Academic Success and Well-Being Following OEF/OIF Deployment

by

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ABSTRACT

As many as one-third of OEF/OIF soldiers and combat veterans may be struggling with less visible psychological injuries. Military/veteran students may face heightened difficulties as they are not only adjusting to civilian life but also transitioning to college life. University administrators and staff have been charged to address their transitional needs and to promote their academic success. Despite significant influx in enrollment with the passing of the Post-9/11 GI Bill, research on OEF/OIF service members and veterans in higher education remains limited. Utilizing self-report measures, the current study examined the psychosocial functioning of 323 military/veteran students enrolled at Arizona State University who served at least one combat deployment as part of OEF/OIF. The study further investigated whether enlisting for educational benefits and utilizing campus programs/services were associated with more positive academic persistence decisions. Participants were also asked to rate ASU's programming for military/veteran students as well as suggest campus programs/services to promote their academic success. More PTSD symptoms, depression, anxiety, and anger/aggression were found to be associated with less cultural congruity and lower perceived social support. Cultural congruity and social support were significant predictors of academic persistence decisions. Participants who reported utilizing more campus programs/services also tended to endorse more positive persistence decisions. No significant differences in persistence decisions were found between participants who enlisted in the military for education benefits and those who enlisted for non-educational reasons. Approximately two-

thirds reported utilizing academic advising services and Veteran Benefits and Certifications. Library services, financial aid services, and ASU sporting events were the next most frequently utilized. More than 91% rated ASU's programming satisfactory or better. Over 71% of participants indicated that increasing recognition of their military experience would facilitate their academic success. Nearly 40% recommended a military/veteran student lounge and improvements to VA education benefits counseling. Another 30% recommended that ASU provide professional development for faculty/staff on military/veteran readjustment issues, improve the re-enrollment process following deployment/training, offer a veteran-specific orientation, and establish a department or center for military/veteran programming. Findings are discussed in light of Tinto's interactionist model of college student attrition, and implications for university mental health providers are presented.

To the men and women in the United States military, past and present,

who demonstrate selfless dedication and service to our country.

May we respond with similar commitment to you.

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CHAPTER 1

PROBLEM AND PROSPECTUS

Upwards to a third of all Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) service members returning from combat are expected to exhibit symptoms of a mental health disorder (Elmore, 2009). Seal, Metzler, Gima, Bertenthal, Maguen, and Marmar (2009) found that new mental health diagnoses among OEF/OIF veterans increased from 6.4% in April 2002 to 36.9% by March 2008. Other researchers have reported rates of posttraumatic stress disorder (PTSD) among returning soldiers ranging from 5% (Burnam, Meredith, Helmus, Burns, Cox, D'Amico, et al., 2008) to 31% (Lapierre, Schwegler, LaBauve, 2007) and rates of depression ranging from 3% (Hoge, Auchterlonie, & Milliken, 2006) to 25% (Vasterling, Proctor, Amoroso, Kane, Heeren, & White, 2006) depending on military population, diagnostic criteria, deployment location, and time since deployment. These mental health disorders, among others, can impair psychosocial and occupational (academic) functioning and overall well-being.

Military/veteran students may face heightened difficulties, as they are not only adjusting to civilian life but also transitioning to college life (DiRamio, Ackerman, & Mitchell, 2008; Radford, 2009). Despite the significant influx in military/veteran student enrollment with the passing of the Post-9/11 Veterans Educational Assistance Act of 2008 (took effect on August 1, 2009), research on OEF/OIF service members and veterans in higher education remains limited.

These students will continue to be a tremendous asset to colleges and universities, but their needs are distinct from other students (Cook & Kim, 2009). To foster their academic success, DiRamio and colleagues (2008) asserted that university administrators and staff must be informed about their post-deployment psychosocial functioning and strive to address their needs. Using self-report measures, the current study assessed for PTSD symptoms, depression, anxiety, anger/aggression, perceived social support, cultural congruity (the cultural fit or match between military/veteran students' beliefs, behaviors, and values and the perceived norms of the university), and academic persistence decisions among military/veteran students enrolled at Arizona State University (ASU) who served at least one combat deployment as part of OEF/OIF. ASU has one of the largest student veteran populations in the country with more than 1,391 undergraduates and graduates (Keeler, 2011b) – an 82% increase since fall 2008 (Keeler, 2011a).

Despite their long history of representation on university campuses, little research has been conducted on effective campus programs and services that aid military/veteran students in their college transition and that foster retention (Cook & Kim, 2009). Thus, the present study examined whether enlisting for educational benefits and utilizing campus programs/services were associated with more positive academic persistence decisions. Participants also recommended new programming or improvements to existing services in order to promote their academic success. This study came on the heels of the American Psychology Association Presidential Task Force on Military Deployment Services for Youth,

Families, and Service Members, which urged members not only in the military communities but also in non-military communities, such as colleges and universities, to develop outreach programs to meet better the needs of returning service members and veterans (Danish & Antonides, 2009).

OPERATION ENDURING FREEDOM & OPERATION IRAQI FREEDOM

In October 2001, Operation Enduring Freedom (OEF) began only weeks after the 9/11 attacks on the World Trade Center and the Pentagon and includes "ongoing operations in Afghanistan, operations against terrorists in other countries, and training assistance to foreign militaries conducting operations against terrorists" (Kapp, 2005, ¶ 1). Operation Iraqi Freedom (OIF) followed in March 2003 and involves "the invasion of Iraq, the defeat of Saddam Hussein's regime, and the subsequent peacekeeping, rebuilding, and counter-insurgency operations in Iraq" (Kapp, ¶ 1). As of October 2009, over two million men and women have deployed to Iraq and Afghanistan (Tan, 2009). Approximately one-third of those deployed have served at least two tours in a combat zone, 70,000 have been deployed three times, and 20,000 at least five times (Johnson et al., 2007).

Soldiers face extensive pressures during deployment and often experience traumatic events (National Center for Post-Traumatic Stress Disorder and Walter Reed Army Medical Center, 2004). OEF/OIF combat veterans, in particular, have reported: Viewing or handling human (e.g., civilians, enemy soldiers, U.S. and allied personnel) and animal remains, caring for the injured and dying, managing

prisoners of war, witnessing the destruction of communities and the anguish of homeless refugees, and the looming threat of personal injury or death (King, King, Vogt, Knight, & Samper, 2006; National Center for Post-Traumatic Stress Disorder and Walter Reed Army Medical Center, 2004). Furthermore, Hoge and colleagues (2004) found that 95% of OEF/OIF respondents had been shot at, 89% had been ambushed or attacked, 86% knew a fellow soldier who was shot or wounded, and 69% injured a woman or child and felt they could not provide assistance (Johnson et al., 2007). In highly armed nations such as Iraq and Afghanistan, seemingly innocent civilians may be carrying firearms, explosives, or remote detonation devices. Such conditions create chronic strain for soldiers. The unpredictability makes it challenging for them to prepare emotionally for the combat environment, and "split second decisions may undergo retrospective analyses to determine their appropriateness" (National Center for Post-Traumatic Stress Disorder and Walter Reed Army Medical Center, 2004, p. 8).

Civilian and enemy capabilities are hardly the only unclear aspect of combat. Rules of engagement and operational plans change continually. Equipment breaks down, and logistical supply lines are uncertain. In battle, soldiers are also taxed purposely to maintain their fighting edge. The intensity of sensory and emotional experience during this heightened physiologic state may lead to increased arousal and attempts to avoid emotion and intrusive reminders of events. Moreover, the novelty of the circumstances may contribute to dissociative

symptoms (National Center for Post-Traumatic Stress Disorder and Walter Reed Army Medical Center, 2004).

The impact of these traumatic experiences is often further magnified by the harsh living conditions, including sweltering temperatures, perpetual noise, intense violence followed by unpredictable periods of relative inactivity, separation from loved ones, lack of privacy, sleep deprivation, extensive physical demands, and the perpetual threat of attack by mortar rounds, rocket propelled grenades, and/or biological and chemical agents (Johnson et al., 2007). Living conditions in combat areas also have been unsanitary, particularly during the early phase of OEF/OIF. Some posts lacked sufficient facilities; there was no warm water for showering or regular hot meals (Johnson et al., 2007). Prior research has found that stressful environmental conditions and exposure to trauma (e.g., being physically deprived–POW, exposure to brutality and mutilated bodies, death of children and fellow soldiers, engaging in atrocities) contribute to the severity and persistence of mental health issues among Vietnam veterans (King et al., 1999; Johnson et al., 2007).

MILITARY VETERAN STATUS

The term, veteran, describes an individual who served on active duty in the United States Army, Navy, Air Force, Marines, or Coast Guard for more than 180 days was honorably discharged/released or who served at least 90 days with one or more days during wartime and was honorably discharged/released (Danish & Antonides, 2009; Wisconsin Department of Veteran Affairs, n.d.). In 2009, the

veteran population was 21.9 million ("Veterans Day 2010: Nov. 11," 2010), comprising 13% of the total U.S. population over the age of 18 (Richardson & Waldrop, 2003). Over nine million veterans are age 65 or older, while 1.7 million veterans are younger than 35 ("Veterans Day 2010: Nov. 11," 2010). It is estimated by 2013 that the younger OEF/OIF veteran population will increase to nearly two million (Radford, 2009). According to the 2009 American Community Survey, 17.7 million veterans self-identified as non-Hispanic white, 2.3 million as African American, 1.1 million as Hispanic, 258,000 as Asian, 153,000 as American Indian or Alaska Native, and 30,000 as Native Hawaiian or Other Pacific Islander. It is important to note that these numbers capture only those reporting a single race ("Veterans Day 2010: Nov. 11," 2010).

Similar to the racial distribution, the gender distribution of veterans has changed over time. In 1980, women comprised only 4% of the veteran population (U.S. Department of Veterans Affairs, 2007a). By 2006, there were 1.64 million female veterans, representing 7% of all veterans and 9% of veterans under age 65 (U.S. Census Bureau, 2009). Over 750,000 of all OEF/OIF veterans were women in 2006. It is expected that the number and proportion of female veterans will continue to increase. The U.S. Department of Veterans Affairs (2007b) predicts that 10% of the entire veteran population will be female by 2020, and slightly more than one million of these women will have served post-9/11.

While less is known about OEF/OIF veterans' educational backgrounds, 26% of veterans 25 and older held at least a bachelor's degree in 2009 compared

to 28% of the total population. More than 92% of veterans 25 and older attained a high school diploma or higher as opposed to 85% of the population as a whole ("Veterans Day 2010: Nov. 11," 2010). In an effort to extend the literature, military/veteran students completed an extensive demographic form regarding their education (e.g., year in college, highest degree intended, current GPA, enrollment status, declared major) as part of the present study.

HISTORY OF GI BILLS

The U.S. government has provided education benefits to service members and veterans since the Servicemen's Readjustment Act of 1944 (popularly known as the original GI Bill) (Radford, 2009). The original GI Bill was largely designed to avert economic and societal problems (e.g., mass unemployment, social unrest) after discharging millions of World War II (WWII) soldiers. According to Field (2008), the legislation was an attempt to "delay their re-entry into the crowded labor market and to pacify the returning troops" (¶ 10). When this bill passed, only 640,000 of the 16 million WWII veterans were expected to enroll in higher education (Breedin, 1972; U.S. Department of Veterans Affairs, 2001). Underestimated by a factor of more than 10, over 6.6 million WWII veterans had enrolled as early as 1950 using their GI Bill benefits (Breedin, 1972). They were given a stipend for living expenses, and their entire tuition was paid directly to their institution, even the most expensive private colleges (Radford, 2009). The percentage of Americans with college degrees increased from 4.6% in 1945 to 25% in 1970 largely due to the original GI Bill (Garcia, 2009).

When concerns surfaced that institutions were abusing such benefits, modifications were implemented through the Veteran Readjustment Assistance Act of 1952 (Korean GI Bill) (Radford, 2009). Under this bill, veterans received their education benefits directly in a single transaction, and the entire cost of private institutions was no longer covered (Breedin, 1972). In addition, this one-time payment had to cover tuition and living expenses, which prompted veterans to attend less expensive institutions in order to have more money for personal expenses. Similarly, three subsequent acts – the Veterans' Readjustment Benefits Act of 1966, the Post-Vietnam Era Veterans' Educational Assistance Act of 1977, and the Veterans' Educational Assistance Act of 1984 (Montgomery GI Bill) – provided benefits directly to recipients in a single monthly check (Radford, 2009).

Over 2.3 million veterans have pursued higher education through the Veterans' Educational Assistance Act of 1984 or the Montgomery GI Bill (McGrevey & Kehrer, 2009). In August 2008, veterans enrolled full-time in postsecondary education under the Montgomery GI Bill–Active Duty program received $1,321 per month for up to 36 months or four academic years. They were allotted 10 years to use such benefits and agreed to a pay reduction of $100 per month over the first 12 months of their service to become eligible (McGrevey & Kehrer, 2009). On the other hand, members of the National Guard and reserves pursuing higher education under the Montgomery GI Bill–Selected Reserve program generally received $329 per month and needed to remain in the reserves to use the program but had no $1,200 pay reduction (McGrevey & Kehrer, 2009).

Still, these education benefits did not keep pace with rising tuition and fees (Alvarez, 2008; Klemm Analysis Group, 2000), making it extremely difficult to attend college full time without working (DiRamio et al., 2008). Work demands often translated to less time to concentrate on coursework (Radford, 2009).

On August 1, 2009, a radically different GI Bill – the Post-9/11 Veterans Educational Assistance Act of 2008 – took effect, offering more generous financial assistance to the nearly two million soldiers who have served in OEF/OIF (Radford, 2009). According to the U.S. Department of Veterans Affairs (2008), they may be eligible for benefits under this Post-9/11 GI Bill if they served at least 90 aggregate days on active duty after September 10, 2001 and meet one of the following requirements: 1) Still on active duty; 2) honorably discharged from active duty; 3) honorably released from active duty and placed on the retired list or temporary disability retired list; 4) honorably released from active duty and transferred to the Fleet Reserve or Fleet Marine Corps Reserve; or 5) honorably released from active duty for further service in a reserve component of the Armed Forces (Radford, 2009). Finally, veterans honorably discharged from active duty for a service-connected disability who served 30 continuous days after September 10, 2001 may be eligible (Radford, 2009).

Post-9/11 GI Bill recipients who pursue associate degree training or higher receive tuition and fees, paid directly to the institution, not to exceed the cost of the most expensive in-state public institution (capped at $17,500 per year for private or foreign schools unless located in AZ, MI, NH, NY, PA, SC, or TX

where may be eligible for higher reimbursement rate) (McGrevey & Kehrer, 2009). A monthly living stipend is included equal to the local rate of the basic allowance for housing for a married military E5 or junior noncommissioned officer. Other benefits of the bill include a yearly $1,000 stipend for books and supplies and a $500 one-time payment if the recipient relocates from a highly rural area (McGrevey & Kehrer, 2009). No reduction in basic pay is required, and recipients have 15 years following release from active duty to use their 36 months (four academic years) of benefits (McGrevey & Kehrer, 2009). Those who enroll in more expensive programs as graduate students, out-of-state students, or private college students may be eligible for the Yellow Ribbon GI Education Enhancement Program. Under this program, the U.S. Department of Veterans Affairs matches what participating colleges/universities contribute for any remaining costs (U.S. Department of Veterans Affairs, 2008; Redden, 2009). Like the Montgomery GI Bill, eligible military/veteran students may use the Post-9/11 GI Bill for non-college degree programs, apprenticeships, and on-the-job training beginning October 1, 2011 (U.S. Department of Veterans Affairs, 2011b).

Overall, the Post-9/11 GI Bill offers unmatched increases in educational benefits that have prompted a significant increase in the number of service members and veterans enrolling in higher education (Cook & Kim, 2009). Between August 2009 and February 2011, 547,945 veterans used this bill to pay for higher education, and $9.9 billion has gone towards tuition assistance (Fairbanks, 2011). The American Council on Education's (ACE) president

announced that these new tuition benefits "make financially feasible things that may not have been feasible in the past" (Field, 2008, p. 6). Thus, ACE urges colleges and universities to become more welcoming to military/veteran students so they can take advantage of their new options, and ACE is invested in assisting colleges and universities with this process (Radford). Towards this end, the present study assessed existing campus programs and services that military/veteran students utilize as well as programs or services they would recommend to promote their academic success.

MILITARY AND VETERAN STUDENTS

During the 2007-2008 academic year, approximately 660,000 veterans and 215,000 service members (excludes the National Guard unless those deployed since 9/11 identified themselves as active duty military) were enrolled in undergraduate education, representing 4% of all undergraduates (Radford & Wun, 2009). Compared to traditional college students, veterans tend to be married and older. In 2007-2008, the majority were age 24 or older (85%), had a spouse, child, or both (62%), and self-identified as male (73%) and non-Hispanic white (60%) (Radford, 2009). Many student veterans look to build on specific skills they gained in the military, and similar to nontraditional students, they seek degree programs that allow them to balance work and family obligations with academic endeavors (Radford, 2009).

Military undergraduates – those on active duty or in the reserves – differ from veterans in several ways (Radford, 2009). They tend to be younger than

veterans. Over 75% of military undergraduates are 39 years of age or younger compared to 13% of all veterans (U.S. Census Bureau, 2009). While military undergraduates tend to be younger than veterans, they are typically older than traditional undergraduates. Although most military undergraduates self-identify as white, they are more likely to self-identify as African American, Hispanic, or Asian American compared to veterans and even those 39 or younger (U.S. Census Bureau, 2009; U.S. Department of Veterans Affairs, 2007a). They also are more likely to be female than veterans overall and OEF/OIF veterans specifically (27% vs. 7% and 16%, respectively) (U.S. Census Bureau, 2009; U.S. Department of Veterans Affairs, 2007b). Finally, military undergraduates are less likely to be married (48%) compared to veterans (75%) (U.S. Department of Veterans Affairs, 2001).

POST-DEPLOYMENT READJUSTMENT ISSUES

While serving during peacetime, in non-combat roles, or even during wartime may have a positive impact on service members and veterans (e.g., improved relationships, greater maturity and resourcefulness, renewed hope and appreciation for life) (Bradley, 2007), serving in combat roles during wartime increases the risk of mental and physical impairments (MacLean & Elder, 2007). More than 5,442 OEF/OIF soldiers have been killed, over 37,467 have sustained physical injuries (e.g., traumatic brain injury) (U.S. Department of Defense, 2010), and as many as one-third may be struggling with less visible psychological injuries (Elmore, 2009; Johnson et al., 2007). According to Hoge and colleagues

(2004), those exposed to high combat are 3.5 times more likely to screen for PTSD, 2.6 times more for depression, and 2.4 times more for anxiety than those with low combat exposure. In addition, previous research has demonstrated a strong link between combat experiences and substance abuse, social isolation, unemployment, anger and aggression, divorce, guilt, and suicidality (Hoge & Castro, 2005). Yehuda, professor of psychiatry at Mount Sinai School of Medicine, asserted that "people don't understand the moral ambiguity of combat and why it is so hard to get over it; what makes combat veterans ill is not always about being a victim, but, in some instances, feeling very much both a perpetrator and a victim at the same time" (Dao, 2010). Seal, Bertenthal, Miner, Sen, and Marmar (2007) found that OEF/OIF veterans between the ages of 18 and 24 were at greater risk for mental health disorders compared to veterans 40 years or older. Since they are young, they are more likely to be of lower rank and, in turn, have greater combat exposure than their older counterparts (Seal et al.). Multiple combat deployments have been found to be associated with a 50% greater prevalence of mental health issues, and with each deployment, military personnel are 60% more likely to develop such issues (Meichenbaum, 2009a).

Post-traumatic Stress Disorder

Post-traumatic stress disorder (PTSD) is the most common mental health diagnosis among OEF/OIF service members and veterans (Iraq War Veterans Organization, 2004). Between 13.8% and 31% of returning OEF/OIF soldiers are suffering from PTSD compared to 6.8% of the general U.S. adult population

(Gradus, 2011; Lapierre, Schwegler, LaBauve, 2007). As a result of clinical research following the Vietnam War, PTSD first appeared in the *Diagnostic and Statistical Manual of Mental Disorders* in 1980 (American Psychiatric Association, 1980; Kulka 1990; Trimble 1985). PTSD is an anxiety disorder that can occur after experiencing or witnessing a traumatic event (e.g., combat. sexual assault) in which threat of serious injury or death is present, and one's response to the event involves intense fear, helplessness, or horror (American Psychiatric Association, 2000). Although symptoms can surface immediately after a traumatic event, PTSD is not diagnosed until symptoms persist for at least one month and produce significant distress or impair daily (e.g., social, occupational) functioning. To meet diagnostic criteria for PTSD, the following types of symptoms must be present: 1) Re-experiencing symptoms or ways that an individual persistently re-experiences the traumatic event (e.g., intrusive memories of the event, recurrent nightmares about the event), 2) avoidance of anything associated with the traumatic event (e.g., avoiding thoughts, feelings, people, and/or situations related to the event, anhedonia, emotional numbing, unable to recall important aspects of the event), and 3) hyperarousal symptoms such as exaggerated startle response, difficulty concentrating, and sleep disturbance (American Psychiatric Association, 2000).

Veterans who have PTSD report worse mental and physical health than veterans without PTSD (Hutchinson & Banks-Williams, 2006; MacLean & Elder, 2007; Ren, Skinner, & Lee, 1999). Consistent with the diagnosis, many

experience flashbacks or intrusive combat-related memories, insomnia, memory deficits, depressed mood, anxiety, anger and irritability, guilt, foreshortened future, emotional detachment, and hypervigilance (Danish & Antonides, 2009; MacLean & Elder). Those with PTSD are also more likely to change jobs frequently, earn less, engage in domestic violence, become involved with the legal system, report trouble raising children, become divorced, and report poorer life satisfaction (Meichenbaum, 2009b). Accordingly, PTSD is among the most costly mental health disorders in the U.S. in terms of health expenses, medical utilization costs, and job productivity loses (Meichenbaum, 2009b).

The rates of PTSD are significantly associated with various combat experiences, including participating in firefights (gunfire exchange between opposing forces), handling dead bodies and disarming civilians, sustaining injuries, being incarcerated as prisoners of war, and exposure to the highest levels of war-zone stress (Adler & Castro, 2001; Friedman, Schnurr, & McDonagh-Coyle, 1994; Hoge et al, 2004). Additionally, perceived threat, low-magnitude stressors, witnessing civilian suffering, and exposure to death and destruction have been identified as risk factors for PTSD (Meichenbaum, 2009b). PTSD is also more prevalent among soldiers deployed longer than four months (Adler & Castro, 2001), and those exposed to repeated or multiple traumas (Meichenbaum, 2009b). Finally, military sexual assaults, including rape, sexual assault, sexual harassment, and/or sexual innuendo (Johnson et al., 2007), have been linked to PTSD (Meichenbaum, 2009b).

Not all service members and veterans exposed to traumatic combat experiences suffer from PTSD. Instead, the strongest predictors of developing PTSD include the nature of their immediate response (e.g., dissociation, horror, fear, or panic) to the event, an unsupportive environment offering little validation, previous trauma, and persistent negative beliefs and emotions about themselves, others, and the world (Meichenbaum, 2009b). Avoidant behaviors (e.g., distancing from others, avoiding distressing thoughts and feelings, emotional numbing, avoiding certain places and situations) also contribute to and maintain PTSD. Other risk factors for PTSD include a history of psychiatric problems (namely depression), poor coping resources, and intense and frequent symptoms of Acute Stress Disorder (e.g., depersonalization, emotional detachment, intrusive images, sleep disturbance) in the weeks following the traumatic event (Meichenbaum, 2009b; National Center for Post-Traumatic Stress Disorder and Walter Reed Army Medical Center, 2004).

Depression

While PTSD is the most common mental health diagnosis of returning service members, it is only one of many post-deployment readjustment difficulties that might surface (National Center for Post-Traumatic Stress Disorder and Walter Reed Army Medical Center, 2004). Approximately 33% of OIF/OEF veterans treated within the VA Healthcare System not only met diagnostic criteria for PTSD but another mental health disorder(s) (Meichenbaum, 2009a). Similar to PTSD, the prevalence of depression among service members and veterans

continues to rise. Extended deployments, the high incidence of military sexual trauma (41% of OEF/OIF female veterans and 1% of males who present at the VA), and the assessment intervals of severe injuries are associated with this increase (Alder, Huffman, Bliese, & Castro, 2005; Rank, 2009). Grieger and colleagues (2006) found that the rates of depression among severely wounded soldiers increased significantly from the initial one-month post-injury evaluation to the seven month assessment (4.4% to 9.3%). Overall, nearly one in five OEF/OIF veterans suffer from depression stemming from major changes in roles and responsibilities, physical and/or psychological injuries, the loss of their military career, and/or difficulty obtaining employment (Hutchinson & Banks-Williams, 2006; Tanielian & Jaycox, 2008). Last, many OEF/OIF veterans report strong feelings of survivor's guilt (e.g., "Why did I survive but they didn't? I should have done more to protect them."), which can manifest as depression and even lead to suicide (Rank, 2009). Researchers with the National Center of Veterans' Studies at the University of Utah surveyed 525 OEF/OIF student veterans and found that 46% endorsed suicidal ideation at some point in their lives, 20% reported suicidal thoughts with a plan, and 7.7% had attempted suicide (Bowen, 2011).

Anxiety

While PTSD (21.5%) and depression (18.3%) are the most common mental health diagnoses of OEF/OIF veterans treated within the VA Healthcare System, nearly 11% meet diagnostic criteria for anxiety disorders, namely panic

disorder, social anxiety disorder, generalized anxiety disorder, or obsessive-compulsive disorder) (Cohen, Gima, Bertenthal, Kim, Marmar, & Seal, 2010). Orsillo, Weathers, Litz, Steinberg, Huska, and Keane (1996) found that 46% of veterans with PTSD, compared to 27% without PTSD, meet criteria for one or more anxiety disorders (Orsillo et al., 1996). The three anxiety disorders most commonly associated with PTSD include simple phobias (e.g., heights, flying), panic disorder involving recurrent and unexpected panic attacks as well as worry/concern about additional attacks, and social anxiety disorder (SAD) (e.g., being around unfamiliar people, performing) (Brady, Killeen, Brewerton, & Lucerini, 2000; Breslau & Davis, 1992). Based on a large sample of veterans in primary care clinics, 3.6% met criteria for social anxiety disorder (SAD), and 73.1% with SAD had comorbid PTSD (Kashdan, Frueh, Knapp, Hebert, & Magruder, 2006).

SAD often intensifies the readjustment difficulties of service members and veterans with and without PTSD for several reasons. Concerned about being rejected and embarrassed, they tend to be more sensitive to social threat cues, even interpreting neutral or ambiguous social situations as threatening (Clark & Wells, 1995; Rapee & Heimberg, 1997). Such information-processing biases fuel intense negative emotions, which are usually misinterpreted as evidence of social failure or incompetence. Unfortunately, these misinterpretations heighten initial fears and social cognitive biases. In response, veterans tend to utilize avoidant coping, which reduces their discomfort, anxiety, and frustration in the short-term

but pulls them away from developing skills and confidence in properly displaying and reading social cues. Overtime, they experience even fewer positive social interactions and become more isolated and socially impaired, putting them at greater risk for other mental health issues (e.g., depression) (Kashdan, Frueh, Knapp, Hebert, & Magruder, 2006).

Anger and Aggression

Research has found that veterans with PTSD are more physically and verbally aggressive than veterans and civilians without PTSD (Meichenbaum, 2009a). While anger and aggression may have been adaptive and appropriate in the context of war, it often becomes difficult to reconcile aggressive impulses into everyday life (Galovski & Lyons, 2004). Some veterans may also harbor anger if they perceive that they were inadequately prepared or trained for what they experienced in combat (National Center for Post-Traumatic Stress Disorder and Walter Reed Army Medical Center, 2004). In particular, they may believe that they lacked the necessary equipment or were insufficiently trained to use certain supplies to complete important procedures. Others may think they were ill-prepared for their combat duties, deployment conditions, and how to respond in the event of a nuclear, biological, or chemical attack (National Center for Post-Traumatic Stress Disorder and Walter Reed Army Medical Center, 2004).

According to Snell and Tusaie (2008), over 90% of OEF/OIF veteran participants sought treatment for anger and interpersonal difficulties. One participant shared, “I have a very short fuse and overreact to things that never

used to bother me. I am afraid that I will eventually lose my marriage, my job, and maybe even end up in jail" (p. 314). Anger dysregulation is not only detrimental to veterans' social support network but also to their psychological, physical, occupational, and social functioning. For instance, anger is significantly related to PTSD severity, and this relationship becomes stronger with increasing time since the event (Orth & Wieland, 2006). Higher rates of domestic violence also have been found among couples where at least one partner served in the military when compared to civilian couples (Griffin & Morgan 1988; Heyman & Neidig 1999; McCarroll, Thayer, Liu, Newby, Norwood, Fullerton, et al., 2000). Legal problems are another consequence of anger and aggressive behavior.

Interpersonal Strain

Research has found that upwards to 90% of returning soldiers have experienced difficulties reintegrating into their families, workplaces, and communities. They often return home without some of their fellow soldiers, need ongoing treatment for their injuries, and are thrust back into the role of spouse and/or parent (Hutchinson & Banks-Williams, 2006). As previously mentioned, many are bothered by significant guilt and suffer in silence with the symptoms of their injuries (e.g., anxiety, depression, nightmares, fear) (Hutchinson & Banks-Williams, 2006). Weins and Boss (2006) characterized those who have returned from deployment(s) as being "physically present while psychologically absent" (p. 33).

Service members and veterans experiencing post-combat stress and PTSD tend to withdraw from others and are often unable to experience intimacy (Hutchinson & Banks-Williams, 2006). One surveyed soldier would not allow his young son to touch him because his son's touch seemed intrusive and unpredictable. His touch likely felt scary and unsafe because touch, in the context of war, becomes associated with new meaning and memories (Hutchinson & Banks-Williams, 2006). Due to repeated violence and constant threat of danger in combat, service members and veterans may develop an increased startle reaction and hypervigilance. Some avoid close contact (e.g., sleeping with partner) to reduce the likelihood of a violent response to inadvertent contact (Hutchinson & Banks-Williams, 2006). According to a recent study by the Army Center for Health Promotion and Preventive Medicine, more than 3,700 veterans reported they had concerns of hurting others or losing control around them. Fear quickly replaces love and intimacy (Hutchinson & Banks-Williams, 2006).

Family and friends may be hurt, confused, or frustrated by their behavior and, in turn, offer or demonstrate less support. This loss of social support, "the exchange of resources between at least two individuals perceived by the provider or the recipient to be intended to enhance the well-being of the recipient" (Shumaker & Brownell, 1984, p. 13), is critical given that intimate relationships are often primary sources of support (Zimet, Dahlem, Zimet, & Farley, 1988). Both returning soldiers and their loved ones often have unrealistic expectations of the other (e.g., rapid return to "normal"), which disrupts communication,

intimacy, and spiritual connectedness and, taken together, may ultimately dissolve relationships (Rank, 2009). Research has indicated that the divorce rate for veterans is 62% higher than for civilians (Hutchinson & Banks-Williams, 2006). Combat veterans, in particular, were more likely to experience marital problems (e.g., separation, adultery, and domestic violence) and to divorce than were noncombat veterans (Gimbel & Booth, 1994; MacLean & Elder, 2007; Ruger, Wilson, & Waddoups, 2002).

MILTARY AND VETERAN STUDENT READJUSTMENT ISSUES

Research indicates that military/veteran students may face heightened difficulties, as they are not only adjusting to civilian life but also transitioning to college life (Radford, 2009). Although some of the challenges generalize to nonmilitary traditional and nontraditional students, others are unique to their military status or background. Financing postsecondary education is the first issue military/veteran students often encounter (DiRamio et al., 2008; Klemm Analysis Group, 2000; McBain, 2008). While concerns may lessen with the expanded benefits offered under the Post-9/11 GI Bill, some may encounter bureaucratic and informational obstacles as institutions and the Department of Veterans Affairs not only implement but adjust to an evolving program (Radford, 2009). In addition, many military/veteran students must balance work and family obligations with their academic endeavors (Radford, 2009). During the 2007-2008 academic year, 48% of military/veteran students were married, and 47% were raising children with or without a partner (Radford, 2009).

Service members and combat veterans may experience social and cognitive dissonance within a civilian campus community (Radford, 2009). Gloria and Robinson Kurpius (1996) used the term, cultural congruity, to describe the feelings of racial/ethnic minority students of not "fitting in" in the mainstream White campus environment. Individuals belonging to two or more cultures may experience cultural incongruity, especially "if the cultures are different in values, beliefs, and expectations for behaviors" (Gloria & Robinson Kurpius, 2001, p. 535). In several research studies, cultural congruity has been found to be a significant predictor of academic persistence decisions of racial/ethnic minority undergraduates (Gloria & Robinson Kurpius, 1996, 2001; Gloria, Robinson Kurpius, Hamilton, & Wilson, 1999).

Military culture does not necessarily reflect the traditional campus culture in terms of values, beliefs, and behaviors. Traditional undergraduates are leaving home for the first time, exploring their identities, and choosing a career path (Erikson, 1963, 1968), whereas military/veteran students tend to be older and married with children, balancing work and family obligations with academic endeavors (Radford, 2009). Risky behaviors of military personnel include serving in combat and putting their lives on the line for the greater mission, whereas at-risk behaviors among the typical undergraduate include binge drinking and unprotected sexual activity (Notre Dame de Namur University Counseling Center, n.d.). Many return from deployment(s) with physical impairments and/or psychological issues and thus may need academic and disability accommodations

to reintegrate or adapt successfully to their new lifestyle (Radford, 2009). One student veteran discusses his struggle to relate with nonmilitary students.

> Most [students] kind of whine over nothing. They don't really know what it is to have a hard time. . . They don't have people screaming at them to get things done at three in the morning. They sit in a sheltered dorm room and do homework. It's not too hard. You hear people complaining and you're just like, why are you complaining? (DiRamio, Ackerman, & Mitchell, 2008, p. 87).

In addition, nonmilitary students may ask inappropriate and bothersome questions of their military/veteran peers (DiRamio et al., 2008). One study participant reported, "They always end up asking me whether I killed somebody over there or not. That's a question I don't like people asking me…" (DiRamio et al., 2008, p. 88). To avoid such discomfort, some military/veteran students may attempt to blend in with other students and not draw attention to their military status or background. Distrusting and strained relationships may extend to faculty as well, particularly when faculty reference their military experience in class, disrupting their efforts at anonymity (DiRamio et al., 2008). Given that college campuses tend to be anti-war and liberal (Bluey, 2008), faculty may also criticize the military and its personnel during lectures, which can further alienate military/veteran students and leave them feeling unwelcome (DiRamio et al., 2008; Herrmann, Raybeck, & Wilson, 2008).

For those who were enrolled as students but then ordered to deploy, the transition back to college is often coupled with the realization that much has changed. One military undergraduate explained, ". . . You think that somebody pushed pause, you left for a while, and when you come back, they press play"

(Bauman, 2009, p. 21). Instead, these military/veteran students find that their original peer group has graduated, yet their own class standing remains unchanged. Additionally, they are now years older than their new peers (Bauman, 2009).

ACADEMIC PERSISTENCE

Traditional College Students

The attrition rates at colleges and universities vary from 10% to 50%, with 75% of these students withdrawing during their first two years of college (Tinto, 1987; 1993). According to Tinto (1993), student departure takes one of two forms – academic dismissal or voluntary withdrawal. Academic failure explains only 15% to 25% of departures, whereas the remaining 75% to 85% come from voluntary withdrawal (Tillman, 2002). While some students leave for reasons beyond the control of the university (e.g., lack of child care, conflicting work schedule), most attrition is preventable, and there are several implications of leaving without obtaining a degree (Levitz & Noel, 1989). Students who do not complete their degrees cost the institution thousands of dollars in unrealized tuition, fees, and alumni contributions (DeBerard, Spielmans, & Julka, 2004) and typically earn much less over their lifetime of work (National Center for Educational Statistics, 1989).

In response to the high attrition rates, researchers have tried to identify risk factors and find ways to decrease the prevalence (Foley Nicpon et al., 2006). Kadison and DiGeronimo (2004) and Sacks (1997) found several areas that can

hinder student success: Difficult transition from high school to college, underrating the challenges of college coursework, overestimating one's ability to cope with academic stress, limited knowledge of campus resources, and financial strain related to tuition and other college-related expenses. In particular, Saint John, Cabrera, Nora and Asker (2000) reported that financial factors explained about half the total variance of student persistence.

Hagedorn, Perrakis, and Maxwell (2004) and Bolge (1994) reported additional factors negatively related to student retention including: Lack of transfer support, inadequate career counseling, insufficient technological resources, lack of basic competencies in English and mathematics, vague career plans, competing work demands, inadequate parking and study facilities, poor or nonexistent course advising, lack of child care, and detachment from faculty and campus culture. Kramer and Spencer (1989) emphasized that faculty-student contact is positively associated with skill development, academic achievement, personal growth, academic persistence, and overall satisfaction with the college experience.

Szulecka, Springett, and de Pauw (1987) further suggested that the major causes of attrition are emotional rather than academic factors (e.g., high school GPA, SAT scores), particularly among first-year college students. According to Leafgran (1989), students who are emotionally and socially healthy are more likely to succeed in higher education. Mental health issues are frequently observed reasons for student departure (Giaquinto, 2009). In general, previous

research has concentrated on demographic, academic, and psychological adjustment variables in predicting academic success and retention (Pritchard & Wilson, 2003). Therefore, the present study was designed to examine the relationship between student emotional and social health (e.g., depression, anxiety, anger/aggression, social support) and academic persistence decisions.

Depression and Anxiety. In the United States, depression affects over 19 million adults, including college students, every year (Veeser & Blakemore, 2006). According to a national college health survey, 10% of college students have been diagnosed with depression (Veeser & Blakemore, 2006). Furr, Westefeld, McConnell, and Jenkins (2001) found that 53% of 1,455 student participants were depressed since starting college and attributed their depression to financial strain, loneliness, relationship problems, and academic issues. Students who are depressed have been found to have lower grade point averages compared to non-depressed students (Fazio & Palm, 1998). Depression and anxiety were significant predictors of failure across three educational milestones: Completing high school, entering college, and completing college (Silva, Dorso, Azhar, & Renk, 2007).

As with depression, anxiety disorders affect more than 19 million U.S. adults annually. In 2000, nearly 7% of college students endorsed having an anxiety disorder(s) within the previous year. Those who reported higher levels of anxiety had lower grade point averages in high school and college (Silva et al., 2007) and were more likely to drop out or withdrawal than their less-anxious

peers (Tobey, 1997). Anxiety may negatively impact academic achievement by diminishing internal motivation and producing task-irrelevant thinking (Pekrun, Goetz, & Titz, 2002).

Social Support and Cultural Congruity. Tinto's interactionist model (1975; 1987; 1993) of college student attrition has received extensive support in the higher education literature. Tinto argues that student attrition can be attributed to the longitudinal process of interactions between the student with particular qualities, skills, resources, previous educational experiences, intentions, and commitments and the other players within the academic and social systems of the institution (Oklahoma State Regents for Higher Education, 2002; Tillman, 2002). The student's intellectual/academic and social integration guides his or her experience within those systems, which continually shapes his or her intentions and commitments to the institution and to graduation and career-related goals (Oklahoma State Regents for Higher Education, 2002; Tillman, 2002). The extent of academic integration is determined primarily by the student's academic performance and his or her level of intellectual development, whereas social integration is primarily a function of the quality of student interactions with peers and faculty (Pascarella, 1980). Tinto asserted that students who develop satisfying peer relationships tend to earn higher grades and are more inclined to remain in college (Foley Nicpon et al., 2006). Plunkett, Henry, Houltberg, Sands, and Abarca-Mortensen (2008) also found a significant relationship between academic support from family and instructors and positive academic outcomes. Overall, as

students' academic and social integration and institutional and goal commitment increase, the likelihood that they will persist at the institution also increases (Pascarella, 1980).

Military and Veteran Students

The amount of literature on military/veteran students is slim and dated. As of 2006, only 25% of veterans age 25 or older held a bachelor's degree (Garcia, 2009). Card (1983) found that Vietnam veterans earned bachelor's and graduate degrees less frequently than did their nonveteran peers (DiRamio et al., 2008). Among twins who served during the Vietnam era, those who were exposed to combat attained fewer years of schooling than their non-combat counterparts (Lyons, Kremen, Franz, Grant, Brenner et al., 2006). Veterans who have used military educational benefits, however, have attained more education and higher earnings than those who did not utilize benefits (MacLean & Elder, 2007).

Not only is the research on military/veterans students limited and dated, findings are also mixed. Joanning (1975) found that his sample of Vietnam veterans at the University of Iowa earned higher grade point averages than did nonveterans but did not differentiate between combat and noncombat veterans. According to the National Vietnam Veterans Readjustment Study, Vietnam veterans exposed to combat-related trauma had similar educational attainment but lower satisfaction across a variety of domains than did those who did not experience such trauma (MacLean & Elder, 2007). Weiss (1976) conducted a study of students enrolled at North Hennepin Community College and also found

no significant differences between veterans and nonveterans in grade point averages, average credit load, or course completion rates. As evidenced, the literature should be updated for the current cohort of military/veteran students who have served or continue to serve in OEF/OIF (DiRamio et al., 2008).

MILITARY/VETERAN STUDENT SERVICES

Current Campus Programming

An increasing number of colleges and universities have implemented or are developing transitional supports and programming for military/veteran students so the responsibility for a successful transition does not fall solely on the students (Rumann & Hamrick, 2009). Of the 723 institutions surveyed, public four-year (74%) and two-year (66%) institutions are more likely to have programs specifically designed for military/veteran students compared to private not-for-profit colleges (36%) (Cook & Kim, 2009). However, almost all campuses with services for military/veteran students offer some form of academic support tailored to them. Besides VA education benefits counseling, available at 82% of postsecondary institutions (Cook & Kim, 2009), the most frequently provided services were general financial aid counseling (57%), employment assistance (49%), and academic advising (48%). On the other hand, the least commonly offered services were veteran-specific orientations (4%), veteran student lounges (12%), and college transition assistance (22%).

Nearly 65% of campuses that offer services to military/veteran students have increased attention to serving their unique needs since 9/11, including 70%

of four-year public institutions, 65% of public community colleges, and 57% of private four-year colleges and universities (Field, 2008). This increased attention is apparent in the new programs and services established for military/veteran students as well as the development of marketing and outreach strategies to attract these students to enroll (Field, 2008). In addition to college catalogs and brochures, service members and veterans are most frequently recruited through special events at military bases and other facilities (e.g., armories, reserve centers, and depots) (Cook & Kim, 2009).

Postsecondary institutions have demonstrated an increased emphasis on military/veteran student needs in numerous other ways (Field, 2008). Four-year and two-year public institutions have increased counseling services and community referral procedures while private not-for-profit schools have selected committees to develop campus responsiveness plans. Of the institutions that offer services to military/veteran students, more than 70% of public four-year universities and 40% of private four-year and public two-year colleges have counseling centers with staff trained to assist them with readjustment issues. Nearly 85% of colleges and universities also provide referrals to military/veteran students for off-campus support services (e.g., local Vet Centers) when their needs extend beyond the scope of a campus counseling center (Field, 2008).

Field (2008) argued that an established office or department dedicated to serving military/veteran students is another way to demonstrate commitment to these students. Of the public four-year and two-year schools that offer services to

military/veteran students, approximately 60% have a dedicated department compared to only 26% of private institutions (Field, 2008). For the campuses without a dedicated office, the primary point of contact for information about services and programs varies by institutional level. At four-year public and private schools, the registrar's office is typically the point of contact for students, which also serves as the contact for veteran benefits advising. At community colleges, however, the office of student affairs or student services tends to be the primary contact while the financial aid office handles veteran benefits (Field, 2008).

In general, institutions with a dedicated office were more likely to make programmatic changes after 9/11 than those without a dedicated office (Cook & Kim, 2009). These changes included but are not limited to: 1) developing new programs and services (71% of institutions with a dedicated office vs. 52% of institutions without such an office); 2) creating or improving marketing and outreach strategies to attract military/veteran students (62% vs. 51%); 3) increasing staff in existing programs and services for military/veteran students (42% vs. 21%); and 4) expanding counseling services and off-campus referral procedures to address their needs (59% vs. 42%) (Cook & Kim, 2009). Moreover, colleges and universities with a dedicated office were more likely than those without an office to focus recruitment efforts on military personnel (61% vs. 42%) and to offer training for faculty and staff on the transitional needs of military/veteran students (49% vs. 36%) (Cook & Kim, 2009). Last, institutions with a dedicated office are more likely to adapt common services (e.g., financial

aid counseling, academic advising, career services, campus events) to these students and to sponsor a student veteran organization (41% vs. 23%) (Cook & Kim, 2009). Through student veteran organizations, military/veteran students promote, unify, and advocate for the military/veteran voice on campus and in the community. They further seek to educate the community about how the military impacts lives and to support members through the readjustment process (Summerlot, Michael-Green, & Parker, 2009).

Veterans Upward Bound (VUB), a free U.S. Department of Education program, is also available at many campuses nationwide. It is designed to help eligible veterans refresh their academic skills in order to complete their degree program successfully (Garcia, 2009). To be eligible, veterans must be low-income and/or first-generation college students, served at least 180 days of active service, and not have a dishonorable discharge. Through VUB, academic instruction as well as study skills and tutorial assistance are offered in various subjects such as science, math, reading, and foreign language. Additional services may include: 1) short-term remedial classes, 3) financial aid assistance, 4) career counseling, and 5) opportunities to attend cultural events and participate in other educational activities (Garcia, 2009).

Beyond the national VUB program and other widespread changes, several institutions have implemented unique programming for military/veteran students. At the University of California at Berkeley, a campus known for its antiwar protests, a special “veterans only” orientation program has been developed to

introduce new military/veteran students to programs and services available through the university, the local VA, and the state at-large (Garcia, 2009). The military/veteran students also receive priority enrollment in courses, a privilege previously reserved for student athletes and those with disabilities. The University of Michigan has established a mentoring program for service members and veterans, and Dartmouth College has developed an educational counseling program for injured veterans (Field, 2008). Liberty University's home page for distance learning contains student testimonials and a welcome video from the university's director of military affairs (Field, 2008). Through a statewide policy, military/veteran students at Arizona State University may defer tuition, fees, and book/supply expenses when dispersion of education benefits is delayed. The University of Phoenix, which serves the most students with GI Bill benefits, operates a military division with over 800 employees, including advisors who work at 24-hour call centers and specialize in transferring military experience to course credit (Field, 2008). Finally, to recognize prior military experience, nearly 81% and 64% of institutions award college credit for military training and military occupational training, respectively (Cook & Kim, 2009).

Recommended Campus Programming

While military/veteran students have long been a tremendous asset to higher education, their transition to campus often presents unique challenges. Their military experiences, particularly in combat, set them apart from other students (Herrmann et al., 2008). Nearly 25,800 are returning from combat with

injuries and upwards to one-third are in need of mental health services (DiRamio et al., 2008). At the same time, military/veteran student enrollment is rising with the Post-9/11 GI Bill (Cook & Kim, 2009).

Colleges and universities have an opportunity to serve the readjustment and academic needs of these military/veteran students. Some prefer to receive readjustment services and academic guidance through their institution rather than the military, whereas others favor the opposite. Of those interested in receiving care through the military, only 23% to 40% reported seeking services within the past year (Hoge et al., 2004). Consequently, colleges and universities might consider expanding its partnership with the VA Healthcare System to reduce possible barriers to treatment. Recent reports indicate that the VA continues to be crowded, overbooked, and understaffed (Schenwar, 2009). At the 2008 American Council on Education (ACE) Annual Meeting, California State University Chancellor Charlie Reed urged campus administrators to assess their readiness to provide services to a growing body of military/veteran students:

> "I'm going to give you an assignment. Go back to your institution. Do an assessment of how you're doing with programs and services for service members and veterans. You won't find a pretty picture. What you will find is that you need to reorganize and reprioritize." (Cook & Kim, 2009).

Low (2000) emphasized that successful institutions concentrate on the needs of their military/veteran students, continually enhance the quality of their educational experience, and use student data to shape their directions. As discussed earlier, satisfied students remain in school and complete their degree. Towards this end, ACE contracted with The Winston Group in July 2008 to

conduct six focus groups with service members and veterans about their perceptions of higher education (Cook & Kim, 2009). In these focus groups, they shared openly about their biggest challenges in pursuing a postsecondary education and the programs and services with greatest benefit to them (Cook & Kim, 2009). Group evaluations took place in Columbia, SC; San Antonio, TX; and San Diego, CA given the high concentration of military personnel and were the first of their kind with OEF/OIF service members and veterans (Cook & Kim, 2009).

Cook and Kim (2009) found that most institutions were considering veteran-friendly changes within the next five years. The most frequently cited changes included submitting grant proposals to fund campus programs and providing professional development for administrators, faculty, and staff on dealing with military/veteran students' readjustment issues. Through the ACE/Wal-Mart Success for Veterans Award Grants, for example, 20 colleges and universities were awarded $100,000 for demonstrated leadership in developing programs (e.g., student veteran orientation, peer mentoring program) that advance access and success in higher education for veterans and their families (Garcia, 2009). These awards support further development of their programs and disseminating lessons learned and best practices (Garcia, 2009).

Even though the military and postsecondary institutions share a long history of preparing service members and educating veterans, current faculty and staff may have little firsthand or systematic knowledge of military culture and the

potential impact of combat on service members and veterans. This may complicate campus efforts to serve military/veteran students and promote their academic success (Rumann & Hamrick, 2009). Survey data reinforce the need to focus on professional development. Less than half of schools with military/veteran programs offer opportunities for administrators, faculty, and staff to learn about the unique needs of military/veteran students, existing campus resources, and promising practices to create a positive campus environment (Cook & Kim 2009; Field, 2008).

Trained college administrators and staff are encouraged to assist military/veteran students with their transition to the campus community (Cook & Kim, 2009). As of July 2009, only 22% of institutions with services for these students provided transition assistance (Cook & Kim, 2009). One student veteran in DiRamio et al.'s (2008) study revealed that the local campus office "mainly focused on the financials..." (p. 90). He further commented, "I wish there could be something to assist in the transition. I definitely could have used it" (p. 90). While offering assistance with financial matters is important, the transition to the campus community is equally significant. According to DiRamio and colleagues, military/veteran students are not seeking special status or unusual accommodations but instead desire a sense that their instructors and advisors appreciate their life circumstances, including any health and academic challenges.

As an extension of their transition, military/veteran students identified academic retention or degree completion as one of their top challenges (Cook &

Kim, 2009). Since academic advising is vital to retention, faculty are encouraged to become involved in the advising process (Tillman, 2002). Quality advising bolsters student learning and promotes student involvement in the institution, both of which are predictors of academic persistence (Tinto, 1993). Building upon their advising skills, administrators and faculty are also encouraged to develop an online course that assists military/veteran students in identifying the skills needed to succeed in the college environment and familiarizes them with pertinent campus resources (Oklahoma State Regents for Higher Education, 2002).

Military/veteran students from Cook and Kim's (2009) focus groups further suggested that campus administrative procedures become more streamlined for those returning from deployment(s). Of the institutions with programs and services for military/veteran students, only 22% have developed an expedited re-enrollment process, whereas most (62%) require the standard re-enrollment process. The remaining 16% insist that military/veteran students reapply and be re-admitted following deployment. Military/veteran students have voiced frustration about the administrative obstacles that seem to delay or impede their return to normalcy on campus. Although these perceived hurdles may seem minor or routine to administrators and staff, they speak volumes to returning military/veteran students about the institution's "veteran-friendly posture" (Field, 2008).

Whether navigating re-enrollment procedures, financial aid, or other administrative undertakings, military/veteran students would benefit greatly from

knowledgeable and accessible points of contact(s) as they transition to and through college. From admission to graduation, this designated staff person or office could help military/veteran students deal with administrative hurdles, offer academic advice, and provide emotional support in their transition to civilian life (American Council on Education, 2009). Former military personnel, especially those who have served in combat, are likely to endorse and valuably contribute in such an initiative. Garcia (2009) suggested that a designated office for military/veteran students offer the following services: 1) admissions information, 2) VA educational benefits, 3) financial aid, 4) scholarships, 5) disability claim information, 6) VA medical benefits, 7) mental health assistance, 8) employment resources, and 9) housing assistance. If budgetary constraints exist, there is likely a pool of candidates among students, staff, and faculty willing to assist on a volunteer basis. In developing and providing programs and services for military/veteran students, it also may be fruitful for colleges and universities to partner with veterans organizations, local National Guard or reserve personnel, and various community agencies (Rumann & Hamrick, 2009). Even though a model of separate spheres (e.g., VA handles "veteran" issues while postsecondary institutions respond to "student" issues) may be initially appealing (Rumann & Hamrick, 2009), this approach is incongruent with transitional processes that integrate and reconcile students' various roles and experiences. Separating or compartmentalizing their experiences and social roles may ultimately disrupt their personal identities (Rumann & Hamrick, 2009).

To foster social integration, Cook and Kim (2009) encouraged colleges and universities to provide opportunities for military/veteran students to connect with their peers. Their study participants expressed the need to connect with those who share similar experiences. Military service "is a bonding experience because individual safety and security often depend on cohesive group efforts" (Summerlot, Green, & Parker, 2009, p. 72). Consequently, service members and veterans often hold a personal bias that to "talk-the-talk," one must have "walked-the-walk." They tend to share more openly about their problems and needs with those who have common experiences (Shackelford, 2009). Thus, once military/veteran students arrive on campus, they often will look to replace the cohesion of their unit with peers who have military backgrounds (Summerlot et al., 2009). Accordingly, military/veteran students regard veteran clubs/organizations and vet-to-vet mentoring as high priorities in facilitating their college transition, particularly their acculturation on campus (Cook & Kim, 2009). At this time, however, only 32% of institutions have clubs or other organizations for military/veteran students (Cook & Kim, 2009). Therefore, establishing more veteran student organizations and informal gathering places for military/veteran students to connect with one another is strongly encouraged.

All too often colleges and universities sponsor programs and services that even their long-time staff and faculty do not know about, which begs the question: If they cannot readily find this information, how can the returning military/veteran students (American Council on Education, 2009)? In response, colleges and

universities are urged to develop an online welcome page with information about current programs and services that is easily accessible from the institution's home page. For example, the portal for Operation Promise for Service Members (OPS), initiated by the New Jersey Association of State Colleges and Universities, gets military/veteran students started with quick and easy frequently asked questions (FAQs) about relevant programs and services (American Council on Education, 2009). Perhaps one FAQ would cover educational benefits under the Post-9/11 GI Bill, as many military/veteran students report that precise information about such benefits and how to access them is not widely available (Cook & Kim, 2009).

SUMMARY AND PURPOSE OF THE STUDY

As many as one-third of OEF/OIF combat veterans and service members may be struggling with less visible psychological injuries. Military/veteran students, in particular, may face heightened difficulties as they adjust not only to civilian life but also transition to college life. According to Cook and Kim (2009), military/veteran students have identified academic retention or degree completion as one of their top challenges. University administrators and staff have been charged to address their transitional needs and to promote their academic success. Despite significant influx in enrollment with the passing of the Post-9/11 GI Bill, research on OEF/OIF service members and veterans in higher education remains limited. The purpose of this study was to examine the post-deployment psychosocial functioning and academic persistence decisions of military/veteran students enrolled at Arizona State University (ASU), which has one of the largest

student veteran populations in the country (Keeler, 2011b). The study also sought to identify campus programs and services that military/veteran students utilize and others that would promote their academic success. In addition to two exploratory research questions, five hypotheses were proposed to examine these relationships:

Q1: What is the typical psychosocial profile and military history of a veteran or service member enrolled at Arizona State University who has served at least one combat deployment as part of OEF/OIF?

Q2: Are combat and post-battle experiences, PTSD symptoms, depression, anxiety, anger/aggression, social support, cultural congruity, and academic persistence decisions interrelated for military/veteran students who have served at least one combat deployment as part of OEF/OIF?

H1: More combat and post-battle experiences will be positively related to PTSD symptoms, depression, anxiety, and anger/aggression and negatively related to social support, cultural congruity, and academic persistence decisions.

H2: Fewer academic persistence decisions will be positively related to PTSD symptoms, depression, anxiety, and anger/aggression and negatively related to social support and cultural congruity.

Q3: Do military education benefits and use of university programs or

services influence the academic persistence decisions of military/veteran students who have served at least one combat deployment as part of OEF/OIF?

H3: Military/veteran students who enlisted in the military for education benefits will report more positive academic persistence decisions than will those who enlisted for non-educational reasons.

H4: More use of university-sponsored programs and services will be related to more positive academic persistence decisions.

Q4: Is there a relationship between deployment locations (active combat zone vs. other deployment areas) and combat and post-battle experiences, PTSD symptoms, depression, anxiety, anger/aggression, social support, cultural congruity, and academic persistence decisions?

H5: Deployment to an active combat zone will be related to more combat and post-battle experiences, PTSD symptoms, depression, anxiety, and anger/aggression and less social support, cultural congruity, and academic persistence decisions.

Q5: What programs or services will participants recommend that Arizona State University implement or sponsor in order to promote their academic success?

CHAPTER 2

METHOD

SAMPLE AND RECRUITMENT

During the second half of the Fall 2010 semester, service members and veterans enrolled at Arizona State University were recruited to complete an online anonymous survey. The registrar's office forwarded a research participation request for this study (see Appendix A) to the campus email addresses of all service members and veterans registered for military benefits (N = 1375). To be eligible to participate, these students must have been deployed at least once to a combat zone following September 11, 2011. Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) military and veteran students were the focus of this study because previous research investigating combat-related trauma and readjustment mental health issues largely come from peacekeeping operations and Vietnam and Gulf War veterans (Johnson et al., 2007). Service members and veterans also tend to experience more psychosocial distress in the transitions to life at home than they show upon leaving the combat zone (Meichenbaum, 2009b).

While 490 student veterans and service members participated in the current study, only the 323 who were deployed at least once following 9/11 were included in the analyses. More than 85% (n = 276) of participants self-identified as male, and 14.3% (n = 46) self-identified as female. The majority of participants (n = 245, 77%) self-identified as European American/Caucasian/White, whereas

8.5% (*n* = 27) self-identified as Hispanic American/Latino, 2.5% (*n* = 8) African American/Black, 2.5% (*n* = 8) Asian American/Pacific Islander, 1.9% (*n* = 6) Native American/Alaskan Native, and 7.5% (*n* = 24) multiethnic. The mean participant age was 29.88 years old (*SD* = 6.62). Thirty four percent (*n* = 109) of participants indicated that they were undergraduate juniors, 22.1% (*n* = 71) undergraduate seniors, 20.6% (*n* = 66) undergraduate sophomores, 5.9% (*n* = 19) undergraduate freshmen, and 17.4% (*n* = 56) graduate students. Approximately one-third of the participants indicated that they were married (*n* = 109, 34.1%) or were single/never married (*n* = 104, 32.5%). Other marital status responses included 13.8% (*n* = 44) in a relationship/living together, 10.3% (*n* = 33) in a relationship/not living together, 7.5% (*n* = 24) single/no longer married, and 1.9% (*n* = 6) separated. Most participants (*n* = 250, 78.4%) reported that they lived off campus with family, roommates, or a significant other/partner, whereas 19.4% (*n* = 62) lived off campus alone, and 2.2% (*n* = 7) lived on campus.

The majority of participants reported a high school diploma or GED for both their father and mother's highest level of completed education, *n* = 103 (32.4%) and *n* = 87 (27.2%), respectively. Over 20% (*n* = 66) identified a bachelor's degree as their father's highest level of completed education; 19.1% (*n* = 61) indicated the same level of academic achievement for their mothers. Nearly 45% (*n* = 143) specified that they intended to earn their masters degree, with 28.7% (*n* = 92) indicating that a bachelor's degree would be their highest degree, 22.4% (*n* = 72) a professional degree or doctorate, and 4.4% (*n* = 14) less than a

bachelor's degree. Nearly 29% (*n* = 91) were the first person in their family to pursue higher education. More than 90% (*n* = 290) of participants were enrolled full-time, and 97.5% (*n* = 313) had declared a major. Two (1%) participants reported that they planned to drop out permanently, 11 (3.4%) indicated that they would drop out temporarily, and 17 (5.3%) planned to transfer to another university/college before graduating.

Over 72% (*n* = 235) of the sample were veterans, and 12.7% (*n* = 41) were reserves, 9% (*n* = 29) served in the National Guard, and 5.6% (*n* = 18) were on active duty. Most of the participants (*n* = 142, 44%) served in the Army, with 21.1% (*n* = 68) in the Marines, 17.3% (*n* = 56) the Air Force, 17% (*n* = 55) the Navy, and 0.6% (*n* = 2) the Coast Guard. Approximately 92% (*n* = 294) were enlisted soldiers, 7.7% (*n* = 25) were officers, and 0.6% (*n* = 2) were warrant officers. About 50% (*n* = 155) reported that their highest pay grade was E5, 23.4% (*n* = 75) E4, and 9.0% (*n* = 29) E6. Nearly half of participants (*n* = 148) were deployed once following 9/11. Approximately 38% (*n* = 122) were deployed twice while 10.8% (*n* = 35) served three deployments, 3.1% (*n* = 10) four deployments, 1.5% (*n* = 5) five deployments, 0.6% (*n* = 2) six deployments, and 0.3% (*n* = 1) seven deployments. The majority were deployed to Iraq [e.g., 54.3%, (*n* = 172) for first deployment, 48.2% (*n* = 82) for second deployment]. Slightly more than 33% of participants (*n* = 107) had re-enlisted in the military.

Although most participants (*n* = 228, 70.8%) were not wounded, injured, assaulted, or otherwise physically hurt during their deployment(s), over 8% (*n* =

27) sustained a Traumatic Brain Injury while deployed, and 9.5% (*n* = 30) reported being exposed to chemical, biological, or radiological warfare agents during their deployment(s). Over 33% (*n* = 109) reported that they had received medical treatment through the VA, 3.1% (*n* = 10) received mental health treatment, and 23.5% (*n* = 76) received both medical and mental health services. Nearly 40% (*n* = 128) had not sought any treatment services through the VA. Twenty two percent (*n* = 71) of participants receive disability for a medical issue(s), 2.8% (*n* = 9) for a mental health issue(s), 13.6% (*n* = 44) for both a medical and mental health issue(s), and 8.4% (*n* = 27) recently applied but are awaiting notification. Over 30% (*n* = 98) indicated that they consume alcohol two to three days per week while another 29.7% (*n* = 96) drink two to four times per month. Seventeen percent (*n* = 55) reported that they drink monthly or less, 11.8% (*n* = 38) drink four or more times a week, and 11.1% (*n* = 36) never consume alcohol. Over 35% (*n* = 115) endorsed consuming 1 or 2 alcoholic drinks (1 drink = 12 oz. beer, 4-6 oz. wine, 12 oz. cooler, or a shot of liquor) on a typical day when drinking followed by 30.2% (*n* = 97) who reported 3 or 4 drinks. Slightly more than 89% (*n* = 287) denied using recreational drugs.

Over 80% (*n* = 258) participants reported using the Post-9/11 GI Bill to cover some or all of their tuition expenses. In addition, 23.3% (*n* = 75) indicated using loans, 17.1% (*n* = 55) Montgomery GI Bill, 13% (*n* = 42) other employment (not work study), 12.4% (*n* = 40) scholarships, 11.5% (*n* = 37) Yellow Ribbon Program, 5.9% (*n* = 19) savings, 3.7% (*n* = 12) Vocational Rehabilitation, 1.9%

(*n* = 6) significant other/partner working, 1.6% (*n* = 5) Reserve Educational Assistance Program, 1.2% (*n* = 4) work study program, 0.6% (n = 2) parental assistance, 0.6% (n = 2) Montgomery G.I. Bill–Selected Reserve, and 5.3% (*n* = 17) other. On a Likert-type scale ranging from 1 (*not at all*) to 5 (*a great deal*) with the midpoint "somewhat," slightly more than 48% (*n* = 154) of participants reported feeling less than "somewhat" concerned about financing their education compared to 30.3% (*n* = 97) who endorsed more than "somewhat" concerned. For complete demographic data, refer to Tables 1-6.

Table 1

Participant Reported Age

Age	*N*	%
20-24	49	15.3
25-29	152	47.4
30-34	63	19.6
35-39	21	6.5
40-44	19	5.9
45-49	13	4.0
50-54	2	0.6
55-59	2	0.6

Table 2

Participant Reported Alcoholic Drinks on Typical Day When Drinking

Drinks	*N*	%
1 or 2	115	35.8
3 or 4	97	30.2
5 or 6	50	15.6
7, 8, or 9	15	4.7
10 or more	8	2.5
Not applicable; I never drink	36	11.2

Table 3

Location of Participant Deployment 1

Country	*N*	%
Afghanistan	32	10.1
Iraq	172	54.3
Iraq & Afghanistan	3	0.9
Africa	4	1.3
Europe	12	3.8
Saudi Arabia	7	2.2
Southeast Asia	37	11.7
Persian Gulf	8	2.5
Kuwait	5	1.6
United Arab Emirates	4	1.3
Qatar	10	3.2
Mediterranean Sea	5	1.6
Classified	2	0.6
Other	16	5.0

Table 4

Length of Participant Deployment 1

Months	*N*	%
1-6	120	38.4
7-12	128	41.0
13-18	55	17.6
19-24	6	1.9
25-30	1	0.3
31-36	2	0.6
37-40	1	0.3

Table 5

Location of Participant Deployment 2

Country	*N*	%
Afghanistan	30	17.6
Iraq	82	48.2
Africa	2	1.2
Europe	2	1.2

Saudi Arabia	2	1.2
Southeast Asia	13	7.6
Persian Gulf	7	4.1
Kuwait	5	2.9
United Arab Emirates	2	1.2
Qatar	4	2.4
Mediterranean Sea	3	1.8
Classified	1	0.6
Other	17	10.0

Table 6

Length of Participant Deployment 2

Months	*N*	%
1-6	72	43.2
7-12	75	45.0
13-18	20	12.0

PROCEDURE

Data were gathered using an online survey that took approximately 20 minutes to complete. Participants read an informed consent cover letter before completing a demographic form and a series of standardized instruments. The order of the instruments was counterbalanced to control for an order effect. Participation was voluntary and a one-time event. Students could choose not to participate or to withdraw from the study at any time, and there was no penalty. No identifying information was solicited throughout the process. Clicking on the "continue" button at the end of the cover letter (see Appendix B) was considered consent to participate.

A $25 cash prize was randomly raffled to 80 participants as participation incentive. Project funding was provided by the ASU Office of the Vice-President

for Research and Economic Affairs, the Graduate Research Support Program, and the Graduate College. To enter the raffle, interested students were asked to email a randomly-generated code provided upon completion of the survey to an email account designated for the study (see Appendix C). The raffle winners were notified through their campus email address. Forty four of the 80 recipients claimed their cash prize. In response, the funds were made available to the remaining participants (n = 19) who had entered the raffle; six of them claimed their $25 cash prize. In addition to entering the raffle, participants could have elected to receive extra credit for their participation. Upon completion of the online survey but before clicking "submit," participants were able to print off an extra credit form, complete it by hand, and then turn it into their respective instructor granting extra credit. On the form, they were instructed to handwrite their name alongside the survey code: Fall 2010 Academic Persistence (see Appendix C).

MEASURES

An online survey was developed to collect participants' responses to demographic items. In addition, nine instruments assessing combat experiences, psychosocial functioning, perceived social support, cultural congruity, and academic persistence decisions were administered.

Demographic Questionnaire

Participants completed a demographic questionnaire consisting of three parts (see Appendix C). Basic demographic questions included sex, age,

racial/ethnic background, current relationship status, current residence (e.g., on campus, off campus with family), year in college, current enrollment status, highest degree intend to obtain, level of concern about financing college education, mother and father's highest level of completed education, current GPA, high school GPA, and SAT composite score or ACT score. Participants also indicated whether they had declared a major, had intentions of transferring or dropping out, were the first one in their family to pursue higher education, and how they were covering their college tuition (e.g., Post 9/11 GI Bill, work study program, loans, scholarships). In addition, participants were asked about their military involvement, including their current military status, service branch, highest pay grade, number of times deployed since September 11, 2001, location and length of each deployment, occupational specialty during each deployment, and reason(s) for joining the military. Participants further reported whether they were wounded, injured, assaulted, or otherwise hurt during their deployment(s), had sustained a Traumatic Brain Injury while deployed, and/or were exposed to chemical, biological, or radiological warfare agents during their deployment(s). They also responded to items about drug and alcohol consumption. Finally, participants were asked about university programs and services and their educational experience, namely why they chose to attend ASU, their level of satisfaction with ASU's services for military/veteran students, specific programs and services that they utilize at ASU, and programs or services that they believe ASU should implement or sponsor to foster their academic success as a

military/veteran student (see Appendix C for the complete demographic questionnaire).

Deployment Risk and Resilience Inventory

Developed by King, King, and Vogt (2003), the Deployment Risk and Resilience Inventory (DRRI) measures various deployment-related factors implicated in the health and well-being of military personnel and veterans. It includes 14 scales to assess two pre-deployment factors (prior stressors and childhood family environment), 10 features of the deployment (combat experiences; perceived threat; aftermath of battle; difficult living and working environment; sense of preparedness; nuclear, biological, and chemical exposures; concerns about life and family disruptions; deployment social support; sexual harassment; and general harassment), and two post-deployment factors (post-deployment social support and post-deployment stressors) (King et al.; Vogt, Proctor, King, King, & Vasterling, 2008). The combat experiences scale (15 items) and the aftermath of battle or post-battle experiences (15 items) scale were both utilized in the current study. According to King and colleagues (2006), "careful attention was given to content validity, with efforts including focus groups with members of the target population, consultation with content experts, and iterative procedures to ensure relevance and appropriate wording and presentation of item content" (p. 31). Moderate correlations among the deployment risk and resilience factors provided evidence for convergent validity (Vogt et al., 2008).

Combat Experiences. Comprised of 15 items, this DRRI scale assesses exposure to stereotypical combat experiences during deployment (King et al., 2003). Sample items include: "While deployed…" 1) "…I went on combat patrols or missions," 2) "…my unit engaged in battle in which it suffered casualties," and 3) "…I or members of my unit received hostile incoming fire from small arms, artillery, rockets, mortars, or bombs" (see Appendix C for the full scale). The instructions for completion are as follows: "The statements below are about your combat experiences during deployment. Please [mark] 'yes' if the statement is true or 'no' if the statement is false" (King et al.). Responses are dichotomous (0 = *no,* 1 = *yes*). Thus, possible scores range from 0 to 15, with higher scores indicating greater exposure to combat. According to Vogt and colleagues (2008), estimates of internal consistency reliability for this scale were .85 for both their study sample of OIF veterans and for their comparison sample of Gulf War I veterans. These coefficient alphas provide robust support for the internal consistency reliability of these scales across these different veteran cohorts. For this study sample, the Cronbach's alpha was .90.

Post-Battle Experiences. This 15-item DRRI scale assesses exposure to the consequences of combat, such as observing or handling human remains, dealing with prisoners of war, and observing devastated communities (King et al., 2003). The instructions for the scale are presented in the following manner: "Next are statements about your experiences AFTER battle. Please indicate if you ever experienced the following events anytime while you were deployed by [marking]

either ‘yes’ or ‘no’” (King et al.). While the scale assesses exposure to the “aftermath of battle” (King et al., p. 3), respondents may have experienced one or more of the incidents during ongoing combat. Sample items include “I or my unit took prisoners of war,” “I observed homes or villages that had been destroyed,” and “I was exposed to the sight, sound, or smell of dying men and women” (see Appendix C for the full scale). Responses are dichotomous (0 = *no,* 1 = *yes*), and possible scores range from 0 to 15. Higher scores are indicative of greater exposure to the consequences of combat. Vogt and colleagues (2008) reported that the Cronbach’s alpha was .86 for their study sample of OIF veterans and .89 for their comparison sample of Gulf War I veterans. This scale had an internal consistency reliability of .94 for the current sample.

PTSD Checklist–Military Version (PCL-M)

The PTSD Checklist–Military Version (Weathers, Litz, Herman, Huska, & Keane, 1993) is a self-report measure of PTSD symptom severity over the past month in response to stressful military experiences. It is comprised of 17 items that correspond to the third and fourth revisions of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) symptom clusters for PTSD, namely re-experiencing, avoidance and emotional numbing, and hyperarousal (American Psychiatric Association, 1980, 1994). The instructions for the measure are outlined below:

> 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 (Weathers et al., 1993).

Sample items include “repeated, disturbing memories, thoughts, or images of a stressful military experience,” “avoiding activities or situations because they reminded you of a stressful military experience,” and “trouble falling or staying asleep” (see Appendix C for the full scale). Items are rated on a 5-point Likert-type scale, with anchors ranging from 1 (*not at all*) to 5 (*extremely*). Ratings for each item are summed to produce a total PTSD severity score ranging from 17 to 85. While not used to diagnosis PTSD, scores over 50 are consistent with a diagnosis of PTSD in military populations (44 or higher for the general population). Scores less than 50, however, do not counter such diagnosis. The higher the score, the more distressing the symptoms are to the individual (Weathers et al., 1993; Blanchard, Jones-Alexander, Buckley, & Forneris, 1996).

The PCL was validated on Vietnam and Persian Gulf War veterans and found to have strong psychometric properties (Weathers et al., 1993). Internal consistency reliability coefficients were very high for the total scale (r = .97) and across the three subscales (r = .92-.93). Test-retest reliability was found to be robust over a two to three day interval (r = .96; Weathers et al.), and other investigators have documented adequate test-retest reliability over a two-week time frame (Ruggiero, Del Ben, Scotti, & Rabalais, 2003). The PCL-M also yields an adequately high diagnostic efficiency of .90 (Blanchard et al., 1996). Strong correlations have been shown between the PCL-M and other measures of PTSD. The PCL-M correlated highly with the Mississippi Scale for Combat-Related

PTSD (r = .93), the Clinical Administered PTSD Scale (r = .93), the PK scale of the MMPI-2 (r = .77), and the Impact of Events Scale (r = .90) (Weathers et al., 1993, Blanchard et al., 1996). For this study sample, the total score Cronbach's alpha was .96.

Center for Epidemiologic Studies Depression Scale–Revised

Developed at the Center for Epidemiologic Studies (a division of the National Institutes of Mental Health), the Center for Epidemiologic Studies Depression Scale (CESD) (Radloff, 1977) is an amalgamation of earlier depressive inventories, namely the Zung Self-Rating Depression Scale (Zung, 1965), Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), and Raskin Depression Rating Scale (Raskin et al., 1969). The CESD includes 20 items that assesses mood, interactions with others, somatic complaints, and motor functioning (Eaton, Smith, Ybarra, Muntaner, & Tien, 2004; Radloff, 1977). Using a 4-point Likert-type scale, respondents indicated the frequency with which they have been experiencing symptoms over the past week. Anchors range from 0 = *not at all or less than 1 day* to 3 = *most or all of the time (5 to 7 days).* Total CESD scores range from 0 to 60, with higher scores indicating more severe depressive symptoms. A score of 16 or higher identifies individuals with clinically meaningful depression (Radloff, 1977).

Among community samples, internal consistency estimates range from .80 to .90, and test-retest reliabilities, ranging from two weeks to one year, were reported between .40 and .70 (Devins et al., 1988; Radloff, 1977). The CESD

scale was created prior to the third revision of the DSM (American Psychiatric Association, 1980), and thus eight items do not pertain to the current definition of major depressive disorder. The CESD also does not assess for anhedonia, psychomotor retardation/agitation, or suicidal ideation. Additionally, weight changes, feelings of worthlessness, concentration difficulties, and sleeping disturbances are each measured by a simple item, whereas symptoms of dysphoria are assessed by at least six items (Eaton et al., 2004). It became evident that a revision of the original scale could increase its generalizability to current psychiatric understanding while retaining its advantageous qualities that made it valuable to community-based researchers (Eaton et al., 2004).

The Center for Epidemiological Studies Depression Scale–Revised (CESD-R) (Eaton et al., 2004) is the first major revision of the original scale, and it was used in the present study. The wording of two original CESD items was simplified, 10 additional items suggested by Zimmerman and Coryell (1994) were included for a total of 20 items, and a new response category ("nearly every day for 2 weeks") was added. These revisions correspond with current diagnostic criteria for major depressive disorder. Sample items include: "I felt sad," "I was tired all the time," and "I wanted to hurt myself" (see Appendix C for the full scale). The CESD-R instructions are as follows: "Below is a list of the ways you might have felt or behaved. Please check the boxes to tell me how often you have felt this way in the past week or so" (Eaton et al., 2004). Scores range from 0 to 80 with the added "nearly every day for 2 weeks" response category. Responses

in this most intense category across five of the nine symptom groups, with dysphoria or anhedonia, meet diagnostic criteria for a major depressive episode (Eaton et al., 2004).

The CESD-R has demonstrated excellent internal consistency reliability in the studies undertaken thus far, including those with four or five response values. The latter targets more closely the diagnosis of major depressive disorder (Eaton et al., 2004). The overall correlation between the CESD and CESD-R ranges from .88 to .93 depending whether the four or five response values are used (Eaton et al., 2004). Based on these high correlations and the similarity in form and response values to the CESD, the test-retest reliability and the criterion validity of the CESD-R are also estimated to be very good (Eaton et al., 2004). For this study sample, the Cronbach's alpha was .95 for the CESD-R.

Self-Rating Anxiety Scale

The Self-Rating Anxiety Scale (SAS) was developed by Zung (1971) to quantify anxiety level for those experiencing anxiety-related symptoms. The self-report measure contains 20 items with the following instructions: "Listed below are 20 statements. Please read each one carefully and decide how much of the statement describes how you have been feeling during the past week" (Zung, 1971). Each item is rated on a 4-point Likert-type scale of severity, with 1 = *none or a little of the time*, 2 = *some of the time*, 3 = *good part of the time*, and 4 = *most of the time or all of the time*. Fifteen items are worded symptomatically positive (e.g., "I feel more nervous and anxious than usual"), and five items are worded

toward decreasing anxiety levels (e.g., “I feel calm and can sit still easily”). As a result, participants are less able to detect a trend in their responses (Zung, 1971). These five items (5, 9, 13, 17, and 19) were reversed scored before analyzing the data. Sample items include: “I can feel my heart beating fast,” “I am bothered by dizzy spells,” and “I am bothered by stomachaches and indigestion” (see Appendix C for the full scale). Total scores range from 20 to 80, with higher scores indicating more anxiety. Specifically, total scores between 20 and 44 are considered in the normal range, 45 to 59 in the mild to moderate anxiety range, 60 to 74 in the marked to severe anxiety range, and 75 to 80 representing extreme anxiety levels (Zung, 1971). Cumulative data on the SAS indicated a morbidity cut-off score of 45. Therefore, respondents with scores of 45 and above are considered to have anxiety symptoms of significant severity (Guy, 1976).

The SAS been found to have good internal consistency in community samples (α = .79; Knight, Waal-Manning, & Spears, 1983) and depressed patients (α = .88; Gabreys & Peters, 1985). The correlation between the SAS and the observer-rated Anxiety Status Inventory was .66. For participants diagnosed with an anxiety disorder, the correlation between the two measures increased to .74 (Zung, 1971). For this study sample, the internal consistency for responses to the 20-item scale was .89.

Aggression Questionnaire

Buss and Perry (1992) developed the Aggression Questionnaire (AQ) to better meet current psychometric standards while retaining the major strength –

the multidimensionality of aggression – of the original Hostility Inventory (Buss & Durkee, 1957). To complete the AQ, respondents are instructed as follows: "Please rate each of the following items in terms of how characteristic they are of you" (Buss & Perry). Sample items include: "I have trouble controlling my temper," "I wonder why sometimes I feel so bitter about things," and "I have become so mad that I have broken things" (see Appendix C for the full scale). Items were rated on a modified 7-point Likert-type scale with anchors ranging from 1 (*extremely uncharacteristic of me*) to 7 (*extremely characteristic of me*) (Anderson, n.d.). Total possible scores range from 29 to 203, with higher scores indicating more anger and aggression. Items 9 ("I am an even-tempered person") and 16 ("I can think of no good reason for ever hitting a person") were reversed scored.

Replicated factor analyses yielded four subscales for the AQ: 1) physical aggression, 2) verbal aggression, 3) anger, and 4) hostility (Buss & Perry, 1992). The 9-item Physical Aggression subscale measures the tendency to use physical force when expressing anger or aggression (Western Psychological Services, 2000). The 5-item Verbal Aggression subscale assesses the inclination to be verbally argumentative, whereas the 7-item Anger subscale measures anger-related arousal and sense of control. Finally, feelings of resentment, suspicion, and alienation are assessed by the 8-item Hostility subscale (Western Psychological Services). These four subscales are summed for a total score – the

overall level of anger and aggression (Western Psychological Services). The total score was used in the current study.

According to Buss and Perry (1992), responses to the total scale indicated strong internal consistency (α = .89). The coefficient alphas for the subscales were lower but adequate for having fewer than 10 items: Physical Aggression, .85; Verbal Aggression, .72; Anger, .83; and Hostility, .77 (Buss & Perry). The test-retest correlations ranged from .72 to .80 (Physical Aggression, .80; Verbal Aggression, .76; Anger, .72; Hostility, .72). Given their small number of items, these subscale coefficients suggest adequate stability over time. For this study sample, the total score Cronbach's alpha was .93.

Multidimensional Scale of Perceived Social Support

Perceived social support has been found to be a better predictor of psychological functioning than objectively measured social support (Barrera, 1981; Brandt & Weinert, 1981; Wilcox, 1981). Therefore, this study assessed social support with the Multidimensional Perceived Social Support Scale (MPSSS) (Zimet, Dahlem, Zimet, & Farley, 1988). The MPSSS is comprised of 12 items rated on a 7-point Likert-type scale, ranging from 1 (*very strongly disagree*) to 7 (*very strongly agree*). Sample items include: "There is a special person in my life who cares about my feelings," "I get the emotional help and support I need from my family," and "I can talk about my problems with my friends" (see Appendix C for the full scale). A total score and three subscales

reflecting perceived social support from family, friends, and significant others are obtained (Zimmet et al.). Only the total score was utilized in the present study.

According to Zimet and colleagues (1988), the MSPSS is psychometrically sound. The internal consistency reliability of the total scale was .88. For the Significant Other, Family, and Friends subscales, the Cronbach's coefficient alpha values were .91, .87, and .85, respectively. Good factorial validity and adequate construct validity were also reported. The test-retest reliabilities over two to three months were .72 for Significant Other, .85 for Family, .75 for Friends, and .85 for the total scale. For this study sample, the total score Cronbach's alpha was .95.

Cultural Congruity Scale – Military

The 13-item Cultural Congruity Scale (CCS) assesses perceived cultural congruity or fit between students' values, beliefs, and expectations of behavior and those of the university (Gloria & Robinson Kurpius, 1996). This scale was initially validated on racial and ethnic minority students at a predominately White university and was revalidated with Chicano/Chicana undergraduates at the same institution (Gloria & Robinson Kurpius, 1996). Participants are instructed to complete the scale as follows: "For each of the following items, indicate the extent to which you have experienced the feeling or situation at school" (Gloria & Robinson Kurpius, 1996). Sample items include "I feel that I have to change myself to fit in at school" and "I try not to show the parts of me that are 'ethnically' based" (see Appendix C for full scale). Each item is rated on a 7-point

Likert-type scale ranging from 1 (*not at all*) to 7 (*a great deal*). The CCS is scored by summing item responses after reverse scoring items 1-4, 6, 7, 9, and 10. Scores range from 13 to 91, with higher scores reflecting more perceived cultural congruity. Gloria and Robinson Kurpius found that the CCS accounted for 11% of the variance in persistence decisions among Chicano/Chicana students, and internal reliability coefficients ranged from .81 to .89.

For the current study, the CCS was modified to assess perceived cultural fit between military/veteran students' values, beliefs, and expectations of behavior and those of the university (see Appendix C for a copy of the CCS-Military). Items were reworded for military/veteran students. For instance, references to ethnic background (i.e., "ethnically," "ethnicity," "ethnic values," and "ethnic minority") in items 2, 3, 4, 7, 11, and 12 were changed to military background (i.e., "military," "military history," "military experiences," "military values," and "a service member or veteran"). Items (5, 6, and 10) about family culture and family values were revised to reflect military culture and military values. On the other hand, item 8, "I can talk to my family about friends from school," and item 13, "I can talk to my family about my struggles and concerns at school," were deleted because they were developed originally to assess one's family of the same ethnic background. Since a large number of service members and veterans' families do not have military experience or a shared military history, these items were removed for the current study. Item 1, "I feel that I have to change myself to fit in at school," and item 9, "I feel that my language and/or appearance make it

hard for me to fit in with other students," were included without any modifications. Items 1-4 and 6-9 were reverse scored before analyzing the data. Individual item responses were summed, with higher scores reflecting greater congruity between military/veteran students' personal values and those of the university. For this study sample, the Cronbach's alpha was .88.

Persistence/Voluntary Dropout Decisions Scale

The Persistence/Voluntary Dropout Decisions Scale (P/VDD), developed by Pascarella and Terenzini (1980), assesses students' academic persistence decisions regarding their degree. The 30-item scale is composed of five subscales: 1) peer group interactions, 2) interactions with faculty, 3) institutional and goal commitment, 4) concern for student development, and 5) academic and intellectual development. The total scale score, which was utilized in the current study, indicates overall persistence decisions. Each item is rated on a 5-point Likert-type scale ranging from 1 (*strongly agree*) to 5 (*strongly disagree*). Items 5-7, 13-15, 21, and 28-30 were reversed scored before analyzing the data. Possible scores range from 30 to 150, with higher scores reflecting a tendency to make more positive persistence decisions. Sample items include: "It is important for me to graduate from this university," "I am satisfied with my academic experiences at this university, and "my classroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes." (see Appendix C for full scale).

The total score was found to have acceptable internal consistency (α = .78), and the intercorrelations among the five subscales were quite modest, ranging from .01 to .33 with a median correlation of .23 (Pascarella & Terenzini, 1980). Distinguishing between persisters and non-persisters, the P/VDD scale has been found to classify students into their correct persistence group 81.7% and 80.8% of the time, respectively (Pascarella & Terenzini, 1980). Peart-Forbes (2004) not only found that the P/VDD scale significantly discriminated between persisters and non-persisters but also was correlated with actual performance, namely second-year college re-enrollment. Foley Nicpon and colleagues (2006) argued that the P/VDD scale "is a more comprehensive measure of overall persistence" and, therefore, "may be a better measure of success in school than GPA alone" (p. 354). For example, many students might decide to persist despite performing poorly their first semester in school. Freshmen, in particular, may find that their GPA suffers as they explore the freedom of college life; however, this does not mean they are going to withdraw from school (Foley Nicpon et al., 2006). This 30-item scale had an internal consistency reliability of .89 for the current sample.

CHAPTER 3

RESULTS

Prior to testing the research hypotheses, participants' descriptive demographic data and internal consistencies for their responses to the measures were calculated. These data are reported in the Method chapter. In addition, missing responses were replaced with each participant's mean score on that instrument. The distribution for each instrument was also checked for normalcy. Finally, the sample was limited to military/veteran students who served at least one combat deployment post-9/11 as part of OEF/OIF.

TYPICAL PSYCHOLOGICAL AND MILITARY HISTORY PROFILE

The first research question asked about the typical psychosocial profile and military history of a veteran or service member enrolled at Arizona State University who has served at least one combat deployment as part of OEF/OIF. The typical military/veteran student is a married, Caucasian male approximately 30 years old. Currently an undergraduate junior, he is enrolled full-time and aspires to attain a master's degree. His current GPA of 3.38 is stronger than his high school GPA of 3.07. While he is not the first in his family to pursue higher education, his father and mother's highest level of completed education is a high school diploma or GED. His college tuition is most likely covered by the Post-9/11 GI Bill, loans, the Montgomery GI Bill, and/or scholarships, and he reports being "not at all" concerned about financing his college education.

As a serviceman in the U.S. Army, he was deployed once to a combat zone post-9/11 –most likely to Iraq or Afghanistan – for six months. His top three reasons for enlisting were for education benefits, to open opportunities, and to serve our country. While deployed, he did not sustain a traumatic brain injury and was not injured or exposed to any chemical, biological, or radiological warfare agents. However, on deployment, he most likely "received hostile incoming fire from small arms, artillery, rockets, mortars, or bombs," "went on combat patrols or missions," "[was] attacked by terrorists or civilians," "saw people begging for food," "observed homes or villages that had been destroyed," and "saw Americans or allies after they had been severely wounded or disfigured in combat." He did not reenlist and has not received disability through the VA Regional Office. Finally, he does not use recreational drugs but consumes one to two drinks of alcohol two to three times per week.

Although he exhibits symptoms of post-traumatic stress disorder (PTSD), he does not appear to meet diagnostic criteria for the disorder. While his anxiety is considered in the "normal" range, he is experiencing clinically meaningful depression. His level of anger/aggression is slightly below what is average for his peers. He also reports slightly above average social support, feeling that he fits in on campus, and intentions to persist in his degree.

TESTS OF STUDY HYPOTHESES

The first and second hypotheses were derived from the second research question: Are combat and post-battle experiences, PTSD symptoms, depression, anxiety, anger/aggression, social support, cultural congruity, and academic persistence decisions interrelated for student veterans and service members who have served at least one combat deployment as part of OEF/OIF? The first hypothesis, which posited that more combat and post-battle experiences would be positively related to PTSD symptoms, depression, anxiety, and anger/aggression and negatively related to social support, cultural congruity, and academic persistence decisions, was tested with one-tailed zero-order correlations. To help control for a Type I error, the familywise error rate was set at .05 so that each individual correlation had to reach a .0036 significance level (.05/14 = .0036). The results of the correlational analyses presented in Table 7 show that 12 out of the 14 correlations, which ranged from .17 to .53, were statistically significant. The correlations of post-battle experiences with social support and academic persistence decisions tended to be lower and not significant. In general, the results suggest that military/veteran students who endorsed more combat and post-battle experiences tended to report higher PTSD symptoms (r = .53, .45, p < .01), depression (r = .33, .31, p = < .01), anxiety (r =.38, .35, p = < .01), and anger/aggression (r =.28, .23, p = < .01). Those who reported more combat experiences also tended to endorse less social support (r = -.17, p = .003) and cultural congruity (r = -.29, p = < .01), and fewer positive academic persistence

decisions (r = -.21, p = < .01). An inverse relationship was revealed for post-battle experiences and cultural congruity (r = -.28, p = < .01); however, post-battle experiences were not related to social support or academic persistence decisions. It should be noted that combat and post-battle experiences were highly correlated, r = .81, p < .001. Hypothesis one was partially supported by the data.

Table 7

Correlations among Study Variables

	1	2	3	4	5	6	7	8	9
(1) Combat experiences	1	.81*	.53*	.33*	.38*	.28*	-.17*	-.29*	-.21*
(2) Post-battle experiences		1	.45*	.31*	.35*	.23*	-.09	-.28*	-.14
(3) PTSD			1	.77*	.80*	.61*	-.35*	-.55*	-.25*
(4) Depression				1	.75*	.54*	-.35*	-.47*	-.24*
(5) Anxiety					1	.55*	-.32*	-.51*	-.26*
(6) Anger/aggression						1	-.36*	-41*	-.21*
(7) Social support							1	.37*	.43*
(8) Cultural congruity								1	.49*
(9) Academic persistence									1

For hypothesis two, a multiple regression was used to identify the predictors of academic persistence decisions. The predictors were PTSD symptoms, depression, anxiety, anger/aggression, social support, and cultural congruity. When the interrelationships of these predictors were examined, they were all highly intercorrelated (see Table 7). Therefore, they were entered as a cluster to predict academic persistence decisions. Together they accounted for 28.4% of the variance in academic persistence decisions, $F(6, 267) = 19.04$, p < .001. Examination of the beta weights indicated that only two of the predictors, cultural congruity and social support, were significant. Cultural congruity had a

standardized beta weight of .36 (t = 5.58, p <.001), and social support had a standardized beta weight of .30 (t = 5.27, p < .001). Both cultural congruity and social support were positively related to academic persistence decisions (see Table 7).

Hypothesis three posited that military/veteran students who enlisted in the military for education benefits would report more positive academic persistence decisions than would those who enlisted for non-educational reasons. Participants were instructed to provide their reason(s) for enlisting. Responses pertaining to education benefits (e.g., "pay for college," "money for college," "education benefits") were coded as 1 for "yes," and all other provided reasons (e.g., "family tradition," "see the world," "serve my country") were coded as 0 for "no." The one-way analysis of variance (ANOVA) was not significant, $F(1, 250) = 1.74$, p = .19. The 101 military/veteran students who enlisted for education benefits reported only slightly more positive academic persistence decisions (M = 105.53, SD = 14.54) compared to those 151 who enlisted for non-educational reasons (M = 102.89, SD = 16.23).

Even though there were no significant differences between the two groups, two reasons for enlisting – open opportunities and increase life experience/training – potentially confounded the findings since they seem to be reasons to improve one's quality of life. Therefore, two post hoc ANOVAs were conducted. The first ANOVA evaluated the academic persistence decisions of participants who enlisted for education benefits and/or to open opportunities (n =

165) and those who enlisted for other reasons (n = 87). No statistically significant differences were found, $F(1, 250) = 3.25$, $p = .07$. The two group means were 105.22 (SD = 15.06) for the education benefits and/or open opportunities group and 101.52 (SD = 16.39) for other reasons. When those who enlisted for education benefits, to open opportunities, and/or for life experience/training were combined to form one group (n = 168) and then compared to those who enlisted for other reasons (n = 84), the ANOVA again failed to reach statistical significance, $F(1, 250) = 3.51$, $p = .06$. The groups means were 105.24 (SD = 14.97) for combined group and 101.35 (SD = 16.57) for the other reasons group. The ANOVAs approached significance suggesting that no strong conclusions can be drawn regarding the impact of reasons for enlisting on academic persistence decisions.

A one-tailed zero-order correlation was used to test hypothesis four: More use of university-sponsored programs and services will be related to more positive academic persistence decisions. The correlation between the total score for use of programs and services and academic persistence decisions was significant, $r = .14$, $p < .01$. When specific programs and services were examined, the data indicated that approximately two-thirds (n = 206; 63.8%) indicated that they had utilized academic advising services and the Office of Veteran Services (recently renamed Veteran Benefits and Certifications), 191 (59%) library services, and 177 (54.8%) financial aid services. Attending ASU sports events was the next most frequently cited program or service (24.1%, n = 78). Finally, an equal percentage of participants reported utilizing study groups and/or review sessions and the

weight room at the student recreation center (21.1%, *n* = 68). A complete listing of the programs and services utilized is presented in Table 8. An examination of rated quality of ASU programs and services revealed that on a 5-point Likert-type scale (1 = *poor*, 3 = *satisfactory*, and 5 = *excellent*) 104 (33.5%) gave ASU a "satisfactory" rating in proving services for military/veteran students, 98 (32%) selected a rating of 4, and 80 (25.8%) indicated "excellent." Only 28 (9%) participants provided a rating less than satisfactory.

Table 8

Frequency Distribution of ASU Programs and Services Utilization

	N	%
Academic advising services	206	63.8
Financial aid services	177	54.8
Library services	191	59.1
Writing center services	34	10.5
Counseling services	31	9.6
Career Services Center	58	18.0
Subject-area tutoring and/or supplemental courses	53	16.4
Study groups and/or review sessions	68	21.1
Academic success courses	6	1.9
Summer Bridge	7	2.2
Credit by examination	6	1.9
ROTC	10	3.1
Veterans Upward Bound Program	3	0.9
Office of Veteran Services	206	63.8
ASU leadership activities	5	1.5
Online degree programs for military/veteran students	5	1.5
Sorority/fraternity activities	10	3.1
Student clubs	59	18.3
Instructional classes at the student recreation center	8	2.5
Weight room at the student recreation center	68	21.1
ASU intramural sports	18	5.6

ASU intercollegiate sports	3	0.9
Disability Resource Center	12	3.7
Multicultural Student Services	5	1.5
Religious activities on-campus	11	3.4
Campus legal services	4	1.2
ASU sporting events	78	24.1
Assistance from the military advocate/retention coordinator	9	2.8
Academic Success Clusters	3	0.9
Virtual Counseling Center	0	0
ASU adult summer program	0	0
Barrett, The Honors College	4	1.2
TRiO Student Support Services	1	0.3

A one-way multivariate analysis of variance was conducted to test hypothesis five, whether deployment location – active combat zone (Iraq and/or Afghanistan, $n = 173$) versus other deployment areas ($n = 53$) – was related to the combat and psychosocial variables. It was expected that deployment to an active combat zone would be related to more combat and post-battle experiences, PTSD symptoms, depression, anxiety, and anger/aggression and less social support, cultural congruity, and academic persistence decisions. Significant multivariate differences were found between the deployment locations, Wilks's $\Lambda = .69$, $F(9, 216) = 10.87$, $p < .01$, $\eta^2 = .31$. Table 9 presents the group means and standard deviations for the dependent variables. Follow-up analyses of variances (ANOVAs) on each dependent variable were conducted. Using the Bonferroni method, each ANOVA was tested at the .0056 level (.05/9 = .0056). The ANOVAs for combat experiences, $F(1, 224) = 67.22$, $p < .01$, $\eta^2 = .23$, post-battle experiences, $F(1, 224) = 82.08$, $p < .01$, $\eta^2 = .27$, and PTSD symptoms were

significant, $F(1, 224) = 8.37$, $p = .004$, $\eta^2 = .04$. Those who served in an active combat zone reported more combat experiences ($M = 6.87$, $SD = 4.37$), more post-battle experiences ($M = 8.35$, $SD = 1.79$), and more PTSD symptoms ($M = 37.77$, $SD = 16.69$) than those who had not served in an active combat zone (combat experiences $M = 1.74$, $SD = 2.31$; post-battle experiences $M = 1.79$, $SD = 2.96$; and PTSD symptoms $M = 30.34$, $SD = 15.28$).

Table 9

Group Means and Standard Deviations for Dependent Variables

	Iraq/Afghanistan		Other locations	
	M	*SD*	*M*	*SD*
Combat experiences	6.87	4.37	1.74	2.31
Post-battle experiences	8.35	5.00	1.79	2.96
PTSD	37.77	10.69	30.34	15.28
Depression	17.15	16.14	14.93	15.36
Anxiety	37.29	10.04	33.23	8.22
Anger/aggression	91.07	32.47	81.28	26.78
Social support	61.33	18.73	60.47	18.68
Cultural congruity	53.40	14.74	55.82	13.57
Academic persistence	102.82	17.12	106.11	12.19

RECOMMENDED PROGRAMS AND SERVICES

The final research question – what programs or services will participants recommend that Arizona State University implement or sponsor in order to promote their academic success – was analyzed using descriptive statistics and qualitative approaches. From the programs and services that were listed, 71.2% ($n = 230$) of participants indicated that increasing recognition of their prior military experience and, in turn, awarding more college credit for military training and military occupational training would facilitate their academic success. Nearly

40% (*n* = 126) recommended a military/veteran student lounge or designated gathering place, and 38.1% (*n* = 123) indicated that improvements to VA education benefits counseling at ASU would promote their academic success. Approximately one-third also recommended that ASU: 1) Establish a department or center for military/veteran programs (35.0%, *n* = 113); 2) provide professional development for faculty and staff on military/veteran readjustment issues (33.7%, *n* = 109); 3) offer financial counseling to military/veteran students (33.4%, *n* = 108); 4) provide a veteran-specific orientation to introduce new military/veteran students to programs and services available through the university (32.8%, *n* = 106); 5) create an online welcome page easily accessible from ASU's home page for military/veteran students (31.6%, *n* = 102); and 6) improve the re-enrollment process to help military/veteran students restart their academics (31.0%, *n* = 100).

More than 20% endorsed other programs and services to facilitate their academic success, including: 1) improve marketing and outreach strategies to attract veterans and military personnel to the university (29.7%, *n* = 96); 2) establish a student club or organization for military/veteran students (26.6%, *n* = 86); 3) offer vet-to-vet mentoring services (26.9%, *n* = 87); 4) organize military/veteran student volunteers to aid transition of incoming service members and veterans to the university (26.6%, *n* = 85); 5) increase programming for injured/disabled veterans (24.5%, n = 79); 6) offer an online course designed to help military/veteran students identify the skills needed to succeed in the college environment and familiarize them with pertinent campus resources (23.2%, *n* =

75); and 7) offer support groups or peer mentoring programs for military/veteran students (21.4%, *n* = 69). See Table 10 for the complete frequencies.

Table 10

Frequency Distribution of Recommended Programs and Services

Recommended Programs and Services	*N*	%
Provide professional development for faculty and staff on military/veteran readjustment issues	109	33.7
Improve marketing and outreach strategies to attract veterans and military personnel to the university	96	29.7
Increase individual and group counseling services for military/veteran student readjustment issues	62	19.2
Improve VA education benefits counseling at ASU	121	37.5
Offer a military/veteran student lounge or designated gathering place	125	38.7
Establish a department or center for military/veteran programs	113	35.0
Increase availability of tutorial services and academic assistance	53	16.4
Offer support groups or peer mentoring programs for military/veteran students	69	21.4
Establish a student club or organization for military/veteran students	86	26.6
Increase availability of legal assistance	42	13.0
Offer financial counseling to military/veteran students	108	33.4
Increase availability of academic advising	53	16.4
Offer an online course designed to help military/veteran students identify the skills needed to succeed in the college environment and familiarize them with pertinent campus resources	75	23.2
Improve the re-enrollment process to help military/veteran students restart their academics	99	30.7
Organize military/veteran student volunteers to aid transition of incoming service members and veterans to the university	84	26.0
Offer vet-to-vet mentoring services	87	26.9
Create an online welcome page easily accessible from ASU's home page for military/veteran students	101	33.1
Provide a veteran-specific orientation to introduce new military/veteran students to programs and services available through the university	105	32.5
Increase programming for injured/disabled veterans	79	24.5

Increase recognition of prior military experience by awarding more college credit for military training and military occupational training	212	65.6

In addition to programs and services provided on the survey, participants were able in an open-ended format to recommend others that ASU should implement or sponsor. Some of their recommendations included: 1) increase tuition assistance; 2) provide military-specific career counseling (this recommendation came on the heels of the following participant comment: “The toughest part of the transition for me is deciding what to do next. After serving for over 25 years and 2 combat tours, everything else seems mundane and boring. Service members are often required to so many different jobs during their time on active duty, they often are the 'jack of all trades and master of none.' Career counseling to help find their passion and direction is needed.”); 3) suggest degree programs that would correspond with the military/veteran student’s MOS; 4) offer housing for military/veteran students and their families; 5) educate advisors and faculty about campus programming for military/veteran students; 6) offer military/veteran discounts on certain campus services (e.g., bookstore, dining); 7) provide excused absences for VA appointments and reservist training, particularly for courses in which attendance is mandatory or graded; 8) demonstrate greater appreciation for military/veteran students on Veterans Day and other national holidays that promote federal service; 9) reserve seats for late registration for those returning from deployments or training; 10) offer priority registration or the opportunity to register with freshmen and honor students; 11) utilize

military/veteran students as resources to ROTC students; 12) host a medical screening event for military/veteran students to meet with VA providers; 13) provide information about how college "works," how to gain admission, how to enhance study skills, and what is needed to graduate; 14) require a psychology course that addresses post-deployment readjustment issues; 15) offer scholarships to military/veteran students for academic excellence; and 16) provide refresher courses in math and English prior to placement exams.

EXPLORATORY ANALYSES

Post-hoc exploratory analyses were conducted to test whether reasons for enlisting, combat and post-battle experiences, and psychosocial variables were related to academic persistence decisions. A hierarchical regression was conducted with reasons for enlisting entered as step 1, followed by combat and post-battle experiences, and then the psychosocial variables. Reasons for enlisting was coded into educational benefits/open opportunities (coded 1) and other reasons (coded 0). Step one was not significant, $R^2 = .009$, $F(1,319) = 2.99$, $p = .085$. However, when combat and post-battle experiences was added as step two, the $\Delta R^2 = .034$, $F(2, 317) = 5.63$, $p = .004$, was significant. Similarly, when the psychosocial variables were entered as step three, the full model accounted for 26.9% of the variance, $\Delta R^2 = .246$, $F(6, 311) = 17.93$, $p < .001$. Examination of the beta weights for the full model indicated that the most powerful predictors were cultural congruity ($\beta = .38$, $t = 6.53$, $p < .001$) and social support ($\beta = .28$, $t = 5.26$, $p < .001$), which supports the findings for hypothesis two.

CHAPTER 4

DISCUSSION

Nearly one-third of OEF/OIF combat veterans and service members may be struggling with psychological injuries (Elmore, 2009). Military/veteran students, in particular, tend to encounter heightened difficulties, as they are not only adjusting to civilian life but also transitioning to college life. University administrators and staff have been charged to address military/veteran students' transitional needs and to promote their academic success (DiRamio et al., 2008). Although enrollment has increased exponentially with the passing of the Post-9/11 Veterans Educational Assistance Act of 2008 (first time since the original GI Bill of 1944), research on OEF/OIF service members and veterans in higher education remains limited (Cook & Kim, 2009). Little is known about their experiences, needs, and expectations, which may derail program development and other transitional assistance and ultimately jeopardize their academic success (DiRamio et al., 2008).

The current study is the first of its kind to collectively examine OEF/OIF military/veteran students' military history, post-deployment psychosocial functioning, utilization of campus programs and services, academic persistence decisions, and program/service recommendations to foster academic success. Participants consisted of 323 military/veteran students enrolled at Arizona State University (ASU) who served at least one combat deployment following 9/11 – the largest known sample of OEF/OIF military/veteran students. Overall, this

study sought to identify their military experiences, post-deployment psychosocial functioning, and predictors of academic persistence decisions in order to inform campus programming for this emerging population and to promote their academic success.

Participants' decisions to stay in school were related to military and psychosocial variables. PTSD symptoms, depression, anxiety, anger/aggression, social support, and cultural congruity were entered as a cluster to predict academic persistence decisions. However, only perceived cultural congruity (cultural fit or match between military/veteran students' beliefs, behaviors, and values and the perceived norms of the university) and social support (predominately emotional support from family, friends, and significant others) were significant predictors. Both were positively related to persistence decisions. In other words, low cultural congruity and low social support were related to fewer positive decisions about staying in school. Post-hoc analyses confirmed these findings, which also correspond with previous research on racial/ethnic minority undergraduates (Gloria & Robinson Kurpius, 1996, 2001; Gloria, Robinson Kurpius, Hamilton, & Wilson, 1999).

Individuals belonging to two or more cultures may experience cultural incongruity, especially "if the cultures are different in values, beliefs, and expectations for behaviors" (Gloria & Robinson Kurpius, 2001, p. 535). Service members and combat veterans, in particular, may experience social and cognitive dissonance within a civilian campus community (Radford, 2009). Their

worldview typically differs from the typical undergraduate student. Traditional undergraduates are leaving home for the first time, exploring their identities, and choosing a career path (Erikson, 1963, 1968). Military/veteran students, on the other hand, may be married with children and striving to balance work and family obligations with their academic endeavors (Radford, 2009). Risky behaviors of military personnel include being stationed overseas, witnessing atrocities, and putting their lives on the line for the greater mission, whereas at-risk behaviors among the typical undergraduate include binge drinking and unprotected sexual activity (Notre Dame de Namur University Counseling Center, n.d.). College campuses tend to be anti-war and liberal, which conflicts with the values commonly held by service members and veterans (Bluey, 2008). In general, they are also used to receiving clear, direct orders and operating within a very structured environment (Black et al., 2007; "Helping Veterans Adjust to the Classroom," 2011). Last, military/veteran students tend to be older than most typical undergraduates and are more likely to be male.

Despite these well-established differences, Tinto (1975; 1987; 1993) argued that students need a sense of belonging – adequate academic and social integration – to foster their commitment to a particular institution and to securing their degree. University administrators, staff, and mental health providers are charged to develop programs and services for military/veteran students that cultivate their sense of support and belief that they can be themselves as service members/veterans and fit in on campus. According to Danish and Antonides

(2009), counseling psychologists are well-regarded for their awareness and sensitivity to the difficulties experienced by various minority groups as they strive to adapt to a different culture. Danish and Antonides further asserted that a military/veteran student's "level of acculturation as he or she deploys and then returns home, sometimes multiple times, and then leaves the military requires that same level of understanding" (p. 1080). It has been found that some service members and veterans desire to return to the combat environment. While their preference may come as a surprise or seem counterintuitive to most civilians, it likely stems from "the desire to be with those with whom they have become so close and who understand them the best" (Danish & Antonides, 2009, p. 1080). Overall, administrators, staff, and mental health providers must seek to foster a more positive, accepting environment for these military/veteran students.

The findings linking social support and cultural congruity to positive academic persistence decisions become even more meaningful given that more PTSD symptoms, depression, anxiety, and anger/aggression were associated with lower perceived social support and less cultural congruity. These psychosocial variables covary with both social support and cultural congruity that, in turn, were positively related to participants' decisions to remain in school. This indirect relationship between the psychosocial variables and persistence decisions cannot be ignored, especially since the average military/veteran student endorsed clinically meaningful depression. His depression may be explained by low cultural congruity and social support from important people in his life, both of

which are directly related to persistence decisions. Campus outreach on depression seems particularly important given that the average military/veteran student has not sought mental health treatment at a VA Medical Center. Continued efforts to increase his or her sense of belonging and support should complement such outreach.

The average military/veteran student had been deployed for six months to a combat zone as part of OEF/OIF and endorsed more than one-third of the combat and post-battle experiences included on the Deployment Risk and Resilience Inventory, such as "I or members of my unit were attacked by terrorists or civilians," "I went on combat patrols or missions," and "I saw Americans or allies after they had been severely wounded or disfigured in combat." As hypothesized, participants who endorsed more combat and post-battle experiences were found to report higher PTSD symptoms, depression, anxiety, and anger/aggression. Those who endorsed more combat experiences further reported less social support, less cultural congruity (or perceived cultural fit between their beliefs, behaviors, and/or values and the perceived norms of the university, e.g., "I feel that I have to change myself to fit in at school" and "my military and school values often conflict"), and fewer positive academic persistence decisions. Post-battle experiences were also inversely related to cultural congruity but were not associated with social support or persistence decisions. Cultural congruity, however, was positively associated with participants' decisions to remain in school, which suggests that post-battle experiences may indirectly hinder their

persistence decisions through its inverse relationship with cultural congruity. Consistent with the literature, it is not surprising that those exposed to the realities of war (e.g., firefights, raids, witnessing severe injury or death) endorsed higher PTSD symptoms, depression, anxiety, and anger/aggression. Moreover, having had extensive war experiences, they perceive their beliefs, values, and behaviors as different or incongruent from the norms of the university/student body, and in turn some would rather redeploy (Danish & Antonides, 2009).

This study further examined whether deployment locations were related to combat and post-battle experiences, psychosocial functioning, and academic persistence decisions. The expectation that deployment to an active combat zone (i.e., Iraq and/or Afghanistan) would be related to more combat and post-battle experiences, PTSD symptoms, depression, anxiety, and anger/aggression and less social support, cultural congruity, and persistence decisions was partially supported. Participants who served in an active combat zone reported significantly more combat experiences, post-battle experiences, and PTSD symptoms compared to those who served in other deployment areas. This makes sense given that participants who served in an active combat zone saw more of the brutality of war and perhaps, as a result, were experiencing PTSD symptoms consistently cited in the literature. There were no significant differences, however, in depression, anxiety, anger/aggression, social support, cultural congruity, and persistence decisions between those who deployed to an active combat zone(s) and other deployment areas. In contrast, other investigators have found that those

exposed to high combat are more likely to screen not only for PTSD but also for depression and anxiety compared to those exposed to low combat (Hoge et al., 2004). In addition, previous research has demonstrated a strong link between combat experiences, anger/aggression, social isolation, divorce, guilt, and suicidality (Hoge & Castro, 2006). Multiple combat deployments are also associated with a 50% greater prevalence of mental health issues (Meichenbaum, 2009). Thus, it is possible that there was an issue in how "active" combat zone was defined for this study because, while Iraq and Afghanistan have been consistent combat areas since 9/11, other deployment areas may have not been entirely peaceful or inactive. Since these groups may not have been truly discrete, findings should be interpreted with caution. Furthermore, PTSD, depression, anxiety, and anger/aggression were all highly intercorrelated, making any statement just about PTSD suspect since it shared considerable variance with anxiety, depression, and anger/aggression.

The third hypothesis examined the relationship between participants' reasons for enlisting in the military and their intentions to persist in their degree. The typical military/veteran student's top three reasons for enlisting were for education benefits, to open opportunities, and to serve his country. Specifically, it was posited that military/veteran students who enlisted for education benefits would report more positive persistence decisions than would those who enlisted for non-educational reasons. No significant differences were found between these two groups, however. Post hoc analyses were conducted since two reasons for

enlisting – open opportunities and increase life experience/training – were potential confounds. Both seem to be approaches to improving one's quality of life. Even when the education benefits group was expanded to include those who enlisted to open opportunities and/or to increase life experience/training, no significant group differences were detected. Since the probability levels were less than .10, however, one must be cautious in claiming that these groups were the same with respect to persistence decisions. Ideally, the latest GI Bill would not only attract individuals to enlist in the military but also contribute to more positive persistence decisions, enhancing the likelihood of personal economic security and reinforcing the utility of more generous benefits.

Another portion of this study focused on campus programs and/or service utilization. Approximately two-thirds of participants endorsed that they had utilized academic advising services and the Office of Veteran Services (recently renamed to Veteran Benefits and Certifications), which is primarily responsible for "the administration of veterans' educational benefits programs and the necessary enrollment certifications" ("Veteran Benefits and Certifications," n.d., ¶ 1). Library services, financial aid services, and attending ASU sports events were the next most frequently cited programs or services used. Slightly over one-fifth of participants reported utilizing study groups and/or review sessions and the weight room at the Student Recreation Complex. The remaining programs or services, such as student clubs, counseling services, the Career Services Center, online degree programs, and the Veterans Upward Bound program, were endorsed

by less than one-fifth of participants. While extensive student programming is offered at ASU, this study was the first to examine which programs and services are being utilized by military/veteran students. In response to these findings, ASU administrators, staff, and mental health providers should target the programs and services most frequently utilized to bolster military/veteran students' perceived social support, sense of being welcome and fitting in on campus, and ultimately their decisions to remain in school. Based on the well-established relationship between campus involvement and academic persistence (Tinto, 1975; 1987; 1993), consideration should also be given to programs and services least utilized and how they could be tailored for military/veteran students to increase utilization and promote academic success.

In support of Tinto's (1975; 1987; 1993) interactionist model of student attrition, findings further revealed that as participants utilized more campus programs and services, they also tended to endorse more positive persistence decisions. This will hopefully encourage ASU administrators, staff, and mental health providers to continue developing and promoting campus programming for military/veteran students. Moreover, it is recommended that mental health providers assist in helping such students overcome potential barriers (e.g., depression, avoidant coping, poor time management skills) to campus involvement. The majority of participants rated ASU "satisfactory" in providing programs and services for military/veteran students, and it is likely that their rating would only increase if ASU administrators, staff, and mental health

providers respond to their programming recommendations (discussed below). Semi-structured interviews with military/veteran students are also suggested to understand further their ratings and how campus programming could be improved.

As a final part of this study, participants provided extensive campus programming recommendations to promote their academic success as military/veteran students. Certain recommendations are thought to increase their perceived social support and cultural congruity, which were the strongest predictors of academic persistence decisions. For example, over 71% of participants suggested increasing recognition of their prior military experience and, in turn, awarding more college credit for military training and military occupational training. Nearly 40% recommended a military/veteran student lounge or designated gathering place as well as improvements to VA education benefits counseling at ASU. To further facilitate their academic success, more than 30% recommended that ASU provide professional development for faculty and staff on military/veteran readjustment issues, improve the re-enrollment process following deployment or training, offer a veteran-specific orientation for new military/veteran students, and establish a department or center for military/veteran programming. Over a fifth of participants endorsed the following: Establish a student club or organization for military/veteran students, offer vet-to-vet mentoring services and support groups, increase programming for injured/disabled veterans, and offer a course designed to help military/veteran

students identify the skills needed to succeed in the college environment and familiarize them with campus resources. These recommendations are believed to bolster perceived social support and cultural congruity and may also have a positive effect on PTSD symptoms, depression, anxiety, anger/aggression given that those who endorsed greater social support and cultural congruity tended to report lower PTSD symptoms, depression, anxiety, and anger/aggression.

Participants offered additional programming recommendations in their open-ended responses. Further highlighting those that may increase perceived social support and cultural congruity, the following recommendations were put forth: 1) Educate advisors and faculty about campus programming for military/veteran students, 2) provide excused absences for VA appointments and reservist training (particularly when course attendance/participation is mandatory or graded), 3) demonstrate greater appreciation for military/veteran students on Veterans Day and other national holidays that promote federal service, 4) reserve seats for late registering for those returning from deployment or training, 5) utilize military/veteran students as resources to ROTC students, and 6) require a psychology course that addresses post-deployment readjustment issues. Given the nature of these recommendations, military/veteran students would likely experience a heightened sense of support and belonging or acceptance for who they are on campus, which may also have a positive effect on PTSD symptoms, depression, anxiety, and anger/aggression and ultimately increase persistence decisions. Counseling psychologists and other university mental health providers

could serve as consultants to ASU administrators and staff with regards to program development. They could also assist with outreach and facilitate support groups, coupled with individual psychotherapy.

STUDY LIMITATIONS

Although these findings are thought provoking and extend the literature, limitations of this study must be acknowledged. Two limitations pertain to the reliance on self-report methods and the use of single instruments to measure study variables. Since this study sample did not assess all the psychosocial concerns of OEF/OIF veterans studied in the literature, it is possible that participants underreported PTSD symptoms, depression, anxiety, and anger/aggression. According to the National Academy of Public Administration (2008), service members and veterans may be unwilling to report symptoms or seek care because of the stigma associated with mental illness. Therefore, in addition to self-report measures, peer report instruments and/or qualitative interviews should be considered in future studies.

While underreporting is an important consideration, military/veteran students with fewer mental health issues may have been more likely to enroll at ASU, and those experiencing greater distress and impairment may have self-selected not to enroll. Another possible explanation is that military/veteran students experiencing fewer psychosocial problems elected to respond to the online survey, whereas those with greater issues chose not to participate.

While initial psychometric data for the cultural congruity measure used in this study is encouraging (α =.88), validity information is uncertain since it was modified to assess perceived cultural fit between military/veteran students' beliefs, behaviors, and values and the norms of the university. The original scale was validated on racial and ethnic minority students at a predominately White university and then revalidated with Chicano/Chicana undergraduates at the same institution (Gloria & Robinson Kurpius, 1996). Thus, the current modified measure should be validated on military/veteran students in future research.

Another limitation pertains to the recommended campus programs and services that participants endorsed from the provided listing and/or generated in the open-response field. They were asked to specify programs and/or services that ASU should implement or sponsor in order to foster their academic success as a military/veteran student. However, with cross-sectional methodology, it was impossible to examine whether their recommendations actually contributed to more positive persistence decisions. This is particularly important given the time that is required to plan, develop, and implement new programming. Coding errors may also exist in how participants' reasons for enlisting in the military were categorized. The "open opportunities" category, for example, could have been further specified for those who enlisted to expand career options, to "get out of small hometown," or to increase independence ("to make my own life"). Similarly, as previously mentioned, it is possible that there was an issue in how "active" combat zone was defined for this study. While Iraq and Afghanistan have

been consistent combat areas since 9/11, other deployment areas may have not been entirely peaceful or inactive, which suggests that the groups were not truly discrete. Thus, these findings should be interpreted with caution. Finally, study findings should be interpreted only with respect to military/veteran students enrolled at ASU who were registered for military benefits and served at least one combat deployment as part of OEF/OIF.

FUTURE RESEARCH

In the future, researchers might consider employing longitudinal methods to examine actual academic persistence beyond academic persistence decisions (one's intention to persist in his or her degree). Future researchers are also encouraged to investigate similar hypotheses with military/veteran students at other colleges and universities. Moreover, further consideration should be given to student veterans who have served in other eras or conflicts. Research should also investigate which campus programs/services (e.g., counseling services, Veterans Upward Bound Program, academic advising services) utilized by military/veteran students promote their academic success and what they find useful about them. The current study examined only the relationship between total utilization of programs/services and persistence decisions. In addition, the average military/veteran student reported that consuming one to two alcoholic drinks two to three times per week. Since the survey did not assess whether participants' alcohol (or drug) consumption produces distress or impairment or whether substance use was a coping mechanism, qualitative interviews may shed

additional light on this finding, such as the need for on-campus substance abuse programming for military/veteran students. It is important to note that frequency of alcohol intake has been found to have a negative impact on student academic performance and overall educational attainment (Pritchard & Wilson, 2003). In addition, given the aforementioned expansion projects at ASU for military/veteran students, follow-up studies are encouraged to investigate the impact of new programming on their perceived social support, cultural congruity, depression, and academic persistence decisions. Similarly, if ASU implements any of the programs or services recommended by participants to foster their academic success, follow-up studies should be conducted to determine if utilization of these programs/services is related to academic persistence.

CONCLUSIONS AND IMPLICATIONS

Despite the aforementioned limitations and need for additional research, this study makes a significant contribution to the literature on military/veteran students who served one or more combat deployments as part of OEF/OIF. For the first time, the voices of 323 military/veteran students were captured to broaden our understanding of their post-deployment psychosocial functioning and the military and psychosocial variables that contribute to their academic persistence decisions. Allowing them to play a more active role in their transition to college, participants also identified campus programs and services they utilize and provided programming recommendations to promote their academic success.

With the passing of the Post-9/11 GI Bill, ASU has one of the largest student veteran populations in the country (Keeler, 2011b).

The findings for this study have important implications for counseling psychologists and other university mental health providers working with military/veteran students. They could serve as consultants to university administrators and staff with regards to program development and assist with outreach. Particular emphasis should be placed on bolstering military/veteran students' sense of social support and cultural congruity, both of which were found to be the strongest predictors of academic persistence decisions. Counseling psychologists and other mental health providers could also facilitate veteran readjustment support groups and provide individual or group therapy for PTSD, depression, anxiety, anger/aggression, and substance abuse, among other presenting issues. Ideally, mental health professionals at ASU would receive support from the university to attend training seminars on evidence-based practices (e.g., Cognitive Processing Therapy) and space would be made available within the newly opened Pat Tillman Veterans Center, allowing military/veteran students to gather in a familiar, supportive environment without having to go elsewhere on campus.

Counseling psychologists and other mental health providers are also encouraged to create professional development seminars for university faculty and staff on military/veteran student readjustment issues and how to foster their academic success (e.g., accommodate special needs such as sitting away from

windows or near the exit, refrain from derogatory comments about war or military efforts that could alienate these students, inform them in advance before making sudden environmental changes such as shutting off the overhead lights). Additionally, during these seminars, providers could disseminate information outlining campus programming relevant to military/veteran students. Over one-fifth of participants recommended that a student club or organization for military/veteran students be established. While ASU has a campus veterans club, one participant emphasized that it needs more support from ASU. This illustrates the importance of clarifying available programming, including location since ASU has four physical campuses across Metropolitan Phoenix, for those (e.g., faculty, advisors) who regularly interact with military/veteran students. Finally, counseling psychologists and other mental health providers could bring their expertise on readjustment issues, career development, and academic persistence to ASU's veteran specific introductory course, "Student Success for Veterans." The objective of the course is to "forge positive relationships among a small network of veterans for the common purpose of academic success, university integration, resource management, and transitional support" ("Veteran Student Success Course," n.d., ¶ 1). Over one-fifth of participants suggested a course of this nature.

It is encouraging that the typical military/veteran student enrolled at ASU reported slightly above average social support, cultural congruity, and intentions to persist in his degree. ASU has also been named one of the top 30 "Best for

Vets: Colleges 2010" by Military Times Edge magazine and a "Military Friendly School" by GI Job magazine, which "honors the top 15 percent of colleges, universities, and trade schools that are doing the most to embrace America's veterans as students" (Keeler, 2009, ¶ 1; 2011a). In addition, ASU was recently selected as one of the first eight institutions to be a part of the VA's pilot program, VetSuccess on Campus, which supports two VA staff, including a full-time vocational rehabilitation counselor and part-time Vet Center outreach coordinator (Keeler, 2011a), and seeks to assist military/veteran students with vocational testing, career counseling, and readjustment counseling. Above all, to promote academic success, it is imperative that university administrators, staff, and mental health providers strive to cultivate a strong sense of community or social support among military/veteran students and the belief that they can be themselves as service members/veterans and fit in on campus.

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APPENDIX A

RECRUITMENT EMAIL

Dear Veteran:

You are receiving this email on behalf of Dana Weber, M.Ed., a doctoral student in Counseling Psychology in the School of Letters and Sciences at Arizona State University. Under the direction of Professors Sharon Robinson Kurpius and Nicole Roberts, Ms. Weber is conducting a research study on "military/veteran students' academic persistence and readjustment experience following deployment(s)."

If you are interested in voluntarily participating in Ms. Weber's one-time, anonymous survey, please access the survey at http://studentvet.questionpro.com for further information concerning the survey's eligibility requirements, instructions, and opportunity to win a $25.00 gift card.

Please direct any survey questions to Dana.Weber@asu.edu. Meanwhile, thank you for considering participation.

APPENDIX B

COVER LETTER

STUDY TITLE: Academic Success and Well-Being Following OEF/OIF

Deployment

Date: 10-1-2010

Dear Participant:

I am a counseling psychology doctoral candidate under the direction of Professors Sharon Robinson Kurpius and Nicole Roberts in the School of Letters and Sciences at Arizona State University.

I am conducting a research study on military/veteran students' academic persistence and readjustment experience following deployment(s). I am inviting your participation, which will involve filling out a one-time, short, and anonymous survey. The online survey should only take 15-20 minutes to complete.

Your participation in this study is voluntary. You can skip questions if you wish. If you choose not to participate or to withdraw from the study at any time, there will be no penalty. Eligible participants must have been deployed at least once to a combat zone as part of Operation Enduring Freedom (OEF) and/or Operation Iraqi Freedom (OIF). You also must be 18 or older to participate in this study.

Your responses to the survey will be used to better understand military/veteran students' readjustment experience following OEF/OIF deployment(s) and will provide valuable information that may ultimately help improve the quality of military/veteran student services offered at ASU. There are no foreseeable risks or discomforts to your participation. No identifying information will be requested; your responses will be completely anonymous. Upon completion of the survey, an e-mail address will be provided for you to submit a message (including your first and last name and ASU email address) to be considered for $25 drawings. Your name and email address will never be associated with your survey responses. In addition, one of your course instructors may offer extra credit if you complete the online survey. You need to print and present the last page of the survey to your instructor in order to receive extra credit. All hard copies of survey data will be maintained in a locked office, and only the principal investigator and co-investigators will have access to the data. The results of this study may be used in reports, presentations, or publications, but your name will not be known.

If you have any questions concerning the research study, please contact the research team at Dana.Weber@asu.edu, Sharon.Kurpius@asu.edu, or

Nicole.A.Roberts@asu.edu. If you have any questions about your rights as a participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board, through the ASU Office of Research Integrity and Assurance, at (480) 965-6788.

Completion of the online survey will be considered your consent to participate.

Sincerely,

Dana Weber, M.Ed.
Counseling Psychology
School of Letters and Sciences
Arizona State University
PO Box 870811
Tempe AZ 85287-0811

APPENDIX C

STUDY SURVEY

DEMOGRAPHIC QUESTIONNAIRE
Background Information

1. Sex
    1. Male
    2. Female

2. Age in years (e.g., 23)

3. Racial/ethnic background
    1. African American/Black
    2. Asian American/Pacific Islander
    3. European American/Caucasian/White
    4. Hispanic American/Latino
    5. Native American/Alaskan Native
    6. Multiethnic (please specify)

4. Current relationship status
    1. Single, never married
    2. Single, no longer married
    3. In a relationship, not living together
    4. In a relationship, living together
    5. Married
    6. Separated
    7. Widowed

5. Current residence
    1. Off campus alone
    2. Off campus with roommate(s)
    3. Off campus with family
    4. Off campus with significant other/partner
    5. On campus

6. Year in college
    1. Undergraduate Freshman
    2. Undergraduate Sophomore
    3. Undergraduate Junior
    4. Undergraduate Senior
    5. Graduate Student

7. Current enrollment status
    1. Full-time
    2. Part-time

8. Have you declared your major?
    1. Yes
    2. No

9. What is the highest degree you intend to obtain?
    1. Less than a bachelor's degree
    2. Bachelor's degree
    3. Masters degree
    4. Professional degree or doctorate

10. Do you have intentions to do one of the following?
    1. Transfer to another college before graduating
    2. Drop out temporarily
    3. Drop out permanently
    4. None of the above

11. Are you the first one in your family to pursue higher education?
    1. Yes
    2. No

12. Please specify how you cover your college tuition using percentage points that total 100, e.g., Other employment (not work study) = 40 and Scholarships = 60.

	Percentage (e.g., 40%)
Post 9/11 GI Bill (Chapter 33)	
Montgomery GI Bill (Chapter 30)	
Montgomery G.I. Bill – Selected Reserve (Chapter 1606)	
Reserve Educational Assistance Program (Chapter 1607)	
Vocational Rehabilitation (Chapter 31)	
Yellow Ribbon Program	
Work study program	
Other employment (not work study)	
Loans	
Scholarships	
Savings	
Parental assistance	
Significant other/partner working	
Other	

13. How concerned are you have about financing your college education?

Not at all		Somewhat		A great deal
❑	❑	❑	❑	❑

14. What is your mother's (mother figure) highest level of completed education?
    1. Some grade school
    2. Some high school
    3. High school diploma or GED
    4. Some college
    5. Associates degree
    6. Bachelors degree
    7. Some postgraduate college
    8. Masters degree
    9. Professional degree (M.D., Ph.D., J.D.)

15. What is your father's (father figure) highest level of completed education?
    1. Some grade school
    2. Some high school
    3. High school diploma or GED
    4. Some college
    5. Associates degree
    6. Bachelors degree
    7. Some postgraduate college
    8. Masters degree
    9. Professional degree (M.D., Ph.D., J.D.)

16. What is your current GPA (e.g., 3.25)?

17. What was your high school GPA?

18. What was your SAT composite score or your ACT score? If you did not take the SAT or ACT, please skip this question.

DEMOGRAPHIC QUESTIONNAIRE (Continued)
Military Involvement

1. Your current military status
    1. Active duty
    2. National guard
    3. Reserves
    4. Veteran

2. Your service branch
    1. Air Force
    2. Army
    3. Coast Guard
    4. Marine Corps
    5. Navy

3. What was (is) your highest paygrade? (e.g., E3, O2, W2)

4. How many times have you been deployed since September 11, 2001?

5. Please specify the location and length of your deployments.

	Location of deployment (country)	Length of deployment (in months)
Deployment 1	❑	❑
Deployment 2	❑	❑
Deployment 3	❑	❑
Deployment 4	❑	❑
Deployment 5	❑	❑
Deployment 6	❑	❑
Deployment 7	❑	❑

6. What was your occupational specialty during each deployment (i.e., MOS/AOC, NEC/NOBC, or AFSC)?

	Occupational Specialty

Deployment 1	
Deployment 2	
Deployment 3	
Deployment 4	
Deployment 5	
Deployment 6	
Deployment 7	

7. Were you wounded, injured, assaulted, or otherwise hurt during your deployment(s)?
    1. Yes
    2. No

8. Did you sustain a Traumatic Brain Injury (TBI) while deployed?
    1. Yes
    2. No

9. Were you exposed to any chemical, biological, or radiological warfare agents during your deployment(s)?
    1. Yes
    2. No

10. How often do you have a drink containing alcohol?
    1. Never
    2. Monthly or less
    3. 2 to 4 times a month
    4. 2 to 3 times a week
    5. 4 or more times a week

11. How many drinks containing alcohol do you have on a typical day when you are drinking? (1 drink = 12 oz. beer, 4-6 oz. wine, 12 oz. cooler, or a shot of liquor)?
    1. 1 or 2
    2. 3 or 4
    3. 5 or 6
    4. 7, 8, or 9
    5. 10 or more
    6. Not applicable; I never drink

12. Do you use recreational drugs (e.g., marijuana)?
    1. Yes
    2. No

13. Individuals join the military for a variety of reasons. Please specify why you

decided to enlist below.

14. Have you re-enlisted in the military?
    1. Yes
    2. No

15. Have you sought medical or mental health treatment at a VA Medical Center?
    1. Yes, medical treatment
    2. Yes, mental health treatment
    3. Yes, both medical and mental health treatment
    4. No

16. Do you receive disability through the VA Regional Office?
    1. Yes for a medical issue(s)
    2. Yes for a mental health issue(s)
    3. Yes for both a medical and mental health issue(s)
    4. Not at this time, but I recently applied; I am awaiting notification
    5. No

DEMOGRAPHIC QUESTIONNAIRE (Continued)
University Programs and Services

1. Why did you choose to attend Arizona State University (ASU)?

2. What does ASU offer to its military/veteran students that you believe it should continue to provide?

3. How would you rate ASU in providing services for military/veteran students?

Poor		Satisfactory		Excellent

❑	❑	❑	❑	❑

4. Check the programs and services that you utilize or attend at ASU.

Academic advising services	❑
Financial aid services	❑
Library services	❑
Writing Center services	❑
Counseling services	❑
Career Services Center	❑
Subject-area tutoring and/or supplemental courses	❑
Study groups and/or review sessions	❑
Academic success courses	❑
Summer Bridge	❑
Credit by examination	❑
ROTC	❑
Veterans Upward Bound Program	❑
Office of Veteran Services	❑
ASU leadership activities	❑
Online bachelor's and masters degree programs specifically for military students	❑
Sorority/fraternity activities	❑
Student clubs	❑
Instructional classes at the student recreation center	❑
Weight room at the student recreation center	❑
ASU intramural sports	❑
ASU intercollegiate sports	❑
Disability Resource Center	❑
Multicultural Student Services	❑
Religious activities on-campus	❑
Campus legal services	❑
ASU sporting events	❑
Seek information or assistance from the military advocate/student retention coordinator	❑
Academic Success Clusters	❑
Virtual Counseling Center	❑
ASU adult summer program	❑

Barrett, The Honors College	❑
TRiO Student Support Services	❑

5. Please specify any other programs or services that you utilize or attend at ASU.

6. Check the programs or services that you believe ASU should implement or sponsor to foster your academic success as a military/veteran student?

Provide professional development for faculty and staff on military/veteran readjustment issues	❑
Improve marketing and outreach strategies to attract veterans and military personnel to the university	❑
Increase individual and group counseling services for military/veteran student readjustment issues	❑
Improve VA education benefits counseling at ASU	❑
Offer a military/veteran student lounge or designated gathering place	❑
Establish a department or center for military/veteran programs	❑
Increase availability of tutorial services and academic assistance	❑
Offer support groups or peer mentoring programs for military/veteran students	❑
Establish a student club or organization for military/veteran students	❑
Increase availability of legal assistance	❑
Offer financial counseling to military/veteran students	❑
Increase availability of academic advising	❑
Offer an online course designed to help military/veteran students identify the skills needed to succeed in the college environment and familiarize them with pertinent campus resources	❑
Improve the re-enrollment process to help military/veteran students restart their academics	❑
Organize military/veteran student volunteers to aid transition of incoming service members and veterans to the university	❑
Offer vet-to-vet mentoring services	❑
Create an online welcome page easily accessible from ASU's home page for military/veteran students	❑

Provide a veteran-specific orientation to introduce new military/veteran students to programs and services available through the university	❑
Increase programming for injured/disabled veterans	❑
Increase recognition of prior military experience by awarding more college credit for military training and military occupational training	❑

7. Please specify any other programs or services that you believe ASU should implement or sponsor to foster your academic success as a military/veteran student?

PTSD Checklist–Military Version
(title did not appear on participant survey)

Below is a list of problems and complaints that veterans sometimes have in response to stressful military experiences. Please read each one carefully, then 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 memories, thoughts, or images of a stressful military experience?	❑	❑	❑	❑	❑
2. Repeated, disturbing dreams of a stressful military experience?	❑	❑	❑	❑	❑
3. Suddenly acting or feeling as if a stressful military experience were happening again (as if you were reliving it)?	❑	❑	❑	❑	❑
4. Feeling very upset when something reminded you of a stressful military	❑	❑	❑	❑	❑

experience?					
5. Having physical reactions (e.g., heart pounding, trouble breathing, sweating) when something reminded you of a stressful military experience?	❑	❑	❑	❑	❑
6. Avoiding thinking about or talking about a stressful military experience or avoiding having feeling related to it?	❑	❑	❑	❑	❑
7. Avoiding activities or situations because they reminded you of a stressful military experience?	❑	❑	❑	❑	❑
8. Trouble remembering important parts of a stressful military experience?	❑	❑	❑	❑	❑
9. Loss of interest in activities that you used to enjoy?	❑	❑	❑	❑	❑
10. Feeling distant or cut off from other people?	❑	❑	❑	❑	❑
11. Feeling emotionally numb or being unable to have loving feelings for those close to you?	❑	❑	❑	❑	❑
12. Feeling as if your future will somehow be cut short?	❑	❑	❑	❑	❑
13. Trouble falling or staying asleep?	❑	❑	❑	❑	❑
14. Feeling irritable or having angry outburst?	❑	❑	❑	❑	❑
15. Having difficulty concentrating?	❑	❑	❑	❑	❑

16. Being “super alert” or watchful or on guard?	❑	❑	❑	❑	❑
17. Feeling jumpy or easily startled?	❑	❑	❑	❑	❑

Center for Epidemiologic Studies Depression Scale–Revised
(title did not appear on participant survey)

Below is a list of the ways you might have felt or behaved. Please indicate how often you have felt this way in the past week or so.

	Not at all or less than 1 day	1 to 2 days	3 to 4 days	5 to 7 days	Nearly every day for 2 weeks
1. My appetite was poor.	❑	❑	❑	❑	❑
2. I could not shake off the blues.	❑	❑	❑	❑	❑
3. I had trouble keeping my mind on what I was doing.	❑	❑	❑	❑	❑
4. I felt depressed.	❑	❑	❑	❑	❑
5. My sleep was restless.	❑	❑	❑	❑	❑
6. I felt sad.	❑	❑	❑	❑	❑
7. I could not get going.	❑	❑	❑	❑	❑
8. Nothing made me happy.	❑	❑	❑	❑	❑
9. I felt like a bad person.	❑	❑	❑	❑	❑
10. I lost interest in my usual activities.	❑	❑	❑	❑	❑
11. I slept much more than usual.	❑	❑	❑	❑	❑
12. I felt like I was moving too slowly.	❑	❑	❑	❑	❑
13. I felt fidgety.	❑	❑	❑	❑	❑
14. I wished I were dead.	❑	❑	❑	❑	❑
15. I wanted to hurt myself.	❑	❑	❑	❑	❑
16. I was tired all the	❑	❑	❑	❑	❑

time.					
17. I did not like myself.	❑	❑	❑	❑	❑
18. I lost a lot of weight without trying to.	❑	❑	❑	❑	❑
19. I had a lot of trouble getting to sleep.	❑	❑	❑	❑	❑
20. I could not focus on the important things.	❑	❑	❑	❑	❑

Self-Rating Anxiety Scale
(title did not appear on participant survey)

Listed below are 20 statements. Please read each one carefully and decide how much of the statement describes how you have been feeling during the past week. Decide whether the statement applies to you none or a little of the time, some of the time, a good part of the time, or most or all of the time. Mark the appropriate column for each statement.

	None or a little of the time	Some of the time	A good part of the time	Most or all of the time
1. I feel more nervous and anxious than usual.	❑	❑	❑	❑
2. I feel afraid for no reason at all.	❑	❑	❑	❑
3. I get upset easily or feel panicky.	❑	❑	❑	❑
4. I feel like I'm falling apart and going to pieces.	❑	❑	❑	❑
5. I feel that everything is all right and nothing bad will happen.	❑	❑	❑	❑
6. My arms and legs shake and tremble.	❑	❑	❑	❑
7. I am bothered by headaches, neck pain, and/or back pain.	❑	❑	❑	❑
8. I feel weak and get tired easily.	❑	❑	❑	❑
9. I feel calm and can sit still easily.	❑	❑	❑	❑
10. I can feel my heart beating	❑	❑	❑	❑

fast.				
11. I am bothered by dizzy spells.	❑	❑	❑	❑
12. I have fainting spells or feel like it.	❑	❑	❑	❑
13. I can breathe in and out easily.	❑	❑	❑	❑
14. I get feelings of numbness and tingling in my fingers & toes.	❑	❑	❑	❑
15. I am bothered by stomach aches or indigestion.	❑	❑	❑	❑
16. I have to empty my bladder often.	❑	❑	❑	❑
17. My hands are usually dry and warm.	❑	❑	❑	❑
18. My face gets hot and blushes.	❑	❑	❑	❑
19. I fall asleep easily and get a good night's rest.	❑	❑	❑	❑
20. I have nightmares.	❑	❑	❑	❑

Aggression Questionnaire
(title did not appear on participant survey)

Please rate each of the following items in terms of how characteristic they are of you.

	Extremely uncharacteristic of me						Extremely characteristic of me
1. Once in a while I can't control the urge to strike another person.	❑	❑	❑	❑	❑	❑	❑
2. Given enough provocation, I may hit another person.	❑	❑	❑	❑	❑	❑	❑
3. If somebody hits me, I hit back.	❑	❑	❑	❑	❑	❑	❑
4. I get into fights a little more than the average	❑	❑	❑	❑	❑	❑	❑

person.							
5. If I have to resort to violence to protect my rights, I will.	❑	❑	❑	❑	❑	❑	❑
6. There are people who pushed me so far that we came to blows.	❑	❑	❑	❑	❑	❑	❑
7. I can think of no good reason for ever hitting a person.	❑	❑	❑	❑	❑	❑	❑
8. I have threatened people I know.	❑	❑	❑	❑	❑	❑	❑
9. I have become so mad that I have broken things.	❑	❑	❑	❑	❑	❑	❑
10. I tell my friends openly when I disagree with them.	❑	❑	❑	❑	❑	❑	❑
11. I often find myself disagreeing with people.	❑	❑	❑	❑	❑	❑	❑
12. When people annoy me, I may tell them what I think of them.	❑	❑	❑	❑	❑	❑	❑
13. I can’t help getting into arguments when people disagree with me.	❑	❑	❑	❑	❑	❑	❑
14. My friends say that I’m somewhat argumentative.	❑	❑	❑	❑	❑	❑	❑
15. I flare up quickly but get over it quickly.	❑	❑	❑	❑	❑	❑	❑
16. When frustrated, I let my irritation show.	❑	❑	❑	❑	❑	❑	❑
17. I sometimes feel like a powder keg ready to explode.	❑	❑	❑	❑	❑	❑	❑
18. I am an even-tempered person.	❑	❑	❑	❑	❑	❑	❑
19. Some of my friends think I’m a hothead.	❑	❑	❑	❑	❑	❑	❑
20. Sometimes I fly off the handle for no good reason.	❑	❑	❑	❑	❑	❑	❑
21. I have trouble controlling my temper.	❑	❑	❑	❑	❑	❑	❑

22. I am sometimes eaten up with jealousy.	❑	❑	❑	❑	❑	❑	❑
23. At times I feel I have gotten a raw deal out of life.	❑	❑	❑	❑	❑	❑	❑
24. Other people always seem to get the breaks.	❑	❑	❑	❑	❑	❑	❑
25. I wonder why sometimes I feel so bitter about things.	❑	❑	❑	❑	❑	❑	❑
26. I know that friends talk about me behind my back.	❑	❑	❑	❑	❑	❑	❑
27. I am suspicious of overly friendly strangers.	❑	❑	❑	❑	❑	❑	❑
28. I sometimes feel that people are laughing at me behind me back.	❑	❑	❑	❑	❑	❑	❑
29. When people are especially nice, I wonder what they want.	❑	❑	❑	❑	❑	❑	❑

Multidimensional Scale of Perceived Social Support
(title did not appear on participant survey)

We are interested in how you feel about the following statements. Read each statement carefully, and then indicate how you feel about each statement.

	Very Strongly Disagree						Very Strongly Agree
1. There is a special person who is around when I am in need.	❑	❑	❑	❑	❑	❑	❑
2. There is a special person with whom I can share my joys and sorrows.	❑	❑	❑	❑	❑	❑	❑
3. My family really tries to help me.	❑	❑	❑	❑	❑	❑	❑
4. I get the emotional help and support I need	❑	❑	❑	❑	❑	❑	❑

from my family.							
5. I have a special person who is a real source of comfort to me.	❑	❑	❑	❑	❑	❑	❑
6. My friends really try to help me.	❑	❑	❑	❑	❑	❑	❑
7. I can count on my friends when things go wrong.	❑	❑	❑	❑	❑	❑	❑
8. I can talk about my problems with my family.	❑	❑	❑	❑	❑	❑	❑
9. I have friends with whom I can share my joys and sorrows.	❑	❑	❑	❑	❑	❑	❑
10. There is a special person in my life who cares about my feelings.	❑	❑	❑	❑	❑	❑	❑
11. My family is willing to help me make decisions.	❑	❑	❑	❑	❑	❑	❑
12. I can talk about my problems with my friends.	❑	❑	❑	❑	❑	❑	❑

Deployment Risk and Resiliency Inventory
Combat Experiences
(title did not appear on participant survey)

The statements below are about combat experiences during deployment. Please select "Yes" if the statement is true or "No" if the statement is false.

While deployed:	Yes	No
1. I went on combat patrols or missions.	❑	❑
2. I or members of my unit encountered land or water mines and/or booby traps.	❑	❑
3. I or members of my unit received hostile incoming fire from small arms, artillery, rockets, mortars, or bombs.	❑	❑
4. I or members of my unit received friendly incoming fire from small arms, artillery, rockets, mortars, or bombs.	❑	❑

5. I was in a vehicle (for example, a truck, tank, APC, helicopter, plane, or boat) that was under fire.	❑	❑
6. I or members of my unit were attacked by terrorists or civilians.	❑	❑
7. I was part of a land or naval artillery unit that fired on the enemy.	❑	❑
8. I was part of an assault on entrenched or fortified positions.	❑	❑
9. I took part in an invasion that involved naval and/or land forces.	❑	❑
10. My unit engaged in battle in which it suffered casualties.	❑	❑
11. I personally witnessed someone from my unit or an ally unit being seriously wounded or killed.	❑	❑
12. I personally witnessed soldiers from enemy troops being seriously wounded or killed.	❑	❑
13. I was wounded or injured in combat.	❑	❑
14. I fired my weapon at the enemy.	❑	❑
15. I killed or think I killed someone in combat.	❑	❑

Deployment Risk and Resiliency Inventory
Aftermath of Battle / Post-Battle Experiences
(title did not appear on participant survey)

Next are statements about your experiences after battle. Please indicate if you ever experienced the following events anytime while you were deployed by selecting either "Yes" or "No."

	Yes	No
1. I observed homes or villages that had been destroyed.	❑	❑
2. I saw refugees who had lost their homes and belongings as a result of battle.	❑	❑
3. I saw people begging for food.	❑	❑
4. I or my unit took prisoners of war.	❑	❑
5. I interacted with enemy soldiers who were taken as prisoners of war.	❑	❑
6. I was exposed to the sight, sound, or smell of animals that had been wounded or killed from war-related causes.	❑	❑
7. I took care of injured or dying people.	❑	❑

8. I was involved in removing dead bodies after battle.	❑	❑
9. I was exposed to the sight, sound, or smell of dying men and women.	❑	❑
10. I saw enemy soldiers after they had been severely wounded or disfigured in combat.	❑	❑
11. I saw the bodies of dead enemy soldiers.	❑	❑
12. I saw civilians after they had been severely wounded or disfigured.	❑	❑
13. I saw the bodies of dead civilians.	❑	❑
14. I saw Americans or allies after they had been severely wounded or disfigured in combat.	❑	❑
15. I saw the bodies of dead Americans or allies.	❑	❑

Cultural Congruity Scale–Military
(title did not appear on participant survey)

For each of the following items, indicate the extent to which you have experienced the feeling or situation at school.

	Not at all						A great deal
1. I feel that I have to change myself to fit in at school.	❑	❑	❑	❑	❑	❑	❑
2. I try not to show the parts of me that are "military" based.	❑	❑	❑	❑	❑	❑	❑
3. I often feel like a chameleon, having to change myself depending on the military history of the person I am with at school.	❑	❑	❑	❑	❑	❑	❑
4. I feel that my military background is incompatible with other students.	❑	❑	❑	❑	❑	❑	❑
5. I can talk to my peers at school about my military experiences.	❑	❑	❑	❑	❑	❑	❑
6. I feel I am leaving my military values behind by going to college.	❑	❑	❑	❑	❑	❑	❑

7. My military values are in conflict with what is expected at school.	❑	❑	❑	❑	❑	❑	❑
8. I feel that my language and/or appearance make it hard for me to fit in with other students.	❑	❑	❑	❑	❑	❑	❑
9. My military and school values often conflict.	❑	❑	❑	❑	❑	❑	❑
10. I feel accepted at school as a veteran or service member.	❑	❑	❑	❑	❑	❑	❑
11. As a service member or veteran, I feel as if I belong on this campus.	❑	❑	❑	❑	❑	❑	❑

Persistence/Voluntary Dropout Decisions Scale
(title did not appear on participant survey)

Please indicate the extent to which you agree with each statement.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. Since coming to this university I have developed close personal relationships with other students.	❑	❑	❑	❑	❑
2. The student friendships I have developed at this university have been personally satisfying.	❑	❑	❑	❑	❑
3. My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values.	❑	❑	❑	❑	❑
4. My interpersonal relationships with other students have had a positive influence on my intellectual growth and interests in ideas.	❑	❑	❑	❑	❑

5. It has been difficult for me to meet and make friends with other students.	❑	❑	❑	❑	❑
6. Few of the students I know would be willing to listen to me and help me if I had personal problem.	❑	❑	❑	❑	❑
7. Most students at this university have values and attitudes different from mine.	❑	❑	❑	❑	❑
8. My classroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes.	❑	❑	❑	❑	❑
9. My non-classroom interactions with faculty have had a positive influence on my intellectual growth and interest in ideas.	❑	❑	❑	❑	❑
10. My non-classroom interactions with faculty have had a positive influence on my career goals and aspirations.	❑	❑	❑	❑	❑
11. Since coming to this university I have developed a close, personal relationship with at least one faculty member.	❑	❑	❑	❑	❑
12. I am satisfied with the opportunities to meet/interact informally with faculty.	❑	❑	❑	❑	❑
13. Few of the faculty members I have had contact with are generally interested in students.	❑	❑	❑	❑	❑
14. Few of the faculty members I have had contact with are generally outstanding or superior	❑	❑	❑	❑	❑

teachers.					
15. Few of the faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance to students.	❑	❑	❑	❑	❑
16. Most of the faculty I have had contact with are interested in helping students grow in more than just academic areas.	❑	❑	❑	❑	❑
17. Most faculty members I have had contact with are genuinely interested in teaching.	❑	❑	❑	❑	❑
18. I am satisfied with the extent of my intellectual development since enrolling in the university.	❑	❑	❑	❑	❑
19. My academic experience has had a positive influence on my intellectual growth and interests in ideas.	❑	❑	❑	❑	❑
20. I am satisfied with my academic experiences at this university.	❑	❑	❑	❑	❑
21. Few of my courses this year have been intellectually stimulating.	❑	❑	❑	❑	❑
22. My interest in ideas and intellectual matters has increased since coming to this university.	❑	❑	❑	❑	❑
23. I am more likely to attend a cultural event (for example, a concert, lecture, or art show) now than I was before coming to this university.	❑	❑	❑	❑	❑
24. I have performed academically as well as I anticipated I would.	❑	❑	❑	❑	❑

25. It is important for me to graduate from college.	❑	❑	❑	❑	❑
26. I am confident that I made the right decision in choosing to attend this university.	❑	❑	❑	❑	❑
27. It is likely that I will register at this university next fall.	❑	❑	❑	❑	❑
28. It is not important to me to graduate from this university.	❑	❑	❑	❑	❑
29. I have no idea at all what I want to major in.	❑	❑	❑	❑	❑
30. Getting good grades is not important to me.	❑	❑	❑	❑	❑

Thank you for completing the survey. Your participation provides valuable information that may help improve the quality of military/veteran student services offered at ASU. We greatly appreciate your contribution and encourage you to contact Dana Weber at Dana.Weber@asu.edu if you have any questions or concerns.

If you are taking this survey for extra credit, please read the following message carefully.

Before clicking continue, PRINT THIS PAGE.

Handwrite your name here:

_____

Your code is: Fall 2010 Student Vet

You may then submit it to your instructor for extra credit.

If you would like to enter your name into the raffle, which includes $25 drawings, please send an email to azstudentvet@gmail.com. In the subject line of the email, enter the following code: d79e237. In the body of your email, please provide your first and last name and your ASU email address. An email will be sent to your ASU email address if your name was selected in the raffle.

Please click on “Continue” to submit the survey.

Thank you for your participation in our study! Your participation provides valuable information that may help improve the quality of military/veteran student services offered at ASU. We greatly appreciate your contribution and encourage you to contact Dana Weber at Dana.Weber@asu.edu if you have any questions or concerns. If you need to speak with a mental health professional, please view the following campus and community resources for assistance (see Appendix D).

APPENDIX D

CAMPUS & COMMUNITY RESOURCES

If you need to speak with a mental health professional, the following campus and community resources may be of use to you:

Campus Services

Clinical Psychology Center - (480) 965-7296
Counseling & Consultation - (480) 965-6146
Counselor Training Center - (480) 965-5067
Employee Assistance Center - (480) 965-2271
Student Health - (480) 965-3346

Community Services

Phoenix VA Health Care System - (602) 277-5551
650 E. Indian School Rd., Phoenix, AZ 85012

Phoenix Vet Center - (602) 640-2981
77 E. Weldon Ave., #100, Phoenix, AZ 85012

Catholic Social Services - (480) 964-8771
430 N. Dobson Rd., Suite 110, Mesa, AZ 85201

EMPACT - (480) 784-1514
1232 E. Broadway Rd., #120, Tempe, AZ 85282

Phoenix Interfaith Counseling - (480) 317-9868
3910 S. Rural Rd., Tempe, AZ 85282

Jewish Family & Children's Services - (602) 256-0528
2033 N. 7th Street, Phoenix, AZ 85006

Crisis Lines

Veteran Crisis Line - (800) 273-TALK (press 1)
Veteran Crisis Online Chat -
http://veteranscrisisline.net/ChatTermsOfService.aspx
Maricopa Crisis Line - (602) 222-9444
EMPACT Crisis Line for ASU students - (480) 921-1006

APPENDIX E

IRB APPROVAL FORM

ASU Knowledge Enterprise Development

Office of Research Integrity and Assurance

To:	Sharon Kurpius EDB
From:	Mark Roosa, Chair Soc Beh IRB
Date:	08/05/2010
Committee Action:	**Exemption Granted**
IRB Action Date:	08/05/2010
IRB Protocol #:	1008005374
Study Title:	U.S. Military and Veteran Students Following OEF/OIF Deployment: Promoting Academic Persistence under the Post-9/11 GI Bill

The above-referenced protocol is considered exempt after review by the Institutional Review Board pursuant to Federal regulations, 45 CFR Part 46.101(b)(2) .

This part of the federal regulations requires that the information be recorded by investigators in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. It is necessary that the information obtained not be such that if disclosed outside the research, it could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.

You should retain a copy of this letter for your records.