CALIFORNIA STATE UNIVERSITY SAN MARCOS

PROJECT SIGNATURE PAGE

PROJECT SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE

MASTER OF SOCIAL WORK

PROJECT TITLE: Outdoor and Adventure-Based Treatment for Veterans

AUTHOR: Katie Carnohan, Brenda Ferro, and Nancy Nguyen

DATE OF SUCCESSFUL DEFENSE: 4/28/2015

THE PROJECT HAS BEEN ACCEPTED BY THE PROJECT COMMITTEE IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF
SOCIAL WORK.

Jacky Thomas, Ph.D.
PROJECT COMMITTEE CHAIR

Jeannine Guarino, LCSW, MSW
PROJECT COMMITTEE MEMBER

Leandro Galaz, MSW, PPS
PROJECT COMMITTEE MEMBER
Outdoor and Adventure-Based Treatment for Veterans

Katie Carnohan
Brenda Ferro
Nancy Nguyen

California State University San Marcos

Committee
Jacky Thomas, Ph.D., Chair
Professor Jeannine Guarino, LCSW, MSW
Professor Leandro Galaz, MSW, PPS
Abstract

California State University San Marcos has a large population of student veterans. With the recent addition of the Veterans’ Center on campus, the school is expanding services to better respond to the unique needs of its former service members. Current treatments for PTSD and other service related ailments have shown promise in their effectiveness, but many barriers exist in accessing such treatments. In this capstone project, service-related problems, treatments, and barriers to treatment are described. Following this, outdoor and adventure-based programs are presented and described as alternative interventions, which address many of these barriers to treatment, allowing veterans to receive effective and needed therapeutic care. This project goes on to describe the efforts of a group of graduating Master of Social Work students to collaborate with Campus Recreation and the Veterans’ center to write a detailed grant template which will be used by Campus Recreation to fund an innovative outdoor therapy program for former service members on the CSUSM campus.

Keywords: veterans, posttraumatic stress disorder, alternative therapies, outdoor therapy, adventure therapy, wilderness therapy, adventure-based therapy, experiential therapy
Acknowledgments

This grant proposal project was supported by Campus Recreation and the Veterans Center at California State University San Marcos. This opportunity is taken to express sincerest gratitude to all members from Campus Recreation and the Veterans Center at California State University San Marcos who have contributed to the working process of this grant proposal. Special thanks to Hugo Lecomte, Director of Campus Recreation for bringing to light the need for additional assistance of student veterans in academic settings.

We would also like to show our gratitude to Assistant Professor Jacky Thomas, Ph.D., LCSW, MSW from the Department of Social Work for your consistent and reliable assistance in the formulation of this grant proposal. Your guidance, support, and compassion did not go unnoticed. In addition, we would also like to thank Professor Leandro Galaz, MSW, PPS for your willingness to be a part of our committee and provide assistance, support, and advice during the process of writing this grant.

Considerable thanks to Dr. Luis Terrazas, MSSW, Ph.D. for returning to California State University San Marcos after your retirement in order to instruct the Capstone Course. Thank you for remaining so readily available to assist your students in their work. Your lifelong dedication to the field of Social Work is all inspiring.

And last but not least, many thanks to those who have taken the time to read this proposal and have decided to provide funding to assist student veterans who are reintegrating back into civilian life all the while receiving higher education. The funds will be utilized to provide student veterans with outdoor adventure therapy free-of-charge.
Outdoor and Adventure-Based Therapy for Veterans

Chapter 1

In the state of California alone there are 1,851,470 military veterans. This includes Gulf War, Vietnam Era, Korean Conflict, World War II, and peacetime veterans (Department of Veterans Affairs, 2014). This number does not even include the large number of veterans returning from Operation Iraqi Freedom and Operation Enduring Freedom. With such an astounding number of veterans in our state, how do we ensure the needs of each of these individuals are being met? The effects of military services are diverse and long-lasting. Without access to effective treatment, these former service members will be facing the negative effects of physical injury, posttraumatic stress disorder, traumatic brain injury, sexual assault trauma, substance use, domestic violence, sleep disorders, and suicidal ideation without the proper help they deserve. Though evidence-based treatments such as Cognitive Processing Therapy, exposure therapy, and Motivational Interviewing are promising interventions, the need for an alternative form of treatment exists. For many veterans, the perceived stigma associated with seeking such forms of therapy may prevent them from doing so (Ewert, 2014). Veterans may experience self-stigma or stigma from other veterans who attribute ailments such as PTSD to personal weakness (Mittal et al., 2013). For these reasons and more, an alternative form of treatment is needed.

Outdoor and adventure-based therapies represent an effective alternative to current treatments. Outdoor adventures help veterans to transition back into civilian life by offering support and increasing levels of well-being (Ryan & Deci, 2001). Research also suggests that such an approach is especially effective in treating veterans diagnosed with posttraumatic stress disorder (Caddick & Smith, 2014; Hyer, Boyd, Scurfield, Smith, & Burke, 1996). In addition,
because outdoor-based therapies do not look like traditional therapy on the surface, stigma is less likely to prevent veterans from seeking such services. Lastly, outdoor and adventure-based therapies do not require any formal diagnosis. This strengths-based approach allows for early intervention in the treatment of former service members (Harper, Norris, & D'astous, 2014). The following literature review examines the negative effects of military service, current treatments, the need for alternative treatments, and the positive outcomes of outdoor and adventure-based therapies.

**Definition of Terms**

*Posttraumatic stress disorder:* PTSD is defined as the exposure to a traumatic event in which a person experiences, witnesses, or is confronted with the threat of death, serious injury, or threat to one’s own physical integrity resulting in intense fear, vulnerability, or horror (Jakovljevic, 2012).

*Traumatic brain injury:* TBI can be a mild, moderate, severe, or penetrating head injury. Each of these is characterized by varying levels of confusion, disorientation, memory loss, and abnormal MRI or CT scans. In addition to these symptoms, penetrating TBI also includes an object having penetrated the dura mater of the brain (Defense and Veterans Brain Injury Center, 2015).

*Adventure-based therapy:* Adventure-based therapy can be defined as a type of experiential learning with several different components that include; wilderness therapy, adventure based-activity therapy, and outdoor experiential therapy (Ewert, McCormick, & Voight, 2001). For the purposes of this capstone, wilderness therapy, adventure based-activity therapy, and outdoor experiential therapy will be referred to collectively as outdoor and adventure-based therapy or adventure therapy for simplicity. Outdoor and adventure-based
therapy includes outdoor activities meant to challenge participants. This often includes problem-solving activities, trust building exercises, and team building courses. Adventure therapy also includes a processing component where the group discusses the experience including how they overcame fear and what they personally gained from participation (Hans, 2001).
Negative Effects of Military Service

Veterans suffer from a plethora of negative effects due to their military service. Those negative effects include physical injury, posttraumatic stress disorder (PTSD), traumatic brain injury, sexual assault trauma, substance use, domestic violence, sleep disorders, and suicide. California has 1,851,470 military veterans (Department of Veterans Affairs, 2014). The amount of veterans will be increasing as many more have served during Operation Iraqi Freedom and Operation Enduring Freedom. This will call for additional support to combat what negative ailments they have endured from their service for the United States.

Physical injury. Injuries caused by explosives have resulted in scores of military personnel with concussive, soft tissue, penetrating, and burn injuries. These highly visible types of injury are the result of explosive sources that include improvised explosive devices (IED), mortar, and rocket propelled grenades. In comparison, during the Vietnam War, head and neck injuries were typically caused by single penetrating wounds (Weaver, Walter, Chard, & Bosch, 2014). Many of these injuries result in permanent changes to physical appearance, disfigurement, and loss of normal functioning. In spite of the extent of these combat related injuries, post-injury survivals for the most recent conflicts are at nearly 90%. This is largely due to improved body armor, medical interventions deployed within field, and efficient medical evacuations. The growing trends of visible injuries coupled with high post-injury survival rates have resulted in a rapidly increasing cohort of military personnel and veterans living with injury-related appearance changes (Weaver et al., 2014).
Injured military personnel are not only suffering the effects of physical hardships due to their injuries, but they also experience psychological distress with countless studies documenting greater rates of posttraumatic stress disorder (PTSD), traumatic brain injuries, and depression for those with combat related injuries. Psychological issues can develop during the course of injury recovery. For example, the longitudinal study of Grieger et al. (2006) found that 78.8% (483/613) of physically injured, U.S. soldiers in the study met criteria for PTSD or depression at 7 months post-injury but had initially screened negative after their first month post-injury. A composite self-report measure of physical problems was a significant predictor of PTSD and depression at both early and later times of post-injury and the findings suggest that psychological symptoms can emerge over time as service members encounter the long-term effects of their injuries (Grieger et al., 2006).

**Posttraumatic stress disorder.** Posttraumatic stress disorder was initially defined as a characteristic pathological condition that follows a psychologically traumatic event that is generally outside the range of usual human experience (Jakovljevic, 2012). The definition of PTSD now includes the exposure to a traumatic event in which a person experiences, witnesses, or is confronted with the threat of death, serious injury, or threat to one’s own physical integrity resulting in intense fear, vulnerability, or horror (Jakovljevic, 2012). The distinctive nature of deployment and combat-related trauma, including lengthy and repeated deployments, a multitude of threats, and chronic exposure to trauma has different psychological implications for military personnel and combat veterans as compared to civilian traumas. Deployment and combat-related PTSD presents a major challenge to military and veteran treatment facilities. The burdens associated with PTSD include considerable human suffering, lost productivity, and disabilities (Yehuda, Vermetten, McFarlane, & Lehrner, 2014).
Traumatic brain injury. More than 2 million service members who have served during Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) have experienced a traumatic brain injury (TBI). Due to the increased use of improvised explosive devices (IEDs), as well as protective equipment and body armor, OEF and OIF veterans are more likely than previous generations to experience and survive a TBI after their deployment (Morissette et al., 2011).

According to the Defense and Brain Injury Center (2015) there are four types of TBI. Those types include mild TBI, moderate TBI, severe TBI, and penetrating TBI. Mild TBI is characterized by the following symptoms; a confused or disoriented state that can last less than 24 hours; loss of consciousness for up to 30 minutes; memory loss lasting less than 24 hours; and structural brain imaging (MRI or CT scan) yielding normal results. Moderate TBI is characterized by the following symptoms; a confused or disoriented state which lasts more than 24 hours; loss of consciousness for more than 30 minutes, but less than 24 hours; memory loss lasting greater than 24 hours but less than seven days; and structural brain imaging yielding normal or abnormal results. Severe TBI is characterized by the following symptoms; a confused or disoriented state which lasts more than 24 hours; loss of consciousness for more than 24 hours; memory loss for more than seven days; and structural brain imaging yielding normal or abnormal results. Penetrating TBI or “open head injury” is characterized as a head injury in which the dura mater, the outer layer of the meninges, is penetrated. Penetrating injuries can be caused by high-velocity projectiles or objects of lower velocity such as knives, or bone fragments from a skull fracture that are driven into the brain. Since 2000 to 2014, there have been 258,816 cases of mild TBI, 25,953 cases of moderate TBI, 3,126 cases of severe TBI, and 4,577 cases of penetrating TBI (Defense and Veterans Brain Injury Center, 2015).
**Sexual assault trauma.** Sexual assault is defined as unwanted physical sexual contact including a range of behaviors ranging from unwanted touching to coercive nonconsensual vaginal, anal, or oral penetration. Coercion may take place with physical force but can also take place with threats of punishment. Threat of receiving a dangerous duty assignment can be a potential punishment. Coercion may also take place with promises of rewards, such as receiving a positive performance evaluation. Since the military is a workplace, unwanted sexual advances, sexual comments, or even the display of pornographic materials, can fall under sexual harassment (Bell, Turchik, & Karpenko, 2014).

According to the Defense Manpower Data Center, Human Resources Strategic Assessment Program (2013) 6.1% of women and 1.2% of men had experienced a completed or an attempted sexual assault and 8% of women and 2% of men experienced sexually coercive behaviors. In regards to lifetime prevalence, a nationally representative survey found that 13.1% of women and 1.6% of men had experienced sexual assault at some point during their service. Sixty percent of women and 27.2% of men experienced repeated or severe sexual harassment (Street, Stafford, Mahan, & Hendricks, 2008).

According to Bell, Turchik, and Karpenko (2014) there is an association between experiences of sexual assault and harassment during military service and poor health outcomes. Studies have shown that military men and women collectively experience similar levels of psychological symptoms and distress after a sexual assault. The most common mental health conditions related to sexual assault and harassment are PTSD, depression, anxiety disorders, and substance use disorder (Bell et al., 2014). Military sexual assault and harassment can have lasting negative impacts on service members’ health and functioning that can continue for decades after the assault.
**Substance use.** It has been noted that the number of military veterans reporting symptoms of substance use disorders has been increasing over the years. The study of Shen, Arkes, and Williams (2012) analyzed the association between deployment characteristics and diagnostic rates for substance use disorder among military personnel. The study looked at active duty personnel who served in 2001 and 2006. Researchers identified individuals diagnosed with substance use disorders. It was found that deployment under OIF and OEF increased the risks of being diagnosed with substance use disorder. Active combat conditions increased the risks of Substance Use Disorder (Shen et al., 2012).

The study of Golub, Vazan, Bennett, and Liberty (2013) compared substance use among veterans to nonveterans and found that veterans were more likely than nonveterans to use or be dependent on illegal drugs. Seventy five percent of veterans reported having consumed alcohol in the past month, slightly more than nonveterans at 68%. Veterans were also found to be more likely to binge drink, defined as having more than 5 drinks in one session, and to drink more heavily as defined by binge drinking on 5 or more days in a single given month. Overall, it was found that 18% of veterans in the general population meet diagnostic criteria for Substance Use Disorder.

**Domestic violence.** The incidence of domestic violence is higher in military families in comparison to civilian families (Gerlock, 2004). The stresses of military life such as deployments, prolonged separation from family, combat training, and exposure to violence have been identified as risk factors for military personnel and place them at higher risk for domestically violent behaviors. Veterans with PTSD are identified as having a higher chance of exhibiting relationship problems and domestic violence than veterans without PTSD (Gerlock, 2004).
It is important to consider the large number of military personnel currently returning home from Afghanistan and Iraq who experience PTSD and their potential struggles for recovery. The experience of PTSD resonates through their interpersonal relationships. Their combat-related PTSD can manifest into hostile behaviors (Sherman, Sautter, Jackson, Lyons, & Han, 2006). At considerable concern, both PTSD and depressed veterans perpetrated violence at significantly higher rates. Based on veterans and intimate partner reports, approximately 81% of veterans with PTSD and 81% of depressed veterans had at least one violent altercation towards their partners in the past year (Sherman et al., 2006).

**Sleep disorders.** Sleep disorders are prevalent in the military and among military personnel returning from Afghanistan and Iraq with PTSD or with mild TBI (Pigeon, Britton, Ilgen, Chapman, & Conner, 2012). The current conflicts in Iraq and Afghanistan have involved military personnel in combat, hazardous security duties, and highly stressful noncombat roles that have contributed to change in individual sleep wake cycles (Pigeon et al., 2012). Evidence suggests that combat exposure produces sleep disruption effects among returning veterans. One study surveyed 2,525 returning soldiers and showed 30% reported complaints of sleep disturbances lasting 4 months after their return home following their tour. Evidence also suggests that sleep disturbances can worsen over time. It is clear that sleep disturbances are increased among combat veterans (Capaldi, Guerrero, & Killgore, 2011).

Capaldi, Guerrero, and Killgore (2011) conducted a retrospective chart review of 69 consecutive referrals to the Walter Reed Army Medical Center Sleep Clinic. It was found that 76.8% of all cases referred were diagnosed with sleep disturbances that include obstructive sleep apnea, excessive awakenings, daytime sleepiness, and hypoxia. Medications had virtually no effect on sleep variables. It was concluded that among combat veterans, clinically significant
Suicide. There is a widespread concern for the health and well-being of military personnel who have served this country. Current thought about veterans’ wounds tends to be excessively medicalized and blind to social and cultural factors. Health professionals perform supporting roles in the process of recovery; however full recovery requires a community, preferably a community of other veterans (Kirsch, 2014). According to the U.S. Department of Veterans Affairs (2015) suicidal risks specific to veterans include frequent deployments, deployments to hostile combat environments, extreme stress exposure, physical and or sexual assault, and service related injuries. According to the U.S. Government, the United States has 22 million veterans, including 2 million female veterans. Every day approximately 22 veterans are estimated to commit suicide. According to the National Alliance on Mental Illness, as many as 950 veterans attempt suicide every month (National Alliance on Mental Illness, 2015). Suicide prevention among veterans should be a national priority (Pigeon et al., 2012).

Current Treatments for Service-Related Ailments

The focus of current therapy for veterans is largely drawn from evidence-based practices implemented for the treatment of PTSD, substance use disorders, suicide, and aggressive behaviors. While these approaches represent an improvement from traditional pharmacological based treatments, there is still a need for alternative forms of treatment for service related ailments. Among other shortcomings, such approaches are often underutilized by veterans and inaccurately implemented by practitioners (Ewert, 2014). One exciting new treatment methodology for a variety of service-related ailments is outdoor and wilderness therapy.
Outdoor, adventure-based treatments represent an exciting new treatment methodology for mental illness affecting the veteran population without the threat of the stigma associated with seeking “therapy.” The following will examine the current evidence-based treatments for a variety of service-related ailments including PTSD, substance use disorders, suicide, and other service-related difficulties. The need for alternative forms of treatment for such afflictions will then be explored.

**Treatment of posttraumatic stress disorder.** The large majority of therapy modalities currently used to treat PTSD center around extinction of conditioned memories. Various triggers for memories related to trauma are conditioned to no longer provoke anxiety through the process of therapy. Major approaches implementing such strategies include Cognitive Processing Therapy (CPT) and prolonged exposure therapy (PET). Psychopharmacology, which should be used in conjunction with a form of psychotherapy, is another form of treatment for PTSD (Rubin, Weiss, & Coll, 2013).

Cognitive Processing Therapy (CPT) involves teaching clients how to re-interpret and cope with trauma. This approach works to expose present secondary emotions and cognitions to gain control over future emotions and behaviors. The clinician helps the client recognize irrational schemas surrounding the traumatic event and create more functional beliefs. CPT posits that traumatic memories must be activated in the present to identify faulty attributions and replace them with corrective schemas (Lenz, Bruijn, Serman, & Bailey, 2014). In conducting CPT, the client begins with the traumatic memory and explores the feelings, thoughts, and beliefs associated with the trauma (Cook et al., 2013).

Prolonged exposure therapy (PET) is based on emotional processing theory, implying that PTSD is caused by fear structures which are activated when stimuli located in these
structures are encountered. These structures are composed of information associated with danger. The goal of PET is to allow the client to experience such stimuli without feelings of anxiety and fear (Rubin, Weiss, & Coll, 2013). While the components of PET include psychoeducation, the emphasis is placed on exposure. This involves exposing the client to trauma-related situations normally avoided due to the level of stress such situations evoke, trauma-related distress or in-vivo exposure, and traumatic memories wherein the client verbally recounts disturbing occurrences (Cook et al., 2013).

Psychopharmacology is another approach to treating PTSD in former service members. Though most of the literature recommends psychotherapy as a first-line defense against PTSD, various medications have received empirical support for their treatment of PTSD. The U.S. Food and Drug Administration has approved just two medications for treatment of PTSD. These drugs are in the serotonin-specific reuptake inhibitors class of drugs, and have been shown to reduce PTSD symptoms such as hyperarousal, avoidance, and reexperiencing (Rubin et al., 2013).

**Treatment of substance use disorders.** Two empirically supported treatment modalities for substance use among veterans include Seeking Safety and Motivational Interviewing (MI). Seeking Safety is a form of cognitive behavioral therapy which focuses on encouraging clients to overcome the chaos associated with substance use in order to create a greater sense of safety (Rubin et al., 2013). Limited research has been done on Seeking Safety’s effectiveness in treating substance use disorders in veterans, but some research has examined its effectiveness in comorbid PTSD. In treating both disorders, Seeking Safety aims to increase safe coping skills by implementing behavioral, cognitive, and interpersonal aspects of case management (Boden et al., 2012).
Motivational Interviewing works to increase and reinforce a client’s commitment and motivation to change. The approach is non-directive, but the clinician works to elicit the client’s own concerns about problematic substance use behaviors (Rubin, Wiess, & Coll, 2013). In the implementation of Motivational Interviewing, comorbid substance use and psychiatric disorders are being treated simultaneously. Interestingly, in examining the effectiveness of motivational-based interventions in substance use disorder treatment among veterans, Lozano, LaRowe, Smith, Tuerk, and Roitzsch (2013) found motivational therapy techniques to be effective in the treatment of comorbid substance use and psychiatric disorders, but not with substance use treatment alone.

**Treatment for other comorbid service-related ailments.** Not only has Motivational Interviewing been implemented among veterans with substance use disorder, but it has also been used in the treatment of suicidal ideation among veterans. Motivational Interviewing to address suicidal ideation is an adaptation of Motivational Interviewing meant to enhance intrinsic motivation to continue to live. Among hospitalized veterans, Motivational Interviewing has been found to be a potentially effective treatment, though further research is needed (Britton, Conner, & Maisto, 2012).

Aggression among veterans may present itself in many forms including intimate partner violence and sexual assault and harassment. While one may assume that increased aggression is a result of combat exposure, research has also shown aggressive behavior following deployment is most strongly associated with PTSD and misuse of alcohol. Greater PTSD symptoms severity is associated with increased likelihood of perpetrating physical violence and aggression. As a result, PTSD and aggression can be treated simultaneously (Stappenbeck, Hellmuth, Simpson, & Jakupcak, 2014).
As with co-occurring mental illness, the medical repercussions of service, such as traumatic brain injury (TBI) and sleep disorders, can also be difficult to differentiate from symptoms of PTSD. TBI and PTSD overlap in terms of symptoms such as problems with cognition, irritability, depression, anxiety, and difficulty sleeping. Considering all co-occurring factors, including a differential diagnosis of PTSD, is important in treating TBI (Rubin et al., 2013).

Need for Alternative Treatments for PTSD and Comorbid Disorders

The need for additional treatment approaches for PTSD and comorbid disorders is clear. Though CPT, EPT, Seeking Safety, and Motivational Interviewing each have promising empirical support, the major issue with these forms of treatment arises in the implementation and utilization of therapy. Unfortunately, these services are often underutilized by former service members for a variety of reasons. Research suggests that veterans, particularly those exposed to combat, tend to shy away from “mental health” services. This underutilization of therapeutic resources may have to do with perceived stigma (Ewert, 2014). The stigma experienced by veterans may be self-stigma, wherein the veteran feels an overwhelming sense of personal shame which prevents them from seeking mental health services. However, stigma may also come from external sources. For example, veterans often label other veterans who seek treatment as “crazy” and “dangerous or violent.” Additionally, there is a belief among veterans that individual deficits are responsible for the development of PTSD (Mittal et al., 2013). Thus, when a veteran experiences shame associated with perceived stigma both internally and externally, they are highly unlikely to seek traditional forms of therapy. As this point, the effectiveness of certain evidence-based therapies becomes trivial in comparison to the veteran's efforts to circumvent labels associated with therapy and mental illness.
Not only are therapeutic services underutilized due to stigma, but the implementation of such therapies is lacking. For example, many treatment providers claim to be trained in evidence-based approaches such as CPT and EPT, but actual adoption of such approaches exists on a continuum. Many providers implement only one aspect of these treatments, such as specific worksheets, while others do not implement these techniques at all. Part of the issue may be that newer treatments take an average of 17 years to become concretely used in a similar manner by all providers implementing said treatment (Cook et al., 2013). When implementation of evidence-based approaches is too complex for providers to practice correctly, efforts towards effective treatments become futile.

Another reason why an alternative form of treatment is needed is that even the most promising evidence-based treatments do not seem to have long-lasting effects. Research suggests that many veterans continue to have problematic symptoms after participating in such treatments (Vella, Milligan, & Bennett, 2013). Additionally, unlike traditional approaches, outdoor and adventure-based treatment encourages veterans to face their fears. Cognitive-behavioral interventions often teach veterans to avoid anxiety related cues to reduce negative affect. This form of conditioning through negatively reinforced avoidance behaviors can often increase anxiety and cause the veteran to globalize patterns of avoidance and withdrawal to contemporary environments. Oftentimes, such treatments lead veterans with PTSD to become more socially isolated and further conditioned to avoid novel situations (Tidball, n.d.).

As a result of lack of utilization and improper implementation of evidenced based therapies for PTSD and co-occurring disorders, there is a great need for an alternative form of treatment. Fortunately, another treatment modality for mental health issues affecting veterans exists. Research suggests that among veterans with PTSD and other co-occurring mental illness,
those who participate in outdoor recreation activities have a sustained increased sense of psychosocial well-being (Vella et al., 2013). In contrast, to avoidance behaviors associated with PTSD which may be reinforced by traditional treatments, outdoor therapies involve voluntary habituation to anxiety and distress, allowing veterans to cope with such feelings in new ways. Rather than working towards extinction of conditioned memories, outdoor-based adventures encourage veterans to lean into feelings of fear and overcome anxiety associated with symptoms of PTSD. This form of treatment reinstates feelings of pleasure and social-connectedness, enhancing individual and community resilience (Tidball, n.d.).

**Outdoor and Adventure-Based Therapies: An Alternate Treatment for PTSD and Comorbid Disorders**

Research suggests that veterans who participate in outdoor and adventure-based therapies experience decreased negative moods as well as decreased anxiety and somatic symptoms (Vella et al., 2013). In addition, outdoor-based treatments allow veterans to explore their desire to participate in new and lost activities. Veterans use skills learned in outdoor therapy to cope with PTSD while creating a transition into civilian life (Erikson, 2013).

Outdoor and adventure-based therapy models are strengths-based and do not advertise themselves as “therapy” in the traditional sense. Due to this terminology, this treatment approach reduces barriers for veterans who are concerned about the shame and stigma associated with seeking mental health services. Many veterans who participate in such programs report they would not have participated in the program if it had been advertised as “therapy” (Harper, Norris, & D'astous, 2014). Through such treatment models, veterans are able to disclose the impact of their service, relate to other former service members, and learn important emotional and interpersonal skills just as they would in traditional talk therapy (Harper et al., 2014).
Implementation of this modality is straightforward due to it being activity-based. This potentially reduces the barriers associated with differential levels of use among treatment providers. In addition, outdoor therapies have a therapeutic processing component that is adaptive and flexible to evidence-based interventions. With activity-based and processing components, this approach is clear, straightforward, and easily altered to meet the needs of any sub-population of veterans. Vella, Milligan, & Bennett (2013) also suggest the positive outcomes of outdoor and adventure therapies can be observed across diverse demographic populations. Outdoor-based treatment is a multi-faceted approach which responds to a wide variety of treatment goals and outcomes through a single modality (Hans, 2001).

Another positive aspect of outdoor treatment is early intervention. While traditional “therapy” often requires a formal diagnosis, all veterans are welcome to participate in outdoor adventures. Research suggests strong evidence for the importance of addressing trauma before the clinical threshold of PTSD is met. This is especially true of veterans who experience depressive symptoms and substance use disorders (Harper et al., 2014). Positive outcomes for early intervention apply to both mental health struggles and physical health struggles. Outdoor therapy can be effective in treating mental health wounds such as PTSD and substance use as well as physical problems such as traumatic brain injury and spinal cord injuries (Tanielian & Jaycox, 2008). For these reasons, outdoor treatment for the mental, emotional, and physical effects represents an effective and promising development in treatment for our veterans.

**Definition and History of Outdoor Adventures**

Pharmacological and psychotherapeutic interventions have been used with veterans for a significant amount of time in comparison to the recent introduction of Adventure Therapy, which has been noticeable only since the 1960’s (Neil, 2003). Although this form of alternative
treatment is relatively new, research suggests that it has become one of the leading forms of treatment when dealing with character development, leadership, and service (Educational Approach, 2015). Ewert, McCormick, and Voight (2001) explain the differences between the types of treatment in the “wilderness environment.” Adventure Therapy is a type of experiential learning with several different components that include; wilderness therapy, adventure based-activity therapy, and outdoor experiential therapy.

Wilderness therapy takes place in a remote area where one would find it difficult to return home until completion of the activity. This requires using survival skills and can be short-term or long-term, depending on the particular participants and goals. This form of therapy includes the Outward Bound model, which utilizes a teaching format and focuses on the individual. Wilderness therapy sets the individual apart from their surroundings and makes them more self-focused (Hans, 2000). Adventure based-activity therapy is solely based on group activities. Teamwork is required to get through challenges. For example, rock-climbing, rope courses, and high intensity activities would require teamwork (Hans, 2000). This is a hands-on approach and requires the participant to utilize their surroundings. Outdoor experiential therapy is about the participant immersing themselves into nature and taking part in outdoor activities that require the use of the physical, mental and emotional self. Many veterans report a sense of having lost their sense of self, and this form of therapy promotes meaning, growth, and contributes to resiliency (Ewert et al., 2001).

Adventure therapy has developed over the years and has evolved from being primarily family focused to being individually focused (Hans, 2000). The key idea is being outdoors and having a sense of direct experience. Even though activities are facilitated outdoors, the activities are not intended to be risky, but rather meant to be challenging. There is a boundary set from the
beginning that differentiates risk from challenge. Adventure therapy also includes a processing component. After an activity is completed, the next step is to explore how the experience helped each participant, as well as, what the participant gained from such an experience. The goal is to foster change, and a way to accomplish this is by having wilderness excursions, problem-solving activities, trust building activities, and team building courses all in one component (Hans, 2000).

**Outcomes**

Using outdoor adventures for healing has been found in different cultures and traditions throughout history (Parker, 1992). According to Parker (1992), outdoor adventures created a transition into more outdoor placements for clients instead of being in a more contained setting such as a hospital. Some residential institutions allowed clients to spend time outdoors while under general supervision. For example, institutions serving clients who suffered from major depressive disorder went on to have clients spend a portion of their time in the facility’s backyard under supervision. In 1961, the creation of Outward Bound (OB) by Kurt Hahn introduced a form of adventure therapy through challenging adventure training. As Outward Bound was gaining more credibility, it started a Mental Health Project helping adults dealing with substance abuse, mental illness, and sexual assault (Educational Approach, 2015).

Following this project, additional programs working with different populations were initiated throughout the country. This type of programming has since been called Adventure-Based Counseling and utilizes a variety of outdoor and adventure-based activities. Importantly, one of the most recent populations beginning to make use of Adventure-Based Counseling is veterans.

Recently, research has focused on the value of sports and physical activities to enhance the psycho-social health and well-being of individuals (Caddick & Smith, 2014). These types of physical activities, especially outdoor activities, may address a variety of issues faced by the
growing veteran population, including amputations, traumatic brain injuries, spinal cord injuries, posttraumatic stress disorder and mental health wounds such as anxiety and substance use (Fear et al., 2010; Ramchand, Karney, Osilla, Burns, & Caldarone, 2008). Participating in different outdoor adventures increases well-being by giving veterans a sense of accomplishment because they are “doing things again” which contrasts with their experiences of extreme inactivity in the months or years following injury or trauma (Carless, Peacock, McKenna, & Cooke, 2013).

Literature suggests that outdoor adventures are a form of support, especially with veterans diagnosed with posttraumatic stress disorder (Caddick & Smith, 2014; Hyer et al., 1996). These results are based on evaluations of different courses and activities throughout the country. Results suggest that as long as veterans are experiencing the outdoors, there is an improvement in well-being and in the ways that they are reintegrating themselves back into civilian life.

One study suggested that when veterans participated in a veterans-only exercise program, they felt more in control of themselves and less dependent on any medications prescribed to manage their symptoms (Otter & Currie, 2004). These exercise programs also aided veterans in maintaining a calm state of relaxation with reduced anxiety levels. A second phase of the study added more adventurous and rigorous outdoor activities that included; rock climbing, hiking, and whitewater rafting, and it was concluded that the performance was no different than the regular exercise program (Otter & Currie, 2004).

Additional studies suggested that being part of physical activities makes veterans “feel good” in different situations (Mowatt & Bennet, 2011). Activities such as fly-fishing are able to engage veterans in relaxation and help them alter negative feelings into positive feelings of joy in doing new activities with fellow veterans. There is sense of camaraderie due to similar shared
Findings from another study suggested that being out in the natural environment has therapeutic qualities due to the healing powers that nature provides (Dustin, Bricker, Arave, & Wall, 2011). These healing powers are felt more by veterans previously diagnosed with posttraumatic stress disorder because the activities allowed for an escape from everyday problems (Dustin et al., 2011). Veterans expressed they prefer this type of support instead of traditional treatment settings due to a sense of normalcy. Veterans also reported having a sense of appreciation towards nature and a sense of peace when being surrounded by nature’s beauty (Dustin et al., 2011). The veterans in this study were describing events after participating in a difficult hike that included strenuous obstacles and ended in the pleasure of viewing a waterfall.

According to Burke and Utley (2013), participating in outdoor adventures and being part of challenging activities brings a sense of determination and inner strength, which provides veterans a goal to strive for. Apart from this, outdoor adventures bring a sense of self-identity that is conducive to reintegrating back into civilian life (Burke & Utley, 2013). For some, this is difficult because it involves being comfortable with one self and reality; however it is manageable with the support of other veterans with similar backgrounds.

Outward Bound

In the Outward Bound programs (Outward Bound, 2015), veterans take part in wilderness adventures that are challenging not only physically, but also mentally and emotionally. Through these challenges there is increased self-confidence, pride, trust, and communication; skills that are important when reintegrating back to the civilian world. Many of these excursions are
similar in some ways to wartime experiences, but the purpose is to achieve positive physical and mental health outcomes.

This type of programming has been helpful to veterans who would not seek or benefit from traditional treatment methods. With so many veterans continuing in higher education, it is proposed that outdoor adventure programming for veterans on college campuses, similar to that provided in the Outward Bound model, would be an excellent intervention method. Veterans returning to college face many challenges, and it is believed that receiving the skills of self-confidence, pride, trust, and communication via such activities, while receiving higher education could make an impact.
Chapter 3

Methods

The concept of having CSUSM student veterans participate in outdoor activities to improve well-being originated in 2014, during the annual Outdoor Spring Break Excursion held by Campus Recreation. During this annual excursion, attended by one of the MSW students completing this capstone project, scheduled discussions were facilitated multiple times during the day. It was during one of these discussions that the concept of outdoor adventure therapy for student veterans was mentioned. The idea was entertained that as a collective process with the Veteran’s Center, Campus Recreation at California State University San Marcos could consider offering additional outdoor activities to student veterans in order to reduce stress, anxiety, depression, and other negative effects of military service. This initial discussion was the beginning of what is now this Master of Social Work Capstone Grant Proposal project.

This concept was again discussed during the annual Campus Recreation excursion to Joshua Tree National Park in fall of 2014. During one of the “Leave No Trace” discussions, an educational discussion of outdoor ethical practice behaviors, students in attendance were continuously shedding light on the need for outdoor adventures for student veterans in order to foster increased feelings of well-being.

The grant proposal project then went in full motion during a discussion with Campus Recreation Director, Hugo Lecomte who has made efforts to increase the focus on student veterans since Campus Recreation at California State University San Marcos recently partnered up with the CSUSM Veterans Center. It was agreed that we would create a detailed grant template which could then be used by Campus Recreation to apply to a variety of funding sources. After this meeting, Hugo Lecomte, we three students in the Masters of Social Work
Program and the Director of the Veterans Center met in order to collaborate on this project focusing on student veterans. During the meeting, topics discussed included; date, location, specific activities, specific veteran population, budget, and possible funding sources. Resources relating to specific activities, including budget, were obtained from the Director of Campus Recreation, as well as from the Outdoor Adventures Coordinator on campus.

Since we did not have sufficient time to escort an evaluation plan through the CSUSM Institutional Review Board (IRB) process, a plan was formed that we would write the grant, and Hugo Lecomte, Director of Campus Recreation at CSUSM, would manage the IRB application and facilitate the IRB process in order to collect data to assess program effectiveness, with assistance from allied faculty researchers in the Kinesiology department, for the IRB process.

Once the project was approved as a Capstone project by the Social Work Department, the student authors began reviewing relevant bodies of literature. Peer reviewed journal articles were obtained from the California State University San Marcos Kellogg Library Database. The primary Database utilized for the search was PsycINFO. Key words including; veterans, military, posttraumatic stress disorder, sexual assault, substance use disorder, suicide, domestic violence, sleep disorder, outdoor activity were searched in the PsychINFO database. Additional key phrases entered in Google Scholar included; veterans and outdoor adventures, adventure therapy, outward bound and experiential outdoor therapy. The authors also used *The Handbook of Military Social Work* (Rubin et al., 2013) for a general overview of the topic.

The target population for the grant project is student veterans at California State University San Marcos. Sources for the grant needs assessment included PsychINFO and Google Scholar. Key terms used for the purposes of the needs assessment were similar to those used in the literature review and included: veterans, military, posttraumatic stress disorder,
sexual assault, substance use disorder, suicide, domestic violence, sleep disorder, outdoor activity, veterans and outdoor adventures, adventure therapy, outward bound and experiential outdoor therapy.
Chapter 4

Grant Proposal Project

Executive Summary

As a part of California State University San Marcos, the Campus Recreation Department and the Veterans Center know the difficult transition from military into civilian life, given that the Veteran’s Center on campus serves about 600 students on a monthly basis (Veteran’s Center, 2015). There are currently 1,851,470 military veterans in the state of California alone (Department of Veterans Affairs, 2014) and according to the Pew Research Center, 27% of veterans say that re-entry has been difficult for them (Morin, 2011). As of 2011, the probabilities of an easy re-entry into civilian life ranged from 82% for those not experiencing some sort of traumatic event, to 56% for those who did experience some sort of traumatic event while abroad (Morin, 2011). This gap of 26% show lasting consequences of psychological traumas that veterans have to work through as they are trying to get used to civilian life.

Research of Vella et al. (2013) and Erikson (2011) suggests that outdoor-based treatments allow veterans to explore their desire to participate in new activities and indicates that using skills such as building a supportive community with other war veterans helps in creating a smoother transition into civilian life. Campus Recreation proposes creating a partnership with the Veterans Center at California State University San Marcos. This partnership would be designed for student veterans attending CSUSM, would introduce outdoor adventures, and would include tools that they can use to better integrate into civilian life. These tools include, but are not limited to: facilitating discussions on readjustment and transition, re-energizing through challenges in a beautiful natural environment, reducing feelings of isolation, bonding with comrades outside of military structure, and being able to transfer their military values to their
civilian life values. The three important phases of the proposed project include: 1) Preparation and planning; 2) Outdoor adventures and leadership learning (skills, resiliency, strength); and 3) Follow-up data collection and support from Campus Recreation.

For approximately 75 years there has been a program called Outward Bound that has offered veterans the opportunity to readjust to life at home through powerful outdoor adventures that draw on the healing benefit of teamwork and challenge through use of the natural world (Outward Bound, 2015). The Outward Bound Veterans model has shown statistically significant improvements in Veteran’s resilience, ability to deal with stress through meaning, and healthy and balanced life, goal setting, compassion, effective communication, problem-solving, and social responsibility (Outward Bound, 2015). Campus Recreation and the Veterans Center are proposing a program similar to Outward Bound, a model which has been shown to have great success around the country.

Implementing outdoor and adventure-based activities through the partnership with Campus Recreation and the Veterans Center at California State University San Marcos will improve outcomes for student veterans reintegrating into civilian life. Given the research supporting the needs for veterans and the results that have been accomplished through outdoor adventures, it is hoped that the Veterans’ Center will get significant benefits through collaboration from Campus Recreation to offer an outdoor adventure program to deliver services to student veterans.

Needs Assessment and Background Literature

Negative effects of military service. Veterans suffer from physical injury, posttraumatic stress disorder, traumatic brain injury, sexual assault trauma, substance use, domestic violence, sleep disorders, and suicidal ideation. All of the following ailments require intervention at some
level. Those who have sacrificed to serve their country should not be allowed to deal with these long-lasting health issues on their own. In addition, veterans should be able to access treatment modalities of their choosing without having to go through hurdles as they are striving for higher education.

**Need for alternative treatments for PTSD and comorbid disorders.** Though a variety of evidence-based treatments for PTSD and other service related ailments exists, many of these treatments are often underutilized by veterans and improperly implemented by practitioners. Research suggests that veterans, particularly those exposed to combat, tend to shy away from “mental health” services. This underutilization of therapeutic resources may have to do with perceived stigma (Ewert, 2014). The stigma experienced by veterans may be self-stigma, wherein the veteran feels an overwhelming sense of personal shame which prevents them from seeking mental health services. However, stigma may also come from external sources. For example, veterans often label other veterans who seek treatment as “crazy” and “dangerous or violent.” Additionally, there is a belief among veterans that individual deficits are responsible for the development of PTSD (Mittal et al., 2013). Thus, when a veteran experiences shame associated with perceived stigma both internally and externally, they are highly unlikely to seek traditional forms of therapy.

Not only are therapeutic services underutilized due to stigma, but the implementation of such therapies is lacking. For example, many treatment providers claim to be trained in evidence-based approaches such as CPT and EPT, but actual adoption of such approaches exists on a continuum. Part of the issue may be that newer treatments take an average of 17 years to become concretely used in a similar manner by all providers implementing said treatment (Cook
et al., 2013). When implementation of evidence-based approaches is too complex for providers to practice correctly, efforts towards effective treatments become futile.

As a result of lack of utilization of treatment, improper implementation of various methodologies, and the chronic, long-lasting effects of PTSD and co-occurring disorders, there is a great need for an alternative form of treatment. Fortunately, another treatment modality for mental health issues affecting veterans exists. Research suggests that among veterans with PTSD and other co-occurring mental illness, those who participate in outdoor recreation activities have a sustained increased sense of psychosocial well-being (Vella et al., 2013).

**Outdoor and adventure-based therapies: an alternate treatment for PTSD and comorbid disorders.** Research suggests that veterans who participate in outdoor programs experience a decrease in negative mood as well as a decrease in anxiety and somatic symptoms (Vella et al., 2013). In addition, outdoor-based treatments allow veterans to explore their desire to participate in new and lost activities. Oftentimes, veterans use these skills sets learned to cope with posttraumatic stress disorder and find meaningful occupations post military service creating a smoother transition into civilian life (Erikson, 2013).

Importantly, outdoor and adventure-based therapy models are strengths-based and do not advertise themselves as “therapy.” Thanks to this terminology, this treatment approach reduces barriers for veterans who are concerned about potential shame and stigma associated with seeking mental health services. Veterans who participate in such programs report they would not have participated had the program been advertised as “therapy” (Harper et al., 2014). Through such treatment models, veterans are able to disclose the impact of their service, relate to fellow service members, and learn important emotional and interpersonal skills just as they would in traditional therapy (Harper et al., 2014).
A final positive aspect of outdoor treatment is early intervention. While traditional therapy requires a formal diagnosis, all veterans are welcome to participate in outdoor adventures. Research suggests strong evidence for the importance of addressing trauma before the clinical threshold of posttraumatic stress is met. This holds especially true of veterans who are also experiencing depressive symptoms and substance use disorders (Harper et al., 2014). For these reasons and more, outdoor treatment for the mental, emotional, and physical effects of service in the military represents an effective development in the treatment for our veterans.

**Outdoor and adventure-based programs.** The typical outdoor treatment is in the form of an excursion. Participants learn basic skills that they will be using in the wilderness, as well as skills that they will be using in real life. These skills are taught with environmental concerns and include: packing, tying knots, cooking, setting tents and tarps, etc. Having a healthy lifestyle is the primary consideration and guideline in this process (Outward Bound, 2015).

The progression of the activity is to first build self-esteem and self-confidence, and the participants are led through a handful of activities in which they are able to experience success in a new environment. The participants are asked to take on a new challenge and to give themselves greater responsibilities and to stretch themselves into more difficult situations (Outward Bound, 2015). As participants are learning to overcome certain challenges, each individual is given the opportunity to lead the group and focus discussions on leadership skills and group interactions. Each participant is also given time to reflect upon their own accomplishments and to integrate experiences from the wilderness into their lives back home (Outward Bound, 2015).

This form of treatment is beneficial to veterans because it provides them an alternative to anything they have experienced before. One veteran, through the Veteran’s Voices at Outward
Bound, stated the following, “I enjoyed the instructors and our conversations each evening. To me, the conversations are the bulk of what a number of the veterans or other individuals may really need in their lives to get to the root of mental issues that are often more difficult to overcome by oneself. Learning to be more open about one's feelings will likely help a person realize that others have similar struggles and that they are not alone in their struggles or anguish,” (Outward Bound, 2015). These experiences give veterans an opportunity to express themselves and receive help without having fears of mental health stigma.

**Organizational Background**

Campus Recreation at California State University will be the organization that actually uses the funds to provide veterans with outdoor activities. The vision of Campus Recreation is vital to the culture of the evolving CSUSM community. They aspire for lifelong wellness and student development by providing visionary facilities and services (California State University San Marcos, Campus Recreation, 2015). The mission of Campus Recreation is dedicated to promoting holistic wellness and enriching the CSUSM experience by providing inclusive recreational services, facilities, and opportunities (California State University San Marcos, Campus Recreation, 2015).

The Veterans Center at California State University San Marcos will be involved in providing Campus Recreation with referrals of qualifying veterans for outdoor activities. The Veterans Center is a one-stop shop for veterans, active duty and their dependents at the CSUSM campus. The Veterans Center provides eligible individuals with information, services and certifications regarding their federal VA education benefits (California State University San Marcos, Veterans Center, 2015).
Project Description

The outdoor adventure that Campus Recreation will be providing for student veterans at the Veterans Center includes a two phase activity. The first phase consists of students participating in a Challenge Course through the University of California San Diego’s Recreation Center. Here, veterans will participate in a custom designed program based on the group goals and desired outcomes. Along with this, veterans will receive an orientation, participate in low challenge activities, and take part in a debriefing process in the end.

The second phase of the outdoor adventure consists of 12 student veterans going on a hiking and camping trip to Joshua Tree National Park where they will enjoy the beautiful scenery, and learn to apply the basics of outdoor leadership, stewardship, and environmental responsibilities while camping. The veterans will also engage in activities that include; group dynamics, navigation, cooking, and photography (Campus Recreation, 2014).

Goals and Objectives

The goals and objectives associated with the creation of an outdoor adventure program for veterans at California State University are wide in scope, incorporating both program participation goals and program outcome goals. The collaboration between both Campus Recreation and The Veterans’ Center on campus aims to create a comprehensive service that is highly accessible to all veterans on the California State University San Marcos campus. Our outdoor adventure-based therapy program for veterans will provide programming that is currently lacking from the current available treatments for service-related ailments in this region. In addition, our services will be accessible to the veterans in our university community by being based within two highly visible and accessible campus departments. The initial participation goals for the adventure-based program for veterans are aimed at establishing this new program
within the campus community, graduating the first group of student veterans, and refining the program based on veteran feedback. In addition, it is the hope that by participating in this innovative and evidence-based program, student veterans will experience an improved sense of well-being, a greater sense of social connection, and reduced PTSD symptoms. Staff at the California State University San Marcos Campus Recreation are completing application to the CSUSM Institutional Review Board to conduct an outcome study to examine these variables. Specifically, our initial program participation goals include the following:

*Participation of 12 veterans in the Outdoor Adventure Program*

It is the goal that the opportunity to participate in this form of treatment will be highly visible to campus veterans. Through advertising for these services at both the Veterans’ Center and Campus Recreation, it is the objective that 12 veteran participants will register for the first outdoor adventure for veterans.

*Completion of the Outdoor Adventure Program by 80% of Participants*

In addition to a significant number of veterans registering for the first outdoor adventure, there will be a goal of program completion among these participants. It is the objective that 80% of these participants will complete both events of the outdoor adventure.

*Participant Completion of Program Evaluation*

A final participation goal is that program participants will complete a program evaluation form upon completion of the program. This information will be used for the purpose of refining and improving the program to best meet the needs of student veterans.

**Additional Goals and Objectives**

The purpose of the following second order goals is to further establish the efficacy of outdoor and adventure based therapy in treating the ailments associated with military service.
The foremost outcome goal is that many of the positive effects posited in the literature will be observed among our campus veterans. To examine this, the CSUSM Campus Recreation Program plans to apply for approval from the CSUSM Institutional Review Board to conduct an outcome study to better understand how the program influenced veteran participants. The literature suggests that outdoor adventure programs contribute to an increased sense of psychosocial well-being, decreased PTSD symptomatology, and increased sense of community and social involvement among participating veterans (Tanielian & Jaycox, 2008; Tidball, n.d.; Vella et al., 2013). Consequently, the CSUSM Campus Recreation program, pending IRB approval, plans to measure these outcomes using standardized measures after receiving approval from the Institutional Review Board (see Appendices B-E). Once this approval is gained, Campus Recreation would measure the following outcomes among participants:

**Increased Sense of Well-Being**

The literature supports the use of outdoor-based therapies in increasing individual sense of psychosocial well-being among veterans (Vella et al., 2013). It is the goal that after taking part in one outdoor adventure, participants will report a greater sense of psychosocial well-being as evidenced by a self-reported measure. It is the objective that after completing one outdoor adventure, there will be a 20% increase in psychosocial well-being as evidence by participant self-report on a standardized measure.

**Decrease in PTSD Symptoms**

A second goal of the program is to decrease levels of symptoms associated with PTSD. As previously described, the literature supports the use of outdoor-based therapies in decreasing the severity of symptoms associated with PTSD (Tanielian & Jaycox, 2008). The objective is
after participation in one outdoor adventure, a 10% decrease in symptomatology as evidenced by self-report on an adapted version of a standardized measure will be observed.

*Improved Sense of Community and Social Involvement*

A final goal of the program is to increase veteran’s sense of social connectedness. As suggested in the literature, outdoor and adventure-based therapies help reinstate feelings of pleasure and social-connectedness, enhancing individual and community resilience (Tidball, n.d.). The objective associated with this goal is that there will be a 15% increase in sense of community and social involvement as evidenced by participant self-report on an adapted version of a standardized measure after participation in one outdoor adventure.

**Activities**

The **first phase** of the outdoor adventure will be held right before the fall 2015 semester starts, late August or early September. Campus Recreation will make sure that everything is prepared and that all planning and organization is complete for this first outing. During the first event, the car ride to the University of San Diego’s Campus Recreation Challenge Course, students will get the opportunity to learn about each other and this will serve as an opportunity to bond. The purpose of this is to get participants familiar with the idea that throughout the day, they will be sharing and learning about one another.

*Welcome and Orientation*

The staff will conduct their introductions and orientation and have students do the same. The students will then participate in multiple ground activities for the first 1-2 hours. The activities will consist of 2-3 icebreakers, followed by a trust activity, and then finish off with an activity that is more difficult than the first two. The last test will show how well the group of students works together as a team and how well they communicate and trust each other after the
first two activities. Each activity requires using different aspects of one’s own self because participants are put in situations where they have to take into consideration the presence of others. The biggest challenge will be how well they work collaboratively in these ground situations before there is progression to the low challenge activities.

*Low Challenge Activities*

This portion of the course includes: community building, communication activities, problem solving initiatives, and advanced problem solving. The most exciting part is that all of this will be accomplished while being 55 feet above ground. Students will be attached to a harness as they are completing mini-obstacle courses. The way these low challenge activities work is that the level of difficulty increases as participants go through the course. The challenge first starts with working individually to get acclimated to the height and then progresses to groups of two or three people working together on a challenge, until everyone has to work collaboratively in a difficult situation. The further along one gets, the more the group of students get to know one another. What ends up being a highlight of this course is the support that each individual student gets from others in the group. The award given at the end of this course is that students are given the option of zip lining to get down from the course. This can be seen as challenging for some students, which is precisely why skills learned throughout the courses can be used to encourage members of the group.

*Debriefing*

The debriefing is one of the most important parts of this activity because it goes through the whole process of the experience and leaders ask questions such as: (1) How do today’s experiences apply to your group dynamics?; (2) How can you apply today’s learning outcomes to your workplace/team/homelife?; (3) What are you taking home with you from today?
Participating in the activity is one thing, but being able to talk about the process, how it felt going through certain obstacles, and what it brought up for individual participants is very powerful. It is during these conversations where there is hope that some of the project objectives will be reached. Those objectives include decreased levels of symptoms associated with PTSD and related disorders and increased sense of community and social involvement among participating veterans. During the second phase of the outdoor adventure, students will apply what was learned in the first activity while out in nature in working towards the third objective, which is the increased sense of psychosocial well-being for veterans through the therapeutic benefits of outdoor therapy.

During the **second phase**, students will be traveling to Joshua Tree National Park, where they will spend 3 days camping and getting to know each other better. They will also be enjoying the beauty that is nature. Attached is an itinerary that explains in detail what the activity-filled days will consist of, as well as some depictions of the great activities that they will be experiencing (See Appendix A).

**Program Evaluation**

In order to ensure goals and objectives of the outdoor adventure program for veterans are being met, staff at Campus Recreation will analyze basic participation and completion data. In addition, Campus Recreation Staff will review participant program evaluation and collaboratively discuss any needed modifications or changes to the program. In so doing, the degree to which the initial program participation goals have been met will be measured.

Pending IRB approval for conducting an outcome study, staff at Campus Recreation will also evaluate whether additional program outcome goals have been met. In order to do this, Campus Recreation staff will administer three self-report measures both pre- and post-
intervention. Staff members conducting the evaluation will complete Collaborative Institutional Training Initiative (CITI) research training, and will also be trained in the scoring of the measures and in careful record keeping. In order to measure the first goal of increasing psychosocial well-being, participants will complete the Satisfaction with Life Scale (see Appendix C). In order to measure the second goal of decreasing symptoms of posttraumatic stress disorder, participants will take an adapted PTSD Symptom Scale (see Appendix D). Lastly, in order to measure our final goal of increasing sense of community and social involvement, participants will take a modified version of the Social Connectedness and Social Assurances Scale (see Appendix E). For each of these goals, participants will be offered the opportunity to take the corresponding measure once at enrollment in the program and once upon completion of an outdoor adventure. However, participation in this outcome research will be voluntary and will not affect the participant's ability to take part in the program. Results will be scored and documented by Campus Recreation staff members. This data will then be analyzed in SPSS, and results will be examined to measure program outcome goal completion.

**Budget Request**

We request a total of $9,400 to undertake the study described above. The majority of the funds will go towards the costs of taking 12 students to a challenge course at the University of California San Diego and to Joshua Tree National Park. This includes activities that will be conducted throughout their time there, as well as planned tours and team building activities. Hugo Lecomte, along with coordinators of Outdoor Adventures, will be responsible for the successful execution of the project and will also conduct the research and take care of the surveys. The coordinators will also provide support for the project by helping to plan, prepare, and get all the little details sorted out in order to have a successful excursion.
The total expenses for the Challenge Course at UCSD are estimated to be $4,400 (see Table 1). The estimated expenses for the Joshua Tree National Park excursion are $5,000 (see table 2). The estimated amount that Campus Recreation is contributing to this excursion is $7,358 (see Table 3).
Table 1

*Expenses for the Challenge Course at the University of California San Diego*

<table>
<thead>
<tr>
<th>Expenses – Challenge Course</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rental Vans for 12 students</td>
<td>$700</td>
</tr>
<tr>
<td>Gas</td>
<td>$500</td>
</tr>
<tr>
<td>Lodging</td>
<td>$0</td>
</tr>
<tr>
<td>Food</td>
<td>$500</td>
</tr>
<tr>
<td>Activity</td>
<td>$2200</td>
</tr>
<tr>
<td>Other</td>
<td>$500</td>
</tr>
<tr>
<td>Total</td>
<td>$4400</td>
</tr>
</tbody>
</table>
### Expenses for Joshua Tree National Park excursion

<table>
<thead>
<tr>
<th>Expenses</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rental Vans for 12 students</td>
<td>$1200</td>
</tr>
<tr>
<td>Gas</td>
<td>$600</td>
</tr>
<tr>
<td>Lodging</td>
<td>$600</td>
</tr>
<tr>
<td>Food</td>
<td>$800</td>
</tr>
<tr>
<td>Activity</td>
<td>$800</td>
</tr>
<tr>
<td>Other</td>
<td>$1000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$5000</strong></td>
</tr>
</tbody>
</table>
Table 3

*Equipment from Campus Recreation*

<table>
<thead>
<tr>
<th>Equipment from Campus Recreation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tents (4 and 6 person tent)</td>
<td>$1656</td>
</tr>
<tr>
<td>Sleeping Bags</td>
<td>$1320</td>
</tr>
<tr>
<td>Sleeping Bag Liners</td>
<td>$360</td>
</tr>
<tr>
<td>Sleeping Pads</td>
<td>$540</td>
</tr>
<tr>
<td>Backpacks</td>
<td>$2244</td>
</tr>
<tr>
<td><strong>Camp Kitchen</strong></td>
<td></td>
</tr>
<tr>
<td>Stove</td>
<td>$220</td>
</tr>
<tr>
<td>Jetboil</td>
<td>$130</td>
</tr>
<tr>
<td>Roll Top Kitchen</td>
<td>$130</td>
</tr>
<tr>
<td>Cook Set</td>
<td>$150</td>
</tr>
<tr>
<td>Table Set</td>
<td>$168</td>
</tr>
<tr>
<td>Wash Station</td>
<td>$45</td>
</tr>
<tr>
<td>Kitchen Sink</td>
<td>$30</td>
</tr>
<tr>
<td>60 qt. Cooler</td>
<td>$55</td>
</tr>
<tr>
<td>70 qt. Cooler</td>
<td>$70</td>
</tr>
<tr>
<td>Camping Chair</td>
<td>$240</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$7358</td>
</tr>
</tbody>
</table>
Applicant Capability

California State University’s Campus Recreation Center specializes in the provision of outdoor activities and excursions to students on campus. Campus Recreation has provided excellent outdoor adventure opportunities for students to branch out and do things they have never tried before. Activities include snorkeling, camping in the desert, indoor skydiving, and learning how to surf. Campus Recreation makes the experience extraordinary. So, whether the individual is looking for something exciting to do or looking to meet fellow outgoing individuals, Campus Recreation has many outdoor adventure opportunities (California State University San Marcos, Campus Recreation, 2015). Campus Recreation has developed collaboration with the California State University San Marcos Veterans Center to provide outdoor adventures to eligible veterans.

Sustainability

It is aspired that Campus Recreation and the Veterans Center at California State University San Marcos will work in collaboration with future graduate students in the Master of Social Work Program to oversee the sustainability of this grant project. Prior to funding being diminished graduate students will work on future grant proposals to continue funding for the provision of outdoor adventures to Veteran population at California State University San Marcos for years to come.
Chapter 5

Discussion

Implications of Findings

The findings of this Capstone Project present many implications for veterans and for the field of social work as a whole. As the literature suggests, outdoor and adventure-based therapies represent an exciting new and effective treatment modality for service-related ailments (Erikson, 2013; Tanielian & Jaycox, 2008; Tidball, n.d.; Velle et al., 2013). This approach circumvents many of the barriers involved in other evidence-based treatment approaches including stigma. Veterans report avoiding therapy as a result of personal shame and stigma. They further report shying away from mental health services due to concerns over how such action would be perceived by their comrades. There is a belief among veterans that individual deficits are responsible for the development of PTSD (Mittal et al., 2013). By not advertising itself as “therapy,” outdoor and adventure-based programs may attract those veterans who avoid treatment due to shame and stigma. Still, the therapeutic benefits of outdoor adventures are extensive. Veterans are able to discuss their service, relate to other former service members, and practice interpersonal and emotional skills (Harper et al., 2014).

Another barrier seen in traditional therapy approaches which is overcome in outdoor therapies includes lack of proper implementation by mental health practitioners. For example, many providers implement only certain aspects of evidence-based models, such as a particular worksheet. Diverse levels of implementation of evidence-based practices across providers is not surprising considering the typical new treatment takes an average of 17 years to be similarly implemented across providers (Cook et al., 2013). Though outdoor programs have a straight-
forward and clear format in terms of activities, the structure lends itself to flexibility based on the composition of the group and intuition of the guide.

Most importantly, outdoor and adventure-based approaches show promise in providing many positive outcomes for veterans. Research suggests the approach's effectiveness in increasing individual sense of psychosocial well-being among veterans (Vella et al., 2013), decreasing the severity of symptoms associated with PTSD (Tanielian & Jaycox, 2008), reinstating feelings of pleasure and social-connectedness, and enhancing individual and community resilience (Tidball, n.d.). This approach also provides early intervention. All veterans are welcome to participate in outdoor adventures, supporting early intervention research which suggests strong evidence for the importance of addressing trauma before the clinical threshold of posttraumatic stress is met (Harper et al., 2014). For these reasons and more, outdoor treatment represents a viable and promising treatment for the emotional and mental health needs of former service members. Not only does this have important implications for veterans, but should also shape the practice of social workers seeking to implement best-practice approaches in their work with veterans.

Limitations of this Project

This project is the first of its kind to be conducted at California State University San Marcos involving Campus Recreation and the newly opened Veterans Center. The detailed information in this Capstone Project is meant to serve as the foundation for obtaining funding sources for free-of-charge outdoor adventure therapy for student veterans. It is the hope that Campus Recreation and the Veterans Center will receive funding in order to provide such services to student veterans who are aspiring to obtain further education through California State University San Marcos.
If funds are obtained, Campus Recreation will continue to collaborate with the Veterans Center to utilize the funds to provide student veterans with the aforementioned activities. Once funding is located, Campus Recreation will have the sole responsibility of going through the IRB process in order to evaluate the programs outcomes and progress.

**Directions for Further Research**

If funds are allocated and the IRB process is completed, it is hoped that future students in the Master of social work program will continue to collaborate with Campus Recreation and the Veterans Center to collect data and conduct further studies to evaluate additional aspects of the program. A pre and post-test can be created to measure decreased negative effects of military service in student veterans.

Additional research may examine the effectiveness of outdoor-adventure therapy for student veterans in other settings aside from the university. For example, outpatient mental health settings and private practice settings are potential areas for further exploration. Future research might also examine the effectiveness of outdoor and adventure-based therapy in treating comorbid disorders beyond PTSD among veteran populations. In addition, further research can be conducted in regards to the effectiveness of outdoor-adventure therapy on single disorders. For example, potential research questions might include the following; how effective is outdoor-adventure therapy for PTSD alone? How effective is outdoor-adventure therapy with TBI alone? Lastly, how effective is outdoor-adventure therapy with substance abuse alone?

**Implications for Social Work**

The National Association of Social Workers is committed to supporting the health and well-being of Veterans and their families. For those who are interested in social work with veterans, there are countless opportunities to do so. Regardless of the practice setting, chances
are that nearly all practicing social workers will serve veterans in some capacity whether it be via behavioral and mental health interventions, social services, housing, health care, coordination of care, or a variety of other settings (National Association of Social Workers, 2015).

Social workers offer a variety of services to veterans including; navigation of available resources, crisis intervention, advocacy, assistance with benefits, and mental health therapy for veterans who suffer from depression, posttraumatic stress disorder, and alcohol and other drug addiction. Social workers also ensure continuity of care through admission, evaluation, treatment, and follow-up processes. Social workers carry a set of skills and knowledge that is beneficial to veterans who return home from war with a host of challenges such as those mentioned in this grant proposal project. Veterans are served particularly well by social workers who practice in a person-in-environment perspective. Social workers also have an indispensable ability to solve multifactorial biopsychosocial problems (National Association of Social Workers, 2015), such as the complex situations faced by many veterans.

It is insufficient to assume that adequate care of veterans will be provided for by military and governmental systems. It is important that social workers engage with and better serve veterans within the context of other settings, such as the university setting. In the name of continued social justice, it is crucial that social workers and social work students recognize their role and responsibility to serve veterans. Social workers and social work students can better prepare themselves to serve veterans in a variety of communities (Savitsky, Illingworth, & DuLaney, 2009) such as CSUSM.


Erickson, D. (2011). Exploring the possibility of using outdoor recreation to promote mental health in veterans with PTSD. *Mental Health CATs, Paper 23.*


Fear, N. T., Jones, M., Murphy, D., Hull, L., Iversen, A. C., Coker, B., et al. (2010). What are the


Appendix A

Joshua Tree Trip Itinerary

Joshua Tree Trip Itinerary Friday: Drive from California State University San Marcos to Joshua Tree National Park (140 miles, 2h40min)

• Leave Clarke Field House at 6AM
• Breakfast in the mini vans
• Pick-up lunch-to-go in Joshua Tree National Park 9AM
• Drive-in Joshua Tree National Park and visit highlights (Keys, Skull Rock)
• Leave No Trace discussions
• Keys Ranch Tour @ gates 1.45PM (90 min hike)
• Set-up the campsites at 4.30PM: Black Rock sites #49, 50 & 51
• Leave No Trace frontcountry reminder (15 min)
• Dinner at the campsites at 7.30PM
• After dinner: fire pit circle + game activity/debrief

Saturday: Hiking and climbing day

• Breakfast @ 6AM – leave camp @ 7AM
• Climb/hike start @ 8AM (with packed lunch)
• Ryan Mtn. hike
• Climbing in surprise location
• Game activity at the camp
• Dinner at the campsites at 7.30PM
• After dinner: fire pit circle + game activity/debrief

Sunday: Drive JT NP to CSUSM (140 miles, 2h40min)
• Breakfast @ camp 6.30AM

• Break down camp and leave camp by 9.30AM

• Arrive @ California State University San Marcos around 1PM
Appendix B

Participant Satisfaction Survey

Please indicate the degree to which you agree with the following statements based on the following scale:

7 - Strongly agree
6 - Agree
5 - Slightly agree
4 - Neither agree nor disagree
3 - Slightly disagree
2 - Disagree
1 - Strongly disagree

1. The guide on the outdoor adventure was knowledgeable and professional.
2. I felt safe and supported by staff and peers during the outdoor adventure.
3. I enjoyed the activities and challenges included in the outdoor adventure.
4. I learned a great deal as a result of my participation.
5. Group processing was a helpful addition to the physical aspects of the outdoor activity.
6. Overall, I am glad I chose to participate in the outdoor adventure program.
Appendix C

The Satisfaction with Life Scale

Below are five statements that you may agree or disagree with. Using the 1 - 7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.

7 - Strongly agree
6 - Agree
5 - Slightly agree
4 - Neither agree nor disagree
3 - Slightly disagree
2 - Disagree
1 - Strongly disagree

____ In most ways my life is close to my ideal.
____ The conditions of my life are excellent.
____ I am satisfied with my life.
____ So far I have gotten the important things I want in life.
____ If I could live my life over, I would change almost nothing.

Scoring:

31 - 35 Extremely satisfied
26 - 30 Satisfied
21 - 25 Slightly satisfied
20 Neutral
15 - 19 Slightly dissatisfied
10 - 14 Dissatisfied
5 - 9 Extremely dissatisfied

Appendix D

PTSD Symptom Scale (PSS)

Below is a list of problems that people sometimes have after experiencing a traumatic event. Please rate on a scale from 0-3 how much or how often these following things have occurred to you in the last two weeks:

0 Not at all
1 Once per week or less/ a little bit/ one in a while
2 to 4 times per week/ somewhat/ half the time
3 to 5 or more times per week/ very much/ almost always

1. Having upsetting thought or images about the traumatic event that come into your head when you did not want them to

2. Having bad dreams or nightmares about the traumatic event

3. Reliving the traumatic event (acting as if it were happening again)

4. Feeling emotionally upset when you are reminded of the traumatic event

5. Experiencing physical reactions when reminded of the traumatic event (sweating, increased heart rate)

6. Trying not to think or talk about the traumatic event

7. Trying to avoid activities or people that remind you of the traumatic event

8. Not being able to remember an important part of the traumatic event

9. Having much less interest or participating much less often in important activities

10. Feeling distant or cut off from the people around you

11. Feeling emotionally numb (unable to cry or have loving feelings)

12. Feeling as if your future hopes or plans will not come true
13. Having trouble falling or staying asleep
14. Feeling irritable or having fits of anger
15. Having trouble concentrating
16. Being overly alert
17. Being jumpy or easily startled

Appendix E

The Social Connectedness and the Social Assurance Scale

6 - Strongly disagree
5 - Disagree
4 - Slightly disagree
3 - Slightly agree
2 - Agree
1 - Strongly agree

1. I feel disconnected from the world around me.
2. Even around people I know, I don't feel that I really belong.
3. I feel so distant from people.
4. I have no sense of togetherness with my peers.
5. I don't feel related to anyone.
6. I catch myself losing all sense of connectedness with society.
7. Even among my friends, there is no sense of brother/sisterhood.
8. I don't feel I participate with anyone or any group.