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Posttraumatic Stress Disorder and Returning U.S. Veterans: A Comprehensive Review of the Literature and its Implications

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POSTTRAUMATIC STRESS DISORDER AND RETURNING U.S. VETERANS:
A COMPREHENSIVE REVIEW OF THE LITERATURE AND ITS
IMPLICATIONS

by

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B.A., Southern Illinois University, 2003

A Research Paper
Submitted in Partial Fulfillment of the Requirements for the
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Department of Rehabilitation Counseling
in the Graduate School
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RESEARCH PAPER APPROVAL

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A Research Paper Submitted in Partial

Fulfillment of the Requirements

for the Degree of

Master of Science

in the field of Rehabilitation Counseling

Approved by:

Dr. Stacia Robertson, Chair

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AMANDA CHESNEK, for the Master of Science degree in REHABILITATION COUNSELING, presented on NOVEMBER 10, 2011, at Southern Illinois University Carbondale.

TITLE: POSTTRAUMATIC STRESS DISORDER AND RETURNING U.S. VETERANS: A COMPREHENSIVE REVIEW OF THE LITERATURE AND ITS IMPLICATIONS

MAJOR PROFESSOR: Dr. Stacia Robertson

The topic of Posttraumatic Stress Disorder (PTSD) in veterans returning from the military operations in Iraq and Afghanistan is reviewed in an in-depth study through a comprehensive review of the literature. A thorough definition of PTSD is provided. An approach to identifying the pertinent literature will be outlined. The importance of the topic is discussed, including prevalence as well as impact to the individual veterans affected. Impact on veterans' families will also be reviewed, as well as how PTSD is affecting the nation and society. Various treatments and barriers to treatment will be reviewed, along with screening tools and prevention methods. An interpretation of the literature and its implications will be provided. Conclusions, implications, and recommendations will be offered to conclude the study.

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CHAPTER 1

STATEMENT OF THE PROBLEM

Rehabilitation counselors are now facing a new, ever-larger population with a disability, one that has been termed a “signature wound” of the returning Operation Iraq Freedom (OIF) and Operation Enduring Freedom (OEF) veterans (Burke, Degeneffe, & Olney, 2009). These veterans are returning home with various psychological and medical needs, and it will be the job of the rehabilitation counselor to determine how to best serve and manage those needs. The better prepared the counselor, the better service the veterans will receive. One of these services will be to provide effective counseling and case management services to veterans who are returning with the signature wound, Posttraumatic Stress Disorder (PTSD).

The purpose of this study is to determine the most effective means of providing these services, as well as the most effective means of mitigating the costs of PTSD, thereby improving the quality of life of OIF/OEF veterans and cutting expenses for U.S. taxpayers. To accomplish this purpose, this study will review the recent literature regarding these issues to determine what preventive measures are being utilized successfully, which screening tools and treatments are being used effectively, and how to effectively remove barriers to treatment for OIF/OEF veterans as they return and readjust to life at home.

According to the research (Sharpless & Barber, 2011; Institute of Medicine, 2007), effective treatments are available; however there are such a variety of approaches to treatment that it is necessary to determine which ones are effective based upon

empirical evidence. Despite the availability of effective evidence-based treatments and effective screens to detect PTSD, OIF/OEF veterans with PTSD are not all receiving treatment; barriers to treatment must also be focused upon to solve this national problem. The literature will be reviewed to determine what the barriers are with the hope of determining how they may be removed.

BACKGROUND OF THE PROBLEM

The background of this national problem consists of the various social concerns stemming from the multitude of costs to the American people that are a result of OIF/OEF veterans returning home with PTSD. The prevalence of PTSD occurring in OIF/OEF veterans is terribly high, and the costs to these veterans and to the United States are excessive. Both prevalence and cost are continuing to rise. The relevance of this paper lies in its attempt to determine methods of alleviating these costs and improving quality of life for OIF/OEF veterans with PTSD, through determining effective methods of prevention, screening, treatment, and removal of barriers to treatment.

Prevalence of PTSD. The cost and prevalence of returning veterans with PTSD to our nation and its people are of such high number that it is important to study this topic to identify solutions in order to best mitigate their effect (Harrison, Satterwhite, & Ruday, 2010). It is important to study this topic in order to improve the quality of life experienced by returning veterans with PTSD. Garcia, Finley, Lorber, and Jakupcak (2011) reported that there are now approximately 1.8 million veterans that have served in either Operation. Prevalence rates of OIF/OEF veterans with PTSD are high; one study found as many as 21.8% of veterans who have accessed Veterans Health Administration

healthcare services between 2002 and 2008 were diagnosed with PTSD (Seal et al., 2009). Another study found that as many as 68.2% of the OIF/OEF veterans who accessed one Department of Veterans Affairs (VA) Poly-trauma Network Site were given a PTSD diagnosis (Lew et al., 2009). Other research has found that PTSD is the most common diagnosis of all mental health diagnosis for OIF/OEF veterans (Seal et al., 2007).

Research determined that the difference between prevalence rates of PTSD for male and female veterans were minimal, though two different studies found that females had 2% (Seal et al., 2007) to 11% fewer positive diagnoses (Haskell et al., 2010). Rate differences were also found to be minimal when compared between ethnic groups, also a two percent difference. Prevalence rates were found to be higher in younger, 18-24 year old veterans, than in veterans 40 years or older (Seal et al., 2007). The OIF/OEF conflicts are still on-going and therefore it is feasible to predict that the healthcare system will continue to see more veterans diagnosed with PTSD.

National cost of PTSD. The financial burden falls to the U.S. to provide treatment of OIF/OEF veterans with PTSD. In 2008, the federal government extended healthcare benefits to veterans from 2 years to 5 years post-discharge, with continued services after that period for a nominal co-payment. Since 2002, 41% of OIF/OEF veterans have enrolled in VA healthcare (Seal et al., 2009). One study estimated that if 15% of returning veterans require treatment services for PTSD, an estimated \$200 million can be anticipated yearly in healthcare expenses (Harrison et al., 2010). They further estimated that the total cost of PTSD and depression could range from \$4 billion to \$6.2 billion, or \$10,151 per veteran.

Cost of PTSD to society. These are the costs incurred by the federal government, which do not include the costs to society or the individual veterans and their families. Society also incurs a high cost when lost productivity is considered. Individuals with PTSD are less productive and have higher rates of absenteeism (Harrison et al., 2010). Kilmer, Eibner, Ringel, and Pacula, (2011) estimated that effects of PTSD and major depression cost society approximately \$923 million for a two year time period due to lost productivity, treatment, suicide attempts and suicide. Another cost to society occurs when veterans with PTSD exhibit antisocial behavior resulting in legal consequences. Behavior such as child abuse, substance abuse, and domestic violence leads to legal problems sometimes resulting in dishonorable military discharge (Burke et al., 2009).

Cost without treatment. The costs for those OIF/OEF veterans who do not seek healthcare services are high as well. Research has found that most veterans have not sought treatment after receiving a mental health diagnosis (Kilmer et al., 2011). There is also a high treatment dropout rate for veterans with PTSD (Garcia et al., 2011). According to Harrison et al. (2010) “Without effective treatment, returning military personnel with PTSD could suffer considerable impairment in function and become a significant financial burden for the United States” (p. 65). Harrison et al. (2010) also indicated that long-term costs and unfavorable outcomes would be increased without effective treatment. Research confirms that war-related PTSD left untreated is chronic and quality of life is considerably low (Priebe et al., 2009).

Cost of PTSD to family. Families of OIF/OEF veterans with PTSD are at risk of experiencing elevated levels of distress. Many spouses have experienced distress related to caregiver burden, and to living with someone with PTSD. Research has developed a

theory that a significant number of military spouses have acquired a disorder similar to PTSD, called secondary traumatic stress or secondary traumatic stress disorder (STS/STSD) (Renshaw et al., 2011). STS/STSD is defined by Figley (1995, p.8) as “a syndrome of symptoms nearly identical to PTSD” that arises due to “exposure to knowledge about a traumatizing event experienced by a significant other.” Other research has shown that veterans with PTSD and their partners experience more marital discord than couples without PTSD, due to trauma symptoms such as sexual problems, dissociation, and sleep disturbances (Nelson Goff, Crow, Reisbig, & Hamilton, 2009). Pregnancy can exacerbate PTSD symptoms for female veterans, also causing the family problems. Some of the symptoms of PTSD, such as increased anxiety, can cause premature birth and lower birth weights (Mattocks et al., 2010).

Individual cost of PTSD. Research has shown that there is great personal cost to the individual as well as family of the OIF/OEF veteran. Individuals with PTSD experience higher rates of unhealthy behavior, such as unsafe sex (Harrison et al., 2010). Other behavior such as domestic violence and child abuse directly affect the families of veterans with PTSD (Burke et al., 2009). In turn, these behaviors elicit stigmatizing behaviors from the veteran’s social support network; thereby further decreasing quality of life (Ouimette et al., 2011). These behaviors can also lead to legal problems and dishonorable discharge for the individual (Burke et al., 2009). Furthermore, these problems can lead to employment difficulties. Research has found that PTSD is associated with lower income as well as unemployment (Resnick & Rosenheck, 2008). Research has also found that PTSD has been linked to higher rates of homelessness (Hourani, Council, Hubal, & Strange, 2011).

The personal cost to individual OIF/OEF veterans with PTSD emerges in yet another aspect as co-occurring disorders; these disorders include biological and psychosocial disorders. Research suggests that comorbidity is high; 83% of veterans with PTSD are estimated to have a co-occurring disorder (Sharpless & Barber, 2011). Comorbidity of mental health issues has been shown to confound diagnosis (Seal et al., 2009).

Many veterans are experiencing an excess burden of medical illness in addition to PTSD. Research has found medical conditions such as lumbosacral spine disorders, lower extremity joint disorders, hearing problems, tendonitis, obesity, and headaches occur more frequently in veterans with PTSD than in veterans who do not have a mental health disorder (Frayne et al., 2011). Possemato, Wade, Andersen, and Ouimette (2010) likewise found an association between PTSD and disease burden. Veterans with PTSD are also experiencing chronic pain at a significant rate (Lew et al., 2009). Veterans are experiencing another co-occurring condition, Traumatic Brain Injury (TBI), at a high rate; the two conditions exacerbate the symptoms of each disorder and complicate recovery (Burke et al., 2009).

Psychosocial conditions are also occurring at a higher rate in veterans with PTSD. These include symptoms for substance abuse, depression, anxiety, dissociation, somatization, anger, sexual problems, and difficulty sleeping (Nelson Goff et al., 2007). Similarly, Smeeding et al. (2010) found in their study that the subgroup with PTSD had higher scores of depression, anxiety, and stress than those in a comparison subgroup who did not have PTSD. Research by Possemato et al. (2010) found outpatient mental health treatment is being used four times as much by veterans with PTSD than by veterans who

do not have PTSD. Many researchers have also found that risk of suicide is considerably higher for OIF/OEF veterans with PTSD than in those who do not have PTSD (Jakupcak et al., 2011; Brenner et al., 2011).

PURPOSE AND OBJECTIVES

It is this author's opinion that a comprehensive plan of action including implementation of effective preventive measures, early detection of PTSD through standardized screening tools, utilization of evidence based treatments for PTSD, and removal of barriers to treatment for OIF/OEF veterans, could substantially alleviate this national problem. These measures could effectively cut the personal and national costs associated with PTSD and increase quality of life for OIF/OEF veterans and their families. It is therefore important to review the literature to determine what preventive measures are being utilized and how successfully, which screening tools and treatments are being used effectively, and how to effectively remove barriers to treatment for OIF/OEF veterans as they return and readjust to life at home.

In summary, the topic of PTSD in veterans returning from the military operations in Iraq and Afghanistan was reviewed, with an extensive definition of PTSD provided for the reader's understanding. The importance of the topic was discussed, including the prevalence of OIF/OEF veterans with PTSD as well as its adverse impact on the individual veterans affected. The detrimental impact of PTSD on veterans' families was also reviewed, as well as how PTSD is negatively affecting the nation and society. An extensive analysis of the literature will be provided in the next chapter, followed by a

final chapter discussing suggestions for future research, as well as implications and conclusions that can be drawn from the literature.

DEFINITIONS

In order for the reader to better understand the relevance of this paper, a comprehensive definition of PTSD is provided. PTSD is described by the American Psychiatric Association (APA) in detail in the fourth edition, text revised Diagnostic and Statistical Manual of Mental Disorders, or DSM-IV-TR (2000). It is categorized by the APA as an anxiety disorder, with the essential feature of direct experience of exposure to an extreme traumatic stressor followed by characteristic symptoms. This direct experience involves threat of death or injury to self or others combined with a response of intense fear or helplessness. Examples of such experiences include but are not limited to: natural disasters, such as tornadoes, personal assault such as rape, military combat, torture, being kidnapped.

In addition to this experience or event, the APA (2000) illustrates further criteria that must be met to afford the diagnosis of PTSD. Of these, there are three categories of symptoms; intrusive memories, avoidance and numbing, and increased anxiety and hyperarousal. With the first category, there will be distressful re-experience of the event manifest as either recurrent frightening dreams, or psychological or physiological distress at re-exposure to the event or some aspect resembling, or recurrent recollections of the experience that cause distress. These recurrent re-experiences may include flashbacks, hallucinations, or illusions, or reliving the traumatic event for a period of time. A clinical diagnosis of PTSD requires one or more of these criteria to be met.

Under the category of avoidance and numbing, the APA (2000) provides the next criteria as a tenacious avoidance of all thoughts, feelings, activities, people, and places that are associated or can stimulate memory of the traumatic experience, in combination with a blunting of responsiveness. An individual with this disorder may feel detached from others and activities that they cared about prior to the experience. Another symptom that is included is a diminished range of affect, for example the individual may feel emotionally numb and have difficulty maintaining close relationships. Another symptom that falls under the category of avoidance and numbing is a feeling of hopelessness about the future. For example, an individual might not expect to live a normal life span. Also included in this category is an inability to remember some parts of the traumatic experience. Three or more of these symptoms must exist to indicate a diagnosis of PTSD.

The third category of symptoms, increased anxiety and hyper-arousal, are explained in the APA (2000) as continuing symptoms of increased stimulation. These symptoms may manifest as extreme alertness, irritability, anger, and trouble with concentrating and falling or staying asleep. Another symptom in this category is an inflated startle reaction. To meet the criteria for a PTSD diagnosis two or more of these symptoms must be present.

In addition to these symptoms, the APA (2000) stipulates that these symptoms must occur for a period of time lasting longer than one month. These symptoms must also cause clinically significant impairment or distress in an important area of functioning. For example, the individual may suffer distress in their social life, or impairment at work due to any of these symptoms. The APA differentiates acute PTSD

as symptoms occurring for less than three months and chronic PTSD as symptoms occurring for more than three months. If the onset of symptoms happens six months or more after the traumatic event, a delayed onset is specified. In the case of symptoms occurring for less than a month, a diagnosis of acute traumatic stress disorder is be identified.

CHAPTER 2

LITERATURE REVIEW

This chapter will be outlined by first discussing research regarding methods that have been used to prevent PTSD. Then research concerning screening and assessment tools to identify and diagnose OIF/OEF veterans with PTSD will be reviewed. Research studying effective treatments for veterans with PTSD will be analyzed, with an emphasis on evidence-based treatments, followed by an analysis of the research regarding barriers to treatment for OIF/OEF veterans.

Prevention

The literature offered two useful articles regarding the prevention techniques that are or have been utilized in the prevention of PTSD. Both articles were literature reviews, one focusing entirely on prevention, the other on treatment and methods of PTSD prevention. In the latter article, Sharpless and Barber (2011) stated that “the best way to lessen the damage caused by PTSD would be to prevent its eventual development following the occurrence of specific traumatic events (i.e., secondary prevention)” (p. 9). They indicated that there are psychological and pharmacological approaches to attempt prevention of the development of PTSD. Psychological prevention approaches can also be further categorized by interventions administered prior to deployment or the traumatic event, or during and after deployment.

Prevention prior to deployment. Hourani et al. (2011) examined PTSD prevention studies that were utilized prior to deployment. The focus of these approaches is to mitigate the impact of a stressful event through educational briefings and coping

skills training. The authors reported that these approaches have been proven successful in nonmilitary settings to reduce stress reactions. The theory behind the psychoeducational approach is that if people are educated about what to expect after a traumatic experience, they will be cognizant of symptoms as normal reactions to trauma, and upon recognition, will perhaps seek help. The military has psychoeducational programs in place, such as Battlemind in the Army branch, and Combat and Operational Stress Control (COSC) in the Navy and Marines. The authors reported that no empirical research for evaluation of either program has been published.

Hourani et al. (2011) discussed another prevention approach utilized prior to deployment, which consists of coping skills training and stress inoculation training. The U.S. Military Academy utilizes Army Center for Enhanced Performance, a program which trains cadets in arousal control and attention control. No empirical research for evaluation of this program has been published. Stress inoculation training (SIT) has been found promising in a few studies. The approach is described as a cognitive behavior therapy, providing stress coping skills training followed by exposure to mild stressors. Few studies have yet been conducted. The authors advised that numerous methodological issues warrant caution of one of the study's results, which indicated that the approach was effective at reducing PTSD. Other SIT programs have had positive results as well but are still in preliminary phases. B.K. Wiederhold and M.D. Wiederhold (2006) are currently studying Virtual Reality (VR) technology as a tool combined with SIT to prevent PTSD and to provide improved military performance. The authors suggested that VR combined with SIT will prove effective at treating veterans with PTSD who are unlikely to be helped by exposure therapy. The authors posited that due to

avoidance symptoms veterans avoid reminders of the traumatic experience, which is a basic component of exposure therapy.

Prevention during deployment. Prevention approaches utilized during deployment are also being studied. One such approach is psychological debriefing, which uses interventions such as provoking emotional responses, normalizing those responses, and preparing the individual for PTSD reactions. In one section of their literature review, Hourani et al. (2011) reviewed four studies for four separate psychological debriefing approaches that were utilized during deployment, and reported that little systematic research has been available to determine the effectiveness of each approach. Sharpless and Barber (2011) reported that the research reviewing psychological debriefing has found little evidence to determine the significant effectiveness of the approach for prevention of PTSD. They also reported that research has found psychological debriefing can potentially be harmful to those who do not exhibit symptoms of PTSD. Hourani et al. (2011) offered that “the lack of rigorous evaluations of these programs may be understood in light of the challenges of conducting these programs at all under such circumstances” (p. 726).

Pharmacological prevention.

Sharpless and Barber (2011) evaluated pharmacological approaches to PTSD prevention. Treatment using such medications as cortisol and ketamine has been assessed. The authors reported that propranolol (Inderal) is the most auspicious medication for PTSD prevention. The medication is a beta-adrenergic antagonist, or beta-blocker, and has been used to treat hypertension, headaches, and performance

anxiety. The authors reported of four studies of propranolol, two have shown efficacy in reducing symptoms of PTSD.

Screens

With the lack of available research providing evidence of effective prevention approaches, effective treatment and screens to determine who may be at risk for PTSD become especially important. Effective screens can facilitate early detection and may expedite treatment (Burke et al., 2009). Effective screens have been found to work efficiently with evidence-based treatments (Alvarez et al., 2011; Rauch et al., 2009). Calhoun et al. (2010) reported that the VA and the Department of Defense (DoD) recommend PTSD screening for all veterans, and has recently been mandated for all OIF/OEF veterans. They also reported that there is a shortage of research on PTSD screens. Seal et al. (2007) urged that early detection is vital to the preemption of chronic mental illness, such as PTSD.

The literature provides many studies that utilized PTSD screens for veterans. Nelson Goff et al. (2007) utilized the Traumatic Events Questionnaire (TEQ), the Purdue Post-Traumatic Stress Disorder Scale-Revised (PPTSD-R), and the Trauma Symptom Checklist-40 (TSC-40) in their study of PTSD impact on relationship satisfaction for veterans and their partners. Garcia et al. (2011) utilized the PTSD Checklist-Military (PCL-M) in their study of association between traditional masculine behavioral norms and OIF/OEF veterans with PTSD symptoms.

Traumatic events questionnaire. The authors described the function of the TEQ is to “determine the experience of each participant with various types of trauma that have the potential to produce symptoms of posttraumatic stress.” They reported the test-retest

reliability coefficients for the TEQ range from .72 to 1.00, which they suggested is adequately reliable. The TEQ consists of 17 items, which include questions about all types of trauma, not limited to combat experiences. Items answered yes receive a score of one. Total scores range from 0 to 17; higher scores indicate more types of traumatic experiences.

Post-traumatic stress disorder scale-revised. The PPTSD-R is described by Nelson Goff et al. (2007) as a scale consisting of 17 items that correspond to the diagnostic criterion for PTSD provided by the DSM-IV. Three subscales illicit information regarding symptom categories of Re-experiencing, Avoidance, and Arousal. Items are scored ranging from 1 (not at all) to 5 (often). Total scores range from 17 to 85; higher scores indicate greater symptoms. The scale does not provide a diagnosis. The authors reported that the PPTSD-R has adequate test-retest reliability, with a total score at .72. They also reported that scale has sufficient internal consistency, with a coefficient alpha for the total score at .91.

Trauma symptom checklist-40. Nelson Goff et al. (2007) described the TSC-40 as a 40 item measure that evaluates symptoms of traumatic experiences. Items are scored from 0 to 3, with total scores ranging from 0 to 120; higher scores indicate greater symptoms. There are six subscales, consisting of Anxiety, Depression, Dissociation, Sexual Abuse Trauma, Sexual Problems, and Sleep Disturbances. The screen does not provide a diagnosis. The authors reported adequate reliability, with total score alphas between .89 and .91.

PTSD checklist-military. Garcia et al. (2011) described the PCL-M as a 17 item scale that measures PTSD symptom severity within the past month, and is based on

DSM-IV criteria. The scale focuses on symptoms related to military experiences. There are three subscales, consisting of Re-experiencing, Avoidance, and Hyperarousal. The authors reported that Cronbach's alpha is .96.

Primary care-PTSD screen. The VA and DoD have selected the Primary Care-PTSD Screen (PC-PTSD) for administration at VA medical centers. According to Calhoun et al. (2010) research regarding the PC-PTSD is scarce, however two studies were found. One study, by Ouimette, Wade, Prins, and Schohn (2008) compared the PC-PTSD to the General Health Questionnaire-12 (GHQ). Another study compared the PC-PTSD to two other screens, the Davidson Trauma Scale (DTS) and the SPAN, a derivative of the DTS that evaluates the severity of the following symptoms: startle, physiological arousal, anger, and numbness (Calhoun et al., 2010).

PC-PTSD compared to the DTS and the SPAN. Calhoun et al. (2010) assessed the diagnostic accuracy of the PC-PTSD among OIF/OEF veterans using a sample of 220 veterans since 9/11/01. The authors used the standardized structured clinical interview DSM-IV-TR as a reference standard for diagnosis of PTSD. They used signal detection analyses to assess efficacy of the PC-PTSD, the DTS, and the SPAN. The authors described the PC-PTSD as a four item screen, with one item each regarding re-experiencing, avoidance, numbing, and hyperarousal. These symptoms are identified as having occurred within the past month (Ouimette et al., 2008). Scores range from 0 to 4, with affirmative answers receiving a score of 1 for each item. They reported that research has shown PC-PTSD has adequate test-retest reliability.

Calhoun et al. (2010) described the DTS as a 17 item screen that measures frequency and severity of PTSD symptoms that have occurred in the past week. Scores

range from 0 to 136, and items correlate with DSM-IV criteria for PTSD diagnosis. The authors reported that reliability and validity of the DTS has been established by prior research. Scores for the SPAN range from 0 to 16, with each item scored on a Likert-type scale. Previous research has established an efficiency rate of 0.80 to 0.81.

Calhoun et al. (2010) reported the results of this study show that though the performance of the PC-PTSD is adequate for use, the DTS and the SPAN performed better. All three demonstrated good sensitivity and specificity. The authors also reported that the DTS and SPAN are copyrighted, while the PC-PTSD is in the public domain and therefore much cheaper to utilize. The authors reported an additional strength of the PC-PTSD is the screen is equally effective for use with minorities as with Caucasians.

PC-PTSD compared to the GHQ. Ouimette et al. (2008) compared the PC-PTSD to the GHQ in a primary care setting. The GHQ is a screen utilized for nonpsychotic psychiatric disorders, to distinguish clinical from nonclinical populations. The GHQ scores indicate the severity of symptoms, using a 4-point Likert-type scale. The authors reported that the psychometric properties of the GHQ have been determined adequate. The authors used signal detection analyses and likelihood ratios to compare the PC-PTSD to the GHQ. The study determined that the PC-PTSD had a higher positive predictive value, (41%) compared to the GHQ (31%). Likelihood ratios also determined better performance by the PC-PTSD (8.3) compared to the GHQ (4.6). The combination of both screens provided the highest likelihood ratio, 17.3.

Treatment

Effective evidence-based treatment needs to be provided to OIF/OEF veterans with PTSD. With the multitude of treatments to choose from, it is necessary to determine

which are effective. Sharpless and Barber (2011) indicated in their review that there are a plethora of types of psychotherapies and just as many psychopharmacological medications that are used in the treatment of PTSD. The authors reported that of these, Prolonged Exposure (PE), Cognitive Processing Therapy (CPT), and Eye Movement Desensitization (EMDR) have the most empirical evidence in their favor, and paroxetine, sertraline, and venlafaxine are the most promising medications. Russell, Silver, Rogers, and Darnell (2007) reported that the Joint Clinical Practice Guidelines for PTSD (JCPG-PTSD) by the VA and DoD recommended the use of cognitive therapy, SIT, exposure therapy, and EMDR treatments. The JCPG-PTSD also recommended paroxetine and sertraline as pharmacological interventions. These guidelines were based on a panel of experts, not on a thorough review of empirical evidence (Peterson, Luethcke, Borah, E.V., Borah, Young-McCaughan, 2011). Per the request of the VA, the National Academy of Sciences' Institute of Medicine (IOM) completed a review of 90 randomized controlled studies, 37 pharmacotherapy studies, and 53 psychotherapy studies, and determined that PE and CPT are the only approaches proven empirically sound for PTSD treatment. The IOM also reported that there is not enough research specific to OIF/OEF veterans with PTSD (IOM, 2007).

Sharpless and Barber (2011) reported that Stress Inoculation Training (SIT), relaxation training, Cognitive Behavioral Therapy (CBT), psychodynamic therapy, Interpersonal Psychotherapy (IPT), Dialectical Behavior Therapy (DBT), and hypnosis, have received some positive results from research studies. While it is important to consider all modalities as each individual will have different resources, preferences, and other variables that need to be assessed to determine appropriate treatment; treatments

must be supported by empirical evidence in order to conserve resources and improve outcomes. For the scope of this paper the focus will be limited to those evidence-based treatments for veterans with PTSD outlined by the JCPG-PTSD (Russell et al., 2007), the IOM (2007), and by Sharpless and Barber (2011), consisting of cognitive and exposure therapies including PE, CPT, and EMDR, with the exception of SIT, as it has been previously addressed in a prior section.

Prolonged exposure therapy. Prolonged exposure therapy is a treatment approach that utilizes imaginal exposure, processing of the imaginal exposure, in vivo exposure, psychoeducation, and relaxation training focused on slow breathing techniques. This approach has been proven highly effective in reduction of PTSD symptoms. The approach has been manualized, and shown to be easily trained to other clinicians. Each session generally lasts 90 minutes, with weekly sessions conducted over a period of 8-15 weeks (Sharpless & Barber, 2011). Technology may address one limitation of PE, through VR, by eliminating the need for the patient to have the ability to imagine past traumatic events (Wiederhold & Wiederhold, 2006).

Rauch et al. (2009) advocated that PE is not often available to veterans pursuing treatment for PTSD in the VA system; less than 10% of VA counselors routinely use PE for PTSD treatment. Rauch et al. (2009) examined the effects of PE in a case series study in which ten veterans with PTSD were treated with PE; the authors hypothesized that PE would reduce PTSD symptoms from pre- to post-treatment. Pre- and post-treatment PTSD severity scores were then analyzed. They utilized the Posttraumatic Diagnostic Scale (PDS) to determine severity scores, with a clinical cutoff of scores above 15 used as expected to meet diagnosis criteria. Clinical staff was trained in PE in four 2 hour

sessions. Counseling sessions consisted of 80 minutes each; veterans received between 7 and 21 sessions. The authors found that PE significantly reduced PTSD symptoms, with an average pre-treatment score of 36.2 (standard deviation = 8.1) and an average post-treatment score of 17.2 (standard deviation = 9.2). Half of the veterans had post-treatment PDS scores of less than 15. The authors noted that there were limitations to the study such as: small sample size, results were based on self-reported data, and lack of ethnic diversity. They also noted that many factors could not be controlled, such as comorbidity and medications. Another limitation the authors identified was randomization was not possible.

Cognitive processing therapy. Cognitive processing therapy (CPT) is similar to cognitive behavior therapy (CBT) in that it focuses on challenging automatic thoughts and self-blame (Sharpless & Barber, 2011). Alvarez et al. (2011) conducted a study to determine the efficacy of group CPT in comparison to treatment as usual (TAU) in a VA residential rehabilitation treatment facility. The authors reported that veterans are referred to this treatment center when a more intensive treatment is indicated. Sample size included 104 male veterans who received group CPT, and 93 male veterans who received TAU. CPT treatment consisted of veterans writing about their personal beliefs about their traumatic experiences, and through discussion of the writing identification of problematic beliefs connected with the trauma, or “stuck points,” and learning to challenge assumptions and then modify maladaptive beliefs. Sessions occurred in a group format, with four or five patients and two trained facilitators. Facilitators were trained in a two day training period focused on the treatment manual, and led by the developer of CPT, Patricia Resick. The primary outcome measure utilized to determine

pre- and posttreatment level of PTSD symptoms was the PCL, with a recommended cutoff score of 50 for probable PTSD diagnosis. Results of the study proved that CPT was significantly more effective than TAU at reducing symptoms of PTSD. There were 16.3% of participants classified as recovered in the CPT group, compared to 4.3% recovered in the TAU group. The mean intake score on the PCL for the CPT group was 64.05 and at discharge dropped significantly to 55.5; mean intake score on the PCL for the TAU group was 66.13 and dropped to 62.12. According to Alvarez et al. (2011) limitations of this study include that it was not a randomized controlled trial, and did not include treatment adherence or therapist competency measures, and did not include a clinician administered PTSD assessment.

Eye movement desensitization and processing. Eye movement desensitization and reprocessing is another manualized treatment for PTSD that utilizes components of CBT. It is clinically directed by the Adaptive Information Processing Model; this model purports that traumatic memories are unprocessed, not stored, and treated as new sensory inputs. The EMDR treatment appears to permit the procession of these unresolved experiences. Treatment consists of eight phases, including desensitization, reprocessing, installation of positive cognitions, and journaling. The technique of desensitization and reprocessing involves the client imagining distressful images, while tracking finger movements by the therapist (Sharpless & Barber, 2011). The EMDR approach uses less focus on the traumatic event than other exposure therapies (Russell et al., 2007).

Russell et al. (2007) reported that approximately 20 randomized controlled studies have determined EMDR to be an effective PTSD treatment in civilian populations, but found few DoD clinicians trained in any of the four JCPG-PTSD recommended

treatments. The authors conducted a study to train and monitor DoD mental health professionals trained to use EMDR to treat combat veterans with PTSD. A total of 175 DoD/VA clinicians were trained in EMDR over two 12 hour days; eight of the 175 volunteered to gather data on 72 patients with PTSD. Training was provided by a nonprofit organization that provides EMDR training, the EMDR Humanitarian Assistance Programs. Four scales were used to determine treatment progress, of which two are used during EMDR treatment: the Subjective Units of Disturbance Scale (SUDS) which evaluates distress related to trauma, the Validity of Cognition scale (VOC) which is used to determine the acceptance of new positive cognitions to replace negative cognitions. The Impact of Event Scale-Revised (IES-R) was used to evaluate severity of trauma symptoms. The Beck Depression Inventory (BDI) was used to evaluate depression. Analysis of the pre- and post-treatment scores showed a significant level of change had occurred by all scales. The SUDS and VOC scores indicated that the distress related to trauma had been replaced with a new positive perspective. The IES-R and BDI scores indicated similar results, with a drop from clinical ranging scores to subclinical levels.

Barriers to Treatment

The majority of returning OIF/OEF veterans with PTSD is not receiving even marginally sufficient treatment (Tanielian et al., 2008). There are many reasons for this phenomenon, which are termed barriers to treatment. Hoge et al. (2004) reported that less than 40% of OIF/OEF veterans who screen positive for PTSD seek treatment; the majority of OIF/OEF veterans worry that seeking treatment could cause them to be

perceived as weak. Another study found that compared to Vietnam veterans, OIF/OEF veterans have a much higher treatment dropout rate (Erbes, Curry, & Leskela, 2009).

Barriers to treatment for veterans include lack of therapists trained in evidence-based treatment, concerns of the veterans regarding various treatments, concerns of the therapist about treatment approaches, and lack of randomized-controlled studies specific to treatment for OIF/OEF veterans with PTSD (Peterson et al., 2011). One barrier is the confounding of mental health diagnosis that occurs with comorbid disorders (Seal et al., 2009). Similarly, co-occurring TBI and PTSD has been found to confound mental health diagnosis (Burke et al., 2009). Research has shown that the primary barrier to treatment is stigma (Hourani et al., 2011). Research by the RAND Corporation determined the top five reasons OIF/OEF veterans are not seeking treatment: Negative side effects of medications, negative impact to their career, loss of coworkers' confidence, denial of security clearance, and beliefs that friends and family are more helpful than professional treatment providers (Tanielian et al., 2008).

In one research study, Ouimette et al. (2011) cited lack of confidence in treatment, lack of perceived need for treatment, and attitudes of self-reliance as other factors that impede sufficient treatment. The authors also suggested lack of knowledge about eligibility for treatment is another factor that presents a barrier to treatment. The authors conducted a study examining barriers related to stigma and institutional-type barriers to treatment among a substantial, diverse national sample (490) of VA outpatients with PTSD. The sample was surveyed regarding perceived barriers to care. The study found that OIF/OEF veterans, female veterans, and veterans of a younger age were more likely to have perceptions of not fitting into the VA. Depression and PTSD, and particularly

avoidance symptoms, were associated with greater perceived barriers to care. The study determined that those with the most severe symptoms may perceive the most barriers to care. The authors also found that the most significant barriers to care reported by veterans were stigma-related, i.e., concerns about social consequences and discomfort with help seeking.

In summary, this chapter was outlined by a primary discussion of the research regarding methods that have been used to prevent PTSD, both prior to deployment and during deployment, and also including psychopharmacological methods. The literature determined that SIT showed the most positive results, along with propranolol. Then research concerning screening and assessment tools to identify and diagnose OIF/OEF veterans with PTSD was reviewed. Though the literature found that research regarding efficacy of screens are lacking, all screens reviewed were found to be adequately effective. Research studying effective treatments for veterans with PTSD was analyzed, with an emphasis on evidence-based treatments. The literature determined that PE and CPT are the only approaches empirically proven, with other methods such as EMDR showing positive results. The chapter ended with an analysis of the research regarding barriers to treatment for OIF/OEF veterans; the literature determined the primary source of barriers to be stigma, however barriers are not limited to stigma.

CHAPTER 3

IMPLICATIONS AND CONCLUSIONS

In conclusion, the research literature regarding OIF/OEF veterans with PTSD has shown that there is a substantial prevalence rate and a high cost, both personal and national, for veterans returning home from Iraq and Afghanistan Operations with PTSD. The research literature has also shown that there are effective approaches to prevent PTSD from occurring, effective screens to determine need for treatment, and effective treatment approaches for OIF/OEF veterans with PTSD. The literature has shown there are barriers to treatment. The literature also provided many implications and suggestions for future research to help mitigate this serious national problem. Analysis of the literature raised many questions, which should guide further areas of research.

Much of the research did not occur in a randomized controlled study format, and reasons were usually provided for why this did not occur. However, it is invaluable for more research to be done in this format to provide solid evidence-based practices. There are several areas in which research should focus. More research should be conducted regarding other treatments that have not been shown to be evidence based. Many of these other treatment options may possibly be adequate for use but need the randomized controlled studies to determine their efficacy.

The etiology of PTSD is known to be the experience of a traumatic event, but why do some people experience a traumatic event and develop PTSD, and others experience the same event and do not experience PTSD symptoms? While research has found some risk factors that help predict this, more research should be done into personal

characteristics that are associated with susceptibility. This research could feasibly help establish more effective prevention measures.

Similarly, why do some veterans who have PTSD respond positively to treatment and others do not? There should be research into personal characteristics of those who do not respond to treatment. This is one area of research that was found lacking. What happens to those who receive treatment with little positive outcome? It seems likely that if one approach was not helpful, perhaps another approach would perform with better results. Could a screen be developed to determine which approach would be a better match?

The literature implicated that OIF/OEF veterans with PTSD have high rates of treatment dropout. Studies regarding which treatments have lower rates of dropout should be done. Perhaps a study of counselors and/or settings who have a low dropout rate would be beneficial; what are they doing that works? Another area of research should survey those veterans who did dropout to determine why they stopped treatment. What could be done differently to improve this high rate?

Another area of research that is lacking is long term treatment outcomes research. PTSD is a chronic mental health disorder. Treatment may provide relief from symptoms in the near future, but what about ten years from now? Veterans who received treatment five to ten years ago should be surveyed for current mental health state to determine if treatment is still providing relief from symptoms, or should veterans positively treated for PTSD need further treatment?

The literature also identified a need for further research into co-occurring disorders. What disorder should be treated first; what should be the counselor's primary

focus? The literature found higher rates of substance abuse, depression, and suicide occurring in veterans with PTSD. Research should be conducted to determine how to effectively treat these disorders at the same time. Seemingly, veterans with co-occurring disorders would need more intensive, extended treatment services. Research is necessary to determine if this is correct.

Employment is another area that research needs to focus on. The literature showed that PTSD is associated with lower income and higher rates of unemployment. Which treatments provide the best employment outcomes for veterans with PTSD? This is an important contemporary topic as national unemployment rates continue to be dismal.

The literature also showed a profound effect of PTSD on families of veterans with PTSD. More research should be conducted to determine which treatment will provide families with the most relief. Should families enter family therapy, or will everything be ok once the individual receives treatment for PTSD? How does PTSD impact family violence? What can be done to strengthen marital relationships? How can the partner help the veteran with PTSD?

Another implication of the literature was that there should be coordination of services among the VA, DoD, and other healthcare providers. The literature showed that costs could be reduced significantly, operational efficiency improved, quality of care and outcomes improved through coordination of clinical services.

Similarly, another implication of the research literature was that veterans with PTSD are incurring legal problems and dishonorable discharges due to symptomatic negative behaviors. What programs could be implemented to provide veterans with legal support coordinated into their care? There are also ethical legislative considerations to

evaluate. Should the laws be more lenient for those veterans who commit crimes related to PTSD induced behaviors? It is this author's opinion that treatment rather than punishment should be provided, or for more violent crimes, treatment in addition to punishment.

Possibly the most important area of future study should be how to reduce stigma related to PTSD. Research has found that many military personnel do not seek treatment for fear of negative consequences. How can these consequences or the perception of these consequences be diminished? Perhaps national policies could be implemented to assure military personnel of confidentiality or a type of no negative consequences policy. Initiatives to maximize privacy mental healthcare are needed. Research regarding interventions directed at improving military personnel's comfort level with help-seeking may prove beneficial. More research about stigma-related concerns, personal beliefs and societal stigma is warranted.

The VA has come to have a certain bad reputation for poor healthcare service, which may also lead to a lack of enthusiasm of military personnel to seek treatment. Perhaps a national ad campaign would help to improve the VA image and to entice those who need treatment to come forward and seek help. The capacity of the mental healthcare system to provide evidence based treatment has room for improvement. Recruitment and training of providers in evidence based approaches should be implemented. Rehabilitation graduate programs should offer courses that would train rehabilitation counselors in one or more of these approaches. Society's negative perceptions of mental illness are also to blame. What can be done to change an entire

society's view of mental illness? Programs need to be developed that will promote a cultural view of mental well-being is as important as physical well-being.

Another implication of this literature is that more financial resources need to be directed into the provision of care for veterans with PTSD. The federal government is substantially in debt. If the government cannot afford to properly take care of its military personnel, then it should not be sending them off to unnecessary combat. The government needs to decide if this country is going to serve as the world's police force, then perhaps it needs to establish a worldwide tax to cover the expense, or find some other way to cover the bill.

In summary, this chapter provided a conclusion of the research paper, and supplied many areas that should be the focus of further research. This chapter also provided a forum for the author to discuss her opinions about this nationally important topic. This paper can be useful to those in the rehabilitation counseling field by helping to narrow down which treatments are evidence-based, which screens are effective, and to make them aware of the barriers facing OIF/OEF veterans. The paper can also be useful to those researchers in the rehabilitation counseling profession by providing them a direction for further research.

REFERENCES

- Alvarez, J., McLean, C., Harris, A. S., Rosen, C. S., Ruzek, J. I., & Kimerling, R. (2011). The comparative effectiveness of cognitive processing therapy for male veterans treated in a VHA posttraumatic stress disorder residential rehabilitation program. *Journal of Consulting and Clinical Psychology, 79*(5), 590-599. doi:10.1037/a0024466
- American Psychiatric Association: *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition, Text Revision. Washington, DC, American Psychiatric Association, 2000.
- Brenner, L., Betthausen, L., Homaifar, B., Villarreal, E., Harwood, J., Staves, P., & Huggins, J. (2011). Posttraumatic Stress Disorder, Traumatic Brain Injury, and Suicide Attempt History among Veterans Receiving Mental Health Services. *Suicide & Life-Threatening Behavior, 41*(4), 416-423. doi:10.1111/j.1943-278X.2011.00041.x
- Burke, H. S., Degeneffe, C. E., & Olney, M. F. (2009). A New Disability for Rehabilitation Counselors: Iraq War Veterans with Traumatic Brain Injury and Post-Traumatic Stress Disorder. *Journal of Rehabilitation, 75*(3), 5-14. Retrieved from EBSCOhost.
- Calhoun, P. S., McDonald, S. D., Guerra, V. S., Eggleston, A., Beckham, J. C., & Straits-Troster, K. (2010). Clinical utility of the Primary Care-PTSD screen among U.S. Veterans who served since September 11, 2001. *Psychiatry Research, 178*(2), 330-335. doi:10.1016/j.psychres.2009.11.009
- Erbes, C. R., Curry, K. T., & Leskela, J. (2009). Treatment presentation and adherence of

- Iraq/Afghanistan era veterans in outpatient care for posttraumatic stress disorder. *Psychological Services*, 6(3), 175-183. doi:10.1037/a0016662
- Figley, C. (Ed.). (1995). *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized*. Philadelphia, PA US: Brunner/Mazel.
- Frayne, S. M., Chiu, V. Y., Iqbal, S., Berg, E. A., Laungani, K. J., Cronkite, R. C., & ... Kimerling, R. (2011). Medical care needs of returning veterans with PTSD: Their other burden. *Journal of General Internal Medicine*, 26(1), 33-39. doi:10.1007/s11606-010-1497-4
- Garcia, H. A., Finley, E. P., Lorber, W., & Jakupcak, M. (2011). A preliminary study of the association between traditional masculine behavioral norms and PTSD symptoms in Iraq and Afghanistan veterans. *Psychology of Men & Masculinity*, 12(1), 55-63. doi:10.1037/a0020577
- Harrison, J. P., Satterwhite, L. F., & Ruday, W. Jr. (2010). The financial impact of post traumatic stress disorder on returning US military personnel. *Journal of Health Care Finance*, 36(4), 65-74. Retrieved from EBSCOhost.
- Haskell, S. G., Gordon, K. S., Mattocks, K., Duggal, M., Erdos, J., Justice, A., & Brandt, C. A. (2010). Gender differences in rates of depression, PTSD, pain, obesity, and military sexual trauma among Connecticut war veterans of Iraq and Afghanistan. *Journal of Women's Health*, 19(2), 267-271. doi:10.1089/jwh.2008.1262
- Hoge, C. W., Castro, S. C., Messer, S. C., McGurk, D., Cotting, D. I., & Koffman, R. L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *New England Journal of Medicine*, 351(1), 13-22. Retrieved from EBSCOhost.
- Hourani, L. L., Council, C. L., Hubal, R. C., & Strange, L. B. (2011). Approaches to the

- primary prevention of posttraumatic stress disorder in the military: A review of the stress control literature. *Military Medicine*, 721-730. Retrieved from EBSCOhost.
- Institute of Medicine (IOM). (2007). Treatment of posttraumatic stress disorder: An assessment of the evidence. Washington, DC: The National Academies Press.
- Jakupcak, M., Hoerster, K., Varra, A., Vannoy, S., Felker, B., & Hunt, S. (2011). Hopelessness and suicidal ideation in Iraq and Afghanistan war veterans reporting subthreshold and threshold posttraumatic stress disorder. *Journal of Nervous & Mental Disease*, 199(4), 272-275. Retrieved from EBSCOhost.
- Kilmer, B., Eibner, C., Ringel, J. S., & Pacula, R. L. (2011). Invisible wounds, visible savings? Using microsimulation to estimate the costs and savings associated with providing evidence-based treatment for PTSD and depression to veterans of Operation Enduring Freedom and Operation Iraqi Freedom. *Psychological Trauma: Theory, Research, Practice, and Policy*, 3(2), 201-211. doi:10.1037/a0020592
- Lew, H. H., Otis, J. D., Tun, C., Kerns, R. D., Clark, M. E., & Cifu, D. X. (2009). Prevalence of chronic pain, posttraumatic stress disorder, and persistent postconcussive symptoms in OIF/OEF veterans: Polytrauma clinical triad. *Journal of Rehabilitation Research & Development*, 46(6), 697-702. doi:10.1682/JRRD.2009.01.0006
- Mattocks, K. M., Skanderson, M., Goulet, J. L., Brandt, C., Womack, J., Krebs, E., . . . Haskell, S. (2010). Pregnancy and mental health among women veterans returning from Iraq and Afghanistan. *Journal of Women's Health*, 19(12), 2159-2166. doi:10.1089/jwh.2009.1892

- Nelson Goff, B. N., Crow, J. R., Reisbig, A. J., & Hamilton, S. (2007). The impact of individual trauma symptoms of deployed soldiers on relationship satisfaction. *Journal of Family Psychology*, 21(3), 344-353. doi:10.1037/0893-3200.21.3.344
- Ouimette, P., Vogt, D., Wade, M., Tirone, V., Greenbaum, M. A., Kimerling, R., . . . Rosen, C. S. (2011). Perceived barriers to care among veterans health administration patients with posttraumatic stress disorder. *Psychological Services*, 8(3), 212-223. doi:10.1037/a0024360
- Ouimette, P., Wade, M., Prins, A., & Schohn, M. (2008). Identifying PTSD in primary care: Comparison of the Primary Care-PTSD screen (PC-PTSD) and the General Health Questionnaire-12 (GHQ). *Journal of Anxiety Disorders*, 22(2), 337-343. doi:10.1016/j.janxdis.2007.02.010
- Peterson, A., Luethcke, C., Borah, E., Borah, A., & Young-McCaughan, S. (2011). Assessment and treatment of combat-related PTSD in returning war veterans. *Journal Of Clinical Psychology In Medical Settings*, 18(2), 164-175. Retrieved from EBSCOhost.
- Possemato, K., Wade, M., Andersen, J., & Ouimette, P. (2010). The impact of PTSD, depression, and substance use disorders on disease burden and health care utilization among OEF/OIF veterans. *Psychological Trauma: Theory, Research, Practice, and Policy*, 2(3), 218-223. doi:10.1037/a0019236
- Priebe, S., Matanov, A., Gavrilovic, J. J., McCrone, P., Ljubotina, D., Knezevic, G., . . . Schutzwahl, M. (2009). Consequences of untreated posttraumatic stress disorder following war in former Yugoslavia: Morbidity, subjective quality of life, and care costs. *Croatian Medical Journal*, 50(5), 465-475. doi:10.3325/cmj.2009.50.465

- Rauch, S., Defever, E., Favorite, T., Duroe, A., Garrity, C., Martis, B., & Liberzon, I. (2009). Prolonged exposure for PTSD in a Veterans Health Administration PTSD clinic. *Journal of Traumatic Stress*, 22(1), 60-64. doi:10.1002/jts.20380
- Renshaw, K. D., Allen, E. S., Rhoades, G. K., Blais, R. K., Markman, H. J., & Stanley, S. M. (2011). Distress in spouses of service members with symptoms of combat-related PTSD: Secondary traumatic stress or general psychological distress? *Journal of Family Psychology*, 25(4), 461-469. doi:10.1037/a0023994
- Resnick, S. G., & Rosenheck, R. A. (2008). Posttraumatic stress disorder and employment in veterans participating in Veterans Health Administration Compensated Work Therapy. *Journal of Rehabilitation Research & Development*, 45(3), 427-435. Retrieved from EBSCOhost.
- Russell, M. C., Silver, S. M., Rogers, S., & Darnell, J. N. (2007). Responding to an identified need: A joint department of defense/departement of veterans affairs training program in eye movement desensitization and reprocessing (EMDR) for clinicians providing trauma services. *International Journal of Stress Management*, 14(1), 61-71. doi:10.1037/1072-5245.14.1.61
- Seal, K. H., Bertenthal, D., Miner, C. R., Sen, S., & Marmar, C. R. (2007). Bringing the war back home: Mental health disorders among 103,788 US veterans returning from Iraq and Afghanistan seen at Department of Veterans Affairs facilities. *Archives of Internal Medicine*, 167(5), 476-482. Retrieved from EBSCOhost.
- Seal, K. H., Metzler, T. J., Gima, K. S., Bertenthal, D., Maguen, S., & Marmar, C. R. (2009). Trends and risk factors for mental health diagnoses among Iraq and Afghanistan veterans using Department of Veterans Affairs health care, 2002-2008.

American Journal of Public Health, 99(9), 1651-1658.

doi:10.2105/AJPH.2008.150284

Sharpless, B. A., & Barber, J. P. (2011). A clinician's guide to PTSD treatments for returning veterans. *Professional Psychology: Research and Practice*, 42(1), 8-15.

doi:10.1037/a0022351

Smeeding, J.W., Bradshaw, D. H., Kumpfer, K., Trevithick, S., & Stoddard, G. J. (2010).

Outcome evaluation of the Veterans Affairs Salt Lake City Integrative Health Clinic for chronic pain and stress-related depression, anxiety, and post-traumatic stress disorder. *Journal of Alternative & Complementary Medicine*, 16(8), 823-835.

doi:10.1089/acm.2009.0510

Tanielian, T., Jaycox, L. H., Schell, T. L., Marshall, G. N., Burnam, M. A.,

Eibner, C., . . . Vaiana, M. E. (2008) *Invisible Wounds: Mental Health and Cognitive Care Needs of America's Returning Veterans*. Santa Monica, CA: RAND Corporation.

Retrieved from http://www.rand.org/pubs/research_briefs/RB9336.

Wiederhold, B. K., & Wiederhold, M. D. (2006). From SIT to PTSD: Developing a continuum of care for the warfighter. *Annual Review of CyberTherapy and*

Telemedicine, 413-18. Retrieved from EBSCOhost.

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