5-2010

Psychotherapeutic Treatment of Post-Traumatic Disorder in Rural Veterans

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PSYCHOTHERAPEUTIC TREATMENT OF POST-TRAUMATIC STRESS DISORDER IN RURAL VETERANS

by

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Bachelor of Science, University of North Dakota, 2006

A Non-thesis Project

Submitted to the Graduate Faculty

of the

University of North Dakota

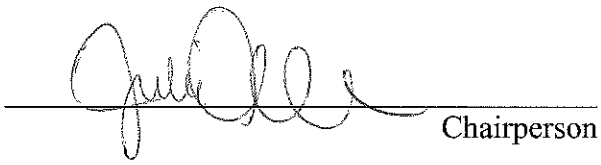
in partial fulfillment of the requirements

for the degree of

Master of Science in Nursing
Psychiatric Mental Health Nurse Practitioner Specialization

Grand Forks, North Dakota
May
2010

This non-thesis project, submitted by Nicole O. Wilson in partial fulfillment of the requirements for the Degree of Master of Science in Nursing from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.



Chairperson

This non-thesis project meets the standards for appearance, conforms to the style and format requirements of the Graduate School of the University of North Dakota, and is hereby approved.

Dean of the Graduate School

Date

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ACKNOWLEDGEMENTS

I would like to thank my advisor, Dr. Julie Anderson, for supporting me through the completion of this project and leading me in directions I never thought possible. I sincerely appreciate the guidance and wisdom of Dr. Myron Veenstra that he has shared with me during this endeavor. Last but certainly not least, I would like to express my deepest gratitude to my husband, a Marine and my inspiration for this project and to all of the other men and women out there who have bravely served this country.

ABSTRACT

Post-traumatic stress disorder (PTSD) is a significant health issue among the veteran population. PTSD can lead to adverse outcomes such as suicide, violence, substance abuse, and an overall decreased quality of life. Psychotherapy has demonstrated effectiveness in treating PTSD. However, providers may not be aware which specific types of psychotherapy have achieved the strongest levels of evidence. Additional challenges exist in treating rural veterans because of barriers such as geographical distance and a shortage of mental health providers. These obstacles may place rural veterans at higher risk. The purpose of this project was to explore the current evidence that supports the use of psychotherapy in the treatment of PTSD and discuss how these strategies might be implemented for veterans in a rural setting. Shapiro's Adaptive Information Processing Model served as a theoretical framework for this project.

The methods used to conduct this project consisted of first performing a literature review of pertinent articles and current practice guidelines. Expert clinicians within the community were consulted to gain further insight and directly observe some clinical applications of these therapies. Collaborative efforts were made with contacts from the Department of Defense Centers of Excellence and an upper-Midwest rural health agency. A variety of web-based training modules related to the practice of psychotherapy for veterans with PTSD were also reviewed.

The findings of this project revealed that cognitive behavioral-based therapies, such as Cognitive Processing Therapy (CPT) and Prolonged Exposure (PE) therapy as well as eye movement desensitization and reprocessing (EMDR) demonstrate the greatest level of efficacy in treating PTSD. Technological advances such as telemental health services or virtual reality-based interventions may improve accessibility to rural veterans. Integrating PTSD treatment options into primary care settings, such as community-based clinics may also improve barriers to seeking treatment.

These results have been disseminated to local providers via informational pamphlets and poster presentations. Several accessible, online training websites have also been included as resources that can assist providers in gaining increased knowledge and understanding specific to the psychotherapies discussed as well as issues pertinent to military culture and programs. By increasing providers' awareness of these evidence-based practices, it is hopeful that better care can be offered to rural veterans in treating their symptoms of PTSD and improving overall quality of life.

CHAPTER I

INTRODUCTION

Approximately 1.64 million U.S. troops have been deployed since October of 2001 to the conflicts in Afghanistan and Iraq (RAND, 2008). During this time, many of these troops have been exposed to combat, trauma, or other forms of prolonged stress, such as separation from family and friends and increased physical demands. These stressors can increase the risk of developing post-traumatic stress disorder (PTSD). It becomes crucial to ensure that these men and women receive adequate access to mental health services upon their return. In order to properly meet the needs of these service men and women as they return home from duty, is it the responsibility of psychiatric advanced practice registered nurses (APRNs) to educate themselves about treatments that will be most effective and ensure that all veterans can receive adequate care.

Statement of the Clinical Problem

Post-traumatic stress disorder is a significant health issue among today's veteran population. According to the RAND Center for Military Health Policy Research (2008), approximately 14% of U.S. service members returning from Afghanistan and Iraq currently meet the diagnostic criteria for PTSD. Unfortunately, only 53% of these service members attempted to seek mental health treatment within the past year. The National Rural Health Association ([NRHA], 2004; Heady, 2007) believes this disparity has a greater impact on rural veterans. Heady (2007) estimated that 44% of U.S. military

recruits come from rural areas, where barriers such as geographical distance create further obstacles to seeking care. To address this issue, the funding and services provided by the Department of Defense (DoD) and Department of Veterans Affairs (VA) have been increased. President Obama recently proposed to increase the VA budget by $25 billion over the next five years (VA, 2009). The President's proposal would expand mental health screening and treatment to rural communities by increasing the number of Vet Centers and mobile health clinics as well as improving outreach spending to assist veterans and families to identify available resources. Access to primary-based care has also been increased in many rural areas through the use of community-based outpatient clinics (CBOCs) and contracts with local facilities (RAND, 2008).

While increasing primary-care services may assist in the screening, diagnosis and pharmacological management of PTSD, evidence strongly supports the use of psychotherapy as a first-line therapy in the treatment of this disorder (Sherman, 1998; Foa et al., 2000; American Psychiatric Association [APA], 2004; VA/DoD, 2004; Bradley, Greene, Russ, Dutra & Westen, 2005; Bisson & Andrew, 2009), which would require a referral to a mental health provider. However, there continues to be a national shortage of mental health providers to meet these needs (Kennedy, 2009) and even the mental health providers that are available in rural areas may not be trained in the psychotherapeutic modalities found most effective to treat PTSD (NRHA, 2004). In a survey of VA clinicians who treat veterans with PTSD, Rosen et al. (2004) discovered that providers reported that they rarely used exposure therapy or trauma-focused therapies in their practice, despite both of these therapies being endorsed as first-line treatments (Foa et al., 2000).

In addition to the shortage of mental health providers, fragmentation of patients' physical and mental health needs also contributes to the lack of quality care being provided to veterans with PTSD. This problem has been recognized as a national concern by the Institute of Medicine (IOM, 2005) who strongly advocate for the integration of mental health and primary care by merging these services. The advanced practice psychiatric nurse can play an important role in filling this service gap and can work together with primary care providers to better address the mental health needs of rural veterans. As mental health providers, it is imperative that APRNs are knowledgeable about which types of psychotherapy are most effective in treating PTSD and how to better provide these services for veterans in rural areas.

Purpose of the Project

In order to address the clinical problem described, the purpose of this project is to explore the current evidence that supports the use of psychotherapeutic interventions in the treatment of PTSD and discuss how these strategies might be utilized or expanded upon for treatment of veterans in a rural setting. This project will benefit advanced practice nurses (APRNs), both in primary care and mental health settings. Non-nursing professionals who are licensed to provide psychotherapy, such as clinical social workers, counselors, and psychologists may also benefit from this information. Hopefully, through the knowledge and insight that is gained by providers, the ultimate benefit will be to the patients and communities that we serve.

Conceptual/Theoretical Framework

Developed by Shapiro in 2001, the Adaptive Information Processing Model (AIP) provides a conceptual framework to guide the discussion regarding the development of

PTSD as well as the basis for treatment strategies. This model indicates that under normal physiologic conditions, the human brain has the ability to adapt to its environment by processing information associated with thoughts, emotions, and sensations. Through this process of learning, information is able to be stored throughout memory networks in the brain and accessed later on for future use (Shapiro & Maxfield, 2002; Wheeler, 2007).

The AIP model proposes that when a person is confronted with an experience that is traumatic in nature, information related to that event may not be fully processed. If these traumatic memories are not processed to an adaptive state, they will be stored in the state they were initially experienced. This creates the potential that in the future, stimuli that are similar to those produced during the trauma could reproduce the initial experience. It is this phenomenon that can provide further insight into the symptoms of PTSD (Shapiro & Maxfield, 2002). For example, a veteran who has a history of combat duty may re-experience feelings of terror or experience a flashback if he hears a sound that resembles weapons firing, such as a car that backfires or fireworks exploding.

The AIP model can also be used to explain the basis of psychotherapy as an effective intervention in the treatment of PTSD. While the various types of psychotherapy all differ somehow in their approach, one of the common goals of psychotherapy overall is to facilitate information processing and emotional/behavioral regulation. Using the AIP model, one could assume that the positive outcomes associated with this form of therapy in PTSD are due to the integration of traumatic experiences into an adaptive state (Wheeler, 2007).

Key Definitions Related to the Clinical Problem

To effectively explore the issue of providing psychotherapy to rural veterans who have PTSD, it is crucial that consistent definitions are applied when discussing this clinical problem. However, this can be a challenge when the current literature lacks consensus in defining some of these key terms. For the purpose of this project, definitions will be provided for the terms PTSD, veteran, rural, psychotherapy, cognitive behavioral therapy (CBT), cognitive processing therapy (CPT), prolonged exposure therapy (PE), and eye movement desensitization and reprocessing (EMDR).

PTSD

The text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* ([DSM-IV-TR] APA, 2000) defines PTSD as a re-experiencing of a traumatic event that is associated with symptoms of heightened arousal and avoidance of stressful stimuli related to the trauma. Diagnostic criteria stipulate that the person must have experienced, witnessed, or been confronted with an event that posed serious threat or injury to self or others in which the person's response was one of fear, helplessness, or terror. This traumatic event is then re-lived through flashbacks, thoughts, dreams or a reaction to cues resembling the event. At least three symptoms related to the avoidance of stimuli associated with the trauma and a response of numbing or dissociation must be present. At least two symptoms indicating increased arousal must be present such as (a) difficulties with sleep, (b) problems with concentration, (c) irritability, (d) hypervigilance, or (e) an exaggerated startle response. The person must experience these symptoms for a period greater than one month and to an extent that causes impairment in occupational and/or interpersonal functioning.

Veteran

The term veteran describes a person who has served active duty as a member of the Armed Forces who was discharged from his or her service under terms other than a dishonorable discharge. A veteran can be male or female and may have served in the Army, Navy, Air Force, Marine Corps, or Coast Guard. Members of National Guard exist as a branch within the Army. A veteran may or may not have served in combat duty (Military Health System Optimization & Population Health Support Center, n.d.).

Rural

There is a definite lack of consistency in the literature when defining the term "rural". The National Rural Health Association's website (n.d) recommends that the definition used to define the term "rural" should depend upon the purpose of the program that it is being applied to, rather than using a standard definition throughout the entire healthcare system. Upon conducting an analysis of the literature surrounding rural veterans, researchers discovered that a variety of definitions were used, which led to confusion and limitations in generalizing the research findings (Weeks, Wallace, West, Heady & Hawthorne, 2008). Some of the researchers used definitions based upon data such as (a) zip code, (b) town size, (c) patient self-report, and (d) U.S. census designation.

Psychotherapy

The American Psychological Association website glossary (2009, P heading) defines psychotherapy as "any of a group of therapies, used to treat psychological disorders, that focus on changing faulty behaviors, thoughts, perceptions, and emotions that may be associated with specific disorders".

Cognitive Behavioral Therapy

CBT refers to a broad class of psychotherapy that focuses on interventions that emphasize the important role of thoughts in how people feel and behave. CBT methods are rather directive and most often time-limited in their course of treatment (NACBT, 2009).

Cognitive Processing Therapy

CPT is a form of CBT that again emphasizes the role of thoughts and beliefs on feelings. CPT consists of four distinct phases that include a) psychoeducation, b) processing of the trauma, c) challenging distorted thoughts, and finally d) cognitive restructuring (National Center for PTSD, Feb. 18, 2010).

Prolonged Exposure Therapy

PE is another form of CBT that is based on Learning Theory and classical and operant conditioning. PE protocol consists of four phases which include a) psychoeducation, b) breathing skills, c) live exposure, and d) imaginal exposure (National Center for PTSD, Feb. 5, 2010).

Eye Movement Desensitization and Reprocessing

EMDR is an information processing therapy that utilizes a combination of several techniques. It consists of an eight-phase approach that combines the use of bilateral rapid eye movements while recalling the traumatic images. This external stimulus facilitates the adaptive processing of the negative experience (EMDR Institute, Inc., 2004).

Significance of the Clinical Problem

Prevalence Rate

The DSM-IV-TR estimates the prevalence rate for PTSD in adults in the United States is approximately 8%. However, this rate may be as high as 50% in groups of at-risk individuals such as those exposed to combat, rape, or captivity (APA, 2000). The National Comorbidity Survey revealed similar results and estimated the lifetime prevalence rate of PTSD is 7.8% (Kessler, Sonnega, Bromet, Hughes & Nelson, 1995). Looking at data specific to the veteran population, the National Center for PTSD (n.d.) projected that the prevalence rate of PTSD is (a) 30% among Vietnam veterans, (b) 10% among Gulf War veterans, and (c) anywhere from 6-20% among veterans from the wars in Iraq and Afghanistan, with Iraq veterans experiencing a higher rate of PTSD.

Suicide Risk

Along with the increased prevalence rates for PTSD, veterans may also experience a higher rate of suicide when compared with the general population. A survey conducted by the U.S. Army in 2003 found that the suicide rate among soldiers in Iraq and Kuwait was 17.3 per 100,000. This compares to a civilian rate of 10.7 per 100,000 in 2001. It is estimated that the current Army suicide rate is the highest it has been in twenty-six years (Roehr, 2007). The U.S. National Comorbidity Survey determined that people who have PTSD are six times more likely to have attempted suicide than people who have a mood disorder or another type of anxiety disorder (Kessler, Borges & Walters, 1999). While these results were not specific to the veteran population, they still suggest that PTSD is a significant risk factor when considering a person's risk for suicidal behavior.

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Economic/Societal Burden

PTSD can be a chronic and debilitating illness that may interfere with every aspect of a person's daily functioning. This disabling illness can impose significant economic demands upon the Department of Veterans Affairs, the healthcare system, and society in general. As of 2009, the VA estimates that 346,393 veterans are currently receiving compensation related to a diagnosis of PTSD (National Center for Veterans Analysis and Statistics, 2009).

A comprehensive study completed by the RAND Corporation in 2008 also found that veterans with PTSD demonstrate a high financial burden upon society. They estimated that the impact of PTSD and major depression on society represents around $5,900 to $25,760 per veteran during the first two years post-deployment. When this figure is adjusted to the entire population of 1.64 million deployed service members, total societal costs range anywhere from $4.0 to $6.2 billion dollars. They also suggest that these figures could be underestimated because there has yet to be any reliable data reported regarding the indirect costs associated with PTSD, such as homelessness, substance abuse, domestic violence, and suicide.

Increased usage of the healthcare system also contributes to a greater economic burden. Deykin et al. (2001) found that veterans with PTSD had 30% more healthcare visits compared to their comrades without PTSD. A possible explanation cited is the increased reporting of physically related symptoms. Hyperarousal symptoms frequently lead to physical complaints, such as fatigue, headache, GI upset, and generalized body aches.

As stated previously, a diagnosis of PTSD can lead to impairments in a person's occupational and interpersonal functioning. This decline in a person's ability to perform his or her job or maintain relationships with others can translate into a negative impact on the economy. Kessler (2000) estimated that decreased productivity rates associated with PTSD account for a loss of approximately $3 billion dollars annually in the United States.

Kessler goes on in his article to discuss some of the long-term effects that PTSD can have on the economy as a result of impaired life opportunities. For instance, people with PTSD have a) 30% greater chance of teenage pregnancy, b) a 40% greater chance of high school or college failure, c) a 60% greater chance of marital problems, and d) a 150% greater chance of unemployment when compared to people without PTSD (Kessler, 2000). Although these figures do not translate as easily into dollar amounts, Kessler presumed that these negative life consequences could result in lost earning potential and dependency upon welfare assistance programs.

While the cost of treating veterans with PTSD may be high, there are effective, evidence-based treatments available. Some of these types of treatments, such as psychotherapy, are not available in many facilities. RAND (2008) reported that if all facilities were to implement evidence-based strategies to treat PTSD and depression, costs could be reduced by as much as $1.7 billion dollars. This reduction in cost is associated with a potential increase in productivity, decreased rate of suicide, and overall improved remission and recovery rates.

Barriers to Seeking Care

Veterans experience numerous barriers when considering seeking help for their symptoms of PTSD. Deykin et al. (2001) discovered that veterans often choose to seek

care from their primary care providers typically because of the stigma associated with visiting a mental health professional. Concerns about these barriers to seeking mental health treatment were reinforced in a study of service members from the current conflict in Iraq. Hoge, Castro, Messer, McGurk, Cotting, and Koffman (2004) found that out of all of the participants who screened positive for a post-deployment mental disorder, only 23-40% of them sought treatment. The stigma associated with seeking mental health treatment was a primary barrier in preventing these men and women from getting help. Reasons such as being perceived as weak or losing the confidence of unit leaders and comrades were frequently cited.

Rural Disparities

The barriers to seeking care discussed above may be compounded for rural veterans because of the isolation that is common in rural areas and the lack of access and distance to care (NRHA, 2004; Heady, 2007). Heady (2007) estimated that up to 4 million rural veterans will decide against obtaining healthcare from a VA facility because of the travel time and distance required. Even though there has been an increase in the number of CBOCs, rural veterans' access to inpatient and specialty care continues to be an issue.

Disparities among veterans' perceptions of their health status also exist in the rural setting. Weeks et al. (2008) found that rural veterans reported decreased quality of life scores compared to urban veterans when assessing aspects related to both physical and mental health. These disproportionate outcomes of care create concern for rural providers and need to be addressed.

Chapter Summary

As a new generation of veterans emerges from the wars in Iraq and Afghanistan, the prevalence of PTSD is likely to increase. Along with this rise, we can expect to see a great impact on the economy and the healthcare system as well as a potential increase in adverse outcomes, such as substance abuse, violence, homelessness and suicide. Veterans in rural areas may be particularly vulnerable because of the lack of specialized services and shortage of mental health providers. With rural men and women comprising almost half of U.S. military recruits (Heady, 2007), this represents a challenge in meeting their mental health needs. Barriers to care such as stigma, shortage of mental health providers, and overall lack of resources in rural areas need to be addressed. APRNs in both primary care and mental health settings can play an important role in ensuring that effective treatment is being delivered through appropriate use of screening, referral, and implementation of evidence-based treatment.

CHAPTER II

REVIEW OF LITERATURE

Introduction

To gain a better understanding of the current research available as well as to identify the gaps in knowledge, a literature search was conducted to find articles relevant to the topic of psychotherapeutic interventions used in the treatment of rural veterans with PTSD. Four different databases were searched including: PubMed, CINAHL, the Cochrane Database, and PILOTS, a database within the Department of Veterans Affairs website. The following MeSH search terms were used alone and in a variety of combinations: rural, veterans, military, combat, PTSD, psychotherapy, evidence-based practice, and evidence-based treatment. Research specific to rural veterans with PTSD yielded the fewest results. While there was a selection of systematic reviews and meta-analyses, overall, randomized-controlled trials (RCTs) were few. Many of the studies cited retrospective analysis as their methodology. There was a definite lack of qualitative research when conducting this literature search.

Review and Critique of Related Studies

Psychotherapy Studies

Upon reviewing the current literature, it was discovered that a variety of psychotherapeutic interventions are supported in the treatment of PTSD; however CBT appears the most highly supported (IOM, 2008). Practice guidelines created by the International Society for Traumatic Stress Studies (Foa et al., 2000) the VA and DoD

(2004) and the American Psychiatric Association (2004) indicate the interventions with the greatest benefit include (a) cognitive behavioral therapy (CBT), (b) exposure therapy, (c) stress inoculation training, and (d) eye movement desensitization and reprocessing (EMDR). A systematic review of 33 randomized-controlled trials (RCTs) that was conducted by Bisson and Andrew (2007) also supports the strategies of both individual and group CBT, as well as EMDR. Their analysis determined that trauma focused therapies produce a greater reduction in symptoms than non-trauma focused therapies. Stress management techniques were also found to be effective, but to a lesser degree.

A multi-dimensional meta-analysis of data from 26 studies revealed that 67% of patients who completed treatment using various forms of CBT, EMDR, or other combination therapies no longer met diagnostic criteria for PTSD, and 54% of patients who completed treatment demonstrated a level of clinical improvement that was previously defined by the authors (Bradley, Greene, Russ, Dutra & Westen, 2005). Specific to the veteran population, participants with combat-related PTSD demonstrated the lowest effect size for improvement. Bradley and colleagues (2005) suggested this result may be due to a more severe presentation in pathology found in veterans, and Ready et al. (2008) concurred that war veterans are often more treatment-resistant than other subsets of patients who have PTSD.

While these results may be promising, it is important to consider some limitations of this data. First, one must consider the outcome criteria used to measure improvement. Some of the studies included in this analysis used failure to meet diagnostic criteria as their measure of improvement. This form of measurement does not necessarily take into account those patients who may no longer meet diagnostic criteria but continue to

experience persistent, residual symptoms. There is also a lack of substantial follow-up studies that make it difficult to determine the long-term efficacy of psychotherapeutic interventions. This particular meta-analysis found only two studies that included follow-up data at 12 months (Bradley et al., 2005). Given the chronic nature of PTSD, APRNs may want to exhibit caution when applying current literature to their clinical practice.

Although the empirical support is substantial for these treatments, Schottenbauer, Glass, Arnkoff, and Gray (2008) argue that patients who receive CBT and EMDR have high dropout and non-response rates. They discussed the benefits of a psychodynamic approach in their review of PTSD literature, particularly in addressing clients' interpersonal dysfunction. However, the psychodynamic approach has fallen out of favor among patients and third-party payers primarily due to the increased costs associated with the extended length of treatment that is typically required. Further research is needed to support the use of psychodynamic therapy in treating PTSD due to the limited strength of the current evidence and lack of controlled studies.

A potential limitation observed throughout the literature was the applicability of the research findings to a veteran population. To further test this limitation, Stirman (2008) conducted a retrospective analysis of 31 RCTs related to the psychological treatment of PTSD and compared the inclusion and exclusion criteria to data from 239,668 VA patients' charts to determine whether or not veterans would have qualified for those studies. His results determined that all of the patients he reviewed would have been eligible for at least one study, and 50% of patients were eligible for sixteen to twenty-one of the studies. This suggests that with reasonable caution, the results of these studies could be generalized to the veteran population in regard to effective

psychotherapeutic treatments for PTSD. The author encouraged future researchers to incorporate veterans with common comorbidities such as substance abuse as well as older veterans into their studies as these criteria were commonly excluded from the studies in his review. Because substance abuse is common in veterans with PTSD and a significant portion of the Vietnam generation is entering into the elderly demographic, it is important that current evidence and practice guidelines are applicable to these populations (Stirman, 2008).

Rural vs. Urban Studies

Several studies were discovered in the literature that investigated differences between rural and urban veterans with PTSD. Weeks et al. (2008) completed an analysis of the literature relevant to rural veterans. They reviewed a total of fifty studies published during years ranging from 1950 to 2007 and discussed the common themes and gaps that were noted. The authors found that when compared to their urban counterparts, rural veterans experience (a) less access to care and utilize fewer services overall, (b) greater travel barriers, (c) lower quality of life scores, and (d) greater severity of PTSD symptoms. This review also discovered that telemedicine may be an effective option to improve these access barriers in addition to providing care via mobile clinics and contracting with local agencies. Limitations that were discovered include (a) lack of consistency in defining the rural setting, (b) lack of a control group for comparison in many of the studies, (c) lack of RCTs and prospective studies, and (d) the absence of new literature, with only one study pertaining to the current conflict in Iraq.

In two cross-sectional retrospective studies that consisted of survey data from over 700,000 veterans, rural veterans were found to have lower quality of life (QOL)

scores than their urban counterparts. The first study, conducted by Weeks et al. (2004) determined that rural veterans had significantly lower ($p < .0001$) unadjusted scores in both mental and physical quality of life compared to urban and suburban veterans. Rural veterans also displayed a greater incidence of physical comorbidities; however, their incidence of mental illness was lower than the urban veteran cohort.

These results were later expanded upon in a similar study by Wallace, Weeks, Wang, Lee, and Kazis (2006) that compared QOL scores among rural and urban veterans with a diagnosis of (a) depression, (b) anxiety, (c) PTSD, (d) alcohol dependence, (e) schizophrenia, or (f) bipolar disorder. A multivariate analysis was conducted, and the results again showed that despite a lower incidence of mental illness, physical and mental QOL scores remained lower among rural veterans. These QOL disparities persisted even after the data was adjusted for demographic variables such as age, gender, job status, comorbidities, and geographical location. Caution should be exercised when considering these results because there is the potential for additional variables to influence QOL scores, such as social or financial issues (Wallace et al., 2006). Again, the challenge of finding a standard definition for 'rural' presents itself in these studies.

Another cross-sectional study compared a sample of 52 rural and 48 urban veterans diagnosed with combat related PTSD with respect to symptom severity and utilization of healthcare (Elhai, Baugher, Quevillon, Sauvageot & Frueh, 2004). The only statistical difference of note was that rural veterans received higher scores related to dissociative experiences ($p<.05$) compared to urban veterans. When the factors of time and distance were adjusted, it appeared that both groups utilized the healthcare system equally as no significant differences ($p<.05$) were found.

These results contradict those mentioned above by Weeks et al., (2008), which suggested that rural veterans had less access to care and used fewer services than urban veterans. Elhai et al. (2004) pointed out a limitation that using only zip codes to define rural status may not accurately reflect the level of immersion that a veteran experiences within the community. One might argue that the sample size was relatively small and that measuring service utilization for only one year after the initial PTSD evaluation is too short a time period to adequately depict the course of a chronic condition such as PTSD. Also, care that was provided at agencies outside of the VA health system was not included in this study. This exclusion criterion has the potential to drastically skew the results because in many rural areas, veterans may choose to seek care with local providers rather than through the VA due to the long travel distances.

Telehealth Studies

To address the issue regarding lack of access to mental health care in the rural setting, there have been some studies that have examined the efficacy of telehealth interventions. In 2005, Shore and Manson developed a model to develop a telepsychiatry program in a rural setting in partnership with the VA. Their project focused specifically on the American Indian population. In 2007, Shore, Brooks, Savin, Manson, and Lisby compared the costs of conducting standard face-to-face interviews versus telehealth interviews in the same population. Initial costs for telehealth in 2003 were $1,700 higher, when clinics were first implementing the program and technology. However, when reassessed in 2005, the cost for telehealth services was $12,000 lower than traditional methods. This study has limitations in that the findings are not completely generalizable

due to the specific nature of the population. Also, variables such as validity and reliability of the interviews and client satisfaction were not addressed.

Another study evaluated clinicians' competency and adherence to the delivery of a manualized CBT program delivered via telepsychiatry and compared this to traditional same-room methods (Frueh, Monnier, Grubaugh, Elhai, Yim, & Knapp, 2007). Using chi-square analyses, no statistical differences were discovered related to adherence to the program. In fact, only one statistical difference regarding clinician competence ($p < .01$) was found after completing a t test. The clinicians in the telepsychiatry group demonstrated a greater ability in explaining one of the treatment exercises to the clients. The most surprising result to the researchers was that client ratings for empathy and rapport were identical between treatment groups. These findings imply that telehealth may be a beneficial model for care to improve access to rural populations without necessarily comprising the therapeutic relationship.

Grubaugh, Cain, Elhai, Patrick, and Frueh (2008) examined the attitudes of urban and rural patients toward medical and mental health care services delivered via telehealth systems, and explored a separate group of patients with PTSD. The results showed that all groups were open to telehealth services with only minimal variations among treatment groups. Numerous limitations were present, though, including a lack of diversity in its sample with the majority being Caucasian. Also, the criteria used for the PTSD group were made only from self-report data and not a professional diagnosis.

Virtual Reality and Internet Studies

Technological advances in addition to telemed are being made to improve the delivery of PTSD treatments. Options include virtual reality therapy and the use of

Internet materials (Hamblen, Schnurr, Rosenberg & Eftekhari, 2009). Virtual reality therapy is an intervention that utilizes computerized images to simulate the exposure process. It is hypothesized that this type of exposure may be beneficial to patients who are having difficulty visualizing or emotionally engaging in their trauma. At this time, the research is limited to support this method. A small trial conducted by Difede et al. (2001) suggests that virtual reality therapy might decrease symptoms of PTSD; however, comparison to control methods or other types of exposure are lacking.

Another option to enhance delivery of PTSD treatment may be the use of the Internet (Hamblen, Schnurr, Rosenberg, & Eftekhari, 2009). Providers can supplement their sessions by providing patients access to therapeutic materials and assignments online. Providers can monitor progress and provide feedback in an online format as well. An eight week randomized-controlled trial conducted by Litz, Engel, Bryant, and Papa (2007) tested the outcomes of a therapist-assisted, Internet-based, CBT intervention for PTSD. Their results demonstrated greater reductions in PTSD, depressive, and anxiety symptoms when compared with the control group. Outcomes remained positive at six months follow-up. While these alternative methods will require further testing, they appear reliable thus far and could vastly improve the delivery of services to veterans in rural areas.

Summary of the Review of Literature

In reviewing the current literature available, it seems that there is a strong level of evidence supporting the psychotherapeutic interventions of CBT, exposure therapy, and EMDR in the treatment of PTSD. While many of the findings were not specific to members of the veteran population, after analyzing inclusion/exclusion criteria of these

studies, it would appear that these results may also be generalized to the veteran population. It is necessary to point out that an overwhelming majority of the literature available consists of retrospective analyses rather than actual RCTs and that longitudinal follow-up studies have yet to determine the long-term outcomes of psychotherapeutic interventions.

There is also a major gap in the research in examining the effects of PTSD on rural veterans. Several studies have indicated that rural veterans may experience PTSD symptoms to greater severity than urban veterans with an overall decrease in quality of life. Another trend in terms of limitations of these studies appears to be the lack of consensus in defining rural settings and the difficulty that this poses in the ability to generalize study findings. One possible solution to address this disparity among veterans in rural areas is the use of advanced technological services such as telehealth or virtual reality methods. The literature has shown that these modes of healthcare delivery may be cost-effective, reliable options that are also receptive to patients.

Chapter Summary

Now that a review of the pertinent literature has been completed regarding the use of psychotherapy in veterans with PTSD and how these services may be improved to reach rural areas, it is clear there are evidence-based treatments that are supported to use among this population. As with any literature review, limitations need to be considered and remaining gaps in the research need to be discussed for future study. The knowledge gained through this review will be used to inform the target audience of this project.

CHAPTER III

PLANS AND PROCEDURES

Introduction

The following chapter will discuss the methods that were used to effectively explore the current evidence that supports the use of psychotherapeutic interventions in the treatment of PTSD and discuss how these strategies might be utilized or expanded upon for treatment of veterans in a rural setting. The target audience, methodology and evaluation procedures for this project will be described in detail.

Target Audience

The intended target audience for this project consists of providers in the community who treat veterans diagnosed with PTSD. More specifically, I planned to disseminate these findings largely to mental health providers trained to provide psychotherapy, which may include psychiatric APRNs, psychologists, psychiatrists, clinical social workers, and counselors, as well as students training in any of these roles. I also felt that this information could certainly benefit primary care providers as well, given they are often the first provider veterans come into contact with when seeking treatment. The findings of this project may assist primary care providers in becoming more familiar with treatment options and resources available and allow them to make more appropriate referrals within the community.

Plans and Procedures

This project began with initially conducting a literature review of pertinent studies, articles, and current practice guidelines. Four different databases were searched including: PubMed, CINAHL, the Cochrane Database, and PILOTS, a database specific to PTSD literature located on the Department of Veterans Affairs website. The following MeSH search terms were used alone and in a variety of combinations: rural, veterans, military, combat, PTSD, psychotherapy, evidence-based practice, and evidence-based treatment. My original literature review was further refined to ensure that the most recent, updated findings were included. This has allowed me to create a more robust, comprehensive assessment of the current state of evidence.

I identified content experts related to the treatment of PTSD in the community to enhance my knowledge as well as to gain insight and experience in providing therapy to veteran clients. I selected a psychologist who currently practices at an upper-Midwest university counseling center because of his expertise with EMDR, one of the modalities supported in current literature. He has also had military experience personally as well as a long history of working with clients who have been exposed to trauma. Through my collaboration with this psychologist, I have been able to observe the treatment of a veteran client diagnosed with PTSD using EMDR and continue to participate in his therapy as his treatment course remains in progress.

Next, I selected a clinical nurse specialist (CNS) employed through an upper-Midwest VA agency. I selected this content expert for several reasons. First, I felt it was important to collaborate with someone from an advanced nursing practice background to better understand the role of an APRN in treating veterans with PTSD. Also, I felt it was

critical to join forces with someone employed within the VA system as they are a primary provider of veteran mental health services. VA programs and protocols can be difficult for a non-VA clinician to navigate, so I felt it would be beneficial to have someone familiar with the system to help decipher the language.

Upon initiating contact with this CNS, she informed me that her role within the VA was primarily managing medications used to treat veterans diagnosed with mental disorders, very often which included PTSD. While she does not routinely provide psychotherapy herself, she finds it extremely important to remain knowledgeable of the current treatment methods being used. Given her limited role with the therapy aspect of treatment, she then referred me to a clinical social worker within the agency who is highly experienced in providing therapy to veterans with PTSD. She has received certification in cognitive processing therapy, one of the treatments strongly recommended in the evidence, as well as acceptance and commitment therapy (ACT).

I made contact with another CNS employed through a VA community-based outpatient clinic in the upper-Midwest. I was interested in communicating with this individual and perhaps even doing some clinical observation as her role consisted primarily of providing therapy and psychoeducation to individuals and groups of veterans diagnosed with PTSD. This was in contrast to the CNS role I discussed previously, whose task was primarily medication management. While I was able to discuss her role via telephone and email conversations, I was unable to directly observe her due to scheduling conflicts and travel distance.

I have also collaborated with contacts from the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury and an upper-Midwest rural health

agency. My contact with the Defense Centers of Excellence was initiated upon encouragement from my advisor, and my request for assistance was referred to a rather high-ranking APRN consultant within the agency. She was able to assist me in narrowing and prioritizing my search of online resources as well as identifying up and coming military programs on the cutting edge of PTSD treatment.

My contact with the rural health agency was developed with the intention of locating additional resources that may be helpful in understanding how rural veterans are currently accessing mental health services and how this access may be improved. A listing of various journal articles and other recommended readings was compiled by an information specialist from the agency for my review. I was able to cross-reference this list with my current references to ensure that I completed a thorough review of the literature pertaining to rural veterans.

Through correspondence with my contact person from the Defense Centers of Excellence, several web-based training modules were recommended. I completed three training modules provided by the VA Employee Education System located on the *PTSD 101* website. The training modules covered content related to the VA/DoD PTSD guidelines, cognitive behavioral interventions for PTSD (specifically prolonged exposure and cognitive processing therapy), and cross-cultural considerations to be aware of when working with the military population. Each module required a short quiz at the end and provided a certificate upon successful completion.

I conducted a search for pertinent conferences and workshops that would allow me to disseminate my findings. However, due to budgetary constraints, I was unable to make arrangements to attend the American's Psychiatric Nurses Association's annual

conference. I discovered a local event, the Dakota Conference on Rural and Public Health, and although I missed the call for abstracts deadline, I was able to attend and share my research with other conference attendees. I was able to attend a presentation by a psychologist from the National Guard that turned out to be a very worthwhile networking opportunity.

A poster presentation was created to disseminate my findings at the University of North Dakota Graduate School's 2010 Scholarly Forum. This allowed me an opportunity to receive feedback on my project from people with diverse professional backgrounds.

I developed an informational pamphlet (see Appendix) that served as a handout to use during my poster presentation at the Graduate Forum as well as a resource to distribute during my interactions and encounters with clinical professionals in the field. Throughout my graduate clinical experience, I regularly come into contact with a number of providers with whom I've been able to share my findings. My goal was to create something tangible for providers to take with them that could serve as a resource to assist in understanding what PTSD treatments are currently supported in the literature and to provide additional resources and websites that might be helpful for further investigation. I also wanted to share the online training resources that were pointed out to me by my contact from the Defense Centers of Excellence. I felt this technique would really capture the attention of my target audience, as clinicians are always looking for access to training materials, particularly when they offer free continuing education credits.

Evaluation

I elicited the feedback of colleagues and content experts to assist me in developing my poster presentation and pamphlet. I also enlisted the assistance of family

members to ensure that the content covered was understandable from a layperson's perspective. My husband was quite helpful during the editing and formatting process given his military background.

I was also able to obtain valuable feedback from audience members during my poster presentation at this spring's Graduate Forum. I inquired audience members about which parts of the poster and handout they felt were particularly beneficial and the areas they felt required further explanation or other areas that I failed to address. I kept a notebook with me during the presentation to record any comments or suggestions that I received. I will discuss this feedback further in Chapter IV.

Chapter Summary

In this chapter, the target audience for this project has been identified as providers in the community who treat veterans diagnosed with PTSD, with an emphasis on providers who are trained to administer psychotherapy. The methods used to complete and evaluate this project were also addressed. A literature review was conducted and refined, with the assistance of contacts through a local rural health agency and the Defense Centers of Excellence, to evaluate the current state of evidence. Expert clinicians within the area were consulted to gain further insight and engage in direct observation of an evidence-based therapy. A poster and informational pamphlet were prepared to present at a university forum and distribute among local providers.

CHAPTER IV

RESULTS AND CONCLUSIONS

Introduction

The purpose of this project was to explore the current evidence that supports the use of psychotherapy in the treatment of PTSD and discuss how these strategies might be implemented for veterans in a rural setting. This chapter will discuss the results and conclusions that were made upon completion of the methods outlined in the previous chapter. Implications for future areas of advanced nursing practice, research, education and policy will also be reviewed.

Results related to Theoretical Framework

Shapiro's Adaptive Information Processing Model (AIP) served as a conceptual framework to guide this project, and while it is beyond the scope of this paper to test the validity or reliability of this framework, some conclusions will be noted. The AIP model proposes that when a person is confronted with an experience that is traumatic in nature, information related to that event may not be fully processed. If these traumatic memories are not processed to an adaptive state, they can lead to distress and impaired functioning.

Originally, the AIP model was introduced as the basis of EMDR, but it can also be used to explain the basis of psychotherapy as a whole as an effective intervention in the treatment of PTSD. While the various types of psychotherapy all differ somehow in their approach, one of the common goals of psychotherapy overall is to facilitate information processing and emotional/behavioral regulation. This goal became apparent

when meeting with various providers and observing therapeutic sessions directly. No matter which approach or rationale a provider selected, the outcome criteria were the same, to effectively process the client's trauma and integrate their negative experience to a more adaptive state. There were a few providers who directly cited the underlying principles of the AIP model to their clients to educate them about the psychotherapy process and what was taking place. This education may reassure a client who has become impatient with the therapeutic process or instill hope to a new client who is skeptical that therapy might work for them. Overall, it seemed that the AIP model could serve as a potential rationale to a variety of clients seeking psychotherapy as a treatment.

Results of Expert Collaboration and Observations

Upon conducting a review of literature that yielded mixed results in terms of which therapies are most effective for veterans with PTSD, it came as no surprise to find similar controversy within the clinical field as well. While there were differences among providers regarding specific treatment selection, it did seem that all were in agreement that cognitive-behavioral-based strategies were the treatment of choice. This general consensus was comforting as a new provider; however, it quickly became apparent to me how broad of a category CBT is. How does one know which CBT-based intervention to choose? I looked to my content experts for their advice and rationale.

One therapist informed me that she typically finds prolonged exposure interventions are better suited for veterans who are experiencing more "avoidant" symptoms; whereas, she will select cognitive processing therapy for those with more "cognitive" types of symptoms, such as flashbacks or intrusive thoughts. Another therapist whom I've had the opportunity to observe on a regular basis finds EMDR is his

first-line treatment choice in most situations. In his experience, he has found that EMDR is particularly effective with veteran clients. Many veterans may be aversive to the idea of more traditional forms of "talk" therapy or may simply be unable to put their trauma into words. EMDR places less of an emphasis on the client "talking" and focuses more on the images produced in the client's mind through the bilateral processing, trusting that the brain will take the person where he or she needs to go.

He has also found EMDR to be beneficial when working with a client who is unable to let his or her defenses due to hypervigilance or is experiencing sensory overload. When discussing his experience with some of the trauma-focused therapies, he finds elements of them to be useful, but feels that if the client is made to concentrate too intensely on the trauma before the brain is capable of processing it effectively, the outcome could be adverse. With the majority of his clients, he tends to gravitate toward a combination of relaxation and mindful breathing techniques in conjunction with EMDR.

It seems through my discussions with providers that many choose an eclectic approach that adapts to their own personal style or the individual needs of the client versus adhering strictly to one treatment modality. This does make it more difficult to apply research findings to cases such as these; however, therapists who use an eclectic approach will argue that many of the research study designs do not take into account the complexities a client may present with. These types of complex scenarios are seen on an everyday basis in clinical practice.

It also becomes difficult for a provider to be trained in all of the different modalities that are shown to be effective in treating PTSD. Most of these therapies

require special training or certification. Consequently, networking becomes an essential skill for a therapist to utilize in order to make appropriate referrals for their clients.

Barriers to Treatment

Many providers can attest to the barriers veterans face when seeking treatment, such as stigma and lack of access. These barriers are commonly cited in the literature as well. However, another barrier was identified during my discussion with a VA clinician that was not prominent in the research. In her experience, there have been instances where veterans have been reluctant to achieve full remission of their symptoms because no longer meeting diagnostic criteria for PTSD could potentially interfere with their compensation or disability benefits. This could have a significant impact in therapy, as the provider and client would not be working towards mutually agreed upon goals.

To address the issue of access to care, the VA clinicians I collaborated with noted that their PTSD services have increased exponentially in the past year. More therapists are being trained in CPT, PE, and EMDR. New programs have been developed, with special attention to educational group and family services. This has been an efficient method for them to reach a greater number of veterans within a given period of time. One group in particular has been highly sought after by veterans and their families that consists of an orientation to PTSD and the treatments available. Veterans learn about the signs and symptoms of PTSD and then learn a little bit about each of the different psychotherapies used. This allows them to make an informed decision regarding their care and clinicians have noticed that it also makes them a bit more invested in the therapeutic process.

Expanding Care to Rural Veterans

When discussing with providers how they felt that mental health services to treat PTSD could be expanded on to reach rural veterans, the concept of telehealth came up repeatedly. Some of the agencies I conferred with have already implemented telehealth services to reach outlying communities. While this strategy can improve access, many providers felt that it was more appropriate for medication management sessions versus psychotherapy. Providers voiced concerns about compromising the therapeutic relationship as well as the concern of how to respond if a session produces a great deal of anxiety for a client. It becomes difficult to imagine managing a crisis or a client's potential destabilization without being in the same room.

Telehealth for psychiatric patients may pose unique challenges. A few providers felt that trust issues often present in working with veteran clients would be a challenge to overcome via a television screen; whereas other providers I spoke to felt that the physical distance that is inherent with this delivery mode may decrease some of the stigma that veterans often experience. Telehealth could also interfere with the delivery of EMDR, as this modality requires the therapist to be performing bilateral movements of some kind frequently throughout the session. When discussing other technological advances in PTSD treatment, such as virtual reality interventions, none of the providers whom I collaborated with had any personal experience with this technique.

Rural access is also being addressed locally by the increasing number of VA community-based outpatient clinics in less-densely populated areas. The use of therapy, psychoeducation, and support groups also maximizes the use of mental health resources.

These advances may not solve the entire issue of limited access to care, but providers feel that these are positive steps toward reaching a greater number of rural veterans.

Results of Project Evaluation

The results of this project included a review of current literature and practice guidelines regarding psychotherapy used to treat veterans with PTSD, as well as expert opinions and observations that I gathered upon collaborating with several mental health providers and agencies. These findings were summarized in the form of a pamphlet, which also included some helpful website resources and training modules to further guide people's inquiries. When sharing these findings and resources with members of my target audience, there was definitely a positive response.

Most of the providers that I interacted with found the information to be very useful, particularly the access to free continuing education websites. These types of free training resources are often difficult to come across in practice. Some providers seemed a bit less interested or were already experts in the area of PTSD treatment, so didn't feel that this was new information. Nevertheless, they did feel the websites provided useful resources for future practice. There was also quite a bit of interest from several primary care providers who felt this information would be of benefit to them when trying to make appropriate referrals.

A result that I did not anticipate originally was the positive feedback and interest that I received from non-healthcare related audience members. During the poster presentation at the Graduate Forum, there were several audience members who described having family who were diagnosed with PTSD and one member who was an actual veteran himself. These individuals expressed a great deal of interest in learning more

about the treatments recommended for PTSD so they might share this information with family. Very similar to what the research suggested, these audience members also identified stigma and access to care as barriers their loved ones faced when deciding whether to seek treatment. One participant felt that offering the pamphlet and suggested resources to her family member might allow him to better educate himself about the treatment options available and empower him to be more informed prior to seeking professional care.

While this wasn't my intended target audience, this finding suggests that there may perhaps be an interest and/or need for this information to be distributed throughout the general population. Some modifications could be made to the original pamphlet, with specific attention to the health literacy level, to make it more "user-friendly". These could be distributed through local health fairs, clinic waiting rooms, and other appropriate locations.

Implications

Results of this project could potentially be translated and expanded upon in a useful manner for future practice. Implications for areas of advanced nursing practice, research, education and policy will be discussed.

Practice

Psychiatric-mental health APRNs can play an important role in filling the practice gap that exists in providing adequate treatment to veterans diagnosed with PTSD. Psychiatric APRNs are in a unique position to provide both medication management and psychotherapy, a combination approach that is often used in the treatment of mental disorders. The advanced assessment and psychoeducation skills that psychiatric APRNs

possess can also assist in selecting the appropriate treatment for a veteran in need of therapy. APRNs may take on the task of further disseminating current evidence and practice guidelines to other practitioners in the field.

Research

Further research regarding the treatment of PTSD in rural veterans is warranted in several areas. As discussed previously in Chapter II, the majority of current evidence consists of retrospective analyses versus randomized-controlled trials (RCTs) and head-to-head comparison studies. Increasing the number of RCTs and comparison trials available could certainly result in a better understanding of which treatments are most effective in a given treatment situation.

Long-term studies may also provide a better understanding of which therapies are more effective than others in achieving continued remission of symptoms. It will also be important for researchers to design studies that are specific to veterans with PTSD. Many of the current PTSD studies use samples taken from the general population. Psychiatric-mental health APRNs are in a unique position to offer both psychotherapy and medication management to clients with mental illness. Thus, it would be beneficial for additional research to be conducted based on this perspective of combining therapy and medications.

Research projects that could be designed to benefit local agencies might include (a) outcome studies comparing various forms of CBT treatment, (b) telehealth implementation studies to assess the economic feasibility of such an intervention, and (c) assessing the knowledge, attitudes and awareness of local providers to guide education efforts.

Education

As discussed earlier in this chapter, many agencies, particularly within the VA health system, are realizing the importance of expanding the education and training of their providers in PTSD treatment options. It can become costly for an agency to send all of its employees outside of the facility for specialty training. Expanded training programs that include cost-effective strategies such as, web-based learning modules and "train the trainer" programs may assist agencies in containing costs. Outreach educational opportunities could be offered for rural providers in this same manner.

Policy

To effectively implement the strategies that have been discussed in this chapter and to ensure that mental health resources are available for veterans with PTSD, policies must be in place that provide the necessary support. Proper policies are needed to ensure care is delivered in cost-effective manner. This includes the prevention of overlapping services and programs while still improving quality and access to care. Rural agencies are in desperate need of funding to expand their mental health related services. The expansion of such funding would ultimately require policies that support further spending.

Summary

PTSD is a significant health issue facing this nation's veteran population. Current research demonstrates that psychotherapy, particularly interventions that are cognitive-behavioral based, is an effective treatment for this disorder. Regardless of specific treatment preference, use of overall evidence-based practice needs to be further disseminated within the mental health community. APRNs can play an important role in

educating their patients, fellow colleagues, and themselves about the possible treatment options and ensuring that adequate resources are available to offer such treatments. By increasing providers' awareness of these evidence-based practices, it is hopeful that improved care can be offered to rural veterans in treating their symptoms of PTSD and improving their overall quality of life.

APPENDIX

Definitions

Cognitive Behavioral Therapy (CBT)- A broad class of interventions that emphasizes the important role of thinking in how we feel and behave

Cognitive Processing Therapy (CPT)- A form of CBT with strong evidence for PTSD treatment. Emphasizes role of thoughts/beliefs on feelings. Consists of four phases: psychoeducation, processing the trauma, challenging thoughts, & cognitive restructuring.

Prolonged Exposure Therapy (PE)- Another form of CBT with strong evidence. Based on Learning Theory & classical/operant conditioning. Specific protocol consists of four phases: psychoeducation, breathing skills, live exposure, & imaginal exposure.

Eye Movement Desensitization & Reprocessing (EMDR)- An information processing therapy that utilizes several techniques. Consists of an 8-phase approach that combines use of bilateral rapid eye movements while recalling traumatic images. This external stimulus facilitates the adaptive processing of the negative experience.

Psychotherapy is a first-line treatment for PTSD. Cognitive-behavioral interventions are most effective.

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A non-thesis project, completed in partial fulfillment of the requirements for the Degree of Master of Science in Nursing from the University of North Dakota

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PSYCHOTHERAPEUTIC TREATMENT OF POST-TRAUMATIC STRESS DISORDER IN RURAL VETERANS

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Facts:

- 6.8% of adult Americans may develop PTSD within a lifetime.

- Prevalence rate for Vietnam veterans is around 30% and 14% for veterans involved in current Afghanistan/Iraq conflicts

- Veterans with PTSD are at greater risk for problems such as: suicide, substance abuse, unemployment, homelessness, and domestic violence.

PTSD Symptoms:

- **Re-experiencing**
  - Flashbacks, nightmares, unpleasant thoughts
- **Avoidance**
  - Isolation, loss of interest, guilt, feelings of numbness
- **Hyperarousal**
  - Easily startled, irritable, difficulty with sleep & concentration

Current PTSD Practice Guidelines:

- Effective treatments for PTSD: Practice guidelines from the *International Society for Traumatic Stress Studies*
  - 1st edition (2000)
  - 2nd edition (2009)
- Expert consensus guideline, *Journal of Clinical Psychiatry,* (Foa et al., 1999)
- Practice guidelines for the treatment of patients with acute stress disorder and posttraumatic stress disorder (APA, 2004)
- VA/DoD clinical practice guideline for the management of post-traumatic stress (2004) *
- Australian Centre for Posttraumatic Mental Health (2007)
- National Institute for Clinical Excellence, London (2005)

**An updated VA/DoD guideline will be coming out in 2010.*

HELPFUL WEB SITES & RESOURCES

Comprehensive PTSD Info:

- National Center for PTSD*- http://www.ptsd.va.gov
- Defense Centers of Excellence for Psychological Health & Traumatic Brain Injury*- http://www.dcoe.health.mil/
- National Institute of Mental Health- http://www.nimh.nih.gov

Military Culture:

- Center for Deployment Psychology (CDP)- http://www.deploymentpsych.org/

Psychotherapy:

- Association for Behavioral & Cognitive Therapies- http://www.abct.org/dHome/
- EMDR Institute, Inc.- http://www.emdr.com

Rural Issues:

- The Center for Rural Health- http://ruralhealth.und.edu/

Telehealth:

- National Center for Telehealth & Technology- http://www.t2health.org

Web-Based Training Modules:

- Designed to enhance provider knowledge of trauma & its treatment. Many offer **FREE CEUs.**
- PTSD 101- http://www.ptsd.va.gov/professional/ptsd101/ptsd-101.asp
- CDP On-line Training Program- http://www.deploymentpsych.org/
- CPT *Web*- http://cpt.musc.edu/index

**For "one-stop shopping", the National Center for PTSD & Defense Centers of Excellence web sites are recommended.*

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