

---

Electronic Theses and Dissertations, 2004-2019

---

2014

## Post-traumatic stress disorder: The effect of age and military status on the military population's awareness of community mental health resources

Susan Stapp  
*University of Central Florida*



Part of the [Education Commons](#)

Find similar works at: <https://stars.library.ucf.edu/etd>

University of Central Florida Libraries <http://library.ucf.edu>

This Doctoral Dissertation (Open Access) is brought to you for free and open access by STARS. It has been accepted for inclusion in Electronic Theses and Dissertations, 2004-2019 by an authorized administrator of STARS. For more information, please contact [STARS@ucf.edu](mailto:STARS@ucf.edu).

---

### STARS Citation

Stapp, Susan, "Post-traumatic stress disorder: The effect of age and military status on the military population's awareness of community mental health resources" (2014). *Electronic Theses and Dissertations, 2004-2019*. 4687.

<https://stars.library.ucf.edu/etd/4687>



University of  
Central  
Florida

STARS  
Showcase of Text, Archives, Research & Scholarship

**POST-TRAUMATIC STRESS DISORDER:  
THE EFFECT OF AGE AND MILITARY STATUS  
ON THE MILITARY POPULATION'S AWARENESS OF  
COMMUNITY MENTAL HEALTH RESOURCES**

by

**SUSAN CATHERINE STAPP**

B.A. University of North Texas, 1988

M.A. University of Central Florida, 1995

A dissertation submitted in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy  
in the College of Education and Human Performance  
at the University of Central Florida  
Orlando, Florida

Spring Term  
2014

Major Professor: Jeffrey Kaplan

© 2014 Susan C. Stapp

## **ABSTRACT**

This study sought to explore the existence of a relationship between age and/or military affiliation (active, veteran, or family member) and awareness of local community mental health programs available for the treatment of post-traumatic stress disorder. The study separated age from military affiliation to better distinguish between influences on awareness level. Considerations that remain critical regarding post-traumatic stress disorder were described and used to guide a comprehensive review of the literature to find directions to fulfill the goal of this study. A survey was conducted and 586 active military, veterans, and their family members responded to an instrument that contained 40 items. This study was constrained to three items from the survey; age, military affiliation, self-rated awareness of treatment for PTSD. Multiple analysis techniques found no significant ( $p < .05$ ) correlation between either age and awareness or military affiliation and awareness. Further analysis found a significant ( $p = .003$ ) correlation between veterans and awareness, as well as between family members of veterans ( $p = .017$ ) and awareness. Veterans and their family members indicated a greater awareness of local community mental health programs available for the treatment of post-traumatic stress disorder than did active troops and/or their family members. The significance of this finding presents new opportunities to study and improve both the marketing and the delivery of mental health treatment for PTSD to the active military population. Multiple opportunities for future research are discussed.

## **ACKNOWLEDGMENTS**

There is a large community of people that have shared their valuable ideas, subject matter expertise, and most importantly their time and patience to make this personal and professional journal for me a possibility. However, before I begin to thank my personal community I must first and foremost thank our brave soldiers, sailors, and airmen. Thank you for your dedication, service, and sacrifice. Thank you for defending my freedom and my way of life. You are one of the select few Americans to stand up and answer to call to defend our great nation. Your service is both admired and appreciated by a truly grateful nation.

Preparation for an educational journey is of the utmost importance. My preparation began with my attendance at Bishop Moore Catholic High School in Orlando, Florida. I was fortunate enough to have an exceptional cadre of teachers who ignited in me a passion for both learning and teaching. During my four years at BMCHS was mentored and influenced by Mr. Bruce Saulpaugh. I have maintained contact with Mr. Saulpaugh and am certain that he understands the life-altering impact that he had on me when I was a young, impressionable high school student.

I continued my educational journey by enrolling into the Master's program at University of Central Florida and met Dr. Richard Cornell. Dr. Cornell and Dr. Gary Orwig introduced me into the burgeoning field of Instructional Design. These two gentlemen were my first coaches and my first critics. Thank you both for your teaching prowess, for your subject matter expertise in the field of ISD, and for your insurmountable patience.

Over the next 15 years I raised a family and gained invaluable experience in the field of ISD. The doctoral program at UCF expanded any knowledge that I had acquired regarding the instructional design. The coursework offered tremendous opportunity for personal and

professional growth far beyond the required course competencies. From these experiences there are several faculty members that offered perspectives, advice, and an open dialog that enabled me to formulate and express my ideas and opinions. Thank you to Stephen Sivo, Monifa Beverly, Atsusi Hirumi, and Peter Kincaid for sharing this experience with me. During this time I was also able to forge an unbreakable bond with several of my classmates. One cohort deserves special recognition for her supportive ideas, her collaboration, and her overall friendship. Thank you LaDonna Slayter for your time and support.

I worked full time during this almost four year journey, and my professional colleagues suffered and commiserated with me as I rode this roller coaster educational experience. A special thank you is offered to two of my colleagues. Thank you to Cheryl Ireland, for having an ear and a heart always ready to listen and a word always ready to encourage. And, thank you to Ananda Roberts, for helping me to realize my dream.

The four faculty members on my dissertation committee were both supportive and patient during the months of research and writing. The experience for me was nurturing and filled with learning, while at the same time experiencing each of their individual areas of expertise made this time unique and irreplaceable. Thank you to Patsy Moskal for your patience while I struggled with the statistical analyses of my research. Your kindness and support enabled me to persevere, and your suggestions permeate all of my work. Thank you to Richard Cornell. You were my mentor almost 20 years ago, and I was lucky enough to have our paths cross again during my dissertation. Your meticulous review of my draft iterations and your insight into the depth of the issue of my dissertation offered me a perspective that would have otherwise been lost and not incorporated into the final product. Thank you to Jay Ellison-Brophy for your endless support and friendship. You were always available to bounce ideas off, meet to discuss

possibilities, and gently offer your steering guidance. Without you none of this would have been possible. And, a special thanks to my committee chair, Jeffrey Kaplan. Your gentle way of encouraging, steering, and guiding has led me to this day. I truly thank all four of my committee members.

This personal and professional journey has been an incredible experience for me. However, I would be remiss not to thank the most important and enabling people in my life. Thank you to my children who on countless nights and weekends had to shut my office door and go about their busy routines while I toiled away with homework. A unique thank you to my husband and my mother-in-law, Peter Stapp and Jean Provanca. You believed in me. From the very beginning of this journey, maybe even before I began, you have held an unwavering and steadfast belief in what I was doing. I would not have come this far had it not been for you. And, to my parents, Norm and Carol Lansverk. As a child you both ignited in me a desire to learn, a need to excel, and a passion for perfection. But, the most important thing that you gave to me is my attitude, or as Dad used to call it, “gumption”. To my mother and father I have always been grateful and will eternally be indebted for my attitude in approaching life. *Attitude is everything, pick a good one!*

## TABLE OF CONTENTS

LIST OF FIGURES .....	xi
LIST OF TABLES .....	xii
LIST OF ACRONYMS AND ABBREVIATIONS .....	xiii
CHAPTER ONE: INTRODUCTION.....	1
Background of the Problem.....	3
Suicidality .....	4
Cost to Society.....	7
Evidence-based Treatment Options.....	8
Veteran and Public Awareness .....	10
Statement of the Problem .....	13
Purpose of the Study .....	14
Significance of the Study .....	14
Summary .....	16
CHAPTER TWO: REVIEW OF THE LITERATURE .....	18
Prevalence of PTSD .....	21
Battle Damage Assessment .....	21
Cost to Society.....	23
Symptomology.....	25



Chronicity .....	27
Comorbidity.....	30
Humanizing the Disorder.....	31
Evidence-based Treatments for PTSD .....	33
Cognitive-Based Therapy .....	34
Prolonged Exposure.....	35
Cognitive Processing Therapy .....	36
Prescribed Regimen.....	38
Awareness of Available Treatment Options .....	39
Obstacles to Care.....	39
Raising Public Awareness .....	41
Onset of Care.....	42
Historical Fluctuations in Utilization of Care.....	43
Give An Hour™ .....	45
CHAPTER THREE: METHODS.....	48
Introduction.....	48
Relevance of the Research Question .....	49
Research Question.....	50
Limitations of the Study .....	51

Description of the Survey .....	51
Target Survey Audience .....	52
Collaboration .....	53
Data Collection.....	54
Implementation of the Survey .....	54
Survey Items Selected for Analysis.....	54
Summary .....	55
CHAPTER FOUR: RESEARCH FINDINGS .....	56
Data Analysis .....	56
Procedures .....	56
Frequencies of Respondents .....	57
Discussion .....	60
CHAPTER FIVE: CONCLUSIONS .....	65
Interpretation of the Findings.....	65
Cognitive Dissonance .....	66
General Age-related Suicide.....	68
Future Directions.....	69
Cognitive Dissonance .....	69
Silent Suffering.....	71

Virtual Reality Exposure Therapy .....	73
Final Conclusions .....	76
APPENDIX A: THOROUGHNESS AND CITATION QUALITY .....	79
Overview .....	80
Discussion .....	82
APPENDIX B: SURVEY INSTRUMENT .....	96
APPENDIX C: REPRODUCTION OF VERBAL COMMUNICATION .....	104
APPENDIX D: PERMISSION TO USE DATA SET .....	107
LIST OF REFERENCES .....	109

## LIST OF FIGURES

Figure 1: Number of soldiers killed in action per every 100K troops .....	22
Figure 2: Percentage of troops with service-related disability.....	24
Figure 3: Depression prior to and post-deployment .....	40
Figure 4: Suicide rates by age, race, and gender in the United States, 2007 (Centers for Disease Control and Prevention, 2010).....	68

## LIST OF TABLES

Table 1 Percentage of Suicides by Age and Veteran Status .....	6
Table 2 Survey Respondents Military Affiliation.....	53
Table 3 Frequency Table Describing Military Status Breakdown of Population.....	58
Table 4 Frequency Table Describing Age Group Breakdown of Population.....	59
Table 5 Frequency Table Describing Awareness Level Breakdown of Population .....	60
Table 6 ANOVA Results Examining Age and Awareness of Community Resources.....	61
Table 7 ANOVA Results Examining Military Status and Awareness of Community Resources	62
Table 8 Post Hoc Tukey LSD Results Pair-Wise Comparisons .....	63
Table 9 Results of Hjørland Thoroughness Analysis and Citation Quality Analysis.....	83

## **LIST OF ACRONYMS AND ABBREVIATIONS**

APA	American Psychiatric Association
CBT	Cognitive Behavioral Therapy
CPT	Cognitive Processing Therapy
DSM	Diagnostic and Statistical Manual
EMDR	Eye Movement Desensitization and Reprocessing
FOB	Forward Operating Base
IED	Improvised Explosive Device
KIA	Killed In Action
MDD	Major Depressive Disorder
OIF/OEF	Operation Iraqi Freedom/Operation Enduring Freedom
PE	Prolonged Exposure
POW	Prisoner of War
PTSD	Post-Traumatic Stress Disorder
SPSS	Statistical Package for Social Sciences
USFDA	United States Food and Drug Administration
VA	Veteran's Affairs
VBIED	Vehicle-Borne Improvised Explosive Device
VHA	Veteran's Health Administration
VR	Virtual Reality
VRET	Virtual Reality Exposure Therapy
WIA	Wounded in Action
WWII	World War II

## CHAPTER ONE: INTRODUCTION

The purpose of this study was to examine the relationship age and military affiliation (active troop, veteran, or family of a veteran), and awareness of local community mental health care options available for the treatment of post-traumatic stress disorder (PTSD). The Suicide Data Report of 2012 (Kemp & Bossarte, 2013) reported that there is one combat-related, PTSD induced suicide every 17 hours. However, the probability of a military professional or a veteran seeking help for this disorder is distressingly low (Powers, Kniesner, & Croghan, 2011). Current research has indicated that the lack of a basic awareness of the existence of community programs for the treatment of PTSD is one of the fundamental barriers to participation as viewed by veterans (Sherman et al., 2008). "Because of many veterans' lack of awareness of available services, repeated, frequent publicity about programming is essential" (Sherman et al 2008, p.449). The target population is not able to receive the care that they require if they are fundamentally unaware of the treatment options that exist. "Reducing the perception of stigma and the barriers to care among military personnel is a priority for research and a priority for policymakers, clinicians, and leaders who are involved in providing care to those who have served in the armed forces." (Hoge et al., 2004, p.21). Dr. Matthew Friedman, Executive Director of the National Center for PTSD, said on June 24, 2013 that "There are many barriers that keep people with PTSD from seeking the help they need. Knowledge and awareness, however, are keys to overcoming these barriers. Greater public awareness of PTSD can help reduce the stigma of this mental health problem and overcome negative stereotypes that may keep many people from pursuing treatment." (Friedman, 2013).

Within the literature on PTSD, there is a call for additional research to examine this target population in regards to who is suffering from PTSD and yet not receiving mental health care benefits. There are documented barriers to care (Hines et al, 2014), but there has been little research on the fundamental awareness level of this target population. Is this target population (active troops, veterans, and their family members) fundamentally aware that there are free local community resources ready to serve them with their mental health issues resultant from their service to our country? The proposed outcomes of this study are to (a) examine any significant factors, or combination of factors, that predispose a lack of awareness, and (b) discuss the findings and suggest future areas of research.

The problem begins when the military population experiences a traumatic event, and their resultant albeit potentially invisible psychological injuries. The result of this combination of events was first identified as early as 1889 as a syndrome called traumatic neurosis by Hermann Oppenheim (Weisaeth & Eitinger, 1991). Oppenheim was a renowned German neurologist and author of a textbook on nervous diseases titled *Lehrbuch der Nervenkrankheiten für Ärzte und Studierende*, a book that at the time became a standard in his profession, and is still considered one of the best textbooks on neurology ever written. Since the 1880's, names such as railway spine and post-concussion syndrome have been given to define the response resulting from general trauma, the symptoms of which include but are not limited to sleep disturbances, nightmares, ringing in the ears, and chronic pain (Cohen & Quinter, 1996; Lasiuk & Hegadoren, 2006). The military medical community has historically used words such as shell shock and combat fatigue to describe the symptoms now related to what is commonly called post-traumatic stress disorder (Lasiuk & Hegadoren, 2006; Pols & Oak, 2007). The term PTSD was first introduced into the 3<sup>rd</sup> Edition of the Diagnostic and Statistical Manual of Mental Disorders



(American Psychiatric Association, 1994) in 1980 as a condition describing the effects of traumatic combat-related experiences.

### **Background of the Problem**

Post-traumatic stress disorder, as defined by the Mayo Clinic, is a mental health condition triggered by a terrifying event (Howarth, 2011). Symptoms of PTSD have been reported to include but are not limited to flashbacks, nightmares and severe anxiety, as well as intrusive thoughts about the traumatic event. A PTSD diagnosis and the individual symptomology can be regarded as a continuum - not everyone has each symptom, all at one time. PTSD is speculated to be caused in part by the events that comprise the traumatic memories, which are encoded in implicit (subconscious memory that automatically guides our procedural actions) as well as declarative memory systems (conscious memory that helps recall facts and details). This dual-encoded memory is most likely a combination of detached emotions, perceptions, and sensory fragmentations with no coherent verbal, chronological or symbolic basis (O'Kearney & Perrott, 2006). Looking back in history, combat-related incidents research has indicated that PTSD occurred in about 30% of Vietnam Veterans (National Center for Posttraumatic Stress Disorder, 2010). As of June 2009, an estimated 25% of the veterans having served in Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) are receiving Veteran's Health Administration (VHA) services in direct relation to their diagnosis of PTSD (Department of Veterans Affairs, 2010). This percentage represents approximately 120,000 OIF/OEF veterans at that date. The Suicide Data Report of 2012 (Kemp & Bossarte, 2013) reported a disturbing

statistic; there is one combat-related suicide every 17 hours. The next section examines the suicidality of the military population suffering with PTSD.

## **Suicidality**

During time of war and military conflict it is an assumed certainty that soldiers will lose their lives in the course of battle. Unfortunately during the year 2012, PTSD, Massive Depression Disorder (MDD), and general depression caused more soldiers to make the decision to terminate their own lives than those that died in combat (Kemp & Bossarte, 2013). Kemp & Bossarte (2013) also reported in their Suicide Data Report of 2012 that there was one suicide in every 17 hours among all active-duty, reserve, and National Guard members. The Suicide Data Report of 2012 listed another terrifying statistic; suicides in the U.S. Army have increased by a staggering 54 percent from 2007 to 2012. Concurrently, the rates of mental health symptoms, PTSD in particular, for soldiers returning from combat duty in Iraq and Afghanistan have been reported as high as 20% (Stecker et al., 2010). Clearly, the current statistics are telling a tragic story; soldiers are more apt to lose their life after the battle has been fought and they have returned home to supposedly more peaceful times.

There is a large body of quantitative research that identifies a strong correlation between increased rate of suicide and the experience of a general traumatic event, proposing that experiencing events such as combat-related trauma may increase a person's suicide risk (Kelleher et al, 2008, Gunter et al, 2013). Further research has found that trauma survivors who have been diagnosed with PTSD have a significantly higher risk of suicide than trauma survivors diagnosed with other psychiatric illness or with no mental health history (Ferrada-Noli et al,

1998). The Federal Practitioner, a peer-reviewed clinical journal founded in 1984 focused on the Department of Veterans Affairs, cites that in 2011 there was an average of 18 suicides every day among veterans returning from war zones, which in that year equated to a staggering 6,570 suicides (Payne, Hill, & Johnson, 2011). The veteran population suffering with PTSD experience highly intrusive thoughts and extreme guilt about acts committed during times of war. These thoughts can often overpower the emotional coping capabilities of the military population.

Soldiers are returning home from military combat zones in record numbers. When the mind's eye conjures an image of a soldier returning from combat there is most likely an image of a young male warrior, dirty and battle weary. However, current research does not suggest that this young soldier is in the age group most at risk for PTSD-related suicide. In fact, between 1999 and 2012, the average age of male veterans who died from suicide was 59.6 years (Kemp & Bossarte, 2013). Table 1 displays the research of Kemp & Bossarte's (2013) suicide statistics by age group among active troops and veterans.

Table 1  
 Percentage of Suicides by Age and Veteran Status

Age Group	Active Troops	Veteran
< 29 years	21.6%	9.0%
30 – 39 years	19.3%	14.3%
40 – 49 years	24.5%	29.6%
50 – 59 years	18.2%	43.4%
60 – 69 years	8.1%	36.1%
70 – 79 years	4.6%	38.6%
< 80 years	3.7%	29%

Alarming, the age group with the highest percentage of suicides was the veterans aged 50 – 59. In fact, the veteran population over the age of 50 consistently has the highest percentage of suicides. Of the active troops, the age group with the highest percentage of suicide was the 40 – 49 years. This age range of 40 – 49 years could be influenced by the current trend toward multiple redeployments for a soldier and the shortened time between deployments. The current trend among active military is to have longer deployments, redeployment is the new standard, and down time between deployments is getting shorter and more infrequent (Hosek, Davanagh, & Miller, 2006).

Regrettably, statistics about the percentages of soldiers killed, either in combat action or by PTSD-related suicide, offer little or no comfort to the parents, spouses, and children that have lost loved ones or to the veterans who have been left to deal with both the visible physical and

the invisible psychological battle scars of combat. Neither do the incidence rates and statistics regarding those veterans suffering from PTSD, MDD, or general depression matter if one happens to be among the untold veterans left anguishing and coping with the disorder. However, it is in the examination of this quantitative data that we will begin to measure both the unique individual and the more general societal expense of war and begin to be able to strategize services for those veterans left in need.

### **Cost to Society**

Notwithstanding the personal difficulties endured by the veteran, PTSD continues to inflict an enormous economic burden on society. Expenses imposed upon society include mental health services, uninsured medical care, and lost productivity caused from time away from work. Knowing that at the present date there are over 21.8 million surviving American veterans of foreign wars, the potential number of veterans currently with PTSD could be as high as 6.7 million (Toomey et al., 2007). The current VA medical system shoulders the majority of the enormous burden of providing mental health, medical, social, and disability services to the majority of veterans with severe PTSD and other associated or comorbid medical illnesses. In 2004, the United States society spent an estimated \$6 billion for mental and physical health services in conjunction with the treatment of PTSD, which ranks PTSD as the mental disorder with the highest annual per person health care expenditure (Tyson, 2008).

Both the military and the civilian populations appear to have an understanding that exposure to combat situations can lead to serious traumatic responses. PTSD is only one of the possible outcomes of experiencing a traumatic combat-related event. Combat-related PTSD, MDD, and general depression can occur after a traumatic or life-threatening event. Common

reactions can include but are not limited to upsetting memories of the event, increased jumpiness, thoughts of suicide, and trouble sleeping. Other possible responses to traumatic combat-related experiences have been characterized by a symptomology including anxiety, depression, and sub-threshold PTSD (Hoge et al., 2004). If these reactions do not go away or if they get worse then the option for treatment is presented.

### **Evidence-based Treatment Options**

Over three decades ago the Diagnostic and Statistical Manual of Mental Disorders, Third Edition, (DSM-III), quantified the rates of PTSD in various populations, isolated the risk factors associated with the development of PTSD, and made the first attempt at identifying effective methods for its effective treatment. Treatment options for the returning Veterans are numerous. The National Center for PTSD (Resick, Monson, & Chard, 2006) has identified several treatment options for combat-related PTSD; Cognitive Processing Therapy, Prolonged Exposure therapy, Eye movement desensitization and reprocessing (EMDR), medication, group therapy, psychodynamic psychotherapy, and family therapy. However, research conducted by Sharpless and Barber (2011) revealed that due to the diversity of PTSD sufferers, there is little data supporting the use of one specific treatment methodology over another.

Current research has posited that psychotherapy is an evidence based treatment for combat-related PTSD, and more specifically exposure-based therapies have the most convincing evidence base and should be used as the first course of treatment for combat-related PTSD (Institute of Medicine, 2008; National Collaborating Centre for Mental Health, 2005) with the disclosure of very limited evidence for the efficacy of any of the U.S. Food and Drug Administration approved pharmacological treatments (Foa, Franklin, & Moser, 2002).

There is strong research-based evidence to suggest that trauma focused Cognitive Behavioral Therapy (CBT) is more effective in regards to combat-related PTSD and should be considered as the first course of mental health treatment (Foa, Keane, Friedman, & Cohen, 2009). Among the multitude of psychotherapy options, CBT has the strongest evidence base, as reported in a meta-analysis including 26 treatment outcome studies (Bradley, Greene, & Russ, 2005). CBT is the treatment option for combat-related PTSD sufferers that is proving to be the most effective type of counseling option (Department of Veterans Affairs, 2010). Currently, the VHA is providing two forms of cognitive behavioral therapy to Veterans with PTSD: Prolonged Exposure (PE) therapy and Cognitive Processing Therapy (CPT).

Using CPT, the therapist helps the patient understand and change the thoughts surrounding the traumatic event and its repercussions. The goal of CPT is to appreciate how thoughts and feelings generated from the traumatic event manifest themselves in stress reactions and physiological symptoms. PE therapy is based on the notion that people are conditioned to fear thoughts, feelings, and situations that remind them of a traumatic event. With prolonged exposure to the traumatic memories people can change the way they react and learn how to control their thoughts and feelings. In the research reported by the Institute of Medicine (2008), it was concluded that exposure therapy was the only treatment with enough evidence to be endorsed for the treatment of PTSD.

Both CPT and PE therapy rely heavily on the relationship that is developed between the therapist and the patient. Dewey (2004) posited that the creation of this therapeutic relationship fashioned by the verbal exchange during therapy is the greatest primary treatment challenge for the combatant and his therapist. The greatest obstacle faced by both the therapist and the patient is the reluctance of the PTSD sufferer to talk about the traumatic event. In CBT practice, the

PTSD sufferer is typically guided by a clinician to envision, describe, narrate and emotionally process the traumatic event within a safe and supportive environment (Rizzo et al., 2009).

Veterans and their family members suffering from PTSD, MDD, or general depression need an awareness of and access to the mental health professionals skilled in CBT.

Unfortunately, the fundamental awareness of these disorders can be a restricting factor.

Currently, awareness of PTSD is intensifying with tenacious news reports highlighting the mental and emotional issues of returning Veterans. A natural derivative of this media attention is that PTSD is progressively becoming part of the national lexicon, as evidenced by a developing public awareness of these conditions and a burgeoning recognition of the need for effective treatment (Karlin et al., 2010).

### **Veteran and Public Awareness**

The frequency of PTSD is high among returning combat veterans. And, the success rates of the use of CBT in treating combat-related PTSD are undisputable. However, the probability of a military professional, a veteran, or a family member seeking help for this disorder is distressingly low (Powers, Kniesner, & Croghan, 2011). Unfortunately, Hoge et al, (2004) found that many returning combat veterans will not even initiate an attempt to find available help or to seek treatment for their PTSD symptoms. The rudimentary and fundamental awareness of and participation in accessible community programs for returning veterans suffering from combat-related PTSD is of critical importance if these veterans are going to be prepared to return to their normal life responsibilities and to enter back into their communities as contributing members of the national society. Unfortunately, research has indicated that the lack of a simple awareness of the existence of community programs for the treatment of PTSD is one of the fundamental



barriers to participation as viewed by veterans (Sherman et al., 2008). “Because of many veterans’ lack of awareness of available services, repeated, frequent publicity about programming is essential” (Sherman et al 2008, p.449). Due to this lack of awareness of available services, research has recommended that repeated, frequent publicity about programming is essential (Sherman et al., 2008). Rudenstine et al (2003) studied the attempt to raise public awareness regarding Project Liberty, a public mental health counseling opportunity available to people suffering with PTSD as a result of the New York City disaster of September 11, 2001. Their findings suggest that it is difficult to publicize a program intended to provide counseling services, even when public awareness of issues related to a particular disaster, such as September 11, are very high. The need to make PTSD sufferers aware of mental health programs becomes even more apparent when considering at-risk groups, such as survivors of natural disasters and the large number of soldiers returning from overseas who are having emotional difficulties (Hoge et al., 2004).

In an effort to raise public awareness of PTSD and the vast array of available treatment options, the U.S. Congress enacted Resolution 169 which designates June as the annual National PTSD Awareness month. In addition, June 23 is the National PTSD Awareness Day in the United States and is celebrated annually. Dr. Matthew Friedman, Executive Director of the National Center for PTSD, said on June 24, 2013 that “There are many barriers that keep people with PTSD from seeking the help they need. Knowledge and awareness, however, are keys to overcoming these barriers. For those living with PTSD, knowing there are treatments that work, for example, can lead them to seek needed care. Greater public awareness of PTSD can help reduce the stigma of this mental health problem and overcome negative stereotypes that may keep many people from pursuing treatment.” (Friedman, 2013).

The need to raise Veterans awareness of effective mental health services is urgent, and is only compounded when looking at the large number of American soldiers currently being exposed to combat. It is in the best interest of our national society that Veterans suffering from war-induced trauma or combat-related PTSD have an awareness of, access to, and receive effective treatment so they can be restored to their standard level of mental functioning prior to returning to society or being redeployed for continued combat.

As of April 2009, a total of 1,924,810 Americans have served or are currently serving in the conflicts in Iraq, Afghanistan, or surrounding locations in support of Operation New Dawn, Operation Iraqi Freedom (OIF), and Operation Enduring Freedom (OEF) (Seal et al, 2010). A large body of research studies have found a high frequency of mental health disorders among these soldiers, ranging from 18.5% up to 42.7% (Milliken, Auchterlonie, & Hoge, 2007; Seal et al., 2007; seal et al., 2009; Tanielian and Jaycox, 2008). Early onset of evidenced-based mental health treatment options such as CBT has been indicated to prevent mental health disorders, such as PTSD, from becoming chronic conditions (Gray, Maguen, & Litz, 2004; Simon, Ludman, Tutty, Operskalski, & Van Korff, 2004). Unfortunately, multiple research studies of the military population have revealed that a large portion of veterans suffering with mental health issues either never access, delay access, or fail to complete a sufficient course of mental health treatment (Hoge et al, 2004; Tanielian & Jaycox, 2008).

The ability to treat combat-related PTSD with the possibility of realizing positive health outcomes is a function of awareness of and access to mental health care that may result in the use of services and the dissemination of high-quality care. In order to maximize the benefits of health care services there must be a simultaneous facilitation of awareness and access to services while

at the same time ensuring that the services received are of the highest quality (Tanielian & Jaycox, 2008).

### **Statement of the Problem**

There is a large body of research supporting the ideas that:

- traumatic combat-related experiences can result in PTSD.
- PTSD and suicide rates have a significant causal relationship.
- the age group of Veterans most predisposed to committing suicide is aged 50 and older.
- cognitive behavioral therapy is successful in minimizing the effects of PTSD.

However, research to determine if the veteran population has the fundamental and rudimentary awareness of the mental health care options that are available to them is almost nonexistent. It is imperative to gather data about veterans' basic awareness of available mental health services and their subsequent utilization. This information could help identify any potential missed opportunities, lapses in service, and barriers to care in order to better align veterans with available treatment options. At the most basic level, veterans will not enroll and participate in available therapies if they are not aware of them. To maximize participation in the PTSD mental health care treatment programs there must be an assurance that the veterans most in need of the treatment programs are rudimentarily aware of their existence.

## **Purpose of the Study**

The objective of this research is to assess the awareness levels of Veterans with regard to locally available mental health programs. Specifically, this research was collected under the direction of Give An Hour™, an organization founded in September 2005 as a nonprofit 501(c)(3) with the organizational mission to develop national networks of volunteers capable of responding to both acute and chronic mental health needs of the nation's troops and their families affected by the ongoing OIF/OEF conflicts in Iraq and Afghanistan. Give An Hour™ is an organization that creates a connection and fosters the relationship between cognitive behavioral counselors and the active military personnel, veterans, and their family members in need of mental health care related to combat-related PTSD, MDD, or general depression.

As Give An Hour™, the VA, and other health care systems attempt to manage the complex mental health needs of the ever-growing population of returning OIF/OEF veterans, detailed information about veterans' awareness of available mental health services and their subsequent utilization could help identify any potential missed opportunities, lapses in service, and barriers to care to better align veterans with target resources within Give An Hour™, other local mental health options and the VA health care system (Seal et al., 2010).

## **Significance of the Study**

Free mental health treatment options exist for active military, veterans, and their family members. However, the existing research is of little use with regard to guiding policy concerning how best to promote awareness of and access to mental health care to active duty personnel and

the veteran population (Hoge et al, 2004). Even though screening for mental health issues has become routine procedure prior to deployment, post-deployment, and again 3 to 6 months after returning home and is currently strongly encouraged in primary care settings (Wright et al, 2002), there is a deficiency in the research regarding the awareness of mental health care options, the use of mental health care, the perceived need for mental health care, and the perceived barriers to treatment among veterans and active duty personnel (Hoge et al, 2004). The purpose of this dissertation research was to determine if there is a relationship between age and/or military affiliation of the respondent and his/her awareness of the Give An Hour™ mental health care treatment options in their community?

H<sub>1</sub>: There is an association between the age range of the respondent and his/her awareness of the mental health care treatment options available in their community.

H<sub>2</sub>: There is no association between the age range of the respondent and his/her awareness of the mental health care treatment options available in their community.

H<sub>3</sub>: There is an association between the military affiliation of the respondent and his/her awareness of the mental health care treatment options available in their community.

H<sub>4</sub>: There is no association between the military affiliation of the respondent and his/her awareness of the mental health care treatment options available in their community.

A telephone survey was administered in order to learn more about the veteran and veteran family populations in the Fayetteville, North Carolina and the Norfolk, Virginia locations. An extensive telephone-administered survey was developed in a joint effort by Give An Hour™ and Infosurv. Infosurv is a full service market research firm that specializes in custom research solutions. The telephone survey, administered by Infosurv, was developed in part to determine if

active military, veterans, and their family members have an awareness of the services and assistance they need once they are back on the home front.

### **Summary**

This study researched the possibility that age and/or military affiliation can have a significant relationship to the awareness level of local community mental health care options available for the treatment of PTSD. A survey was developed in a joint effort by Give An Hour™ and Infosurv and implemented via telephone. The research design examined a pair-wise comparison to look for any relationship between the factors of age and military affiliation with regards to awareness level.

There is a large body of research supporting the ideas that traumatic combat-related experiences can result in PTSD and that PTSD and suicide rates have a significant causal relationship. This same research also supports that the age group of Veterans most predisposed to committing suicide is aged 50 and older and that evidenced-based cognitive behavioral therapy is successful in minimizing the effects of PTSD. However, research to determine if the veteran population has the fundamental and rudimentary awareness of the mental health care options that are available to them is almost nonexistent. It is imperative to gather data about veterans' basic awareness of available mental health services and their subsequent utilization. This information could help identify any potential missed opportunities, lapses in service, and barriers to care in order to better align veterans with available treatment options. Veterans will not enroll and participate in available therapies if they are not aware of them. To maximize participation in the

PTSD mental health care treatment programs there must be an assurance that the veterans most in need of the treatment programs are rudimentarily aware of their existence.

The next chapter is a review of the current literature. In chapter 2, the targets for the review of the literature include an examination of the prevalence of PTSD in the target population, evidenced-based treatment prescriptions for PTSD, and the current research on awareness levels regarding PTSD. The organization of chapter 2 leads the reader to logically synthesize the design attributes necessary to accomplish the study purpose.

## **CHAPTER TWO: REVIEW OF THE LITERATURE**

In the introductory chapter, the rationale of this study illustrates that there is a dramatic increase in the rate of PTSD in the current military community, specifically in the OIF/OEF population. In conjunction, there are evidenced-based treatment options that are available on a free basis to this community. Despite these conditions, there is still a dramatic underutilization of these free and proven treatment options. Why is this population, suffering from this terrible disorder, failing to take advantage of the treatment options available to them? If through this study a relationship is found between age and/or military affiliation and their fundamental awareness level of the available treatment options, then practitioners will have additional resources to improve marketing agendas, accessibility, and/or the very method by which the treatment is delivered. This knowledge increases the likelihood of participation in the available treatment options, and also functions as part of a feedback loop to improve the delivery process of the prescribed treatment.

The introductory chapter contains several key points. The key points can be summarized as the following:

- During the year 2012, PTSD, Massive Depression Disorder (MDD), and general depression caused more soldiers to make the decision to terminate their own lives than those that died in combat (Kemp & Bossarte, 2013).
- Quantitative research identifies a strong correlation between increased rate of suicide and the experience of a traumatic event, proposing that experiencing events such as combat-related trauma may increase a person's suicide risk (Kelleher et al, 2008, Gunter et al, 2013).



- The Suicide Data Report of 2012 (Kemp & Bossarte, 2013) reported that there is one combat-related suicide every 17 hours.
- In 2004, the United States society spent an estimated \$6 billion for mental and physical health services in conjunction with the treatment of PTSD (Tyson, 2008).
- CBT is the only evidenced-based treatment option for combat-related PTSD sufferers that is proving to be the most effective type of counseling option (Department of Veterans Affairs, 2010).
- The probability of a military professional or a veteran seeking help for PTSD is distressingly low (Powers, Kniesner, & Croghan, 2011).
- Multiple research studies of veterans have revealed that a large portion of veterans suffering with mental health issues either never access, delay access, or fail to complete a sufficient course of mental health treatment (Hoge et al, 2004; Tanielian & Jaycox, 2008).

The discrepancies in these claims underlines the need addressed by the purpose of this study: our troops are coming home with PTSD in record numbers, PTSD is known to cause an increased likelihood of suicide, the high cost of treating PTSD is being imposed on all of society, and there are proven and prescribed evidenced-based treatment options, yet the suffering population is not accessing the available care.

These claims guide this review of the literature presented here in chapter 2. The primary topic areas to be addresses in this review are (a) the prevalence of PTSD; (b) the evidenced-based treatment options; (c) the current assessment of the target population's awareness of available treatment options. Each of these three topic areas if further sub-divided to support the

investigation of evidence, warrants, or the backing of claims presented in the introductory chapter.

The first section, *prevalence of PTSD*, is further divided into six subsections: (a) battle damage assessment; (b) cost to society; (c) symptomology; (d) chronicity; (e) comorbidity; (f) humanizing the disorder.

The next section, *evidenced-based treatment for PTSD*, is further divided into two subsections: (a) cognitive-based therapy; (b) prescribed regimen.

The third section, *awareness of available treatment options*, is further divided into five subsections: (a) obstacles to care; (b) raising public awareness; (c) onset of care; (d) historical fluctuations in utilization of care; (e) Give An Hour™.

The review of the literature concludes with a summary.

## **Prevalence of PTSD**

PTSD usually arises when the military population experiences a traumatic event, and the result is the silent, unseen, invisible wound of psychological injuries. The result of this combination of events was first identified as a syndrome called traumatic neurosis by Hermann Oppenheim in 1889 (Weisaeth & Eitinger, 1991). Since the 1880's, names such as railway spine and post-concussion syndrome have been used to define the response resulting from general trauma, the symptoms of which include but are not limited to sleep disturbances, nightmares, ringing in the ears, and chronic pain (Cohen & Quinter, 1996; Lasiuk & Hegadoren, 2006). The military medical community has historically used words such as shell shock and combat fatigue to describe the symptoms now related to what is commonly called post-traumatic stress disorder (Lasiuk & Hegadoren, 2006; Pols & Oak, 2007). PTSD was first introduced into the 3<sup>rd</sup> Edition of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1994) in 1980 as a condition describing the effects of traumatic combat-related experiences.

### **Battle Damage Assessment**

More than 2.6 million service members have deployed to Iraq or Afghanistan since 2001, and nearly a million have deployed more than once (Sessums, L., & Jackson, J. 2013). In the absence of the draft system that supported historical combat forces, this all-volunteer force is being exposed to rapid, meaning the time between deployments is shorter, and repeated deployments, meaning they are sent back down range more than once, at an unprecedented level (Belasco, 2007). Deployments are involving a higher number of military personnel. Deployments are longer, redeployment is the standard, and the down time between deployments is shorter and

more infrequent (Hosek, Davanagh, & Miller, 2006). Despite these magnificent numbers of soldiers in combat zones, living and exercising their daily routines in harm's way, Figure 1 reports the results of a multitude of research indicating that OIF/OEF actions have produced Killed In Action (KIA) and Wounded in Action (WIA) battle damage assessment rates that are historically lower than the majority of previous combat actions or wars (Leland & Oboroceanu, 2010; Goldstein, 2011; Pinker, 2011).

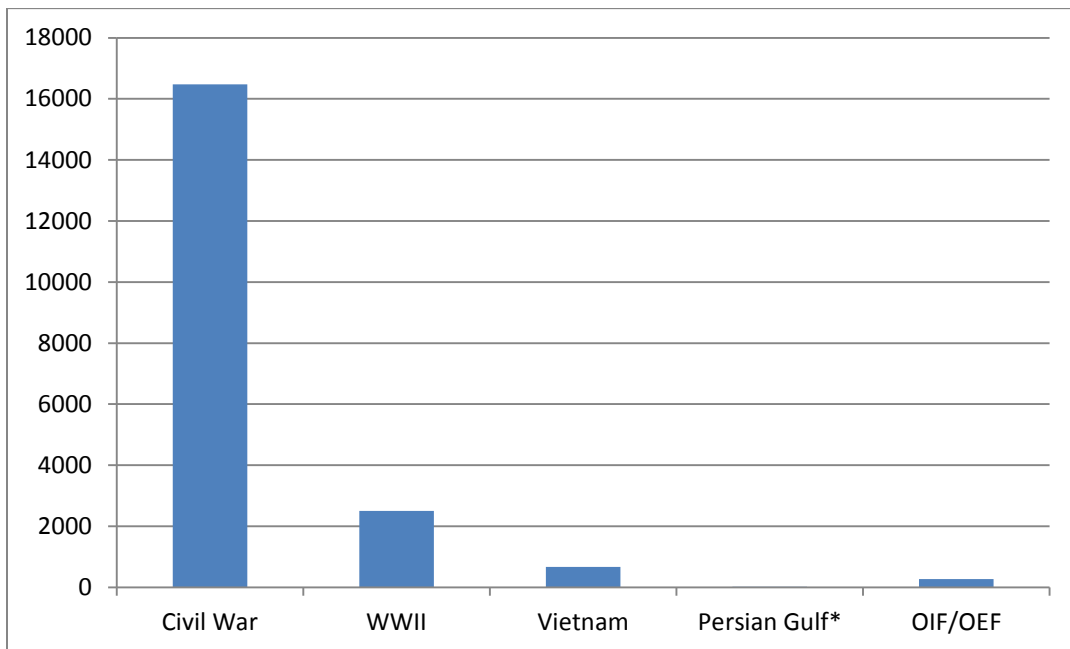


Figure 1: Number of soldiers killed in action per every 100K troops

Note: \*Persian Gulf = 17 soldiers for every 100,000 troops

The dramatic decrease in the rate of combat-related deaths can be explained to some extent by the unprecedented advances in military medical technologies as well as technologically advanced body and vehicle armor (Regan, 2006; Warden, 2006). Complimentary research has found that the survival rate for wounded military personnel has increased from 76% during the

Vietnam War (Gawande, 2004) to a remarkable < 95% during the wars in Iraq and Afghanistan (McNally, 2012). Unfortunately, it is the invisible battle wound of PTSD and the associated cognitive impairments resulting from traumatic deployment experiences that have emerged as the assessment of the battle damage; the emotionally wounded in action.

### **Cost to Society**

Notwithstanding the personal difficulties endured by the veteran, PTSD continues to inflict an enormous economic burden on society. Expenses imposed upon society include mental health services, uninsured medical care, and lost productivity caused from time away from work. The statistics are staggering in many areas for U.S. active duty military personnel and veterans. As of September 2011, there were 1,468,364 military personnel (“Veterans by the Numbers,” 2014). With a life time prevalence of PTSD reported to be anywhere from 6 – 31% (Toomey et al., 2007), the potential number of military personnel currently suffering with PTSD is anywhere from 88,101 to 455,193 people.

As of 2013 the average cost of caring for a single soldier suffering with PTSD for just the first year of outpatient treatment was \$8,300.00 (Fischer, 2013). The current VA medical system shoulders the majority of the enormous burden of providing mental health, medical, social, and disability services to the majority of this population with severe PTSD and other associated or comorbid medical illnesses. In 2004, the United States society incurred an estimated \$6 billion for mental and physical health services in conjunction with the treatment of PTSD, which ranks PTSD as the mental disorder with the highest annual per person health care expenditure (Tyson, 2008).

PTSD is the third most prevalent service-related disability for veterans who were currently receiving disability compensation at the end of fiscal year 2012; tinnitus and hearing loss being the first and second most common, respectively (Department of Veterans Affairs Veterans Benefits Administration, 2012). When looking at all veterans receiving VA disability compensation, the percentage of those diagnosed with a mental disorder increased by 30.3% in a single year from 2011 to 2012 (McNally & Frueh, 2013). The Veterans for Common Sense (2012) reported that approximately 35% of all Iraq and Afghanistan veterans are seeking disability benefits related to PTSD. The findings from McNally’s research (2012), examining the historical percentages of service-related disability instances from World War II (WWII) to present day, are depicted in Figure 2.

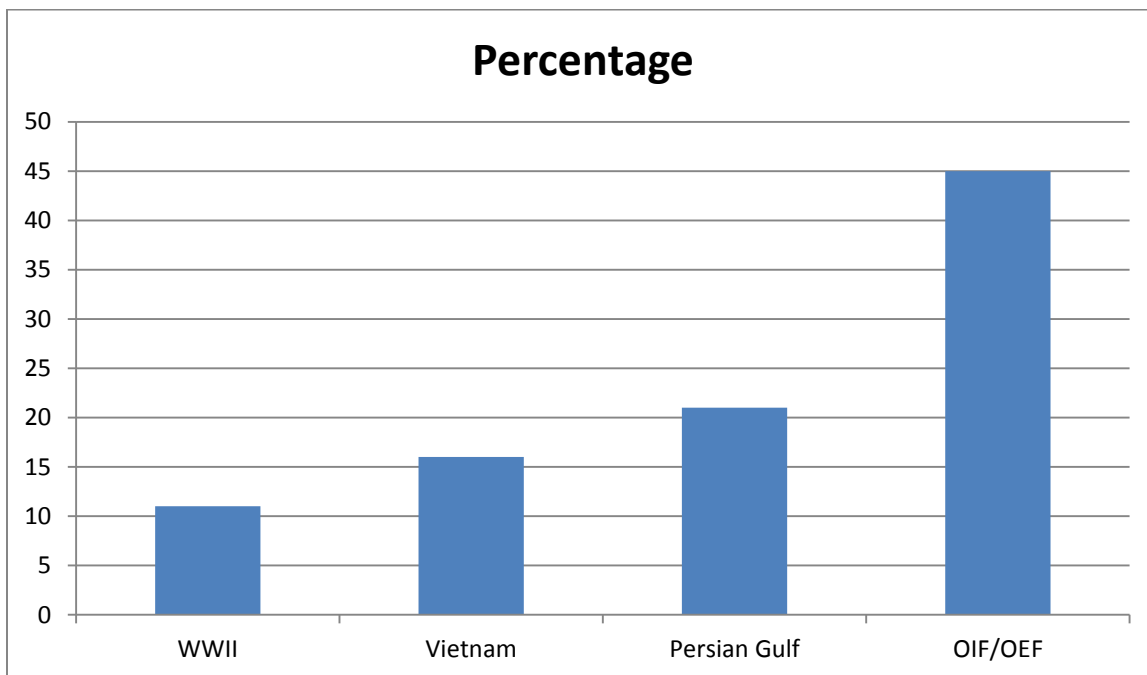


Figure 2: Percentage of troops with service-related disability

Whereas Figure 1 shows a dramatic *decrease* over time in the number of *killed* in action, Figure 2 clearly shows a dramatic *increase* in the number of *wounded* in action; wounded by traumatic experiences and plagued by their resultant psychological injuries.

## **Symptomology**

Traumatic experiences and their resultant psychological injuries were first identified as a syndrome called traumatic neurosis by Hermann Oppenheim in 1889 (Weisaeth & Eitinger, 1991). Since the 1880's, names such as railway spine and post-concussion syndrome have been given to define the response resulting from general trauma: sleep disturbances, nightmares, ringing in the ears, and chronic pain (Cohen & Quinter, 1996; Lasiuk & Hegadoren, 2006). The medical community has historically used words such as shell shock and combat fatigue to describe the symptoms now related to PTSD (Lasiuk & Hegadoren, 2006; Pols & Oak, 2007). PTSD was introduced into the 3<sup>rd</sup> Edition of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1980) in 1980 as a condition describing the effects of traumatic combat-related experiences. PTSD, as defined by the Mayo Clinic, is a mental health condition triggered by a terrifying event (Howarth, 2011). Symptomology of PTSD is typically associated with a wide variety of acute psychological distress and psychiatric comorbidity (Keane & Wolfe, 1990), poor quality of life (Zatzick et al., 1997), and severe social estrangement (Frueh, Turner, Beidel, & Cahill, 2001). Symptoms of PTSD have been known to include flashbacks, nightmares and severe anxiety, as well as intrusive thoughts about the traumatic event. More recent research suggests that the symptoms related to PTSD cluster into four main groups; re-experiencing of the trauma, avoidance of the trauma-related stimuli, absence or numbing of responsiveness, and hyperarousal (Cox, Mota, Clara, & Asmundson,

2008). Symptomology of PTSD will be unique for each individual suffer, but without regard to the symptoms, PTSD can be loosely defined as a continuum of onset, severity, and symptomology - not everyone will experience each symptom, the duration of symptomology will vary between instances, and not every person exposed to a traumatic experience will develop PTSD.

The onset of PTSD and its related symptomology brought on by the experience of a traumatic event might be activated by an inherent feeling of responsibility. The ownership of the traumatic event, the feeling of personal responsibility for the consequences of the traumatic event, may be at the heart of determining who will develop PTSD as a response to a traumatic experience. The personal feeling of responsibility with regards to a traumatic event may affect the psychological outcome (Peleg & Shalev, 2006). Research conducted with a population of 130 motor vehicle accident survivors found that those subjects who perceived someone else as responsible for the accident demonstrated increased stress for only up to 12 months after the accident (Delahanty et al., 1997; Hickling, Blanchard, Buckley, & Taylor, 1996). Twelve months after the accident these survivors reported no increased rate of stress. These findings suggest that a sense of responsibility, or a sense of control, seem to reduce the risk of developing chronic PTSD.

Not only is responsibility a contributing factor, but PTSD is also thought to be caused in part by the nature of traumatic memories, which are “encoded in implicit as well as declarative memory systems and are likely to exist primarily as dissociated emotional, perceptual, or sensory fragments with no coherent verbal, symbolic, or temporal basis” (O’Kearney & Perrott, 2006, p.82). Larry Dewey (2004), a Veterans Affairs psychiatrist who has worked with PTSD Veterans from World War II, the Korean War, Vietnam War, and the first Gulf War, suggests



the pivotal issues for Veterans suffering from combat-related PTSD revolve around the shame and guilt associated with something they either witnessed or did during their tour of duty. Dewey (2004) identified the following common characteristics that most sufferers seem to have one or more of in common:

1. Breaking the Geneva Convention of the soul:
  - causing incidental civilian casualties.
  - killing fellow soldiers in friendly fire incidents.
  - killing the enemy with deep hatred or elation, or a sense of battlefield justice.
  - vigilante actions in the context of war; this includes both acting as a vigilante and permitting or condoning the actions of others who do so.
2. Breaking their fellow soldier's trust (feeling in some way they let down their fellow comrades).
3. Humanizing the enemy that they are there to destroy.

Epidemiologists have estimated that members of the veteran population who have been exposed to war zone trauma have an estimated incidence rate of PTSD from anywhere between 6 - 31% (Kulka et al., 1990, Toomey et al., 2007) whereas members of the general population have an 8-14% prevalence rate of PTSD (American Psychiatric Association, 1994).

### **Chronicity**

When examining the chronicity of PTSD, the DSM-IV (American Psychiatric Association, 1994) identified two temporal subtypes of PTSD – time of onset, and duration of the disorder. Onset of PTSD, computed as the span of time between the age when the traumatic experience occurred and the age at the first symptoms, can either be acute or delayed (Schnurr et

al, 2003). Acute onset PTSD is defined as symptoms almost immediately up to 6 months after experiencing a traumatic event. Acute onset PTSD has been shown to have predictability by examining the internal and external risk factors prior to the experience of the traumatic event (Carlier, Lambert, & Gersons, 1995). Carlier, Lambert & Gersons (1995) reported that acute onset PTSD was predicted in 262 traumatized police officers when the risk factors of introversion, difficulty in expressing feelings, emotional exhaustion at time of trauma, dissatisfaction with organizational support, and an insecure job future were self-assessed prior to the traumatic experience. Among Vietnam veteran men studied in the National Comorbidity Survey (Kessler et al, 1995), delayed onset was reported in approximately 22% of the respondents, with delayed onset being defined as symptoms first occurring 6 months after experiencing a traumatic event. This number represents a four times greater likelihood for delayed onset PTSD when the trauma was combat related than when trauma was non-combat related (Prigerson, Maciejewski, & Rosenbeck, 2001). Port et al., (2001) reported that delayed onset of PTSD in the Vietnam veteran POW community was correlated to the factors of low education level, poor self-reported health, and shorter duration of imprisonment when compared with other Vietnam POWs. These findings indicate that the type of trauma experienced is a significant factor in predicting whether the onset of PTSD will be acute or delayed.

Continuing the examination of delayed onset PTSD, in research conducted by Schnurr et al (2003) studying a similar population of Vietnam veterans, delayed onset was reported in approximately 40% of the sample when the onset was defined with symptoms first occurring 2 or more years after experiencing traumatic events in Vietnam.

The second subtype of PTSD as defined by the DSM-IV is duration where chronic duration is defined as symptoms lasting longer than 3 months (American Psychiatric

Association, 1994) and is determined by calculating the difference between the age when the first symptoms were experienced and the age when the last symptoms occurred (Schnurr et al, 2003). “Understanding who is at risk for developing PTSD is obviously important from a prevention standpoint. But understanding who among these individuals may fail to recover could be even more important, given the substantial comorbidity associated with PTSD.” (Schnurr, Lunney, Sengupta, & Waelde, 2003, p. 552).

Using a symptomology duration of a minimum 3 months as the delineation, PTSD can be thought of as non-chronic (>3 months) or chronic (<3 months). Carlier, Lambers, & Gersons (1995) found that chronic PTSD could be predicted by the presence of specific post-trauma risk factors of acute hyperarousal, subsequent traumatic events, job dissatisfaction, over work, and lack of social support. Additional longitudinal research on chronic PTSD conducted by Koenen, Stellman, Stellman & Sommer, 2003) with a population of 1,377 American Legionnaires over the course of 14 years (1984 – 1998) reported that chronic PTSD could be predicted by combat exposure, perceived negative reaction upon homecoming, being of a minority race, depression, and anger. Chronic PTSD, defined as symptoms lasting more than 6 years, has also been associated with a 17% increase in mortality rate (Johnson, Fontana, Lubin, Corn, Rosenbeck, 2004). The duration of chronic PTSD symptomology has been reported to span an entire adult lifetime, as documented in samples of Holocaust survivors (Yehuda et al., 1995) and WWII POW veterans (Port, Engdahl, & Frazier, 2001; Schnurr, Spiro, Vielhauer, Findler, & Hamblen, 2002). The research of WWII POW veterans conducted by Port, Engdahl & Frazier (2001) found that this population was comprised of 16% experiencing no PTSD, 29% experienced PTSD symptoms with duration of less than 5 years, and 18% reported chronic PTSD. Very similar results were found using this same population by Zeiss & Dickman (1989); 14% experiencing no

PTSD, 62% experiencing intermittent PTSD symptomology and 24% reported experiencing PTSD symptoms continuously. Additional research, focused on chronic PTSD conducted with a group of Palestinian children in Gaza, showed that cumulative involvement in traumatic war experiences proved to be a risk factor for chronic PTSD (Saxe et al, 2005).

Regardless of the contributing factors PTSD is not a short lived disorder, with many veterans still suffering from chronic symptomology from wars fought years ago in Vietnam and in World War II (Gold et al, 2000). Research conducted by Spiro, Schnurr, & Aldwin (1994) reported that PTSD was still observable in WWII veterans some 50 years after their combat had ended, with many of those veterans suffering late into their 70s and 80s.

### **Comorbidity**

Research aimed at conducting an assessment of the symptoms and risks associated with PTSD and the associated comorbid diagnoses such as MDD has found an increased risk of suicidality among veterans of OEF/OIF (Guerra, & Calhoun, 2011). The research study conducted by Guerra & Calhoun (2011) included 393 veterans of OEF/OIF with a mean age of 38 years. They found that PTSD, MDD, and a history of one or more prior suicide attempts each independently predicted an increased risk of suicidality. Of interest to note, Guerra & Calhoun (2011) also found that PTSD alone, in an absence of any comorbid risk factors, was sufficient to predict an increased likelihood of suicide. A similar study reported convincing empirical evidence of an association between deployment to a war zone and an increase in suicide risk consequent to that deployment (Mayeux, Drossman, & Basham, 2008).

Research focused on the combination of the comorbid factors of PTSD and MDD is a topic for extensive research. Shalev et al., (1998) studied a population suffering from PTSD and

MDD and found an increase in distress, the suffering from major life-skill impairments, and a decreased likelihood of recovery. More recent research regarding PTSD and MDD posits that survivors with PTSD are at an increased risk for depression (Breslau, Wilcox, Storr, & Lucia, 2004). Interestingly, this study also indicated that trauma exposure without resultant PTSD was not linked to a higher incidence of depression. Nevertheless, the personal experience of PTSD, how it will upset the daily lives of those affected with the disorder, and the chronic nature that the disorder will take seem to be as limitless as the number of lives that will be impacted.

### **Humanizing the Disorder**

The personal and genuine human face of this disorder can be lost when we immerse ourselves in the sea of statistics regarding the increased likelihood of suicide, the confounding comorbid disorders, the type of onset of the disorder, and the chronicity of the symptomology. The statistics and numbers presented in this review of the literature regarding the myriad of aspects of PTSD quickly get overwhelming. The opportunity to sit with a veteran struggling with a very real personal journey trying to overcome this disorder presented itself to this author in July 2012. Here is one soldier's account of the traumatic event that has left him suffering with PTSD and how this disorder is affecting his daily civilian life.

For me, Iraq 2003/2004 was just another deployment; I've been stationed from South Korea all the way to Fort Bragg, NC. Going to Iraq, especially to Camp Victory, was a safe assignment, just doing intelligence work. What I didn't count on was being reassigned to the 519<sup>th</sup> Alpha Company at forward operating base (FOB) Brassfield-Mora. That was way outside the wire, living in remote locations, no running water, no electricity, no showers and even too hostile for mail delivery. Mortar fire was an everyday occurrence at FOB Brassfield-Mora. My buddies that had been there a while could hear the incoming whistles of

mortar fire closing in on the FOB throughout the night. My job was to help with the team's security, though I did participate in 'fear-up' interrogations of captured insurgents. This kind of stuff allowed military personnel to take advantage of the subjects existing fears to escalate the interrogation process and potentially obtain information in a more efficient manner. It was like playing Cowboys and Indians with no rules of engagement.

By January 2005, I had transferred from Alpha Company to Bravo Company 519<sup>th</sup> further north in Kirkuk. During this time vehicle borne improvised explosive devices (VBIEDs) were everywhere every day. We conducted convoys in the local area on a regular basis. Rules of engagement (ROE) while on patrol were, '**Shout** (a warning), **Show** (your weapon), **Shove** (the person/car out of the way), and then **Shoot**.' One day on convoy, a black car approached us from the right. I was lead driver of the convoy. I spun around, made eye contact with the male driver, but he continued to close ground. I shouted for him to turn around. He got so close to my HUMVEE that my gunner was unable to react. So, I took matters into my own hands and commenced to ram the HUMVEE into the smaller car. I just shoved it out of the way of the way. I'll never forget the site of the entire family inside of the black sedan as I rammed it into the wall. Husband, wife, and little kids. I knew in an instant that this vehicle was not a VBIED. But it was an instant too late. I felt terrible, miserable, and guilty. My rules of engagement told me to roll down my window and throw business card with the phone number of United States Public Affairs where the victims could obtain 'compensation for their damages'. And the patrol rolled on.

Convoying was always tension filled; constantly dodging the thoughts of "This might be an IED.", "This one could kill me.", "This driver/car might blow up right next to me." I felt that, every day I was on the road, it felt like, this could be the day. My body would tense up, my heart would pound in my ears. All of us took any extreme to ensure the safe return of our patrol to the FOB. I was driving the lead vehicle of our convoy, and that made me feel like I had God status, like I was the king of the road.

On one convoy, we reached a fork in the roadway, and chose to go left. Almost immediately, an IED on the right side of the fork detonated. There is not a day that goes by that the thought of that near miss doesn't bother me.

Nowadays, back in a non-combat environment, the mundane task of driving a car has taken on an entirely different meaning for me. The mere task of stepping into a car, turning the key and going from point A to point B creates anxiety, my palms get sweaty, my heart pounds in my ears. Just seeing miscellaneous objects on the side of the road gets my heart racing and I become nervous and anxious. Riding 'shot gun' has taken on a whole different meaning. I'm no longer king of the road. In fact, the road now terrifies me.

Joseph T. Magallanes

31 year old male Staff Sergeant

First Deployment from Nov. 2004-Nov. 2005

Total time in service, Aug. 13, 2001 - Mar. 01, 2012

### **Evidence-based Treatments for PTSD**

With recent events in our own individual nation in particular and the entire world at large, coupled with the climbing rates of PTSD diagnoses in the returning fighting forces from OIF/OEF, there is an unprecedented urgency to identify effective treatment options for PTSD. As discussed in the previous section, PTSD is associated with an increased risk of suicidality and is most often chronic in nature, with more than one-third of cases continuing to meet the diagnostic criteria for PTSD several years after their initial diagnosis (Kessler et al, 1995). It has been over three decades since the DSM-III identified and defined the disorder now routinely referred to as PTSD. Global researchers have spent the better part of those thirty years since the initial definition quantifying the rates of PTSD in various populations and isolating the risk factors associated with the development of PTSD, and initial attempts have been made at

identifying effective treatment options for the successful management of PTSD and its associated symptomology.

Foa & Kozak (1986) posited that PTSD is a combination of pathological fear structures associated with harmless stimuli. These fear structures are activated when information represented in the fear structure is presented. From this position we can discern that successful treatment of PTSD requires a modification of the emotional modeling of these fear structures so that harmless stimuli no longer invoke a fear response. Expert guidelines for the treatment of PTSD were first published in 1999 (Foa, Davidson, & Frances, 1999) and recommended that traditional cognitive behavioral treatment augmented with prolonged exposure should be the first line of therapy.

### **Cognitive-Based Therapy**

Over the course of these three decades, and more significantly the most current research has shown that cognitive behavioral therapies (CBT) have the most convincing evidence base and should be used as the first course of treatment for PTSD (Foa, Keane, Friedman, & Cohen, 2009; Institute of Medicine, 2008; National Collaborating Centre for Mental Health, 2005). In addition to supporting the use of CBT as a first course of treatment for PTSD, research is producing very limited evidence for the usefulness of any of the U.S. Food and Drug Administration (FDA) approved pharmacological treatments (Foa, Franklin, & Moser, 2002).

Cognitive therapy, developed by Albert Ellis and Aaron T. Beck in the 1950s and 1960s, is the application of the cognitive model to a disorder with the use of different techniques to modify the patient's beliefs (Beck, 2005). Cognitive therapy interventions are focused on how patients create internal meaning about external situations and events in their lives, as well as their



internal beliefs about themselves, others, and the world (Beck, 2005; Dobson & Khatri, 2000). CBT is described as a form of treatment concentrated on looking at the relationship between feelings and behaviors. Proponents of CBT and the research surrounding CBT treatment options in the presence of combat-related PTSD suggest that people suffering with PTSD can modify their patterns of thinking, change their dysfunctional beliefs, and improve their coping skills by examining and identifying the thought patterns that lead to self-destructive behaviors. CBT is unique from other types of therapy in that the patient and the therapist work actively together and develop a relationship of mutual trust and benefit. Among the multitude of psychotherapy options, CBT has the strongest evidence base for use in the treatment of combat-related PTSD, as reported in a meta-analysis including 26 treatment outcome studies (Bradley, Greene, & Russ, 2005).

### **Prolonged Exposure**

In research reported by the Institute of Medicine (2008), it was concluded that CBT-based exposure therapy was the only treatment with enough overwhelming evidence to be endorsed for the treatment of PTSD. Recent research has identified a more precise CBT exposure treatment protocol developed by Foa, Hembree, & Rothbaum (2007), Prolonged Exposure (PE), as one of the first CBT techniques to accumulate a significant evidence base and to be widely accepted as the gold standard for the treatment of PTSD. The theoretical basis for PE is reliant on the idea that PTSD is a disorder of extinction (Cukor et al, 2010), where the individual's response to a traumatic event does not lessen appropriately, and the association between the memory of the traumatic event and the accompanying internal message of danger has not been eliminated even after the danger has passed.

There are two primary components of PE; imaginal exposure and *in vivo* exposure. Both exposure techniques involve continual revisiting of the traumatic memory in an attempt to extinguish the associated fear response. The first component of PE, imaginal exposure, was described by Cukor et al, (2010) as the stage of re-experiencing a memory. During imaginal exposure patients are coached to close their eyes and recount the details of the traumatic experience while engaging with the emotional memories associated with each detail. This imaginal exposure is repeated over the course of several treatment weeks enabling the patient to fully process their memories and associated emotional responses. The second component of PE is *in vivo* exposure and involves physically “approaching activities, people, and/or places the patient may have been avoiding to allow habituation to the environment, and the assimilation of the corrective information regarding safety” (Cukor et al, 2010, p. 83).

In a recent study regarding the use of PE in military populations, female veterans and active duty personnel each receiving a total of 10 sessions of PE were significantly more likely to no longer meet the PTSD diagnostic criteria than those in the control group (Schnurr et al, 2007). Based on the positive research regarding PE and the treatment of PTSD, the Veterans’ Administration Office of Mental Health Services has introduced a program to distribute PE treatment information to its providers so PE can be delivered as a treatment of choice in VA facilities (Nemeroff et al, 2006).

### **Cognitive Processing Therapy**

Another exposure-based CBT treatment protocol, Cognitive Processing Therapy (CPT) places “a strong emphasis on increasing the cognitive components and decreasing the amount of exposure necessary for treatment, which some believe will be more palatable to individuals with

PTSD” (Cukor et al, 2010, p.83). CPT is based on a social cognitive theory of PTSD in which the focus is on how a traumatic event is interpreted and managed by the patient trying to regain a sense of control of his/her emotions, reactions, and behaviors (Monson et al., 2010). CPT focuses on the broad continuum of anxieties and emotions that are resultant to a traumatic event. Monson et al, (2010) posited that CPT theorizes PTSD as a disorder of non-recovery, where dysfunctional or inaccurate beliefs about the causes and consequences of traumatic experiences and/or events yield robust destructive emotions and prevent accurate processing of the memory of the trauma preventing the natural flow of emotions stemming from the event. Using CPT, therapists can guide patients to recognize how their automatic responses to day-to-day happenings may be over-generalized based on their traumatic experience(s) and how their daily functioning may be impacted as a result. Using CPT, patients are continually coached, either individually or in small groups, to reevaluate their beliefs and to develop alternate more adaptive and balanced ways of responding to trigger events.

CPT, usually consisting of a 12-session protocol, was originally developed as a treatment option for sexual assault related PTSD (Resick & Schnicke, 1993), but it has gradually become a treatment option of choice in cases related to combat-related PTSD. CPT is comprised of two integrated components; cognitive therapy and exposure (Cukor et al, 2010). The cognitive therapy component “focuses on deconstructing assimilated distorted beliefs, such as guilt, and more global beliefs about the world and self, and generating more balanced statements” (Cukor et al, 2010, p.83). The exposure component involves the patient writing narratives of the traumatic event and then reading out loud to the therapist in an attempt to examine the writing for sticking points, such as areas of conflicting beliefs, breaks in logic, or blind assumptions (Resick et al, 2002). Research conducted by Monson et al (2006) found that 40% of patients

receiving CPT no longer met the criteria for PTSD at the end of the study, 50% demonstrated a decrease in PTSD symptomology at 1 month post-treatment, and significant improvements in comorbid symptoms such as depression and anxiety were evidenced throughout the treatment study. “An important aspect of CPT that makes it well suited to the veteran population is the ability to address cognitions related to committing, witnessing, and experiencing acts of violence, which often co-occur in the context of combat traumatization” (Monson et al, 2006, p. 904).

### **Prescribed Regimen**

Currently, the VA recommends that veterans with PTSD diagnoses receive evidence-based CPT and/or PE therapy in a VA mental health clinic, typically requiring 9 sessions, ideally spaced at weekly intervals (Resick et al., 2006; Schnurr et al., 2007). Unfortunately the research conducted by Seal et al., (2010) found that less than 10% of OIF/OEF veterans diagnosed with PTSD or major depression attended the prescribed 9 or more sessions within a time span of 15 or fewer weeks, indicating that the majority did not receive evidence-based PTSD treatment within the VA system of mental health care. Seal et al., (2010) also found a disturbing trend that the factors of being male and under the age of 25 were strongly associated with two conditions; an increased predisposition of being diagnosed with PTSD and a decreased likelihood of being aware of and/or seeking out and receiving sustained evidence-based mental health treatment.

“Because early, evidence-based PTSD treatment may prevent chronic PTSD, it will be important that the VA, in its mission to provide the best care for returning combat veterans, continues to develop and implement interventions to improve retention in mental health

treatment, with particular attention to the needs of more vulnerable OEF and OIF veterans.”  
(Seal et al., 2010, p. 14).

### **Awareness of Available Treatment Options**

The frequency of PTSD is high among returning combat veterans. And, the success rates of the use of CBT in treating combat-related PTSD are undisputable. However, the probability of a military professional or a veteran seeking help for this disorder is distressingly low (Powers, Kniesner, & Croghan, 2011).

### **Obstacles to Care**

Unfortunately, Hoge et al, (2004) found that many returning combat veterans will not even initiate an attempt to find available help or to seek treatment for their PTSD symptoms. The rudimentary and fundamental awareness of accessible community programs for returning veterans suffering from combat-related PTSD is of critical importance if these veterans are going to be enabled to participate in the evidenced-based treatment and to become prepared to return to their normal life responsibilities and to be contributing members of the national society. Regrettably, research has indicated that the lack of a basic awareness of the existence of community programs for the treatment of PTSD is one of the fundamental barriers to participation as viewed by veterans (Sherman et al., 2008). “Because of many veterans’ lack of awareness of available services, repeated, frequent publicity about programming is essential” (Sherman et al 2008, p.449). The target population is not able to receive the care that they require if they are fundamentally unaware of the treatment options that exist.

Barriers to receiving mental health care among combat veterans in Iraq and Afghanistan was examined in research conducted by Hoge et al., (2004). This study looked at three Army units and one Marine unit using an anonymous survey administered prior to their deployment, and then re-administered three to four months after their return from active duty in Iraq or Afghanistan. Figure 3 displays the results of the research conducted by Hoge et al (2004).

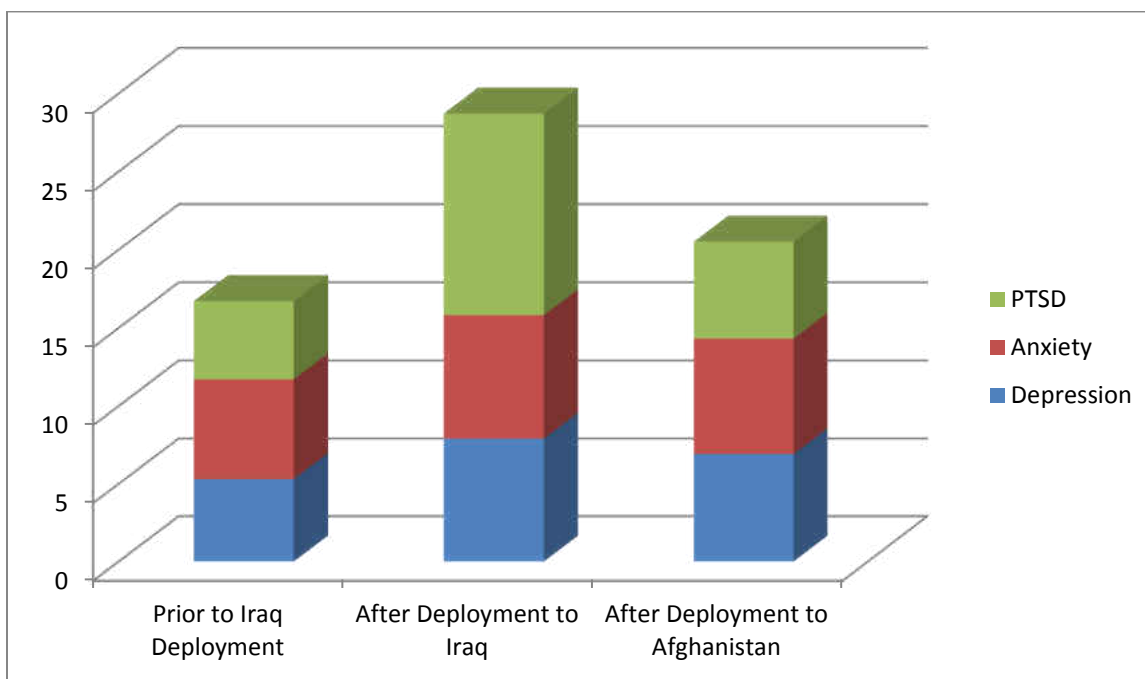


Figure 3: Depression prior to and post-deployment

The surveys indicated that the combination of symptoms of major depression, generalized anxiety, and PTSD were significantly higher after active duty in Iraq (15.6 to 17.1 percent) than after active duty in Afghanistan (11.2 percent) or before deployment to Iraq (9.3 percent), with the largest difference being in the rate of PTSD (Hoge et al., 2004). Alarming, of all of the responses positive for a mental disorder regardless of pre- or post-deployment, only 23 – 40 percent sought mental health care while a troublesome 22 percent indicated that they had no idea

where to get help (Hoge et al., 2004). “Reducing the perception of stigma and the barriers to care among military personnel is a priority for research and a priority for policymakers, clinicians, and leaders who are involved in providing care to those who have served in the armed forces.” (Hoge et al., 2004, p.21).

### **Raising Public Awareness**

Rudenshtine et al (2003) studied the attempt to raise public awareness regarding Project Liberty, a public mental health counseling opportunity available to people suffering with PTSD as a result of the New York City disaster of September 11, 2001. Their findings suggest that it is difficult to publicize and raise awareness of a program intended to provide counseling services, even when public awareness of the issue(s) related to a particular disaster are very high. In other words, the general public had a high awareness of the traumatic events taking place on September 11, 2001 yet, despairingly their awareness of the Project Liberty mental health counseling options remained low. Extrapolating from this Project Liberty research on awareness, the need to make PTSD sufferers aware of mental health programs becomes even more apparent when considering at-risk groups such as the large number of young soldiers returning from overseas who are having emotional difficulties (Hoge et al., 2004).

In an effort to raise public awareness of PTSD and the vast array of available treatment options, in 2013 the U.S. Congress enacted Resolution 169 which designates June as the annual National PTSD Awareness month. In addition, June 23, 2013 was the National PTSD Awareness Day in the United States and will be celebrated annually. Dr. Matthew Freidman, Executive Director of the National Center for PTSD, said on June 24, 2013 that “There are many barriers that keep people with PTSD from seeking the help they need. Knowledge and awareness,

however, are keys to overcoming these barriers. For those living with PTSD, knowing there are treatments that work, for example, can lead them to seek needed care. Greater public awareness of PTSD can help reduce the stigma of this mental health problem and overcome negative stereotypes that may keep many people from pursuing treatment." (Friedman, 2013).

The need to get veterans access to effective mental health services is urgent, and is only compounded when looking at the large number of American soldiers currently being exposed to combat. It is in the best interest of our national society that veterans suffering from war-induced trauma or combat-related PTSD have an awareness of, access to, and receive effective treatment so they can be restored to their standard level of mental functioning prior to returning to society or being redeployed for continued combat.

### **Onset of Care**

As stated in the previous section, as of 2001 over 1.6 million Americans have served or are currently serving in the conflicts in Iraq, Afghanistan, or surrounding locations in support of OIF/OEF (Seal et al, 2010). A large body of research studies have found a high frequency of mental health disorders among these soldiers, ranging from 18.5% to 42.7% (Milliken, Auchterlonie, & Hoge, 2007; Seal et al., 2007; seal et al., 2009; Tanielian and Jaycox, 2008). Early onset of evidenced-based mental health treatment options such as CBT has been indicated to prevent mental health disorders, such as PTSD, from becoming chronic conditions (Gray, Maguen, & Litz, 2004; Simon, Ludman, Tutty, Operskalski, & Van Korff, 2004). However, multiple research studies of veterans have revealed that a large portion of veterans suffering with mental health issues either never access, delay access, or fail to complete a sufficient course of mental health treatment (Hoge et al, 2004; Tanielian & Jaycox, 2008).



The ability to treat PTSD with the possibility of realizing positive health outcomes is a function of two conditions; (1) the fundamental awareness of the available local community mental health treatment options that may result in the use of services, and (2) the dissemination of high-quality care. In order to maximize the benefits of health care services there must be a simultaneous facilitation of awareness of and access to services while at the same time ensuring that the services received are of the highest quality (Tanielian & Jaycox, 2008). The issue is not strictly limited to the single component of access to treatment options. Simply providing access to sub-quality treatment options that are not effective or that have unknown value may have little or no positive benefit. In fact, ineffective treatment may impose financial burdens to both the systems and the individuals who use services. Likewise, high-quality clinical care will have a restricted effect on outcomes if awareness of this care is not publicized to the target population and if access to this care is hindered for the broader population of those who would be expected to benefit (Tanielian & Jaycox, 2008).

There are a multitude of mental health care treatment options for veterans suffering with PTSD and other associated illnesses. However, before these individuals can access these services, they must be fundamentally aware that they even exist. Outreach to the target population is essential.

### **Historical Fluctuations in Utilization of Care**

In other research looking at utilization of mental health care services, Seal et al., (2010) examined the utilization of VA mental health facilities among approximately 85,000 OIF/OEF veterans just beginning treatment with a VA health care facility and receiving a new mental health diagnosis. The study found that of the veterans being followed with a new diagnosis of

PTSD, 80% of OIF/OEF veterans had at least 1 follow-up VA mental health visit and nearly 50% of those with a new diagnosis of a mental health disorder other than PTSD had at least 1 follow-up visit (Seal et al., 2010). These percentages indicate that approximately two-thirds of the entire OIF/OEF population of veterans who have received a new VA mental health diagnosis are seeking at least 1 mental health care visit. The research conducted by Tanielian & Jaycox (2008) for the RAND™ Corporation looked at a nationally representative sample of OIF/OEF veterans meeting the criteria for PTSD or major depression (n = 1,965). Tanielian & Jaycox (2008) reported that 53% of the target population of OIF/OEF veterans with PTSD or MDD had accessed some type of mental health treatment. Looking to past conflicts and comparing the research, the National Vietnam Veterans Readjustment Study reported much lower percentages; 30% of a nationally representative sample with n = 1,198 sought mental health treatment and only 7.5% reported ever having used VA mental health services (Kukla et al., 1990).

There are a wide variety of factors that could have influenced the increased utilization of mental health services utilization from the Vietnam veterans to the OIF/OEF veterans. The National Defense Authorization Act (2008) extended free military service-related health care coverage from 2 years to 5 years. This free health coverage enables returning OIF/OEF veterans who may be facing economic hardship and possibly unemployment to take full advantage of all the VA health care services, including mental health care. Another factor could be the fact that the Department of Defense has recently taken a more open stance in the public discussion of combat-related stress among active duty service members (Hoge et al., 2004; Mental Health Advisory Team, 2008). A third factor that might explain the increase in seeking mental health care among OIF/OEF veterans is the widespread media attention currently being focused on the issue of PTSD. This media attention is working to reduce the negative stigma associated with

PTSD and “lower[ed] the threshold for recently returned veterans to seek care” (Seal et al., 2010, p. 13). A final factor has been researched and posited as contributing to the increase in mental health care utilization; a greater percentage of OIF/OEF veterans have direct front-line experience with exposure to traumatic events (Friedman, 2005). Frankly, during the Vietnam War soldiers exposed to traumatic events were typically killed in action (KIA) as a result of the incident. Current military medical technology has brought the KIA number down, while the wounded in action number is on the rise, leaving soldiers alive to suffer with the invisible wounds of combat. The combination of this increased likelihood for exposure to a traumatic event coupled with the research indicating that OIF/OEF veterans and the injuries they sustain in combat have an unprecedentedly high survival rate (Gawande, 2004) and they have a greater percentage of sustaining mild traumatic brain injuries (Okie, 2005) has been found to be associated with the increased probability of mental health diagnoses and increased use of mental health care services (Hoge et al, 2004; Hoge, Terhakopian, Castro, Messer, & Engel, 2007; Schneiderman, Braver, & Kang, 2008). Seal et al., (2010) reported findings consistent with research conducted by Zeiss and Karlin (2008). Both groups of researchers support the VA’s ongoing effort to increase access to and adherence to mental health care standards of treatment. Currently, the VA is promoting extended clinic hours, internet-based mental health treatment options, and an increased number of mental health specialists in community-based clinics.

### **Give An Hour™**

One community-based mental health treatment option for veterans and their family members is Give An Hour™ founded in 2005 by Dr. Barbara VanDahlen. Give An Hour™ has an organizational vision to develop national networks of volunteers capable of responding to

both acute and chronic mental health needs of the nation's troops and families affected by the ongoing conflicts in Iraq and Afghanistan. Give An Hour™ is committed to providing cognitive behavioral counseling to individuals, couples and families, children and adolescents as well as offering treatment for anxiety, depression, substance abuse, PTSD, traumatic brain injuries, sexual health and intimacy concerns, and loss and grieving. In addition to offering direct counseling services, Give An Hour™ mental health providers work to reduce the stigma associated with mental health by participating in and leading education, training, and outreach efforts in schools and communities and around military bases. As of August 2013, the Give An Hour™ provider network included over 6,700 psychologists, social workers, psychiatrists, marriage and family therapists, drug and alcohol counselors, pastoral counselors, and other professional counselors. These mental health professionals volunteer their services, they “give an hour” of their professional time to returning service veterans or any of their family members that are suffering from their experiences.

In the summer of 2010, the Bristol Myers Squibb Foundation (BMSF) approached Give An Hour™ with an interest in funding the efforts of providing free mental health care to the returning troops and their families. After learning of Give An Hour™ involvement in this initiative, and realizing the need for a more comprehensive and integrated system of care in communities across the country to support those who serve, BMSF agreed to fund Give An Hour™ to develop a model that could be used to assist communities in their efforts to organize support for their military families. The result of this collaboration was a two-year grant for Give An Hour™ to lead the implementation of a community model in two demonstration sites; Fayetteville, North Carolina and Norfolk, Virginia. In these two demonstration locations Give An Hour™ implemented a template centered on community organization joining individuals

from across sectors in a collaborative effort to serve those who serve. These two demonstration sites offered a unique opportunity for civilians, service members, veterans and their families to receive mental health care as well as volunteer and serve alongside one another, giving back to their community. These two demonstration sites yielded a blueprint that is going to be used to help nationwide community leaders assess and improve their community's support for veterans, service members, and their families.

## CHAPTER THREE: METHODS

In this chapter, methods used to investigate the relationship between military personnel age, military status, and their awareness of local community mental health treatment options available for the treatment of post-traumatic stress disorder are discussed. This chapter includes four major sections: (a) introduction; (b) survey development; (c) data collection; (d) summary.

The *introduction* includes three subsections: (a) relevance of the research question; (b) the research question and hypotheses; (c) limitations of the study.

The second section, *survey development*, includes three subsections: (a) description of the survey; (b) target survey audience; (c) collaboration.

Section three, *data collection*, includes two subsections: (a) implementation of the survey; (b) survey items selected for analysis.

The final section summarizes the research design methodology and collection of the data in relation to the literature review presented in Chapter Two.

### **Introduction**

There is a large body of research supporting the ideas that:

- traumatic combat-related experiences can result in PTSD.
- PTSD and suicide rates have a significant causal relationship.
- the age group of veterans most predisposed to committing suicide is aged 50 and older.

- cognitive behavioral therapy is successful in minimizing the effects of PTSD.

However, research to determine if the veteran population has the fundamental and rudimentary awareness of the mental health care options that are available to them is almost nonexistent. It is imperative to gather data about veterans' basic awareness of available mental health services and their subsequent utilization. This information could help identify any potential missed opportunities, lapses in service, and barriers to care in order to better align veterans with available treatment options. Veterans will not enroll and participate in available therapies if they are not aware of them. To maximize participation in the PTSD mental health care treatment programs there must be an assurance that the veterans most in need of the treatment programs are rudimentarily aware of their existence.

### **Relevance of the Research Question**

This dissertation research was conducted to determine if the veteran population has the fundamental and rudimentary awareness of the mental health care options that are available to them. It is imperative to gather data about veterans' basic awareness of available mental health services and their subsequent utilization. This information could help identify any potential missed opportunities, lapses in service, and barriers to care in order to better align veterans with available treatment options. Veterans will not enroll and participate in available therapies if they are not aware of them. To maximize participation in the PTSD mental health care treatment programs there must be an assurance that the veterans most in need of the treatment programs are rudimentarily aware of their existence. The objective of this research was to assess the awareness levels of veterans with regard to locally available mental health programs.

As Give An Hour™, the VA, and other health care systems attempt to manage the complex mental health needs of the ever-growing population of returning OIF/OEF veterans, detailed information about veterans' awareness of available mental health services that could lead to their resultant utilization could help identify any potential missed opportunities, lapses in service, and barriers to care to better align veterans with target resources within Give An Hour™, other local mental health options and the VA health care system (Seal et al., 2010).

### **Research Question**

Free mental health treatment options exist, such as those offered by Give an Hour™, for active military, veterans, and reservists. The purpose of this dissertation research was to determine if a relationship exists between age and/or military affiliation of the respondent and his/her awareness of the Give An Hour™ mental health care treatment options in their community.

H<sub>0</sub>: There is an association between the age range of the respondent and his/her awareness of the mental health care treatment options available in their community.

H<sub>1</sub>: There is no association between the age range of the respondent and his/her awareness of the mental health care treatment options available in their community.

H<sub>0</sub>: There is an association between the military affiliation of the respondent and his/her awareness of the mental health care treatment options available in their community.

H<sub>1</sub>: There is no association between the military affiliation of the respondent and his/her awareness of the mental health care treatment options available in their community.



## **Limitations of the Study**

There are several limitations to this study. The first is access to the target population of active troops, veterans, and their family members: this study was implemented via a telephone survey with a stipulation that at least 25% of the 800 respondents be a member of the target population. The second limitation is the representative nature of the target population sample: the sample was drawn solely from the Fayetteville, NC and Norfolk, VA communities, which means this may or may not be representative of the target population across the United States or around the globe. The third limitation is the survey instrument used to collect the data. The items in the survey required the respondent to self-report their awareness using a Likert Scale ranging from Strongly Agree to Strongly Disagree. The act of self-reporting causes a tendency in some individuals to supply socially desirable responses rather than disclose sensitive information about themselves (Matlin, 1995). Whereas the information regarding awareness of mental health treatment options in relation to PTSD is not in and of itself sensitive, the negative social stigma associated with PTSD can cause respondents to self-report inadequately.

## **Description of the Survey**

The survey was designed with the purpose of determining if troops who have served in combat, present or past, are aware of, have access to, and are provided any services and assistance that they need once they are back on the home front. Two military-centric communities were chosen for assessment; Fayetteville, North Carolina and Norfolk, Virginia. These communities were assessed to understand if appropriate services and resources are available and to assure that these resources are adequately marketed and easily accessible. The

items in the survey apply to any project or program that provides resources and services for military troops, both active and veteran, following deployment to war.

### **Target Survey Audience**

Study participants included active military personnel, veterans, reservists, and associated family members ages 18 and over, in two locations; Fayetteville, NC and Norfolk, VA. In an effort to maintain respondent anonymity, the final data file does not contain any demographic information that might identify respondents. Table 2 shows the final assembly of all respondents who completed the self-assessment questionnaire survey.

Table 2  
Survey Respondents Military Affiliation

Military Affiliation	# of Responses in Fayetteville	# of Responses in Norfolk	Total # of Responses
Active Service Member	25	12	37
Family of Active Service Member	52	43	95
Veteran	131	97	228
Family of a Veteran	104	116	220
Total Military Affiliated	312	268	580
No Military Affiliation	91	129	220

Participation was voluntary and limited to the convenience sample identified by Infosurv, with 580 military affiliated (active, veteran, family) participants completing the telephone interview survey.

### **Collaboration**

The survey was administered in order to learn more about the veteran and veteran family populations in the Fayetteville, NC and the Norfolk, VA locations. An extensive telephone-administered survey was developed in a joint effort by Give An Hour™ and Infosurv. Infosurv is a full service market research firm that specializes in custom research solutions. The telephone survey, administered by Infosurv, was developed to determine if active military, veterans, and reservists have an awareness of the services and assistance they need once they are back on the home front.

## **Data Collection**

This survey was sponsored by an organization, Give an Hour™, whose mission is to develop a national network of volunteer providers capable of responding to both acute and chronic conditions that are a result of military interaction. In their efforts to ensure that troops who have served in war are provided the required services and assistance once they return home, various communities were surveyed to understand if there is a relationship between age, military affiliation, and the fundamental awareness of the mental health care treatment options available to them.

### **Implementation of the Survey**

The survey was administered via a telephone interview and quotas were set to ensure the respondent samples surveyed matched the characteristics that were desired by Give An Hour™. Survey responses were documented online by the phone interviewers from August 16, 2011 through September 9, 2011. Quotas were set to ensure the respondent sample surveyed matched the characteristics that Give an Hour™ desired and include:

- Market: a target of 400 responses for each of the two communities
- Age: respondents were required to be at least 18 years of age
- Military Affiliation: a minimum of 25% of the respondents were to be affiliated with the military, either as an active service member or a veteran.

### **Survey Items Selected for Analysis**

For purposes of this dissertation research, the survey respondents were limited to only the population affiliated with the military (active military, veterans, reservists, and associated family

members). An additional constraint imposed by this specific dissertation research was the examination and assessment of only three survey questions: the respondent's age, their military affiliation, and their awareness of the mental health treatment options available to them through Give An Hour™. Two independent communities of Fayetteville, NC and Norfolk, VA were targeted to understand if the target population was fundamentally aware of the existence of appropriate mental health services offered by Give An Hour™ and if the awareness of treatment options varied by the respondent's age.

### **Summary**

The statement of the research question began this chapter. This included the significance and the limitations of the study. The collaboration between this research and the Give An Hour™ foundation was described and the development of the telephone survey was described. In the next chapter the data analysis methods will be described and the results of the analyses will be discussed.

## CHAPTER FOUR: RESEARCH FINDINGS

In this chapter, the data collected was used to explore the relationship between military personnel age, military status, and their awareness of local community mental health treatment options available for the treatment of post-traumatic stress disorder are discussed. This chapter includes three two sections: (a) data analysis; (b) discussion.

The first section, *data analysis*, includes two subsections: (a) procedures; (b) frequencies of respondents.

The discussion section summarizes the results of the data analysis in relation to the literature review presented in Chapter Two.

### Data Analysis

#### **Procedures**

Quantitative data were analyzed using Statistical Package for Social Sciences (SPSS) version 22.0. Descriptive statistics including mean, standard deviation, and range were determined for the study variables. Data were collected from 586 respondents; however, seven were excluded from each the awareness response and the military affiliation response due to missing responses. The age response had a total of 42 respondents with missing responses.

Frequencies of participants' awareness of available services were calculated by demographic groups including age and military affiliation. The hypothetical relationship between respondents' age and military status and the dependent variable of the respondent's self-reported awareness of the mental health treatment opportunities available in their community was tested

using a one-way ANOVA. Tukey's HSD post hoc procedure was used to determine which age groups were different from each other. In the event of a combined effect, SPSS was again used to perform contrast analyses where age groups were combined and compared to other age groups in relation to their awareness level.

### **Frequencies of Respondents**

The total number of participants in the survey was 586. Frequency data of the entire population was analyzed with regard to military status, age range, and awareness of community mental health resources available for the treatment of PTSD. Table 3 depicts the frequency table for military status. Based on the review of the literature, and the predominance of PTSD in the active and veteran community, it is of concern that there is a relatively low percentage of responses from active service members, 6.5%, and an extremely high percentage of responses from family members, 53.7%.

Table 3  
 Frequency Table Describing Military Status Breakdown of Population

Status	Frequency	Percent
Family Member	315	53.7
Veteran	226	38.6
Active Service Member	38	6.5
Missing Response	7	1.2
Total	586	100.00

The next frequency table presented in Table 4 breaks down the 586 respondents into age ranges. There were 28 respondents who preferred not to answer the question regarding their age and 14 respondents who did not respond to the item, so those responses were removed before performing any further analyses. The integrity of the continued analyses with regard to age is intact due to the small percentage of these non-responses, 7.2%. Of concern is the low representation of the 18-25 age group, 2.9%, as well as the high representation of the >65 age group, 28.2%.



Table 4  
 Frequency Table Describing Age Group Breakdown of Population

Age Range	Frequency	Percent
Prefer not to answer	28	4.8
18-25	17	2.9
26-35	69	11.8
36-45	73	12.5
46-55	113	19.3
56-65	107	18.3
>65	165	28.2
Missing Response	14	2.4
Total	586	100

The last frequency table presented in Table 5 breaks down the 586 respondents with regards to their awareness of local community mental health treatment options available for the treatment of post-traumatic stress disorder. There were 51 respondents who answered with “I Don’t Know” and 7 respondents who did not respond to the item, representing 9.9% of the total respondents. Those responses were removed before performing any further analyses.

Table 5  
 Frequency Table Describing Awareness Level Breakdown of Population

Response	Frequency	Percent
Don't Know	51	8.7
Strongly Disagree	20	3.4
Disagree	167	28.5
Neither Agree or Disagree	33	5.6
Agree	163	44.9
Strongly Agree	45	7.7
Missing Response	7	1.2
Total	586	100

### **Discussion**

The one-way analysis of variance (ANOVA) was used to determine whether there was a significant difference between the means of the three independent groups; age, military affiliation, awareness level. The one-way ANOVA was used to determine in general if any of the means were significantly different from each other. Specifically, this analysis was used to test the null hypothesis. A post-hoc Tukey's LSD was used in order to examine which specific groups were significantly different from each other.

The One-way ANOVA examining awareness of community resources and respondents age yielded statistically insignificant results where  $f(5,493) = 1.9, p = .08$ . There was no discernibly significant relationship between the age of the respondent and his/her awareness of

local community mental health treatment options available for the treatment of post-traumatic stress disorder. Table 6 displays the results of this ANOVA.

Table 6  
ANOVA Results Examining Age and Awareness of Community Resources

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	11.70	5	2.34	1.93	.08
Within Groups	598.78	493	1.22		
Total	610.45	498			

However, upon further examination of the evidence the study supported a second One-way ANOVA examining awareness of community resources and respondents' military status. This analysis yielded statistically significant results where  $f(3,524) = 3.04, p = .03$ . There is a significant relationship between the military affiliation of the respondent and his/her awareness of local community mental health treatment options available for the treatment of post-traumatic stress disorder. Table 7 displays the results of this ANOVA.

Table 7  
ANOVA Results Examining Military Status and Awareness of Community Resources

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	11.11	3	3.71	3.04	.03
Within Groups	638.52	524	1.22		
Total	649.63	527			

Since this ANOVA indicated statistically significant results, further analysis was warranted to compare all possible pair-wise comparisons of the means within the military affiliation. Tukey's LSD posthoc test was used to compare each military status in regards to their awareness of local community mental health treatment options available for the treatment of post-traumatic stress disorder. The results indicate that family members of veterans perceive a significantly greater awareness of services than family members of active troops ( $p = .02$ ) and veterans perceive a significantly greater awareness of services than family of active troops ( $p = .00$ ). The results of the post hoc Tukey LSD are presented in Table 8.

Table 8  
 Post Hoc Tukey LSD Results Pair-Wise Comparisons

					95% Confidence Interval	
(I)Status	(J)Status	Mean Difference	Std. Error	Sig.	Lower Bound	Upper Bound
Family member of veteran	Family member of active troop	.34	.14	<b>.02</b>	.06	.63
	Veteran	-.076	.11	.49	-.29	.14
	Active Troop	-.072	.19	.71	-.46	.31
Family member of active troop	Family member of veteran	-.34	.14	.02	-.63	-.06
	Veteran	-.42	.14	<b>.00</b>	-.69	-.14
	Active Troop	-.42	.22	.05	-.84	.01
Veteran	Family member of veteran	.08	.11	.49	-.14	.29
	Veteran	.42	.14	.00	.14	.69
	Active Troop	.00	.19	.99	-.379	.39
Active Troop	Family member of veteran	.07	.19	.71	-.31	.46
	Veteran	.42	.22	.05	-.01	.84
	Active Troop	-.00	.19	.99	-.39	.40

These findings support and confirm that family members of veterans perceive a greater awareness of services than family members of active troops ( $p = .02$ ) and veterans perceive a greater awareness of services than family of active troops ( $p = .00$ ).

there is a statistically significant association between a military affiliation of veteran and family member of a veteran and their awareness of local community mental health treatment options available for the treatment of post-traumatic stress disorder.

The primary intent in this present study was to examine the association between age and the self-reported level of awareness of local community mental health treatment options available for the treatment of post-traumatic stress disorder. However, a secondary focus was presented in examination of the analysis, the association between military affiliation and level of awareness, which yielded statistically significant findings. Whereas the factor of age was not found to significantly affect a respondent's awareness, the factor of military affiliation was found to be significantly associated with the respondent's awareness of mental health treatment options. By exploring the association of military affiliation and the influence on self-reported levels of awareness, this study determined that a respondent with a military affiliation of veteran or family member of a veteran was either more aware of available treatment options for PTSD, which could possibly lead in turn to either a higher rate of participation in such programs, or, conversely, an increased likelihood for suicide resultant from PTSD.

This exploratory study of levels of awareness of mental health care options for the treatment of PTSD indicated that there was no significant correlation between age and self-report awareness of treatment options. Instead, the data analysis revealed an unexpected result. There is a statistically significant correlation between military affiliation and self-reported level of awareness of mental health care treatment options. More specific, veterans and family members of veterans are significantly more aware of the existence of mental health care options for the treatment of PTSD.

The previously reviewed literature supported the research that veterans over the age of 50 had a suicide rate of 36.8%. If this same group of veterans is aware of the treatment options available to them, then why is the suicide rate so out of control? In the next chapter this question will be examined and relevant future research opportunities will be suggested.

## **CHAPTER FIVE: CONCLUSIONS**

In this chapter, findings are discussed. The chapter included three sections: (a) interpretation of the findings; (b) future directions; (c) final conclusion.

The first section, *interpretation of the findings*, includes xx subsections: (a) cognitive dissonance; (b) general age-related suicide;

The second section, *future directions*, includes three subsections: (a) cognitive dissonance; (b) silent suffering; (c) virtual reality exposure therapy.

The *final conclusion* presents a final summary and a closing discussion.

### **Interpretation of the Findings**

In this section, the lack of a relationship that was discovered between age group and awareness level of mental health care treatment options for PTSD is discussed, as well as

interpretations of the emergent evidence from this study that indicates a positive relationship between military affiliation and levels of awareness.

### **Cognitive Dissonance**

An explanation as to the insignificant findings regarding the age group and the awareness level of community mental health treatment options is centered on the theory of cognitive dissonance. Cognitive dissonance can be described as a subject having two or more cognitions (thoughts, beliefs, ideas, etc.) that contradict each other, or are dissonant (Wicklund & Brehm, 2013). Relative to combat, the subject might be in a combat situation with conflicting cognitions: the responsibility to protect and defend the self, the unit, and the country might be dissonant with the feeling of remorse and guilt associated with the actions of combat. The dissonance between these emotions could lead the soldier to suppress the later feelings that are typically related to PTSD, and focus on the current cognitions that involve the task at hand. This concentration of emotions on protecting, defending, and defeating might cause the soldier to be uninterested and consequently unaware of any mental health issues and/or options for treatment.

This theory of cognitive dissonance was analogized by a United Nations special reporter as the PlayStation mentality: “Young military personnel raised on a diet of video games now kill real people remotely using joysticks. Far removed from the human consequences of their actions, how will this generation of fighters value the right to life?” (Alston & Shamsi, 2010). There is increasing evidence that drone pilots, just like those troops facing direct combat, can suffer from PTSD. Drone operators have the unique opportunity to watch their targets in the mundane routing of living their daily lives, playing with their children, oftentimes for extended periods of surveillance. And then, they are ordered to drop ordinance on the target and witness the



mutilation of the target and possibly other family members caught in the crossfire. Certainly this witness takes a psychological toll on the drone operators. In fact, a recent Air Force study found that 29 percent of drone operators suffered from “burnout,” and 17 percent were clinically distressed (Martin, 2011).

The research regarding military suicide cited in the review of the literature presented in chapter two is remarkable; the group of military personnel, both active and veteran, least likely to commit suicide related to PTSD was the younger, active military (Kemp & Bossarte, 2013). This could be credited to the dissonant emotions experienced by this age group. The active duty soldier might be focusing only on the emotions at hand, the values that he has been drilled, schooled, trained, conditioned, maybe even brain washed into focusing on the, cognitions and emotions of a soldier. The core values of the U.S. Army; *Loyalty, Duty, Respect, Selfless Service, Honor, Integrity, and Personal Courage*, form the acronym LDRSHIP. These seven core leadership values are proudly displayed to every soldier and visitor on Army posts and they are proudly embodied by the soldiers that are giving daily witness to their meaning. The core values define who the Army is, they define what the Army does, and they identify what the Army stands for. These are the cognitions that the soldier is expected to embody, and these might be the only cognitions that the active duty soldier allows himself to experience. The dissonance between these emotions and the emotions related to the suffering from PTSD could be an explanation for the low percentages found among the younger, active military population in regards to suicidality.

## General Age-related Suicide

The previously reviewed literature presented in chapter two supported the research that veterans over the age of 50 had a suicide rate of 36.8%. In fact, suicide is a major public health problem, with rates rising to their highest levels in many countries and cultures during the second half of life (Conwell, Duberstein & Caine, 2002). Figure 4 identifies the rate of suicide over the life span segregated by age, race, and gender. For both black and white women, rates rise through midlife and subsequently fall into old age; black men experience two climaxes of risk, one in young adulthood and the second in old age. Most alarming is the higher rate at each and every point in over the course of time for white men, rising to a peak in the oldest age group of over 45 per 100,000 per year, which is over 4 times the nation's overall age adjusted rate of 11.5 per 100,000 per year (Centers for Disease Control and Prevention, 2010).

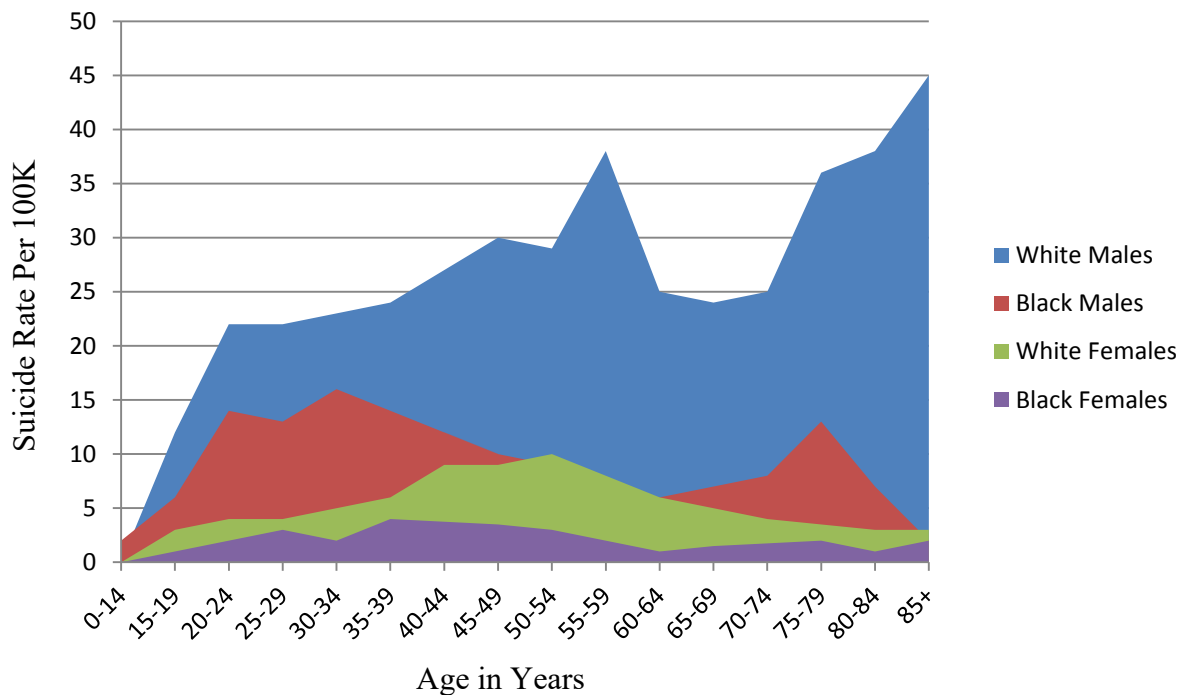


Figure 4: Suicide rates by age, race, and gender in the United States, 2007 (Centers for Disease Control and Prevention, 2010).

The elderly have predominantly high suicide rates in almost all countries of the world (Hawton & van Heringen, 2009). And, as the global population rises, the number of suicide deaths is projected to increase over the next decade. The risk factors that contribute to later-life suicide are distinctive from those in younger populations. Predictors of later-life suicide attempt include living alone, low education, major depressive disorder, and overall feelings of loneliness.

Many elders who die from suicide were never seen in a mental health care treatment facility (Smith, Craig, Ganoczy, Walters, & Vanenstein, 2011). This result is similar to a research studies in both Taiwan (Lee, Lin, & Liu, 2008) and Finland (Pitkala, Isometsa, & Henriksson, 2000) which found that men over 55 years of age were very unlikely to use a mental health provider in the entire year before suicide. Awareness of mental health treatment options is only one cause of the lower use of mental health services by the elderly. Another cause for lower elder use of mental health services is that this population may prefer to receive mental health care in the privacy of their primary care setting rather than from a specialty mental health service (Klap, Unroe, & Unutzer, 2003). Due to the comfort level in a primary care setting experienced by the elder population, a higher level of referral to mental health services may be warranted, along with further improvement of primary care services.

### **Future Directions**

#### **Cognitive Dissonance**

A disturbing fact presented in the review of the literature from chapter two is that the age group most likely to commit suicide are the veteran population over the age of 50 (Kemp & Bossarte, 2013). Future research must examine the theory of cognitive dissonance as it applies to

the onset of PTSD. Cognitive dissonance can be most evidently seen by examining the career of a soldier. The soldier's career might easily be dissected into two phases; the first phase is the life as an active duty soldier living on military bases or deployed downrange, the second phase is life as a veteran, living among the rest of us in the civilian world.

During phase one of a military career, active duty, the soldier is drilled, schooled, trained, conditioned, maybe even brain washed into focusing only on the cognitions and emotions of a soldier. The United States Military Academies (USMA) states their vision succinctly: it must provide leaders of character who will serve the common defense (Maslowski, 1990). To realize this vision, The U.S. Military Academies place enormous emphasis on character development and the reinforcement of traditional U.S. values *in conjunction with* the distinct military values. The United States Army promotes their own unique norms of conduct. These norms are embodied in the idea that their culture is one of an exceptional service ethic where every soldier is expected to make personal sacrifices in selfless service to the nation. Most U.S. Army bases greet visitors with by a progression of signs lining a road near the Main Gate entrance. These signs are the core values of the U.S. Army; *Loyalty, Duty, Respect, Selfless Service, Honor, Integrity, and Personal Courage*. Similarly, at the Walter Reed Army Medical Center, the main hospital is organized around seven individual wings, each named for these same seven values, which form the acronym LDRSHIP. These seven core leadership values are proudly displayed to every soldier and visitor on post and they are proudly embodied by the soldiers that are giving daily witness to their meaning. The core values define who the Army is, they define what the Army does, and they identify what the Army stands for.

According to the Deputy Chief of Staff of the United States Army, any actions counter to the core Army Values weakens the Army team, their morale, and their readiness. The Army

must never accept actions inconsistent with the Army Values. The core values define who the Army is, they define what the Army does, and they identify what the Army stands for.

The perception of a distinguishing set of values within the culture of military personnel has long been accepted by both critics of the military (Mills & Wolfe, 2000) and supporters (Huntington, 1981). Dorman (1976) conducted extensive research verifying widespread agreement that the culture of military personnel tend to be above average in its collective sense of nationalism, conservatism, and traditionalism.

During this active duty phase of the soldier's career, the idea of PTSD might not even enter into conscience thought, focused on the mission, focused on protecting, preserving and defending. In contrast, when the soldier enters phase two of his career, the life of a veteran in a world full of "normal" civilians, cognition must be reprogrammed, refocused, reprioritized. No longer is he expected to be the warrior ready for battle. Instead, society now expects him to be thoughtful, kind, compassionate. It is only during this phase of the soldier's life that the feelings of remorse and guilt caused by the actions during combat are allowed to enter into his conscience. Now he has the luxury to allow himself to evaluate his feelings of regret and blame caused by wartime actions. Research needs to be conducted to examine the influence of cognitive dissonance regarding the increase of PTSD and suicide-related tendencies of the older veteran population.

### **Silent Suffering**

PTSD is a condition that, in the military, results from psychological breakdown on the battlefield; and it is characterized by a polymorphous and ever-changing symptom profile, which may include emotional and physical numbness, emotional and physical withdrawal from society,

depression, substance abuse, and a paralyzing fear of death. Future research should examine the treatment of combat-related PTSD, even during peacetime. Herman (1997) suggested that trauma in general has a tendency to gain popularity but then lose appeal slowly over time. With respect to combat-related PTSD, there has been a historical propensity to conduct extensive research during wartime, but then there is a lessening of interest in peacetime. The consequence is that generations fail to learn from past work. An effort should be made to provide a research link that bridges lessons learned in the past to the lessons being learned in the present.

Future research needs to define treatment needs beyond current interventions. Persons with symptoms that do not yet meet the threshold for a diagnosis of PTSD can still suffer from significant disability and therefore require treatment.

In addition, estimates of people suffering with clinically significant disorders but who refuse treatment would be helpful to complete the picture of unmet needs. Research that identifies the extent of combat veterans who are suffering symptoms of PTSD but not receiving mental health care will help to define a largely ignored group of silent sufferers.

Future research regarding these silent sufferers might explore what characteristics separate combat veterans who do not experience PTSD symptoms and those who do. It is also imperative to differentiate between individuals who exhibit an initial stress reaction to trauma exposure and those who initially appear to be unaffected. The focus should be placed on the common resiliency factors to initiate preemptive models for military members prior to being deployed to combat.

This research would cause a paradigm shift toward conceptualizing PTSD as an expected reaction to combat, removing the onus and unfit stigma that they currently can carry when diagnosed with PTSD. Preparing every soldier to reduce risk factors associated with combat-

related trauma as well as institutionalizing preventative measures (i.e., coping mechanisms, resilient community support, plan of preparedness) are more effective avenues in preserving the strength of the military.

If research continues to indicate that PTSD is neither predictable nor preventable, then PTSD needs to be conceptualized in a different way in order to enable the silent sufferers to seek the mental health they need. In so doing, the negative stigma associated with PTSD is addressed directly; and those combat veterans who suffer from PTSD will receive the treatment and regain the respect they never should have lost in the first place.

### **Virtual Reality Exposure Therapy**

Creating a therapeutic relationship in which verbal sharing can occur is the biggest initial treatment challenge for the PTSD victim and his therapist (Dewey, 2004). The biggest barrier faced by the therapist is the reluctance of the PTSD sufferer to talk. As presented in the review of the literature in chapter two, prolonged exposure therapy is used to guide a person to imagine, narrate, and emotionally process the traumatic event within the safe and supportive environment of the clinician's office (Rizzo, Reger, Gahm, Difede, & Rothbaum, 2009). A relatively new method available to clinicians to encourage this imagination and narration of a traumatic event is virtual reality (VR).

VR can be defined as a way for humans to visualize, manipulate, and interact with extremely complex cognitions (Aukstakalnis & Blatner, 1992). VR can be achieved using something as elementary as a graphic novel (graphics and images in conjunction with the narration of the traumatic event) created by the subject, that serves to immerse the subject in a simulated world. The seemingly limitless capacity of VR to create a controllable environment

within which a person can become engrossed and interact offers the clinician assessment and intervention options that are not possible using traditional methods (Rizzo, Schultheis, Kerns, & Mateer, 2004).

Future research is required to examine the effectiveness of VR in the treatment of PTSD. This research needs to evolve the understanding of physiological measurements that might be used to diagnose and understand PTSD such as electroencephalogram (EEG), electrocardiogram (EKG), galvanic skin response, and other forms of body-based responses (Rizzo et al., 2009).

In the research reported by the Institute of Medicine (2008), it was concluded that CBT-based exposure therapy was the only treatment with enough overwhelming evidence to be endorsed for the treatment of PTSD. The research presented in the review of the literature in chapter two suggests that Prolonged Exposure (PE), is one of the first CBT techniques to accumulate a significant evidence base and to be widely accepted as the gold standard for the treatment of PTSD. The theoretical basis for PE is reliant on the idea that PTSD is a disorder of extinction (Cukor et al, 2010), where the individual's response to a traumatic event does not lessen appropriately, and the association between the memory of the traumatic event and the accompanying internal message of danger has not been eliminated even after the danger has passed. Similarly, Van Etten & Taylor (1998) found that cognitive behavioral therapies in conjunction with prolonged exposure have proven to be more effective than most other treatment options.

Future research should examine the use of VR as an augmentation to the *in vivo* phase of the PE treatment regimen. A controlled VR environment can accurately depict a situation that triggers the subject's anxiety. If the responses elicited by the VR *in vivo* experience correlate strongly between real-life and the virtual situation, then the chances are great that prolonged



virtual exposure can be successfully used as part of the therapy regimen (Sanchez-Vives & Slater, 2005).

Similar to the way in which a flight simulator can test a pilot's abilities in a variety of controlled situations, VR environments can be used to create context-relevant simulated environments wherein cognitive and emotional process can be assessed and treated. VR environments are currently being used with adults in many realms of psychological assessment, including the treatment of PTSD (Difede et al., 2007).

The first effort to apply prolonged exposure using VR began in 1997 (Rothbaum, Hodges, Ready, Graap, & Alarcon, 2001) with Georgia Tech and Emory University testing the *Virtual Vietnam*<sup>TM</sup> VR scenario with Vietnam veterans diagnosed with PTSD. *Virtual Vietnam*<sup>TM</sup> is a computer-generated VR designed to re-associate the subjects' fear response to simulated external stimuli such as gunfire, helicopter sounds, smell of gun powder, mine explosions, and jungle sounds. Corresponding *Virtual Vietnam*<sup>TM</sup> research measured clinician-rated and self-report measures of PTSD. Results of this research indicated post-treatment improvement on all measures of PTSD; with a 34% decrease in clinician-rated symptoms and a 45% decrease in self-reported symptoms of PTSD (Rothbaum et al., 1999).

A more recent study using VR Exposure Therapy (VRET) in the treatment of PTSD involved active duty Operation Iraqi Freedom and Operation Enduring Freedom soldiers in a *Virtual Iraq/Afghanistan*<sup>TM</sup> scenario. In this study participants were exposed to multi-sensory stimulation designed to elicit anxiety, fear, and stress responses. The presentation of additive, combat-relevant stimuli in the *Virtual Iraq/Afghanistan*<sup>TM</sup> VR scenarios can be controlled by a therapist via a separate clinical interface similar to the Wizard of Oz standing behind the curtain and controlling reality (Rizzo et al, 2009). Measures used to assess the effectiveness of the

*Virtual Iraq/Afghanistan*<sup>TM</sup> scenarios included the PTSD Checklist-Military Version, the Beck Anxiety Inventory, and the Patient Health Questionnaire-Depression. Rizzo et al (2009) indicate that analyses of results after the *Virtual Iraq/Afghanistan*<sup>TM</sup> VRET treatment describe positive clinical outcomes.

Literature suggests in cases of severe PTSD, incident-specific, individual treatment is recommended (Shelby, 2000), and in order to gain control of the fear response the VR treatment must be incident-specific (Frederick, 1985).

Another form of VRET that deserves further study is the use of art therapy which is a form of psychotherapy using art as the primary mode of communication. Art therapy facilitates the expression and exploration of the traumatic using imagery as it emerges from memory and recreates the automatic fear response (Appleton, 2001). The Chapman Art Therapy Treatment Intervention (CATTI) is a VR treatment intervention for severe PTSD as a trauma resolution method (Chapman et al., 2001). The CATTI is a VR art therapy treatment designed to provide an opportunity for the subject to chronologically relate and cognitively understand the traumatic event. Chapman et al. (2011) posit that CATTI offers developmentally and culturally specific trauma resolution therapy to reduce the symptomology related to PTSD, and facilitates the integration of the traumatic experience into the larger, autobiographical life chronicle (Siegel, 1999).

### **Final Conclusions**

This study set out to explore if a relationship exists between age and/or military affiliation and the awareness of available mental health treatment options. The study separated age from military

affiliation to better focus on the influences between each of these factors and their influence on awareness levels. Considerations that are critical to the need for fundamental and elementary awareness of mental health treatment, as they are affected by PTSD, were described and used to guide a review of the current literature in order to find directions to accomplish the goal of this study.

Results of a telephone survey implemented by Give An Hour™ in conjunction with Infosurv were collected and analyzed. Limitations of the study were presented and the results were presented. Whereas the analysis of the correlation of age and awareness level yielded no significant results, there was significant findings when examining the relationship between military affiliation and awareness ( $p = .029$ ). Further analysis on the influence of the military affiliation variable was done using the post-hoc Tukey's LSD. This analysis revealed that family members of veterans ( $p = .017$ ) as well as veterans themselves ( $p = .003$ ) were significantly more aware of mental health treatment options than were their active duty counterparts.

The final discussion of the results demonstrated the utility of the findings. From the review of the literature, a correlation has never been found between military affiliation and awareness levels of mental health treatment options. The significance of this finding presents new opportunities to increase fundamental awareness of these treatment options by addressing the issues of cognitive dissonance and the global epidemic of late life depression-related suicide.

Future directions for research include the following: expanding the body of knowledge on the confounding nature of cognitive dissonance as it exists in the fabric of a military career span of life; researching the effect of silent suffering and bringing about a paradigm shift toward conceptualizing PTSD as an expected reaction to combat, removing the onus and unfit stigma that is currently carried when a soldier is diagnosed with PTSD; and continued research on the effectiveness of the use of virtual reality as an augmentation to prolonged exposure therapy. At a minimum, all continued research will contribute to improving guidance to policy makers,

therapists, and volunteers who directly affect soldiers and veterans struggling with the post-combat effects of PTSD.

Awareness is important and useful. Determining if military personnel and their families, both active and veteran, are fundamentally aware of the mental health treatment options available to them is not only important to the treatment centers offering help, but the knowledge is also useful to governmental policy makers, military leadership, and to the general public. Raising awareness of PTSD and more important, to the treatment options that are available, can only result in an increase in the number of military personnel who receive treatment.

The starting point of this study was the consideration that age and/or military affiliation may in some way be connected to the awareness level mental health treatment options. From this study, it has been shown that military affiliation and awareness levels have a positive relationship. Such knowledge can now be acted upon by the volunteers, licensed caregivers, and policy makers with increased confidence. We should now expect to learn more about the relationship between military affiliation and awareness, and the influence of this relationship on the treatment of PTSD and its comorbid disorders, including suicidality. With this study, and from the result of future research, awareness levels of mental health treatment options for PTSD may very well continue to reveal more than expected. And from that, knowledge of awareness levels remains important and useful.

## **APPENDIX A: THOROUGHNESS AND CITATION QUALITY**

## **Overview**

The American Psychological Association has indicated that "... informal and unsystematic search behavior plays a dominant role..." (p.40) in searching for literature to review. In a case study on information retrieval in psychology, Hjørland (1988) focuses on three concerns: search strategy, selection of sources, and the construction of the search profile. Given that this work plays a significant role in research, Hjørland's eight facets, or view points, that should be employed when searching for pertinent writing to be included in a literature review were used to guide this review of the literature. These eight tenets guiding a literature review balance viewpoints while expediting the process of determining which works are relevant. The inherent problem of selecting literature to review "...tends to expand, so that in the end what one finds relevant is something completely different from what one deemed relevant at the start" (Hjørland, 1988, p.52). Using Hjørland's tenets to steer a literature search provides direction, while also providing alternative perspectives that serve to reinforce the overall analysis that materializes from the review. Hjørland's eight tenets are:

1. The research method applied
2. The theoretical frame of reference
3. Common facets, such as time, form, and place
4. The psychological process involved
5. Psychobiological aspects
6. Individual characteristics, such as sex, age, and personality traits
7. Social and cultural conditions
8. The aim of application

Regarding quality of citations, Beile, Boote, and Killingsworth (2004) present two convincing arguments that the quality of citations employed in dissertation research serves a wide variety of audience needs. The first argument is that citations provide a suggestion of the author's "...ability to engage in an extensive scholarly endeavor, and that successful doctoral students should be comprehensive and up to date in reviewing the literature" (p.347). The quality of the citations not only serves the author's purpose, but it serves the greater purposes of the dissertation committee and the college where the research is conducted by validating the skill and knowledge of a topic that the author currently commands. The second argument emphasizes that citations, through the list of references, provide readers with an "... expedient approach to effective collection development" (p. 347). The quality of the citations and the literature represented therein is of importance to readers, librarians, dissertations committees, and the college.

The quality of each citation is calculated using Beile, Boote, and Kinningsworth's (2004) three criteria of:

1. Scholarliness – considers whether the source originates from empirical, peer-reviewed journal articles, or general magazines
2. Currency – derived by considering whether the source is retrospective or contemporary
3. Appropriateness of fit to the development of the topic – derived by how well the source contributes to the author's argument

In table nine below, *Results of Thoroughness Analysis and Citation Quality Analysis to Guide the Review of the Literature*, the results of Hjørland's Thoroughness Analysis and a partial Citation Quality Analysis is presented as an argument for the overall quality of the review of the literature. In

this citation analysis, the third criterion, appropriateness, is also not used. Rather, scholarliness and currency are the principal focus as they best serve the need to assess quality. The criterion *appropriateness* was omitted primarily for concern with self-rating bias.

## Discussion

The results of the works used in the literature review as the research process progressed are presented in table xx below within the context of Hjørland's eight facets as they serve the purpose of the review. Each article is identified using the leading three authors' last names, with the year of publication and the title, along with an indicator of the publication type. Publication types include the following:

A: Article

B: Book

b: Bulletin

P: Paper presented at association conference

R: Report

W: Website

To gauge the quality of citations used within the review, the age since publication is provided, as well as counts within the following categories:

5 years or less old (<5)

Greater than 5 years to less than or equal to 10 years (<10)

Greater than 10 years to less than or equal to 15 years (<15)

Greater than 15 years to less than or equal to 20 years (<20)

Greater than 20 years (20+)



Table 9  
Results of Hjørland Thoroughness Analysis and Citation Quality Analysis

Tenet	Literature Reviewed	Pub Type	Age	<5	<10	<15	<20	20+
<b>Research methods:</b>	<b>Literature Review</b>							
	<b>Research Methods</b>							
	*Beile, Boote (2004). A microscope or a mirror?: A question of study validity regarding the use of dissertation citation analysis for evaluating research collections.	A	10		X			
	*Boote, Beile, (2005). Scholars before researchers: On the centrality of the dissertation literature review in research preparation.	A	9	X				
	*Hjørland, (1988). Information retrieval in psychology: Implications of a case study.	A	26					X
	*Kemp, Bossarte, (2013) Suicide date report: 2012.	R	2	X				
	<b>Survey and Meta-analyses</b>							
	*Bradley, Greene (2005). A multidimensional meta-analysis of psychotherapy for PTSD.	A	9		X			
	*Committee on Treatment of Posttraumatic Stress Disorder. (2008). Treatment of posttraumatic stress disorder: An assessment of the evidence.	b	6	X				
	*Cox, Mota (2008). The symptom structure of posttraumatic stress disorder in the National Comorbidity Replication Survey.	A	6		X			
	*Kessler, Sonnega (1995). Posttraumatic stress disorder in the National Comorbidity Survey.	A	19					X
<b>Theoretical Framework</b>	<b>Armed conflict</b>							
	*Goldstein, (2011). Winning the war on war.	B	3	X				

<b>Tenet</b>	<b>Literature Reviewed</b>	<b>Pub Type</b>	<b>Age</b>	<b>&lt;5</b>	<b>&lt;10</b>	<b>&lt;15</b>	<b>&lt;20</b>	<b>20+</b>
	*National Defense Authorization Act for Fiscal Year 2008. (2008).	W	6		X			
	*Mills, Wolfe, (2000). The power elite.	B	14				X	
<b>PTSD</b>								
	*Cukor, Olden (2010). Evidence-based treatments for PTSD, new directions, and special challenges.	A	4	X				
	*Howarth, (2011). Concepts and controversies in grief and loss.	A	3	X				
	*Committee on Treatment of Posttraumatic Stress Disorder. (2008). Treatment of posttraumatic stress disorder: An assessment of the evidence.	R	6			X		
	*Lasiuk, Hegadoren, (2006). Posttraumatic stress disorder part I: Historical development of the concept	A	8			X		
	*National Center for Posttraumatic Stress Disorder. (2010). What is PTSD?	W	4	X				
	*Nemeroff, Bremner, (2006). Posttraumatic stress disorder: A state-of-the-science review.	A	8			X		
	*O’Kearney, Perrott, (2006). Trauma narratives in posttraumatic stress disorder: A review.	A	8			X		
	*Dewey, L. (2004). War and redemption: Treatment and recovery in combat-related posttraumatic stress disorder.	A	10			X		
<b>CBT</b>								
	*Dobson, Khatri, (2000). Cognitive therapy: Looking backward, looking	A	14				X	

Tenet	Literature Reviewed	Pub Type	Age	<5	<10	<15	<20	20+
	forward.							
	*Monson, Schnurr, (2006). Cognitive processing therapy for veterans with military-related PTSD.	A	8		X			
	*Siegel, (1999). The developing mind.	B	15			X		
	*Weisaeth, Eitinger, (1991). Research on PTSD and other post-traumatic reactions: European literature.	A	23					X
<b>Psychological Processes</b>	<b>General Psychology</b>							
	*American Psychiatric Association. (1980). DSM-III.	B	34					X
	*American Psychiatric Association. (1994). DSM-IV.	B	20				X	
	*Friedman, (2005). Veterans' mental health in the wake of war.	A	9		X			
	*Gawande, (2004). Casualties of war – Military care for the wounded from Iraq and Afghanistan.	A	10		X			
	*Gray, Maguen, (2004). Acute psychological impact of disaster and large-scale trauma.	A	10		X			
	*Hosek, Kavanagh, (2008). How deployments affect service members.	A	6		X			
	*Matlin, (1995). Psychology, 2nd ed.	B	19				X	
	*Mayeux, Drossman, (2008). The stress response. Gulf war and health: Physiologic, psychologic, and psychosocial effects of deployment-related stress.	A	6		X			
	<b>CBT</b>							
	*Beck, (2005). The current state of cognitive therapy: A 40-year retrospective.	A	11			X		

Tenet	Literature Reviewed	Pub Type	Age	<5	<10	<15	<20	20+
	*Foa, Hembree, (2007). Prolonged Exposure Therapy for PTSD: Emotional Processing of Traumatic Experiences, Therapist Guide.	B	7		X			
	*Karlin, Ruzek, (2010). Dissemination of evidence-based psychological treatments for posttraumatic stress disorder in the Veterans Health Administration.	A	4	X				
	*Resick, Monson, (2006). Cognitive processing therapy – Veteran/military version.	A	8		X			
	*Resick, Nishith, (2002). A comparison of cognitive-processing therapy with prolonged exposure and a waiting condition for the treatment of chronic PTSD in female rape victims.	A	12			X		
	*Resick, Schnicke, (1993). Cognitive processing therapy for rape victims: A treatment manual.	B	24					X
<b>Cognitive Dissonance</b>								
	*Alston, Shamsi, (2010). A killer above the law?	W	4	X				
	*Dorman, (1976). ROTC cadet attitudes: A product of socialization or self-selection?	A	38					X
	*Maslowski, (1990). Army values and American values.	A	24					X
	*Martin, (2011). Report: High level of ‘burnout’ in US drone pilots.	R	3	X				
	Schnurr, Friedman, (2007). Cognitive behavioral therapy for posttraumatic stress disorder in women: A randomized controlled trial.	A	7		X			

<b>Tenet</b>	<b>Literature Reviewed</b>	<b>Pub Type</b>	<b>Age</b>	<b>&lt;5</b>	<b>&lt;10</b>	<b>&lt;15</b>	<b>&lt;20</b>	<b>20+</b>
	*Wicklund, Brehm, (2013). Perspectives on cognitive dissonance.	A	1	X				
	<b>Virtual Reality</b>							
	*Appleton, (2001). Avenues of hope: Art therapy and the resolution of trauma.	A	13				X	
	*Aukstakalnis, Blatner, (1992). Silicon mirage; the art and science of virtual reality.	B	22					X
	*Chapman, Morabito, (2001). The effectiveness of art therapy interventions in reducing post-traumatic stress disorder (PTSD) symptoms in pediatric trauma patients.	A	13				X	
	*Rizzo, Schultheis, (2004). Analysis of assets for virtual reality applications in neuropsychology.	A	10				X	
	*Rizzo, Difede, (2009). VR PTSD exposure therapy results with active duty OIF/OEF combatants.	P	5	X				
	*Rothbaum, Hodges, (1999). Virtual reality exposure therapy for PTSD Vietnam veterans: A case study.	A	15				X	
	*Rothbaum, Hodges, (2001). Virtual reality exposure therapy for Vietnam veterans with posttraumatic stress disorder.	A	13				X	
	*Sanchez-Vives, Slater, M. (2005). From presence to consciousness through virtual reality.	A	9				X	
	<b>PTSD</b>							
	*Blanchard, Jones-Alexander, (1996). Psychometric properties of the PTSD checklist (PCL).	A	18					X

Tenet	Literature Reviewed	Pub Type	Age	<5	<10	<15	<20	20+
	*Breslau, Wilcox, (2004). Trauma exposure and posttraumatic stress disorder: A study of youths in urban America.	A	10		X			
	*Carlier, Lamberts, (1995). Risk factors for posttraumatic stress symptomatology in police officers: A prospective analysis.	A	19				X	
	*Delahanty, Herberman, (1997). Acute and chronic distress and post-traumatic stress disorder as a function of responsibility for serious motor vehicle accidents.	A	17				X	
	*Difede, Cukor, (2007). Virtual reality exposure therapy for the treatment of posttraumatic stress disorder following September 11, 2001.	A	7		X			
	*Ferrada-Noli, Asberg, (1998). Suicidal behavior after severe trauma. Part 1: PTSD diagnoses, psychiatric comorbidity, and assessments of suicidal behavior.	A	16				X	
	*Foa, Kozak, (1986). Emotional processing of fear: Exposure to corrective information.	bu	28					X
	*Frueh, Turner, (2001). Assessment of social functioning in combat veterans with PTSD.	A	13			X		
	*Gold, Engdahl, (2000). Trauma exposure, resilience, social support, and PTSD construct validity among former prisoners of war.	A	14			X		
	*Hickling, Blanchard, (1999). Effects of attribution of responsibility for motor vehicle accidents on severity of PTSD symptoms, ways of coping, and recovery	A	15			X		

Tenet	Literature Reviewed	Pub Type	Age	<5	<10	<15	<20	20+
	over six months.							
	*Kelleher, Corcoran, (2013). Psychotic symptoms and population risk for suicide attempt: A prospective cohort study.	A	1	X				
	*Koenen, Stellman, (2003). Risk factors for course of PTSD among Vietnam veterans: A 14-year follow-up.	A	11			X		
	*Kukla, Schlenger, (1990). Trauma and the Vietnam war generation: Findings from the National Vietnam Veterans Readjustment Study.	A	24					X
	*Mental Health Advisory Team (2008). Operation Iraqi Freedom 06-08: Iraq, Operation Enduring Freedom 08: Afghanistan.	bu	6			X		
	*Milliken, Auchterlonie, (2007). Longitudinal assessment of mental health problems among active and reserve component soldiers returning from the Iraq war.	A	7			X		
	*National Collaborating Centre for Mental Health (Great Britain). (2005). Post-traumatic stress disorder: The management of PTSD in adults and children in primary and secondary care.	bu	9			X		
	*Payne, Hill, (2011). Suicide and homicide risk management.	A	3	X				
	*Pols, Oak, (2007). War & military mental health: The US psychiatry response in the 20th century.	A	7			X		
	*Regan, Hagwood, (2006). Posttraumatic stress disorder following military deployment in Iraq and Afghanistan.	A	8			X		

<b>Tenet</b>	<b>Literature Reviewed</b>	<b>Pub Type</b>	<b>Age</b>	<b>&lt;5</b>	<b>&lt;10</b>	<b>&lt;15</b>	<b>&lt;20</b>	<b>20+</b>
	*Shalev, Freedman, (1998). Prospective study of posttraumatic stress disorder and depression following trauma.	A	16				X	
	*Sharpless, Barber, (2011). A clinician's guide to PTSD treatments for returning veterans.	A	3	X				
	*Sherman, Blevins, (2008). Key factors involved in engaging significant others in the treatment of Vietnam veterans with PTSD.	A	6		X			
	*Toomey, Kang, (2007). Mental health of U.S. Gulf War veterans 10 years after the war.	A	7		X			
	*Wright, Huffman, (2002). Psychological screening program overview.	A	12				X	
<b>Awareness of PTSD</b>								
	*Friedman, (2013). VA starts campaign to raise PTSD awareness.	W	1	X				
	*Rudenstine, Galea, (2003). Awareness and perceptions of a communitywide mental health program in New York city after September 11.	A	11				X	
	*Tanielian, Jaycox, L., (2008). Invisible wounds of war: psychological and cognitive injuries, their consequences, and services to assist recovery.	A	6		X			
<b>Late-life Suicidality</b>								
	*Conwell, Duberstein, (2002). Risk factors for suicide in later life.	A	12				X	
	*Guerra, Calhoun, (2011). Examining the relation between posttraumatic stress disorder and suicidal ideation in an OEF/OIF veteran sample.	A	3	X				



<b>Tenet</b>	<b>Literature Reviewed</b>	<b>Pub Type</b>	<b>Age</b>	<b>&lt;5</b>	<b>&lt;10</b>	<b>&lt;15</b>	<b>&lt;20</b>	<b>20+</b>
	*Klap, Unroe, (2003). Caring for mental illness in the United States: A focus on older adults.	A	11				X	
	*Gunter, Chibnall, (2013). Childhood trauma, traumatic brain injury, and mental health disorders associated with suicidal ideation and suicide-related behavior in a community corrections sample.	A	1	X				
	*Hawton, van Heringen, (2009). Suicide.	A	5	X				
	*McNally, (2012). Psychiatric disorder and suicide in the military, then and now.	A	2	X				
	*Schnurr, Spiro, (2002). Trauma in the lives of older men: Findings from the Normative Aging Study.	A	12				X	
	*Smith, Craig, (2011). Treatment of veterans with depression who die from suicide.	A	3	X				
	*Spiro, Schnurr, (1994). Combat-related posttraumatic stress disorder symptoms in older men.	A	20					X
<b>Psycho-biological Aspects</b>	*Cohen, Quinter, (1996). The derailment of railway spine: A timely lesson for post-traumatic fibromyalgia syndrome.	A	18					X
	*Okie, (2005). Traumatic brain injury in the war zone.	A	9			X		
	*Powers, Kniesner, (2002). Psychotherapy and pharmacotherapy in depression.	A	12				X	
	*Schneiderman, Braver, (2008). Understanding sequelae of injury mechanisms and mild traumatic brain injury incurred during the conflicts in Iraq	A	6			X		

Tenet	Literature Reviewed	Pub Type	Age	<5	<10	<15	<20	20+
	and Afghanistan.							
	*Simon, Ludman, (2004). Telephone psychotherapy and telephone care management for primary care patients starting antidepressant treatment: A randomized controlled trial.	A	10		X			
	*Warden, (2006). Military TBI during the Iraq and Afghanistan wars.	A	8		X			
<b>Individual Characteristics</b>	*Active veterans by the numbers. (2014).	W	0	X				
	*Department of Veterans Affairs. (2010). Analysis of VA health care utilization among Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) Veterans.	R	4	X				
	*Frederick, (1985). Children traumatized by catastrophic situations.	A	29					X
	*Johnson, Fontana, (2004). Long-term course of treatment-seeking Vietnam veterans with posttraumatic stress disorder: Mortality, clinical condition, and life satisfaction.	A	10		X			
	*Leland, Oboroceanu, (2010). American war and military operations casualties: lists and statistics.	R	4	X				
	*Prigerson, Maciejewski, (2001). Combat trauma: Trauma with highest risk of delayed onset and unresolved posttraumatic stress disorder symptoms, unemployment, and abuse among men.	A	13			X		
	*Saxe, Stoddard, (2005). Pathways to PTSD. Part 1: Children with burns.	A	9			C		
	*Shelby, (2000). Brief therapy with traumatized children: A developmental perspective.	A	14				X	

<b>Tenet</b>	<b>Literature Reviewed</b>	<b>Pub Type</b>	<b>Age</b>	<b>&lt;5</b>	<b>&lt;10</b>	<b>&lt;15</b>	<b>&lt;20</b>	<b>20+</b>
	*Yehuda, Kahana, (1995). Impact of cumulative lifetime trauma and recent stress on current posttraumatic stress disorder symptoms in Holocaust survivors.	A	19				X	
	*Zatzick, Marmar, (1997). Posttraumatic stress disorder and functioning and quality of life outcomes in a nationally representative sample of male Vietnam veterans.	A	17				X	
	*Zeiss, Dickman, (1989). PTSD 40 years later.	A	25					X
<b>Social Cultural Conditions</b>	*Belasco, (2007). The cost of Iraq, Afghanistan, and other global war on terror operations since 9.11.	P	7		X			
	*Hines, Goodwin, (2014). Factors affecting help seeking for mental health problems after deployment to Iraq and Afghanistan.	A	0	X				
	*Hoge, Castro, (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care.	A	10		X			
	*Hoge, Terhakopian, (2007). Association of PTSD with somatic symptoms, health care visits, and absenteeism among Iraq war veterans.	A	7		X			
	*Huntington, (1981). The soldier and the state: The theory and politics of civil-military relations.	B	33					X
	*Keane, Wolfe, (1990). Comorbidity in PTSD: An analysis of community and clinical studies.	A	24					X
	*Lee, Lin, (2008). Contact of mental and non-mental health care providers prior to suicide in Taiwan: A population-based study.	A	6		X			

<b>Tenet</b>	<b>Literature Reviewed</b>	<b>Pub Type</b>	<b>Age</b>	<b>&lt;5</b>	<b>&lt;10</b>	<b>&lt;15</b>	<b>&lt;20</b>	<b>20+</b>
	*Magruder, Frueh, (2004). PTSD symptoms, demographic characteristics, and functional status among veterans treated in VA primary care clinics.	A	10		X			
	*McNally, Frueh, (2013). Why are Iraq and Afghanistan war veterans seeking PTSD disability compensation at unprecedented rates?	A	1	X				
	*Pinker, (2011). The better angels of our nature: why violence has declined.	A	3	X				
	*Pitkala, Isometsa, (2000). Elderly suicide in Finland.	A	14				X	
	*Port, Engdahl, (2001). A longitudinal and retrospective study of PTSD among older prisoners of war.	A	13				X	
	*Tyson, (2008). Combat stress may cost U.S. up to \$6 billion.	A	6			X		
<b>Sphere of Application</b>	*Foa, Franklin, (2002). Context in the clinic: How well do cognitive-behavioral therapies and medications work in combination?	A	12				X	
	*Foa, Keane, (2009). Effective treatments for PTSD.	B	5	X				
	*Peleg, Shalev, (2006) Longitudinal studies of PTSD: Overview of findings and methods.	A	8			X		
	*Schnurr, Lunney, (2003). A descriptive analysis of PTSD chronicity in vietnam veterans.	A	11				X	
	*Seal, Bertenthal, (2007). Bringing the war back home.	A	7			X		
	*Seal, Maguen, (2010). VA mental health	A	4	X				

Tenet	Literature Reviewed	Pub Type	Age	<5	<10	<15	<20	20+
	services utilization in the first year of receiving new mental health diagnoses.							
	*Seal, Metzler, (2009). Trends and risk factors for mental health diagnoses.	A	5	X				
	*Sessums, Jackson, (2013). Care of returning military personnel.	A	1	X				
	*Stecker, Fortney, (2010). Engagement in mental health treatment among veterans returning from Iraq.	A	4	X				
	*Veterans for Commom Sense (2012). Iraq and Afghanistan impact report, January 2012.	W	2	X				
	*Zeiss, Karlin, (2008). Integrating mental health and primary care services.	A	6		X			

Totals	%	N=129	<5	<10	<15	<20	20+
A: Article	77%	99	20	39	23	11	8
B: Book	9%	11	2	1	2	2	4
bu: Bulletin	3%	4	0	3	0	0	1
P: Paper presented at association or conference	2%	2	1	1	0	0	0
R: Report	4%	5	4	1	0	0	0
W: Website	5%	6	5	1	0	0	0

Currency of Citations	N	% of Total
5 years or less (<5)	32	25%
Greater than 5 years to ≤ to 10 years (<10)	46	36%
Greater than 10 to ≤ to 15 years (<15)	25	19%
Greater than 15 to ≤ 20 years (<20)	13	10%
Greater than 20 years (20+)	13	10%

## **APPENDIX B: SURVEY INSTRUMENT**

## Give An Hour Survey

### Telephone Script:

This study is being sponsored by an organization whose mission is to develop a national network of volunteer providers capable of responding to both acute and chronic conditions that are a result of military interaction. In their efforts to ensure that troops who have served in war and their families are provided the required services and assistance once they return home, we are assessing various communities to understand first if appropriate services and resources are available and then to ensure that these resources are easily accessible. Your feedback is critical regardless of your current military status.

The following questions apply to any projects or programs that provide resources and services for military troops and their families following deployment to war. We are interested in assessing your community's current ongoing efforts and the coordination between these efforts.

### Survey Questions:

1. For categorization purposes, what is your current military status? (Please select one)

I am currently an active service member (Includes Reserves and National Guard)

I am a family member of an active service member

I am a veteran

I am a family member of a veteran

Neither I nor anyone in my immediate family has served in the military

2. What is your age?
  - A. 18-30 years
  - B. 31-55 years
  - C. 55-64 years
  - D. 65 and older





Please indicate the extent to which you agree or disagree with the following statements concerning <b>coordination between organizations</b> and community support.	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know
11. Nonprofit and veterans service organizations that provide services to returning veterans and their families work well together.						
12. There is a great deal of coordination across nonprofit and veterans service organizations in providing services to returning veterans and their families.						
13. There is effective collaboration between agencies that serve service members and their families.						
14. There is strong feeling of community support for returning veterans and their families.						
15. There are adequate community resources for returning veterans and their families.						
16. Key people at all organizations that provide services to returning veterans/families know one another.						

Please indicate the extent to which you agree or disagree with the following statements concerning <b>awareness</b> and communication within the community.	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know
17. I am confident I understand the issues that service members and their families face before and during deployment.						
18. I am confident I understand the issues that service members and their families face post deployment.						
19. The amount of communication among members of the community concerning available resources and services is sufficient (calendars, meetings, newsletters, etc.).						
20. The amount of communication <i>to service members and their families</i> concerning available resources and services is sufficient (resource guides, call centers, information and referral lines).						
21. The amount of education for <i>the community</i> about the challenges of service members and their families is sufficient (conferences, trainings, news).						
22. The amount of education for <i>the community</i> about the various resources & services that are available is sufficient (conferences, trainings, news).						

23. There is effective use of the media to promote awareness <i>to service members and their families</i> about resources and services that are available.						
24. There is effective use of the media to promote awareness <i>to the community</i> about resources and services that are available.						
25. I am confident I understand what <i>common</i> reactions to expect in most troops following deployment.						
26. I am confident I understand the signs & symptoms of more serious mental health problems such as Post Traumatic Stress Disorder (PTSD).						

Please indicate to what extent you agree or disagree with the following statements concerning <b>meeting the needs</b> within the community.	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know
27. I am satisfied that the needs of returning veterans and their families are being met.						
28. Most service members/families know about community resources & services and how to access them.						
29. Most employers know about community resources for service members and their families. (meetings, newsletters, etc.).						

30. Most colleges/students know about community resources for service members and their families.						
31. I believe the majority of service members and their families are satisfied that their needs are being met.						
32. Our community knows how to help returning troops.						
33. Our community can do more to help provide for returning troops and their families.						

34. Which of the following areas do service members, veterans, and their families need assistance? (Select all that apply)

- Financial Resources
- Employment/career
- Educational opportunity
- Child issues
- Housing
- Substance abuse
- Relationship issues
- Traumatic Brain Injury (TBI)
- Handling emotions (grief, anger, guilt, etc.)
- VA services and benefits
- Mental Health (PTSD, depression, etc.)
- Criminal Justice

35. Which type of providers do service members primarily go to for assistance in your community? (Select one.)

- Department of Defense (e.g., TRICARE, Military One Source)
- Community Based (e.g., nonprofit organizations, veteran service organizations, faith based organizations)
- Department of Veterans Affairs
- Military base / instillation (e.g., Family Readiness Group, Relocation Readiness Program, Family Advocacy Program)
- State and local government (e.g., community mental health centers)
- Other, please specify
- Don't Know

Demographic Questions

36. Please indicate your gender.

Male

Female

Prefer not to answer

37. Which of the following best describes your highest level of education?

Less than High School

Completed some High School

High School Graduate

Completed some College

College Graduate

Advanced Degree Work

Prefer not to answer

38. What is your current employment status?

Employed for wages

Self-employed

Out of work and looking for work

Out of work but not currently looking for work

A homemaker

A student

Retired

Unable to work

Prefer not to respond

39. Which of the following best describes your annual household income?

Under \$50,000

\$50,000 to under \$75,000

\$75,000 to under \$100,000

\$100,000 and over

Prefer not to answer

40. What is your Ethnic background?

African American

Caucasian

Hispanic

Asian

Other \_\_\_\_\_ (Specify)

Prefer not to answer

## **APPENDIX C: REPRODUCTION OF VERBAL COMMUNICATION**

From: Susan Stapp

Date: January 26, 2014

Dear Joseph T. Magallanes:

This letter is to confirm our recent conversation. I am completing a doctoral dissertation at the University of Central Florida entitled:

POST-TRAUMATIC STRESS DISORDER:  
THE AFFECT OF AGE AND MILITARY STATUS  
ON THE VETERAN'S AWARENESS OF LOCALLY AVAILABLE  
COMMUNITY MENTAL HEALTH RESOURCES

The excerpt to be reproduced is as follows:

For me, Iraq 2003/2004 was just another deployment; I've been stationed from South Korea all the way to Fort Bragg, NC. Going to Iraq, especially to Camp Victory, was a safe assignment, just doing intelligence work. What I didn't count on was being reassigned to the 519<sup>th</sup> Alpha Company at forward operating base (FOB) Brassfield-Mora. That was way outside the wire, living in remote locations, no running water, no electricity, no showers and even too hostile for mail delivery. Mortar fire was an everyday occurrence at FOB Brassfield-Mora. My buddies that had been there a while could hear the incoming whistles of mortar fire closing in on the FOB throughout the night. My job was to help with the team's security, though I did participate in 'fear-up' interrogations of captured insurgents. This kind of stuff allowed military personnel to take advantage of the subjects existing fears to escalate the interrogation process and potentially obtain information in a more efficient manner. It was like playing Cowboys and Indians with no rules of engagement.

By January 2005, I had transferred from Alpha Company to Bravo Company 519<sup>th</sup> further north in Kirkuk. During this time vehicle borne improvised explosive devices (VBIEDs) were everywhere. We conducted convoys in the local area on a regular basis. Rules of engagement (ROE) while on patrol were, 'Shout (a warning), Show (your weapon), Shove (the person/car out of the way), and then Shoot.' One day on convoy, a black car approached us from the right. I was lead driver of the convoy. I spun around, made eye contact with the male driver, but he continued to close ground. I shouted for him to turn around. He got so close to my HUMVEE that my gunner was unable to react. So, I took matters into my own hands and commenced to ram the HUMVEE into the smaller car. I just shoved it out of the way of the way. I'll never forget the site of the entire family inside of the black sedan as I rammed it into the wall. Husband, wife, and little kids. I knew in an instant that this vehicle was not a VBIED. But it was an instant too late. I felt terrible, miserable, and guilty. My rules of engagement told me to roll down my window and throw business card with the phone number of United States Public Affairs where the victims could obtain 'compensation for their damages'. And the patrol rolled on.

Convoying was always tension filled; constantly dodging the thoughts of "this might be an ied", "this could kill me", "this driver/car might blow up right next to me." I felt that, every day I was on the road, it felt like, this could be the day' My body would tense up, my heart would pound in my ears. All of us took any extreme to ensure the safe return of our patrol to the FOB. I was driving the lead vehicle of our convoy, and that made me feel like I had God status, like I was the king of the road.

On one convoy, we reached a fork in the roadway, and chose to go left. Almost immediately, an ied on the right side of the fork detonated. There is not a day that goes by that the thought of that near miss doesn't bother me.

Nowadays, back in a non-combat environment, the mundane task of driving a car has taken on an entirely different meaning for me. The mere task of stepping into a car, turning the key and going from point A to point B creates anxiety, my palms get sweaty, my heart pounds in my ears. Just seeing miscellaneous objects on the side of the road gets my heart racing and I become nervous and anxious. Riding 'shot gun' has taken on a whole different meaning. I'm no longer king of the road. In fact, the road

now terrifies me.

Joseph T. Magallanes  
31 year old male Staff Sergeant  
First Deployment from Nov. 2004-Nov. 2005  
Total time in service, Aug. 13, 2001 - Mar. 01, 2012

The requested permission extends to any future versions and editions of my dissertation, including non-exclusive world rights in all languages. These rights will in no way restrict republication of the material in any other form by you or by others authorized by you. Your signing of this letter will also confirm that you own the copyright to the above-described material.

If these arrangements meet with your approval, please sign this letter where indicated below and return it to me. Thank you for your attention in this matter.

Sincerely,

Susan C. Stapp

---

PERMISSION GRANTED FOR THE USE REQUESTED ABOVE:

By: Joseph T. Magallanes  
Joseph T. Magallanes

Date: 26 JAN. 2014



## **APPENDIX D: PERMISSION TO USE DATA SET**



Barbara Van Dahlen, Ph. D.  
Founder & President

P.O. Box 5918  
Bethesda, MD  
20824

[bvandahlen@giveanhour.org](mailto:bvandahlen@giveanhour.org)  
[www.giveanhour.org](http://www.giveanhour.org)

March 21, 2013

Dear Dr. Brophy-Ellison:

This document briefly summarizes our prior discussions about Give an Hour (GAH) sharing with you the original data set from our Fayetteville and Hamptons Roads Community Blueprint demonstration sites. The original data set includes two surveys completed in each community by a number of community based organizations: one set of data collected at the beginning of each demonstration project, and one collected a year after the projects were in place. The original data set also includes two surveys we administered to veterans and family members who attended Community Blueprint events in these two communities about a year after these projects had begun. Finally, GAH collected two phone surveys of several hundred community members in each community yielding a total of eight surveys.

We understand that sharing this data with you will enable three of your graduate students to complete their dissertations. We also understand that Give an Hour may benefit from learning the conclusions your students draw from their analyses of the data. It is our understanding that you have requested background information related to our rationale for choosing each location as a demonstration site, and other anecdotal information about the events or communities that may be relevant and helpful for your analysis of this data, which we will provide via phone meeting.

We are pleased to be able to share our original data set, consisting of the eight surveys. We will provide copies of all data while maintaining the original versions. I would request authorship on all presentations and publications generated by this data—not as first author, but as a co-author. This will allow me to maintain oversight of the representation of Give an Hour's work. We also maintain the right to use our data as needed while the students are working on their dissertations.

We hope that these details accurately reflect the nature of the partnership we have discussed, while also assuring you of our level of commitment to your students. I would appreciate your signature below indicating that these details meet your expectations. If you have any concerns that have not been addressed above, please contact me at your earliest convenience and I would be happy to address these before we move forward.

Sincerely,

Barbara Van Dahlen, Ph.D

## LIST OF REFERENCES

- Active veterans by the numbers. (2014). Retrieved October 16, 2013, from <http://www.infoplease.com/spot/veteranscensus1.html>
- Alston, P., & Shamsi, H. (2010). A killer above the law? *The Guardian*. Retrieved from [www.theguardian.com/.../2010/feb/.../afghanistan-drones-defence-killing](http://www.theguardian.com/.../2010/feb/.../afghanistan-drones-defence-killing)
- American Psychiatric Association. (1980). Diagnostic and statistical manual of mental disorders (3rd ed.). *Washington, DC*.
- American Psychiatric Association. (1994). Diagnostic and statistical manual of mental health disorders (4<sup>th</sup> ed.). *Washington, DC*.
- Appleton, V. (2001). Avenues of hope: Art therapy and the resolution of trauma. *Art Therapy: Journal of the American Art Therapy Association*, 18(1), 6-13.
- Aukstakalnis, S., & Blatner, D. (1992). *Silicon mirage; the art and science of virtual reality*. Peachpit Press.
- Beck, A. T. (2005). The current state of cognitive therapy: A 40-year retrospective. *Archives of General Psychiatry*, 62(9), 953 - 939.
- Beile, P. M., Boote, D. N., & Killingsworth, E. K. (2004). A microscope or a mirror?: A question of study validity regarding the use of dissertation citation analysis for evaluating research collections. *The Journal of Academic Librarianship*, 30(5), 347-353.
- Belasco, A., (2007). The cost of Iraq, Afghanistan, and other global war on terror operations since 9.11. *Washington, DC: Congressional Research Service*.
- Blanchard, E., Jones-Alexander, J., Buckley, T., & Forneris, C. (1996). Psychometric properties of the PTSD checklist (PCL). *Behaviour Research and Therapy*, 34(8), 669-673.
- Boote, D. N., & Beile, P. (2005). Scholars before researchers: On the centrality of the dissertation literature review in research preparation. *Educational Researcher*, 34(6), 3.
- Bradley, R., Greene, J., Russ, E., (2005). A multidimensional meta-analysis of psychotherapy for PTSD. *American Journal of Psychiatry*, 162, 214-227.
- Breslau, N., Wilcox, H., Storr, C., Lucia, V., Anthony, J. (2004). Trauma exposure and posttraumatic stress disorder: A study of youths in urban America. *Journal of Urban Health*, 81, 530-544.

- Carlier, I., Lamberts, R., & Gersons, B. (1995). Risk factors for posttraumatic stress symptomatology in police officers: A prospective analysis. *Journal of Nervous and Mental Disease, 185*, 498-506.
- Chapman, L., Morabito, D., & Schreier, H. (2001). The effectiveness of art therapy interventions in reducing post-traumatic stress disorder (PTSD) symptoms in pediatric trauma patients. *Art Therapy, 18*(2), 100-104.
- Cohen, M. L., & Quinter, J. L. (1996). The derailment of railway spine: A timely lesson for post-traumatic fibromyalgia syndrome. *Pain Reviews, 3*, 181-202.
- Conwell, Y., Duberstein, P., & Caine, E. (2002). Risk factors for suicide in later life. *Society of Biological Psychiatry, 52*, 193 – 204.
- Cox, B., Mota, N., Clara, I., Asmundson, G. (2008). The symptom structure of posttraumatic stress disorder in the National Comorbidity Replication Survey. *Journal of Anxiety Disorders, 22*, 1523-1528.
- Cukor, J., Olden, M., Lee, F., & Difede, J. (2010). Evidence-based treatments for PTSD, new directions, and special challenges. *Annals of the New York Academy of Sciences, 1208*(1), 82-89.
- Delahanty, D., Herberman, H., Craig, K. (1997). Acute and chronic distress and post traumatic stress disorder as a function of responsibility for serious motor vehicle accidents. *Journal of Consulting and Clinical Psychology, 65*, 560-567.
- Department of Veterans Affairs. (2010). Analysis of VA health care utilization among Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) Veterans (pp. 1-18). *Washington, D.C.*
- Dewey, L. (2004). War and redemption: Treatment and recovery in combat-related posttraumatic stress disorder. *Ashgate Publishing Ltd.*
- Difede, J. A., Cukor, J., Jayasinghe, N., Patt, I., Jedel, S., Spielman, L., Hoffman, H. G. (2007). Virtual reality exposure therapy for the treatment of posttraumatic stress disorder following September 11, 2001. *Journal of Clinical Psychiatry.*
- Dobson, K., & Khatri, N. (2000). Cognitive therapy: Looking backward, looking forward. *Journal of Clinical Psychology, 56*(7), 907-923.
- Dorman, J. (1976). ROTC cadet attitudes: A product of socialization or self-selection? *Journal of Political and Military Sociology, 4*, 203–216.

- Ferrada-Noli, M., Asberg, M., Ormstad, K., Lundin, T., & Sundbom, E. (1998). Suicidal behavior after severe trauma. Part 1: PTSD diagnoses, psychiatric comorbidity, and assessments of suicidal behavior. *Journal of Traumatic Stress, 11*(1), 103-112.
- Foa, E., Franklin, M., & Moser, J. (2002). Context in the clinic: How well do cognitive-behavioral therapies and medications work in combination? *Biological Psychiatry, 52*(10), 987-997.
- Foa, E. B., Davidson, J. R. T., & Frances, A. (1999). Treatment of posttraumatic stress disorder. *Physicians Postgraduate Press*.
- Foa, E. B., & Kozak, M. J. (1986). Emotional processing of fear: Exposure to corrective information. *Psychological Bulletin, 99*(1), 20.
- Foa, E., Hembree, E., & Rothbaum, B. (2007). Prolonged Exposure Therapy for PTSD: Emotional Processing of Traumatic Experiences, Therapist Guide. *Oxford University Press*. New York.
- Foa, E., Keane, T., Friedman, M., & Cohen, J. (2009). Effective treatments for PTSD: Practice guidelines from the International Society for Traumatic Stress Studies. *The Guilford Press*. New York.
- Frederick, C. J. (1985). Children traumatized by catastrophic situations. *Post-Traumatic Stress Disorder in Children, 73-99*.
- Friedman, M. (2013). VA starts campaign to raise PTSD awareness. Retrieved from <http://www.texvet.org/postings/va-starts-take-step-campaign--raise-ptsd-awareness>
- Friedman, M. (2005). Veterans' mental health in the wake of war. *New England Journal of Medicine, 352*, 1287 – 1290.
- Frueh, B., Turner, S., Beidel, D., & Cahill, S. (2001). Assessment of social functioning in combat veterans with PTSD. *Aggression and Violent Behavior, 6*, 79-90.
- Gawande, A. (2004). Casualties of war – Military care for the wounded from Iraq and Afghanistan. *New England Journal of Medicine, 351*, 2471 – 2475.
- Gold, P., Engdahl, B., Eberly, R., Blake, R., Page, W., & Frueh, B. (2000). Trauma exposure, resilience, social support, and PTSD construct validity among former prisoners of war. *Social Psychiatry and Psychiatric Epidemiology, 35*, 36-42.
- Goldstein, J. (2011). Winning the war on war: The decline of armed conflict worldwide. *New York: Dutton*.

- Gray, M., Maguen, S., & Litz, B. (2004). Acute psychological impact of disaster and large-scale trauma: Limitations of traditional interventions and future practice recommendations. *Prehospital and Disaster Medicine, 19*, 64–72.
- Guerra, V., & Calhoun, P. (2011). Examining the relation between posttraumatic stress disorder and suicidal ideation in an OEF/OIF veteran sample. *Journal of Anxiety Disorders, 25*(1), 12-18.
- Gunter, T. D., Chibnall, J. T., Antoniak, S. K., Philibert, R. A., & Black, D. W. (2013). Childhood trauma, traumatic brain injury, and mental health disorders associated with suicidal ideation and suicide-related behavior in a community corrections sample. *Journal of the American Academy of Psychiatry and the Law Online, 41*(2), 245-255.
- Fischer, H. (2013). U.S. military casualty statistics: Operation New Dawn, Operation Iraqi Freedom, and Operation Enduring Freedom. *Congressional Research Service*, Hawton, K., & van Herringen, K. (2009). Suicide. *Lancet, 373*, 1372 – 1381.
- Hickling, E., Blanchard, E., Buckley, T., Taylor, A. (1999). Effects of attribution of responsibility for motor vehicle accidents on severity of PTSD symptoms, ways of coping, and recovery over six months. *Journal of Trauma and Stress, 12*, 345-353.
- Hines, L., Goodwin, L., Jones, M., Hull, L., Wessely, S., Fear, N., & Rona, R. (2014). Factors affecting help seeking for mental health problems after deployment to Iraq and Afghanistan. *Psychiatric Services, 65*(1), 98-105.
- Hjorland, B. (1988). Information retrieval in psychology: Implications of a case study. *Behavioral and Social Sciences Librarian, 6*(3-4), 39-64.
- Hoge, C., Castro, C., Messer, S., McGurk, D., Cotting, D., & Koffman, R., (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *New England Journal of Medicine, 351*, 13 – 22.
- Hoge, C., Terhakopian, A., Castro, C., Messer, S., & Engel, C. (2007). Association of posttraumatic stress disorder with somatic symptoms, health care visits, and absenteeism among Iraq war veterans. *American Journal of Psychiatry, 164*, 150 – 153.
- Hosek, J., Kavanagh, J., & Miller, L. (2008). How deployments affect service members. *Santa Monica, CA: Rand Corporation*.
- Howarth, R. A. (2011). Concepts and controversies in grief and loss. *Journal of Mental Health Counseling, 33*(1), 4-10.
- Huntington, S. (1981). The soldier and the state: The theory and politics of civil-military relations. *Belknap Press*.

- Institute of Medicine (US). Committee on Treatment of Posttraumatic Stress Disorder. (2008). Treatment of posttraumatic stress disorder: An assessment of the evidence. *National Academies Press*.
- Johnson, D., Fontana, A., Lubin, H., Corn, B., Rosenbeck, R. (2004). Long-term course of treatment-seeking Vietnam veterans with posttraumatic stress disorder: Mortality, clinical condition, and life satisfaction. *Journal of Nervous and Mental Disorders*, *192*, 35-41.
- Karlin, B. E., Ruzek, J. I., Chard, K. M., Eftekhari, A., Monson, C. M., Hembree, E. A., Foa, E. B. (2010). Dissemination of evidence-based psychological treatments for posttraumatic stress disorder in the Veterans Health Administration. *Journal of Traumatic Stress*, *23*(6), 663-673. doi: 10.1002/jts.20588
- Keane, T., & Wolfe, J. (1990). Comorbidity in posttraumatic stress disorder: An analysis of community and clinical studies. *Journal of Applied Social Psychology*, *20*, 1776-1788.
- Kemp, J., & Bossarte, R. (2013) Suicide date report: 2012. *Department of Veterans Affairs, Mental Health Services, Suicide Prevention Program*.
- Kelleher, I., Corcoran, P., Keeley, H., Wigman, J. T., Devlin, N., Ramsay, H., & Hoven, C. (2013). Psychotic symptoms and population risk for suicide attempt: A prospective cohort study. *JAMA Psychiatry*, *70*(9), 940-948.
- Kessler, R., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry*, *52*, 1048-1060.
- Klap, R., Unroe, K., & Unutzer, J. (2003). Caring for mental illness in the United States: A focus on older adults. *American Journal of Geriatric Psychiatry*, *11* (5), 517 – 524.
- Koenen, K., Stellman, J., Stellman, S., Sommer, J. (2003). Risk factors for course of posttraumatic stress disorder among Vietnam veterans: A 14-year follow-up of American Legionnaires. *Journal of Consulting and Clinical Psychology*, *71*, 980-986.
- Kukla, R., Schlenger, W., Fairbank, J., Hough, R., Jordan, B., Marmar, C., et al. (1990). Trauma and the Vietnam war generation: Findings from the National Vietnam Veterans Readjustment Study. *New York: Brunner/Mazel*.
- Lasiuk, G. C, & Hegadoren, K. M. (2006). Posttraumatic stress disorder part I: Historical development of the concept. *Perspectives in Psychiatric Care*, *42*(1), 13-20.
- Lee, H., Lin, H., & Liu, T. (2008). Contact of mental and non-mental health care providers prior to suicide in Taiwan: A population-based study. *Canadian Journal of Psychiatry*, *53*(6), 377 – 383.

- Leland, A., & Oboroceanu, M. (2010). American war and military operations casualties: lists and statistics. *Washington, DC: Congressional Research Service.*
- Magallanes, J. (2012, July). Personal Interview.
- Magruder, K., Frueh, B., Knapp, R., Johnson, M., Vaughan, J., Carson, T., & Hebert, R. (2004). PTSD symptoms, demographic characteristics, and functional status among veterans treated in VA primary care clinics. *Journal of Traumatic Stress, 17*(4), 293-301.
- Martin, R. (2011). Report: High level of 'burnout' in US drone pilots. *National Public Radio.*
- Maslowski, P. (1990). Army values and American values. *Military Review, 70*, 10-23.
- Matlin, M. (1995). *Psychology*, 2nd ed., Harcourt Brace, Fort Worth, TX.
- Mayeux, R., Drossman, D., & Basham, K. (2008). The stress response. Gulf war and health: Physiologic, psychologic, and psychosocial effects of deployment-related stress. *The National Academies Press. Washington, DC.*
- McNally, R. J. (2012). Psychiatric disorder and suicide in the military, then and now: Commentary on Frueh and Smith. *Journal of Anxiety Disorders, 26*, 776-778.
- McNally, R., & Frueh, B., (2013). Why are Iraq and Afghanistan war veterans seeking PTSD disability compensation at unprecedented rates? *Journal of Anxiety Disorders, 27*, 520-526.
- Mental Health Advisory Team (MHAT), V. (2008). Operation Iraqi Freedom 06-08: Iraq, Operation Enduring Freedom 8: Afghanistan. *Washington, DC: Office of the Surgeon Multi-National Force-Iraq Office of the Command Surgeon and Office of the Surgeon General United States Army Medical Command.*
- Milliken, C., Auchterlonie, J., & Hoge, C. (2007). Longitudinal assessment of mental health problems among active and reserve component soldiers returning from the Iraq war. *Journal of the American Medical Association, 298*, 2141– 2148.
- Mills, C. W., & Wolfe, A. (2000). *The power elite. Oxford University Press.*
- Monson, C., Schnurr, P., Resick, P., Friedman, M., Young-Xu, Y., & Stevens, S. (2006). Cognitive processing therapy for veterans with military-related posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology, 74*(5), 898.
- National Center for Posttraumatic Stress Disorder. (2010). What is PTSD? Retrieved September 5, 2010, from [http://www.ncptsd.va.gov/ncmain/information/what\\_is.jspU.S](http://www.ncptsd.va.gov/ncmain/information/what_is.jspU.S).



- National Collaborating Centre for Mental Health (Great Britain). (2005). Post-traumatic stress disorder: The management of PTSD in adults and children in primary and secondary care. *Gaskell and the British Psychological Society*.
- National Defense Authorization Act for Fiscal Year 2008. (2008). Retrieved October 26, 2013, from <http://www.govtrack.us/congress/bills/110/hr4986>
- Nemeroff, C., Bremner, J., Foa, E., Mayberg, H., North, C., & Stein, M. (2006). Posttraumatic stress disorder: A state-of-the-science review. *Journal of Psychiatric Research, 40*(1), 1-21.
- O’Kearney, R., Perrott, K. (2006). Trauma narratives in posttraumatic stress disorder: A review. *Journal of Traumatic Stress, 19*(1), 81-93.
- Okie, S. (2005). Traumatic brain injury in the war zone. *New England Journal of Medicine, 352*, 2043 – 2047.
- Payne, S., Hill, J., & Johnson, D. (2011). Suicide and homicide risk management: Rationale and suggestions for the use of unit watch in garrison and deployed settings. *The Federal Practitioner*.
- Peleg, T., & Shalev, A. (2006) Longitudinal studies of PTSD: Overview of findings and methods. *CNS Spectrums, 11*(8), 589.
- Pinker, S. (2011). The better angels of our nature: why violence has declined. *Journal of Moral Education, 42*, 136.138.
- Pitkala, K., Isometsa, E., & Henriksson, M. (2000). Elderly suicide in Finland. *International Psychogeriatrics, 12*(2), 209 – 220.
- Pols, H., & Oak, S. (2007). War & military mental health: The US psychiatry response in the 20th century. *American Journal of Public Health, 97*, 2132-2142.
- Port, C., Engdahl, B., & Frazier, P. (2001). A longitudinal and retrospective study of PTSD among older prisoners of war. *American Journal of Psychiatry, 158*, 1474-1479.
- Powers, R., Kniesner, T., Croghan, T. (2002). Psychotherapy and pharmacotherapy in depression. *Journal of Mental Health, 5*, 153-161.
- Prigerson, H., Maciejewski, P., & Rosenbeck, R. (2001). Combat trauma: Trauma with highest risk of delayed onset and unresolved posttraumatic stress disorder symptoms, unemployment, and abuse among men. *Journal of Nervous and Mental Disease, 189*, 99-108.

- Regan, J., Hagwood, T., Hamer, G., & Wright, A. (2006). Posttraumatic stress disorder following military deployment in Iraq and Afghanistan. *Tennessee Medicine, 99*(2), 40.
- Resick, P., Monson, C., & Chard, K. (2006). Cognitive processing therapy – Veteran/military version. *Boston: National Center for PTSD, Women's Health Science Division, VA Boston Healthcare System.*
- Resick, P., Nishith, P., Weaver, T., Astin, M., & Feuer, C. (2002). A comparison of cognitive-processing therapy with prolonged exposure and a waiting condition for the treatment of chronic posttraumatic stress disorder in female rape victims. *Journal of Consulting and Clinical Psychology, 70*(4), 867.
- Resick, P. & Schnicke, M. (1993). Cognitive processing therapy for rape victims: A treatment manual. *Sage. Thousand Oaks, CA.*
- Rizzo, A. A., Schultheis, M., Kerns, K. A., & Mateer, C. (2004). Analysis of assets for virtual reality applications in neuropsychology. *Neuropsychological Rehabilitation, 14*(1-2), 207-239.
- Rizzo, A. A., Difede, J., Rothbaum, B. O., Johnston, S., McLAY, R. N., Reger, G., Pair, J. (2009). VR PTSD exposure therapy results with active duty OIF/OEF combatants. Paper presented at the *Medicine Meets Virtual Reality, 17* 277-282.
- Rothbaum, B., Hodges, L., Alarcon, R., Ready, D., Shahar, F., Graap, K., & Wills, B. (1999). Virtual reality exposure therapy for PTSD Vietnam veterans: A case study. *Journal of Traumatic Stress, 12*(2), 263-271.
- Rothbaum, B. O., Hodges, L. F., Ready, D., Graap, K., & Alarcon, R. D. (2001). Virtual reality exposure therapy for Vietnam veterans with posttraumatic stress disorder. *Journal of Clinical Psychiatry.*
- Rudenshine, S., Galea, S., Ahern, J., Felton, C., & Vlahov, D. (2003). Awareness and perceptions of a communitywide mental health program in New York city after September 11. *Psychiatric Services, 54*(10), 1404-1406.
- Saxe, G., Stoddard, F., Hall, E. (2005). Pathways to PTSD. Part 1: Children with burns. *American Journal of Psychiatry, 162*, 1299-1304.
- Sanchez-Vives, M. V., & Slater, M. (2005). From presence to consciousness through virtual reality. *Nature Reviews Neuroscience, 6*(4), 332-339.
- Schneiderman, A., Braver, E., & Kang, H. (2008). Understanding sequelae of injury mechanisms and mild traumatic brain injury incurred during the conflicts in Iraq and Afghanistan: Persistent postconcussive symptoms and posttraumatic stress disorder. *American Journal of Epidemiology, 167*, 1446 – 1452.

- Schnurr, P., Friedman, M., Engel, C., Foa, E., Shea, M., Chow, B., et al. (2007). Cognitive behavioral therapy for posttraumatic stress disorder in women: A randomized controlled trial. *Journal of the American Medical Association*, *297*, 820 – 830.
- Schnurr, P., Lunney, C., Sengupta, A., & Waelde, L. (2003). A descriptive analysis of PTSD chronicity in vietnam veterans. *Journal of Traumatic Stress*, *16*(6), 545-553.
- Schnurr, P., Spiro, A., Vielhauer, M., Findler, M., & Hamblen, J. (2002). Trauma in the lives of older men: Findings from the Normative Aging Study. *Journal of Clinical Geropsychology*, *8*, 175-187.
- Seal, K., Bertenthal, D., Miner, C., Sen, S., & Marmar, C. (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*, 476–482.
- Seal, K., Maguen, S., Cohen, B., Bertenthal, D., Marmar, C., et al. (2010). VA mental health services utilization in Iraq and Afghanistan veterans in the first year of receiving new mental health diagnoses. *Journal of Traumatic Stress*, *23*, 5 – 16.
- Seal, K., Metzler, T., Gima, K., Bertenthal, D., Maguen, S., & Marmar, C. (2009). Trends and risk factors for mental health diagnoses among Iraq and Afghanistan veterans using Department of Veterans Affairs Healthcare, 2002–2008. *American Journal of Public Health*, *99*, 1651– 1658.
- Sessums, L., & Jackson, J. (2013). Care of returning military personnel. *Annals of Internal Medicine*, *159*(1), ITC1-1.
- Shalev, A., Freedman, F., Peri, T. (1998). Prospective study of posttraumatic stress disorder and depression following trauma. *American Journal of Psychiatry*, *155*, 630-637.
- 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.
- Shelby, J. S. (2000). Brief therapy with traumatized children: A developmental perspective. *American Psychological Association*.
- Sherman, M., Blevins, D., Kirchner, J., Ridener, L., & Jackson, T. (2008). Key factors involved in engaging significant others in the treatment of Vietnam veterans with PTSD. *Professional Psychology: Research and Practice*, *39*(4), 443 – 450.
- Siegel, D. (1999). The developing mind. *Guilford Press New York*.
- Simon, G., Ludman, E., Tutty, S., Operskalski, B., & Von Korff, M. (2004). Telephone psychotherapy and telephone care management for primary care patients starting

- antidepressant treatment: A randomized controlled trial. *Journal of the American Medical Association*, 292, 935–942.
- Smith, E., Craig, T., Ganoczy, D., Walters, H., & Vanenstein, M. (2011). Treatment of veterans with depression who die from suicide: Timing and quality of care at last VHA visit. *Journal of Clinical Psychiatry*, 72(5), 622 – 629.
- Spiro, A., Schnurr, P., & Aldwin, C. (1994). Combat-related posttraumatic stress disorder symptoms in older men. *Psychology and Aging*, 9, 17-26.
- Stecker, T., Fortney, J., Hamilton, F., Sherbourne, C. D., & Ajzen, I. (2010). Engagement in mental health treatment among veterans returning from Iraq. *Patient Preference and Adherence*, 4, 45.
- Tanielian, T., & Jaycox, L., (2008). Invisible wounds of war: psychological and cognitive injuries, their consequences, and services to assist recovery. *Rand Corporation*.
- Toomey R., Kang H., Karlinsky J., Baker D., Vasterling J., Alpern R., et al.(2007). Mental health of U.S. Gulf War veterans 10 years after the war. *British Journal of Psychiatry*, 190, 385–393.
- Tyson, A. S. (2008, April 18). Combat stress may cost U.S. up to \$6 billion. *The Washington Post*, p. A18.
- Van Etten, M. L., & Taylor, S. (1998). Comparative efficacy of treatments for post-traumatic stress disorder: A meta-analysis. *Clinical Psychology and Psychotherapy*, 5, 126 – 144.
- Veterans for Common Sense (2012). Iraq and Afghanistan impact report, January 2012. Retrieved June 28, 2013 from <http://veteransforcommonsense.org/wp-content/uploads/2012/01/VCS.IAIR.JAN.2012.pdf>.
- Warden, D. (2006). Military TBI during the Iraq and Afghanistan wars. *The Journal of Head Trauma Rehabilitation*, 21(5), 398-402.
- Weisaeth, L., & Eitinger, L. (1991). Research on PTSD and other post-traumatic reactions I: European literature. *PTSD Research Quarterly*, 2(2), 1-2, 7.
- Wicklund, R. A., & Brehm, J. W. (2013). Perspectives on cognitive dissonance. *Psychology Press*.
- Wright, K., Huffman, A., Adler, A., & Castro, C. (2002). Psychological screening program overview. *Military Medicine*, 167.

- Yehuda, R., Kahana, B., Schmeidler, J., Southwick, S., Wilson, S., & Giller, E. (1995). Impact of cumulative lifetime trauma and recent stress on current posttraumatic stress disorder symptoms in Holocaust survivors. *American Journal of Psychiatry*, *152*, 1815-1818.
- Zatzick, D., Marmar, C., Weiss, D., Browner, W., Metzler, T., Golding, J., et al. (1997). Posttraumatic stress disorder and functioning and quality of life outcomes in a nationally representative sample of male Vietnam veterans. *American Journal of Psychiatry*, *154*, 1690-1695.
- Zeiss, A., & Karlin, B. (2008). Integrating mental health and primary care services in the department of veterans affairs health care system. *Journal of Clinical Psychology in Medical Settings*, *15*(1), 73-78.
- Zeiss, R., & Dickman, H. (1989). PTSD 40 years later: Incidence and person-situation correlates in former POWs. *Journal of Clinical Psychology*, *45*, 80-87.