POSTTRAUMATIC GROWTH OF IRAQ AND AFGHANISTAN WAR VETERANS

A Project

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by

Mark Alan Miller

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POSTTRAUMATIC GROWTH OF IRAQ AND AFGHANISTAN WAR VETERANS

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by

Mark Alan Miller

Approved by:

____________________________, Committee Chair
Serge Lee, PhD, MSW

____________________________
Date
Student: Mark Alan Miller

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___________________________________, Graduate Coordinator

Dale Russell, Ed.D., LCSW

Date

Division of Social Work
Abstract

of

POSTTRAUMATIC GROWTH OF IRAQ AND AFGHANISTAN WAR VETERANS

by

Mark Alan Miller

Abstract. This content and mini meta-analysis synthesizes the available data of four studies on posttraumatic growth of Iraq and Afghanistan War veterans and compares it to U.S. Vietnam prisoners of war and individuals with and without trauma. Posttraumatic growth is the positive changes that can occur within a person due to experiencing a trauma. The purpose of this study was to show that Iraq and Afghanistan veterans were more likely to have posttraumatic growth than the comparison groups. While this hypothesis was not supported, this study did show that posttraumatic stress disorder was not the only outcome that may arise from Iraq and Afghanistan War veterans’ combat experiences. These veterans had positive growth in Personal Strength and Appreciation of Life as reported in four research studies that collected data from 5427 veterans using the Posttraumatic Growth Inventory (PTGI).

______________________________, Committee Chair
Serge Lee, PhD, MSW

______________________________
Date

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Also, my daughter deserves praise for being a source of strength in my life. She brings me hope that each day is better than the next. I thank her for being a wonderful daughter and a mother to my three joyful grandchildren.

Finally, I thank my brothers and sisters in the Armed Forces; those that sacrifice so much to do what needs doing.
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Chapter 1

STATEMENT OF THE PROBLEM

In June of 2009, the author of this Master’s Project sets foot on the powdery sand of Afghanistan armed with knowledge of what to expect but no experience of what war really entailed. He quickly learned that there were times of ultimate fear when rockets and mortars were coming in from the enemy. There were also times of boring routine, where every day seemed like a never-ending grind full of hard continuous work and little sleep or rest. Within his own self, he started to feel anxiety building. Anxiety began to rise around the feeling of potentially being the enemy’s next victim. This type of feeling grew as more stories of U.S. military personnel serving in the war zone were being hurt, maimed, kidnapped or killed. As a member of a Combat Control Stress Team, this author heard many unpleasant military stories while counseling soldiers that had underwent trauma. During the seven-month deployment to Afghanistan, he listened to hundreds of stories of military and civilian defense contract members witnessing, experiencing, or hearing of traumatic combat incidents. He also was witness to traumatic combat incidents and memorial services for men and women that served over there.

Once finished with the tour of duty and having returned to the United States, this Combat Stress Control Team member brought numerous traumatic and shocking stories buried deep in his heart back to America. Knowing that without exploring and sharing these deep mental images, the unpleasant experiences may someday occupy the researcher’s personal and psychological well-being. He found himself telling his stories to others which allowed him to gain an inner strength because, or even despite, of his
combat experiences. As confirmed by various researchers such as Tedeschi and Calhoun, the author of this Master’s Project discovered that trauma does not automatically lead to disorders. It can lead to growth.

There are military members who were affected by war related trauma but were able to turn these types of stressful life events into positive personal and psychological growth (Pietrzak, et al, 2010). Pietrzak and colleagues state that returned combat war veterans can utilize trauma encountered while serving in the military and turn the negative experiences into powerful, positive growth. For example, a research study conducted by Tedeschi and Calhoun in 1996, found that traumatic experiences such as post-traumatic stress disorder (PTSD) led to positive growth in areas like sense of self, relationships, spirituality, and life philosophy.

**Background of the Problem**

Various research studies have examined the effects of posttraumatic stress disorder after the trauma of combat (Milliken, Auchterlonie & Hoge, 2007; Rosenheck & Fontana, 1999; Marlowe, 2001). Within the research, there is an emphasis in clinical work on disorders to the exclusion of the positive changes as the result of trauma (Frazier, Conlon & Glazer, 2001). Further investigation into posttraumatic growth after combat experiences would help clinicians serve war veterans better.

Posttraumatic growth as it has been currently described is a fairly new. The definition of posttraumatic growth is the positive changes that can occur within a person due to experiencing a trauma (Tedeschi & Calhoun, 1996). This growth is not the same as posttraumatic stress disorder (PTSD) which has diagnostic criteria for the chronic stress
reaction to traumatic experiences (APA, 2000). It should be noted that posttraumatic growth and PTSD may be co-occurring within an individual, as there may be both positive personal growth and emotional stress after a traumatic event (Zoellner & Maercker, 2006).

Positive effects of combat trauma have been studied for past conflicts; however the definition of posttraumatic growth had not been used to describe these effects until most recently (Pietrzak, et al, 2010). One of the first studies on positive effects of combat experiences was on a sample of 149 World War II and Korean War veterans. This study found that combat experiences had positive developmental effects, such as better coping with adversity, increased self-discipline, and a broader perspective of life (Elder &Clipp, 1989). A study of German child soldiers of World War II found that they had increased growth associated with being acknowledged as survivors and more belief that the world was meaningful (Forstmeier et al., 2009). A study of 30 former Vietnam War prisoners of war has found growth in areas of a greater appreciation of life and personal strength (Feder et al., 2008). In a study of 1287 older World War II and Korean War Veterans in regard to military service, the desirable effects were more common than undesirable effects. Their military service correlated positively with combat exposure (Aldwin et al., 1994).

Since the beginning of the Afghanistan War in Oct 2001 and Iraqi War in March 2003, there have been over 2 million troops deployed to combat areas in these war zones (Nedegaard, et al, 2012; Belasco, 2009; Tanelian & Jaycox, 2008). One in six veterans returning from these wars meet criteria for PTSD, depression, or related mental health
disorders during post-deployment screenings (Hoge, et al., 2004, 2007; Miliken et al., 2007; Tanelian & Jaycox, 2008). This is a large number of veterans that will require counseling services, some for many years to come. Counselors and social workers should be sensitive to positive changes, such as self-reliance and changing life priorities when assessing Afghanistan and Iraq war veterans (Pietrzak et al, 2010). The positive growth that is fostered may help to counter deleterious effects of the veterans’ combat experiences.

**Statement of the Research Problem**

There is limited research on posttraumatic growth, especially in regard to Iraq and Afghanistan veterans’ combat experiences (Pietrzak, et al, 2010). In this thesis project, I explored posttraumatic growth of veterans. This author did a content analysis and mini meta-analysis of research articles that recently published on the use of the Posttraumatic Growth Inventory (PTGI) to assess for positive changes among the returned Iraq and Afghanistan veterans. The main objective of this research project was that Iraq and Afghanistan veterans were more likely to have posttraumatic growth than veterans that served in other wars such as the Vietnam War and from individuals with trauma not related to war.

**Study purpose.** In a time when our nation has military members fighting in two separate war zones, it is of vital interest that we understand how these combat situations affect them. This study aimed to explore the amount of posttraumatic growth that veterans of the Iraq and Afghanistan wars have experienced due to their combat deployments compared to other combat veterans and non-combat trauma victims.
The primary purpose of this study is to show that positive growth can occur in individuals exposed to trauma, in particular combat trauma. This was done by analyzing studies of Iraq and Afghanistan veterans’ responses to a posttraumatic growth survey and comparing the results to study results of other combat veterans and non-combat trauma victims. The secondary purpose is to show that posttraumatic stress disorder is not the only outcome that may arise from deployment or combat experiences. It has been shown in previous studies that growth may also be a result of trauma as well as stress disorders (Pietrzak, et al, 2010; Elder & Clipp, 1989; Forstmeier et al., 2009; Feder et al., 2008; Aldwin et al., 1994).

This information will serve our nation and the military veterans that have been exposed to combat experiences in finding a way to heal from the trauma. This information will also help counselors and social workers to facilitate this healing process within these veterans.

**Theoretical framework.** The theoretical perspective of posttraumatic growth utilized and examined for this Master’s project was positive psychology. Positive psychology emphasizes the promotion of positive functioning in individuals by developing interventions in psychological research and practice to build positive emotion, engagement, meaning, and better relationships among people (Seligman & Fowler, 2011; Joseph & Wood, 2010). This theoretical perspective has been an outgrowth of humanistic theory in that individuals are inherently motivated towards growth (Joseph & Wood, 2010; Joseph & Linley, 2005, 2006). The aim of positive psychology is to broaden the
scope of psychology and become a supplement to the practice of relieving suffering, not a replacement (Seligman & Fowler, 2011).

When applied to the treatment of trauma, positive psychology looks at the growth that may occur in addition to the stress reactions in the traditional diagnostic measurement for PTSD (Joseph & Linley, 2006). It offers an adjunct theoretical mindset in regard to how individuals may be affected by trauma. Growth is dependent upon both the cognitive appraisal and the context in which a transition, whether crisis or loss, occurs (Lewis Hall, Langer & McMartin, 2010). The cognitive appraisal is how the individual interprets the meaning of the traumatic event. Growth can be said to occur if the trauma is interpreted as a valued learning opportunity and experience gained to give back to others (Lewis Hall, Langer & McMartin, 2010). The context of the trauma also affects growth in individuals. If the event is perceived as being life threatening, being uncontrollable, and instilling helplessness, then growth is more likely to develop (Lewis Hall, Langer & McMartin, 2010).

Within positive psychology, a therapeutic method of broaden-and-build fosters an upward spiral in which positive emotions and broadened thinking of finding positive meaning influence each other, leading to a gradual increase in emotional well-being (Fredrickson, 2001). The positive emotions influence how people cope with adversity, such as trauma, and build resilience (Fredrickson, 2001). The positive emotion not only broadens the thinking for the current trauma but also increases the ability to find positive meaning in future events (Fredrickson, 2000). Using positive psychology techniques within a clinical setting allows for a greater range of therapeutic interventions. It allows
the clinician to shift the agenda for the client so that the therapy is not meant to pathologize, but rather to find positive meaning and a desired outcome (Joseph & Wood, 2010). The tenets of positive psychology can guide people’s awareness to live their life in an authentic way (Lewis Hall, Langer & McMartin, 2010).

The implications for the use of positive psychology for combat soldiers is already being developed and implemented by Seligman. The Comprehensive Soldier Fitness program is using positive psychology techniques to bolster resilience and adaptability in soldiers before deployment through training and education (Seligman & Fowler, 2011). The aim is to foster growth after combat trauma as opposed to disorder. The central message of the training and education is that PTSD is not an inevitable outcome of the trauma, but even if it does occur, there are other aspects of living after the trauma that contains value (Tedeschi, 2011).

**Definition of terms.**

*Combat-related* refers to any type of work or support roles that a service member may have for a combat mission. This term can also refer to being associated with war-related operations or conflicts.

*Deployments* refer to any period of time in which a service member is sent overseas to an area where combat or combat-related conflict is occurring. Deployment periods can be anywhere from a few days, weeks, several months, and, in some cases, up to a year or longer deployment.

*Posttraumatic Stress Disorder* (PTSD) – If, following a traumatic event in which the person feared for their life or witnessed another person threatened or killed, they
experience extreme terror, defenselessness, or fright, a person may be diagnosed with PTSD, if they meet the diagnostic criteria in the Diagnostic and Statistical Manual of Mental Disorders (APA, 2000).

*Posttraumatic Growth* is the positive changes that can occur within a person due to experiencing a trauma. These positive posttraumatic growth areas can include effects on their sense of self, relationships, spirituality or life philosophy (Tedeschi & Calhoun, 1996).

*Service members* include all people, male or female, who are serving in one of the five branches in the military: United States Air Force, Army, Navy, Marines or Coast Guard. This term is interchangeable with military members.

*Veterans* include service members that are currently serving or have previously served in the military.

**Assumptions.** One assumption of this study is that combat is a traumatic event at some level for anyone subjected to it. Another assumption is that traumatic events can lead to emotional, behavioral, and/or cognitive changes within the person exposed to that trauma. This study also assumes that a person exposed to trauma can have emotional, behavioral, and/or cognitive changes that are positive as well as negative.

**Social work research justification.** This research will benefit the field of social work by providing education on how trauma may affect military members coming from combat. Most clinicians focus on the negative effects of trauma in survivors by looking for symptoms of PTSD. However, it is important for counselors to note that there can potentially be positive changes after a trauma that might otherwise be ignored (Frazier,
Conlon & Glazer, 2001). Social workers should be sensitive to positive changes, such as self-reliance and changing life priorities when assessing Afghanistan and Iraq war veterans (Pietrzak et al, 2010). As the Veterans Administration uses social workers as the most widely recognized support personnel for counseling within its system, it is important for them to understand the processes involved posttrauma, to include the positive changes as well as the negative ones. It is paramount for social workers to learn the processes that are involved when a veteran is struggling as the result of combat trauma to find meaning, gain wisdom from the events, and face the future confidently (Tedeschi & Calhoun, 1996).

**Study limitations.** As the purpose of this study is on posttraumatic growth, this study will not identify stress reactions due to combat trauma. As there may be a variety of factors that may influence reactions to trauma, this study cannot take into account comorbid factors, such as premorbid or subsequent trauma to a service member’s deployment. In addition, not all veterans have the same exposure to war. The Army and Marine Corps have noted higher percentage of ground operations than Air Force or Navy service members, and thus have a greater exposure to combat (Belasco, 2009). Areas of operation within combat zones as well as jobs held while deployed may affect the responses. A soldier doing patrols outside the relative safety of a base may face more frequent and intense trauma than an administrative worker within a sheltered bunker. Reactions may also vary among individuals when faced with trauma based on their training and prior experiences.
Chapter 2

REVIEW OF THE LITERATURE

This study seeks to discover what positive growth U.S. veterans of the Iraqi War and the Afghanistan War have experienced since returning from their combat experiences. As such, it encompasses many issues that revolve around the topics of posttraumatic growth and combat trauma. Analyzing the current literature of these topics brings up the themes of history of posttraumatic stress disorder and posttraumatic growth, the nature of the U.S. military operations in Iraq and Afghanistan, the effects of trauma, posttraumatic growth, combat trauma, military intervention for trauma, Intervention for trauma by other social service agencies, and positive psychology principles in intervention. These themes highlight the current literature on the perception of trauma within the military healthcare system and academic community.

Background of Posttraumatic Growth

Throughout military history, combat stress has been known to affect the readiness of a fighting force. Combat stress has been called combat fatigue, shell shock, soldier’s irritable heart, nervous breakdown, and, more recently, PTSD (Pols & Oak, 2007; Sauer & Bhugra, 2001). Whatever it was called, the symptoms of combat stress have been deleterious to the military service, causing up to one-third of returning troops to have combat-related mental disorders in the most recent Iraq and Afghanistan wars (Tanelian & Jaycox, 2008). However, emotional stress is not the only symptom that can come from trauma. Tedeschi and Calhoun assert that posttraumatic growth can also come out of traumatic events (1996).
Growth and emotional stress may occur in a person at the same time, thus a person may have symptoms of PTSD and characteristics of posttraumatic growth (Zoellner & Maercker, 2006). Posttraumatic growth is not a new phenomena and has been described in literature previous and since Tedeschi and Calhoun’s initial research. Positive benefits to trauma have been called other terms or defined in similar manners that overlap the definition of posttraumatic growth. Terms in literature that hold similar meaning or have factors that are associated with posttraumatic growth are adversarial growth (Linley & Joseph, 2004) and strengths of character (Peterson, et al., 2008). Variables associated with adversarial growth are optimism, extraversion, sense of coherence, positive reappraisal, and problem-focused coping (Linley & Joseph, 2004). Strengths of character variables positively associated with posttraumatic growth were found to be bravery, fortitude, and perseverance (Peterson, et al., 2008).

**Nature of the U.S. Military Operations in Iraq and Afghanistan**

The United States military has within its total capacity approximately 2.2 million service members (Department of Defense, 2008). This all-volunteer force consists of the services branches of the Army (47%), Air Force (25%), Navy (19%), and the Marine Corps (10%) (Department of Defense, 2008). These forces are characterized by components of the fulltime Active Duty forces as well as Reserve and National Guard personnel.

Since the beginning of the Afghanistan War in Oct 2001 and Iraqi War in March 2003, there have been over 2 million troops deployed to combat areas in these two war zones (Nedegaard, et al, 2012; Belasco, 2007; Tanelian & Jaycox, 2008). Beyond the size
and locations of these battlefields, there are distinguishing characteristics that set these conflicts apart from previous wars. Even though the United States has fought wars on more than one front before, most notably in European and Pacific theaters in World War II, these wars saw a deployment pace that has been unprecedented (Belasco, 2007; Bruner, 2006). There are a greater proportion of troops deployed, with longer deployments (up to 15 months), infrequent breaks between deployments, and deployments from one combat zone to another common (Hosek, Kavanagh, and Miller, 2006). In addition, the extended nature of the two wars, the longest since the Vietnam War, has taxed the U.S. military as it was not sized, resourced, or configured to meet these ongoing demands (Tanielian & Jaycox, 2008).

To meet the demands, the Department of Defense has instituted deployment rotation policies that cycles forces and equipment through both combat zones. These rotation cycles include one year of deployment for every two years outside of combat for active duty forces and one year of deployment for every five years outside of combat for reserve forces (Office of the Under Secretary of Defense, 2007). In the current situation of extended conflicts, many active duty forces can expect to deploy to combat a minimum of three to four times during their careers and the reserve forces can expect at least twice in their careers.

The brunt of the conflicts in both wars has been borne by the Army and the Marine Corps. These ground forces have suffered the most casualties and wounded in action (Tanielian & Jaycox, 2008). After the initial invasion forces swept through the Afghanistan in 2001 and Iraq in 2003, the ground forces’ recent military operations have
been peacekeeping missions or stabilizing operations (Tanielian & Jaycox, 2008). These operations are not without risk due to the enemy insurgency forces. These operations share the same risks as combat to include exposure to hostile forces, injured civilians, mass graves, and land mines (Tanielian & Jaycox, 2008). The nature of these operations and the high pace of deployments to combat areas expose the combat troops to a higher degree of repeated trauma.

**Effects of Trauma**

Trauma is defined as a sudden and potentially deadly experience that often leaves lasting and troubling memories (Figley & Figley, 2009). For diagnostic purposes, the American Psychiatric Association defines trauma as events that involve actual or threatened death or serious injury, or a threat to the physical integrity of the person or others in which the person witnessed, experienced or has been confronted with (2000). The person’s response to the event then involves intense fear, helplessness, or horror (APA, 2000). Posttraumatic refers to the aftermath of extremely stressful, traumatic events and not of minor stressors or natural developmental stresses (Zoellner & Maercker, 2006).

Exposure to trauma can cause many psychological, physical, and behavioral effects in people. Many of these are common reactions to stressful situations and do not necessarily form into diagnostic disorders. However, if the symptoms are severe or become chronic, and affect the individual’s social, occupational, or important areas of functioning, then a mental health disorder, such as posttraumatic stress disorder (PTSD), should be considered (APA, 2000).
The psychological effects that trauma can have on a person can include a nervous demeanor, fearful outlook, depression, and numbed feelings (National Center for PTSD, 2009; International Society for Traumatic Stress Studies, 2005; Grieger & Benedek, 2006; Nelson Goff, Reisbig & Hamilton, 2007; Figley, 2005). Strong negative emotions of self-blame, survivor’s guilt or shame may be present (National Center for PTSD, 2009). A meta-analysis of 39 studies showed a substantial association between anger and hostility with PTSD among adults exposed to trauma (Orth & Wieland, 2006). An explanation for this association was offered with the survival mode theory, in which individuals with PTSD have a lowered threshold for perceiving situations or events as life-threatening, and they activate more readily to a biologically predisposed survival mode (Chemtob, Novaco, Hamada, Gross, & Smith, 1997; Novaco & Chemtob, 1998). This can activate in people as anger and fight reactions as well as fear and flight reactions. It was noted that anger and hostility reactions could be a predominant aspect of combat soldiers suffering with PTSD (Novaco & Chemtob, 1998).

This fight or flight reaction has a physical component that is also an effect of the traumatic event on the person. When exposed to trauma, a person becomes aroused due to involuntary reactions of the autonomic nervous system controlled by the part of the brain that generates fear, the amygdala (Coon, 2004). This arousal is characterized by jumpy reactions, anxiety, numbing, and exaggerated startle response. If the person stays in a constant arousal state for an extended period after the trauma event, then this could cause damage to the amygdala and cause the numbing or dissociative effects of PTSD (Coon, 2004). The stress from trauma may also have a person present with somatic complaints.
rather than psychological symptoms (National Center for PTSD, 2009, Nelson Goff, et al., 2007, Figley, 2005). These complaints may be aches or pains in the body, an upset stomach, trouble eating or sleeping, or exhaustion. These bodily pains may be a manifestation of a troubled mind or may be culturally bound, as it may be more acceptable in some cultures to complain of bodily pains rather than psychological ailments (Tseng & Strelzer, 1997). For others, it may be easier and less shameful for difficulties to be due to a medical need for a physical condition rather than to a psychological reaction.

The coping mechanisms of individuals that are undergoing stress reactions to traumatic events influence the behavioral outcomes presented. The effects of trauma on behavior can include sleep disturbances, substance abuse, avoidance and withdrawal from others, and suicidal behaviors (National Center for PTSD, 2009; International Society for Traumatic Stress Studies, 2005; Grieger & Benedek, 2006; Nelson Goff, Reisbig, & Hamilton, 2007; Figley, 2005). When a person’s ability to cope overcomes their functioning in the social, occupational, and other areas of their lives, then a mental health disorder may be considered (APA, 2000).

The most common mental health disorders associated with traumatic events include the anxiety disorders of Acute Stress Disorder (ASD) and Posttraumatic Stress Disorder (PTSD), Major Depressive disorders, and substance use disorders. Anxiety is noted to be the anticipation of misfortune or future danger, either from internal or external means, with negative feelings, apprehension, or somatic complaints of tension (APA, 2000).
Acute Stress Disorder has the same symptoms as PTSD however the time frame for this disorder in which the symptoms last for at least two days but no longer than 30 days (APA, 2000). This diagnosis is usually given until the symptoms are either resolved or 30 days have elapsed, in which the diagnostic criteria for PTSD has then been met.

The symptoms of Posttraumatic Stress Disorder occur after a trauma for a duration of more than one month. The diagnostic criterion from the Diagnostic and Statistical Manual for Mental Disorders, 4th edition-text revision (DSM IV-TR) for PTSD includes re-experiencing the event, avoidance of stimuli relating to the event, numbing of general responsiveness, and hyperarousal (APA, 2000). Re-experiencing of the traumatic event can occur as recurrent recollections, thoughts, or images, recurrent dreams or nightmares, dissociative flashback episodes, intense sensitivity to cues or triggers of the event, or physiological reactivity to cues or triggers of the event (APA, 2000). Avoidance of the traumatic stimuli criteria includes efforts to avoid thoughts, feelings or conversations of the associated stimuli, avoidance of activities, places or people associated with the traumatic stimuli, or inability to recall aspects of the trauma (APA, 2000). Criteria for the numbing of general responsiveness are diminished interest or participation, detachment or estrangement, restricted affect, and a sense of foreshortened future (APA, 2000). The symptoms of hyperarousal can include difficulty sleeping, irritability, difficulty concentrating, hypervigilance, or exaggerated startle response (APA, 2000). These symptoms can occur at any point after the trauma and sometimes can persist for months to years afterward (APA, 2000).
The anxiety disorders of Acute Stress Disorder and Posttraumatic Stress Disorder may not be the only response to extreme traumatic stressors. Major Depressive Disorder may be brought on by the occurrence of a traumatic event. Depression is two to three times more likely in individuals with PTSD (Kessler, Sonnega, Bromet, Hughes & Nelson, 1995). Depression can be brought on by trouble coping with painful experiences or losses, such as feelings of regret or guilt about combat experiences (Gregg, 2004; National Center for PTSD, 2007a).

The diagnostic criterion for a Major Depressive Episode includes depressed or sad mood, diminished interest or pleasure, significant weight loss, insomnia or hypersomnia, loss of energy, restlessness or psychomotor retardation, feelings of worthlessness or guilt, decreased ability to think or concentrate, and thoughts of death or suicide (APA, 2000). To arrive at a Major Depressive disorder diagnosis, at least five of these symptoms must persist for at least two weeks, the symptoms cause significant distress in areas of functioning, and the cause cannot be attributed to physiological reasons, such as substance abuse, or by bereavement (APA, 2000). Specifiers of type of depression, such as recurrent or single episode, depend on a history of occurrence and frequency of symptoms as well as an absence of manic episodes (APA, 2000). There can be an overlap of symptoms of depression with PTSD. Common overlapping symptoms can include sleep difficulties, problems with attention, decrease in pleasure or interests, or irritability (Gregg, 2004; National Center for PTSD, 2007a).

Substance use disorders, which include both alcohol and psychoactive drugs, are common diagnoses of individuals with a history of trauma. The substance use disorders
are categorized by substance abuse and substance dependence, depending on the pattern of use. The category of drug, including alcohol, specifies the type of substance used. Common categories of drugs of abuse are alcohol, opioids, amphetamine, cocaine, cannabis and hallucinogens (APA, 2000).

Substance abuse is a pattern of use that is maladaptive and causes significant impairment or distress within a 12-month period. It is manifested by one or more symptoms to include: using substances instead of fulfilling work, school, or home obligations; using substances in physically hazardous situations; legal problems because of substance use; or substance use despite having social or relationship problems centering on the substance use (APA, 2000). The individual must not meet the diagnostic criteria for substance dependence.

Substance dependence is a pattern of use that is maladaptive and causes significant impairment or distress within a 12-month period. It is manifested by three or more symptoms to include: tolerance; withdrawal; using substance in larger amounts or longer than intended; persistent desire or unsuccessful efforts to quit substance use; spending a great deal of time using, obtaining or recovering from substance use; giving up or reducing social, occupational, or recreational activities due to substance use; or substance use despite knowledge of having a psychological or physical problem that is caused or made worse by continued use (APA, 2000). Tolerance is defined as either a need for increased amounts of the substance to attain the desired effects or diminished effect with using the same amount of the substance (APA, 2000). Withdrawal is the manifestation of a syndrome specific to the substance used which may cause discomfort
or be life threatening due to cessation or reduction of heavy and prolonged substance use (APA, 2000).

Alcohol abuse is prevalent in three quarters of those that have survived abuse or violent trauma and in up to a third of those surviving a traumatic accident, illness, or disaster (Kofoed, Friedman & Peck, 1993; National Center for PTSD, 2007b). Of the Iraq and Afghanistan War veterans, one in ten returning veterans have a problem with alcohol or drugs (National Center for PTSD, 2007b). One in three veterans seeking treatment for substance use disorders also has PTSD (National Center for PTSD, 2011). Older veterans (65 years and older), are at greater risk for suicide attempts if they also have drinking problems or depression (Kofoed, Friedman & Peck, 1993; National Center for PTSD, 2007b). Studies have found that of the Vietnam Veterans seeking treatment for PTSD, sixty to eighty percent have alcohol abuse problems (Kofoed, Friedman & Peck, 1993; National Center for PTSD, 2007b).

The reasons for the comorbidity of PTSD and substance use disorders can be associated to either the lifestyle of those with substance use problems or the survivors of trauma trying to self-medicate their PTSD symptoms. Individuals with a drug or drinking problem have a higher probability to be affected by psychological trauma due to the link between substance use disorders and leading a confused or disorderly life (National Center for PTSD, 2007b). Substance abusers may have less coping skills and fewer internal and external resources due to this confused or disorderly lifestyle when a traumatic event occurs. Another reason for the comorbidity of PTSD and substance use disorders is that individuals may find themselves “medicating” their PTSD symptoms
with drugs or alcohol. They may drink or drug themselves to sleep due to sleep
difficulties or nightmares caused by the traumatic events. Using drugs or alcohol in this
manner alters the quality of restorative sleep and causes less restful sleep (National
Center for PTSD, 2007b). Substance abuse is more likely to make the symptoms of PTSD
worse. The numbing of emotions caused by PTSD can become more pronounced with
alcohol or drug abuse (National Center for PTSD, 2007b). The avoidance of the traumatic
stimulus by abusing alcohol or drugs can cause the PTSD to last longer and can make
treatment less effective (National Center for PTSD, 2007b).

**Posttraumatic Growth**

Posttraumatic growth is the formation of positive changes and outlook developed
in an individual after a traumatic event (Tedeschi & Calhoun, 1995). Posttraumatic
growth has also been defined as either an outcome or process in which individuals have
undergone a traumatic event and recovered to a higher level of functioning than before
the trauma (Zoellner & Maercker, 2006). The growth is an experience in which the
traumatized person does more than recover, but rather uses the experience as an opening
to develop further as an individual (Zoellner & Maercker, 2006). A person that
experiences posttraumatic growth would gain positive psychological benefits in
comparison to their pre-trauma functioning and outlook. The prevalence of posttraumatic
growth among respondents in research studies has shown 50% to 60% have at least some
degree of positive growth after a traumatic event (Tedeschi & Calhoun, 1995).
Posttraumatic growth is not exclusive in individuals that have PTSD and is not viewed in
terms of being opposites or as two ends of a continuum. Growth and emotional stress
may occur in a person at the same time, thus a person may have symptoms of PTSD and characteristics of posttraumatic growth (Zoellner & Maercker, 2006).

Posttraumatic growth was shown to occur in specific domains of the trauma victims’ lives (Zoellner & Maercker, 2006). The areas of improved psychological functioning was noted to include changes in one’s sense of self, in relationships, and in spirituality or life philosophy (Frazier, Conlon & Glazer, 2001). Changes in one’s self included increased personal strength self-reliance and self-evaluation of competence individual development, and increased maturity (Tedeschi & Calhoun, 1996; 2004; Frazier, Conlon & Glazer, 2001; Zoellner & Maercker, 2006). Changes in relationships included improved relationships with others, increased closeness to others, increased empathy with the suffering of others, and willingness to accept help and utilize social supports (Tedeschi & Calhoun, 1996; 2004; Frazier, Conlon & Glazer, 2001; McMillen & Fisher, 1998). Changes in spirituality or life philosophy included increased appreciation of life, identification of new possibilities, new life priorities, deepened sense of meaning, and a deepened sense of connection with a higher power (Tedeschi & Calhoun, 1996; 2004; Frazier, Conlon & Glazer, 2001; Zoellner & Maercker, 2006). Posttraumatic growth affected individuals in one or more of these domains or areas of their life in a beneficial manner.

There were noted differences when posttraumatic growth was compared to resilience, a process also positively related to trauma. Resilience was described as personal characteristics that allow an individual to maintain integrity despite going through trauma (Levine et al., 2009). The personal characteristics of resilience included
hardiness, optimism, self-enhancement, repressive coping, positive affect, and a sense of coherence (Agaibi & Wilson, 2005; Bonanno, 2004; Tedeschi & Calhoun, 2004).

Resilience allowed a person to undergo trauma with less psychological impact than others experiencing the same trauma (Levine et al., 2009). In essence, the person remained relatively unchanged from their pre-trauma functioning. On the other hand, posttraumatic growth resulted in the outcome of positive change due to the trauma that the person experienced (Tedeschi & Calhoun, 1996). Levine and colleagues conjectured that the traumatic event would have to be upsetting to cause the individual to try to find positive meaning for the growth to occur, while the personal characteristic of resilience would cause the person to be less likely to be upset in face of the trauma (2009).

**Combat Trauma**

Trauma in a battlefield environment is different from trauma elsewhere. Service members have to deal with traumatic events sometimes on a daily basis depending on the duties expected of them. Combat exposure includes being shot at, handling dead bodies, knowing someone who was killed, killing enemy combatants, or discharging one’s weapon. These variables have been found consistently associated with having symptoms of PTSD during screening exams of combat troops (Grieger et al., 2006; Hoge, Auchterlonie, and Milliken, 2006; Hoge et al., 2004; Hotopf et al., 2006; Kolkow et al., 2007; U.S. Department of the Army, 2006). There is also a higher association of PTSD in service members being injured or wounded during combat across studies (Hoge, Auchterlonie, and Milliken, 2006; Hoge et al., 2004; Hoge et al., 2007).
The effects of this trauma on veterans have been recorded since the onset of the wars. One in six of Afghanistan and Iraq War veterans meet diagnostic criteria during screenings for PTSD, depression or a related psychiatric disorder following their deployment (Hoge et al., 2004, Hoge et al., 2007; Milliken et al., 2007; Tanielian and Jaycox, 2008). A 2007 telephone survey of 1,965 returned war veterans found rates of 14 percent for symptoms of PTSD and 14 percent for symptoms of major depression within the past 30 days (Tanielian and Jaycox, 2008). The researchers estimated that there were thus likely 300,000 war veterans suffering from PTSD or major depression symptoms at that time.

Of particular concern is the affect of trauma on the suicide rates of combat veterans. Veterans are at a higher risk for suicide in comparison to nonveterans of the same age except for the oldest of 64 years and older (Mark, Bentson, Huguet & Valenstein, 2012). In 2007, the Veterans Administration reported that 1,000 veterans receiving care at the VA and possibly up to 5,000 of all veterans die by suicide each year (Dept of VA OIG, 2007). Trauma survivors with PTSD are at a higher risk for suicide when compared to trauma survivors with other or no diagnosed psychiatric illness (Dept of VA OIG, 2007). At this time, it is still unclear whether combat trauma is more likely to be a determining factor in the rates of suicide seen in veterans when compared with other factors, such as mental illness or substance abuse (Knox, 2008). There is evidence that veterans that have suffered multiple wounds or hospitalization from wounds during combat have increased their risk for suicide compared to other combat veterans (Bullman & Kang, 1995). The intensity of the combat trauma and the number of times a service
member was exposed to combat trauma influenced the risk of suicide in veterans (Hudenko & Crenshaw, 2007). There was a strong association between PTSD diagnosis and suicide among veterans, even after controlling for other related comorbid disorders (Sareen, Houlahan, Cox & Asmundson, 2005; Sareen, Cox, Stein, Afifi, Fleet & Asmundson, 2007). A possible reason for this association could be intrusive thoughts about combat, especially when the thoughts revolved around guilt about acts committed during the war (Hendin & Hoss, 1991). These intrusive thoughts overcome the suicidal veterans’ ability to cope.

**Military Intervention for Trauma**

The U.S. military, simply put, prepares for war. An effect of war is the trauma of combat. The military has prepared methods to intervene with combat trauma effects to include prevention, assessment, and treatment programs. There are obstacles that service members and the military face while implementing these intervention programs. There are also intervention techniques that are currently being developed that use positive psychology and posttraumatic growth elements.

The prevention programs that the military implements to address trauma and its effects have been widely used in both the Iraq and Afghanistan war campaigns prior to troop deployment. These are broad scale training programs that are meant to be brief and delivered in a large group training format (Adler, Bliese & Castro, 2011). The purpose of the training is to build cohesion among the group members so that this serves as a protective factor and affects the individual group member’s well-being (Adler, Bliese & Castro, 2011). Content of the briefings include information on resilience and identifying
signs of posttrauma effects. The army-wide resilience training initiative, called Battlemind Training, is designed to address demands specific to the combat environment (Adler, Bliese & Castro, 2011). The latest program in development, the Comprehensive Soldier Fitness, uses positive psychology philosophy and will be discussed later in this literature review.

Upon return from deployments, all service members were assessed using care-based screenings to see if they meet the symptoms for mental health problems such as depression or PTSD (Adler, Bliese & Castro, 2011). The screening tools used are the Post Deployment Health Assessment (PDHA), used upon return from deployment, and the Post Deployment Health Reassessment (PDHRA), for 3 to 6 months after deployment (Adler, Bliese & Castro, 2011). If service members are positive for symptoms, they are referred to military or Veterans Administration health care facilities for further assessment and treatment.

Upon return from deployment, treatment for service members takes place in the military health care system at their local area that they are stationed, which usually has a mental health unit (Rowan & Campise, 2006; Adler, Bliese & Castro, 2011). If a military is discharged from service, they may seek care for combat or duty related injuries to include psychiatric illness through the Veterans Administration (Adler, Bliese & Castro, 2011; National Center for PTSD, 2007a). The most common therapy techniques used by the military care system for trauma is cognitive behavior therapy techniques (Adler, Bliese & Castro, 2011; National Center for PTSD, 2007a). The rate in which military service members seek care for PTSD or depressive symptoms is comparable to civilian
rates, with 53 percent seeking help from a health care professional (Tanielian & Jaycox, 2008).

Many of those that do not seek care for trauma-related mental illness do so for a variety of reasons. Some obstacles to care include the negative stigma associated with mental health care, limits of confidentiality in the military system, possible impact on career, and perception of inadequate mental health care. Within a deployed environment, there are multiple issues that may impede psychiatric services.

One of the biggest obstacles is the negative stigma associated with mental health problems by military members, which can cause a gap between the need for services and its actual utilization (Britt, et al, 2008; Corrigan, 2004; Corrigan, 2000). In the deployed combat environment, the stigma associated with mental illness was decreased, resulting in a higher utilization of mental health services by military service members (Nedegaard, Foster, Yeboah-Ampadu & Stubbs, 2012; Christensen & Yaffe, 2012). This may be due to the cause of the mental illness being attributed to the external source, such as the combat conditions, as opposed to perceived internal weaknesses of the individual. The external cause then allows for greater acceptance of seeking mental health care with less associated stigma in a deployed setting (Christensen & Yaffe, 2012).

Other obstacles to mental health care include the institutional barriers of the limits of confidentiality and the possible impact on the service member’s career. Military members are entrusted with the safety and security of their fellow service members while fulfilling a combat mission. Military mental health confidentiality has its limits due to the impact that it may have on this mission. Health care providers are obligated to report
conditions that may place the mission or other military members at security or safety risk. Consequently, military members are fearful to use mental health services due to the communications between the mental health provider and their commander and the possible resultant duty restrictions (Hoge, et al, 2004; Rowan & Campise, 2006; Tanielian & Jaycox, 2008). This apprehension also extends to the perception of a potential impact on future military job assignments and military career advancement (Tanielian & Jaycox, 2008).

The perception that the military service members have about the mental health services is also an obstacle to intervention. One-quarter of service members felt that even the best mental health care was not very effective (Tanielian & Jaycox, 2008). Military members also expressed unease about the use of drug therapies. For example, about 45 percent expressed concern about unpleasant side effects from psychotropic medications (Tanielian & Jaycox, 2008). There were also structural aspects of care that caused barriers to service, such as long wait times and unavailability of mental health providers (Tanielian & Jaycox, 2008). These factors affected the perception of the quality of care by service members after their deployment.

During the deployment, there are varieties of factors that affect utilization of mental health services while in a combat environment. Deployed members usually face increased barriers to mental health services compared to nondeployed service members (Christensen & Yaffe, 2012). In a combat zone like Afghanistan or Iraq, the available resources for mental health providers are limited, causing less flexibility in intensity and duration of care available to service members in comparison to their home bases.
(Nedegaard, Foster, Yeboah-Ampadu & Stubbs, 2012). The limitations of the treatment environment include extreme environmental conditions, such as heat and rocket attacks. In addition, there are limited resources available, such as private and quiet treatment areas and continuity of care due to the rotating nature of staff (Nedegaard, Foster, Yeboah-Ampadu & Stubbs, 2012).

Treatment in a deployed environment takes place at either the location within the combat zone the person is assigned or at a central base in country with a larger medical facility. As is the U.S. policy on psychiatric treatment in wartime, mental health providers will treat service members as far forward to the front as possible to keep combat personnel as close to their units and to complete their deployments (Nedegaard, Foster, Yeboah-Ampadu & Stubbs, 2012). The general principles employed in the combat zone are proximity, immediacy, and expectancy (PIE) for mental health presentations (Nedegaard, Foster, Yeboah-Ampadu & Stubbs, 2012). This approach is designed to ensure that service members have a sense that they will continue in their combat mission and not escape the immediate danger. In the PIE model, proximity means that care will take place close to the battle so service members are still connected and maintain cohesiveness to their unit. Immediacy relates to the immediate care of symptoms that the service member is feeling at that point and normalizing these symptoms. Expectancy is the expectation that the service member will recover and return to duty (Nedegaard, Foster, Yeboah-Ampadu & Stubbs, 2012). Not everyone involved in combat trauma seen by the mental health providers are given a diagnosis of PTSD. A distinction is made between PTSD, Acute Stress Reaction (ASR) and Combat
Operational Stress Reaction (COSR) within the combat environment. ASR is a transient disorder in response to exceptional stress, such as combat, with symptoms that are usually minimal after three days (Tanielian & Jaycox, 2008; APA, 2000). The military also makes the distinction of COSR, known also as battle fatigue or battle shock, in which the stress of battle renders a service member transiently unable to remain on duty (Tanielian & Jaycox, 2008). This condition differs from PTSD in that it is temporary and is usually treated in the combat zone using PIE principles without the use of traditional psychotherapy techniques or medication (Tanielian & Jaycox, 2008; APA, 2000).

**Intervention for Trauma by Other Social Service Agencies**

Besides military prevention, intervention, and treatment programs, there are social services outside the military healthcare system available to combat veterans. This is in response to American leaders, the Department of Defense (DOD), the Department of Veterans Affairs (VA), and the public desire for those who have served in Afghanistan and Iraq to receive the highest quality care (Tanielian & Jaycox, 2008).

Each military branch has set up community service programs at the local level, to include short-term individual and group counseling (Tanielian & Jaycox, 2008). These programs are most usually provided by civilian masters-level counselors or social workers. They offer assistance for issues from combat stress, anxiety, and sadness to marital and parenting problems and financial difficulties (Tanielian & Jaycox, 2008). The strength and drawback to this community service program is that they are anonymous. This means that members do not have to worry about stigma or their information being released to their commander; however, the treatment also does not deal with intensive
therapy and is not included in the military member’s medical record for disability consideration (Tanielian & Jaycox, 2008).

Military members also may seek treatment through local civilian mental health clinicians. This method would require members to either pay out of pocket or use TRICARE, the military healthcare insurance (Tanielian & Jaycox, 2008). Outside civilian providers however may not be available for all military members depending on the local community resources. The civilian clinicians may also not be familiar with treatments suitable for combat-related mental disorders (Tanielian & Jaycox, 2008).

Also available for military veterans is the Veterans Administration (VA). This government agency provides healthcare for military veterans after they have completed their active duty service commitments. Some of the strengths of the VA are openness to treatment, major healthcare providers, and accessibility to resources. The VA has sites throughout the country with therapists that are familiar with treating combat veterans diagnosed with PTSD and combat related mental illness (National Center for PTSD, 2010). However, the amount of veterans needing services has made accessibility to the VA for care a problem (Tanielian & Jaycox, 2008).

Positive Psychology Principles in Intervention

The military is currently developing and testing intervention techniques that use positive psychology and posttraumatic growth elements. This is under the name of Comprehensive Soldier Fitness and uses four components in its implementation (Seligman & Fowler, 2011). First, an assessment tool will be created to gather empirical data. Second, the creation of self-improvement courses using the dimensions of
emotional, social, family, and spiritual fitness will be developed. Next, resilience training and positive psychology training will be implemented throughout the Army. Finally, identification and training of master resilience trainers from Army and civilian psychologists will take place (Seligman & Fowler, 2011).

The philosophy of teaching positive psychology is to foster posttraumatic growth among service members after exposure to traumatic combat experiences. According to Seligman, most people that are exposed to adversity respond in one of three methods. They may collapse and develop PTSD, depression or anxiety, they may return to their normal level of functioning because they are resilient, or they may grow and attain a higher level of functioning than before the adversity (Seligman & Fowler, 2011). The aim of the Comprehensive Soldier Fitness is to move a person toward decreased PTSD, increased resilience, and increased growth (Seligman & Fowler, 2011).

One of the extensive treatments for U.S. veterans is called the Comprehensive Soldier Fitness program that uses a five-part format to facilitate posttraumatic growth in combat soldiers. The first part helps service members to understand that the trauma response is a precursor to growth (Tedeschi & McNally, 2011). The trauma response has negative aspects such as shattered beliefs, which form the foundation for later growth. The service members are taught that the negative physiological and psychological reactions to combat experiences are normal and not character defects. The next part of the program enhances the emotional regulation of the service members (Tedeschi & McNally, 2011). This is accomplished through basic anxiety reduction and intrusive thought control methods to help prepare them for evaluating their traumatic events. The
third part uses constructive self-disclosure to allow the service members build a narrative of the traumatic events, receive support, and find models for healthy response and growth (Tedeschi & McNally, 2011). The next part has the service members build a trauma narrative using posttraumatic growth domains (Tedeschi & McNally, 2011). This is to help reconfigure their shattered belief systems and revise their life narratives. The last part is to develop life principles that can thrive in the face of challenges (Tedeschi & McNally, 2011). This incorporates the ideas that the traumatic combat experience is life transforming and moving forward toward growth is a process rather than a goal.

Summary

The U.S. military has been involved in combat operations since 2001 employing over 2 million troops to combat zones in Iraq and Afghanistan. Combat trauma is examined in terms of how it can differ from trauma outside the combat environment. Many of these service members are exposed to combat that causes traumatic effects on them. These effects include psychological, physical, and behavioral symptoms. The symptoms, if left untreated, can manifest into major depressive disorders, substance use disorders, or anxiety disorders, such as acute stress disorder or posttraumatic stress disorder. The concept of posttraumatic growth has been studied as a possible outcome of trauma experiences. The military has prepared methods to intervene with combat trauma effects to include prevention, assessment, and treatment programs. There are obstacles that service members and the military face while implementing these intervention programs, such as negative stigma and the deployed environment. Agencies outside the military healthcare system can also provide care for combat-related mental illnesses.
These civilian interventions have strengths but also weaknesses in implementation. To help combat the growing number of cases of traumatic disorders, the military is currently developing intervention techniques that use positive psychology and posttraumatic growth elements.
Chapter 3

METHODS

Study Objectives

To reiterate, the purpose of this study was to do a mini meta- and content analysis on the adjustment reactions of Iraq and Afghanistan war veterans for signs of posttraumatic growth. Posttraumatic growth is defined as positive changes in individuals as a consequence of undergoing trauma. This was accomplished through content analysis of research articles that recently published about the Posttraumatic Growth Inventory (PTGI) to assess for growth among the returned Iraq and Afghanistan veterans. The main objective of this research project is that Iraq and Afghanistan veterans were more likely to have posttraumatic growth than veterans that served in other wars such as the Vietnam War and from individuals with trauma not related to war. Evidence found from this content and mini meta-analysis will educate counselors and social workers to facilitate the healing process with current and future veterans.

Study Design

This study is a mini meta- and content analysis of research articles that recently published about the Posttraumatic Growth Inventory (PTGI) to assess for growth among the returned Iraq and Afghanistan veterans. This is a quantitative and exploratory study design. Content analysis is an in-depth analysis using quantitative or qualitative techniques of messages using a scientific method and is not limited as to the types of variables that may be measured or the context in which the messages are created or presented (Neuendorf, 2002). This analysis method is suitable in grouping the data
variables of posttraumatic growth for purposes of examination. Meta-analysis is an aggregation of the results of several studies to determine an overall effect on one variable to another (Lipsey & Wilson, 1993). This study used meta-analysis to combine study results of posttraumatic growth in the Iraq and Afghanistan War veterans since there was currently a paucity of research studies in this area.

**Sampling Procedures**

The research articles chosen for this research study were based on published journal articles on the Posttraumatic Growth Inventory (PTGI). Two other articles were chosen with the seminal use of the Posttraumatic Growth Inventory reported by Tedeschi and Calhoun (1996) that discussed PTGI with and without trauma; and, the PTGI study that focused on United States prisoners of war (POWs) during the Vietnam War by Feder and colleagues (2008). These two latter articles were used to contrast with the data that focused on Iraq and Afghanistan veterans by the following authors (see Benetato, 2011; Gallaway, Millikan & Bell, 2011; Lee, Luxton, Reger & Gahm, 2010; Pietrzak, Goldstein, Malley, Rivers, Johnson, Morgan & Southwick, 2010). In summary, contents to be analyzed for this Master’s Project included the following journal articles:

soldiers and negative behavioral health conditions, *Journal of Clinical Psychology*, 67(12), 1151-1160.


**Data Collection Procedures**

The research objectives were organized based on 21 items from the PTGI instrument. These items are reported in each of the research articles as mean averages obtained from the respective sample population surveyed. These means scores were
gathered and re-organized using a Microsoft Excel spreadsheet. The spreadsheet listed each of the variables against the study in which the data was collected from.

**Instruments**

The research instrument used by the aforementioned journal articles was called the Posttraumatic Growth Inventory (PTGI). This standardized instrument was developed based upon trauma literature and interviews of individuals that have undergone major life crises (Cann, et. al., 2010). The PTGI is a 21-item scaled inventory which reports the posttraumatic growth factors of New Possibilities, Relating to Others, Personal Strength, Spiritual Change, and Appreciation of Life (Tedeschi & Calhoun, 1996). Respondents are to endorse a scaled response to statements of possible areas of growth in regard to a traumatic event. The range of responses extends from 0 (I did not experience this change as a result of my crisis) to 5 (a very great degree as a result of my crisis). This researcher will also include the option “n/a” if the respondents prefer not to respond or wanted to skip a question for any reason. The PTGI has an internal consistency of $a = .90$, a test-retest reliability of $r = .71$, and deletion of individual items did not result in a drop in the alpha below .89, indicating that all items are relatively consistent across the scale (Tedeschi & Calhoun, 1996).

**Data Analysis**

Based on the PTGI measure, several variables were chosen as key target variables. Findings from the aforementioned journal articles based on those variables were compared and contrasted. Discrepancies between/among the journal articles were discussed. The conclusion incorporated recommendations by the researchers in
conjunction with this author’s own perceptions and suggestions for mental health clinicians and counselors. The following variables were the targeted variables for the mini meta- and content analysis:

1. Relating to Others
2. New Possibilities
3. Personal Strength
4. Feelings of Self-Reliance
5. Handling Difficulties
6. Acceptance of the Way Things Work Out
7. Spiritual Change
8. Stronger Religious Faith
9. Appreciation of Life
10. Priorities of What is Important in Life
11. Appreciating Each Day
12. Total Posttraumatic Growth

Five of the variables (New Possibilities, Relating to Others, Personal Strength, Spiritual Change, and Appreciation of Life) are factors used to describe different dimensions of posttraumatic growth (Tedeschi & Calhoun, 1996). These five variables were tabulated using the 21 survey items of the PTGI. These five factors along with the total Posttraumatic Growth Inventory score are most usually represented in research studies. The rest of the variables come from the 21 PTGI survey items and were chosen based on representation within the literature of posttraumatic growth.
Protection of Human Subjects

In the fall semester of 2012, this researcher answered the questions contained in the human subject application and submitted the application to the researcher’s thesis advisor. The researcher’s thesis advisor collaborated with the researcher to make corrections to and assist in the completion of the application. The thesis advisor gave suggestions to the researcher as to further enhance the methods of data collection as well as maintaining a clear and concise application. This researcher then submitted a request for Review by the Sacramento State Committee for Protection of Human Subjects on February 28, 2013. On March 8, 2013, the application was approved by the Committee for Protection of Human Subjects, as exempt research with approval number 12-13-072 and expiration date of March 8, 2014. The researcher study was designated as exempt due to the fact that this researcher collected secondary data, case identifiers were not collected, and at no given time was this researcher involved with human subjects. The journal articles used for this Master’s Project are publicly available. This author only downloaded and printed the articles and used them similar to the public domain; therefore, confidentiality was not an issue. All the studies used in this project can be found on the internet and Sacramento State’s library collections.
Chapter 4

STUDY FINDINGS AND DISCUSSIONS

The primary purpose of this study was to examine what positive growth U.S. veterans of the Iraqi War and the Afghanistan War have experienced since returning from their combat experiences. Posttraumatic growth is defined as positive changes in individuals as a consequence of undergoing trauma. Specifically, this study explored how Iraqi and Afghanistan war veterans scored on the Posttraumatic Growth Inventory (PTGI) against comparison groups. The author accomplished this through content analysis of research articles recently published about the Posttraumatic Growth Inventory (PTGI) to assess for growth among the returned Iraq and Afghanistan veterans. This study examined four articles with posttraumatic growth data collected from Iraq and Afghanistan War veterans and two articles with posttraumatic growth data from comparison groups. The comparison groups consisted of individuals with trauma, individuals with no trauma, and Vietnam War veterans. The variables for comparison included the five factors of posttraumatic growth (New Possibilities, Relating to Others, Personal Strength, Spiritual Change, and Appreciation of Life) as well as the total PTGI score. In addition, other target variables (Feelings of Self-Reliance, Handling Difficulties, Acceptance of the Way Things Work Out, Stronger Religious Faith, Priorities of What is Important in Life, and Appreciating Each Day) were selected from the 21 PTGI survey items based on representation within the selected studies on posttraumatic growth.
Overall Findings

Of the six studies chosen for this mini meta-analysis (see Table 1.1 and Table 1.2), four articles used data from Iraq and Afghanistan War veteran participants (Petrzak, et. al., 2010; Lee, Luxton, Reger, & Gahm, 2010; Gallaway, Millikan & Bell, 2011; Benetato, 2011). The total number of Iraq and Afghanistan War veteran participants was 5,699. The gender of the war veterans were 5,002 males, 396 females, and 301 not reported. The mean age of the war veterans was 28.6 with an age range from 18-59 years, as reported on 3,593 of the participants in the two studies that included age data (Lee, Luxton, Reger, & Gahm, 2010; Benetato, 2011). The ethnicity data of 5,209 of the war veterans reported in three of the studies revealed 3,541 (67.9%) were Caucasian/White, 665 (12.8%) were Hispanic, 553 (10.6%) were African American, 75 (1.4%) were Asian/Pacific Islander, 56 (1.1%) were Native American/Alaskan Native, and 319 (6.1%) reported Other or Did Not Report (Gallaway, Millikan & Bell, 2011; Lee, Luxton, Reger, &Gahm, 2010; Benetato, 2011). The marital status of 5,422 of the war veteran participants revealed 3,269 (60.2%) were married, 1,322 (24.4%) were single, and 831 (15.3%) indicated other status or did not report in the three studies with marital data (Gallaway, Millikan & Bell, 2011; Lee, Luxton, Reger, &Gahm, 2010; Benetato, 2011).

A research article chosen for comparison in this content and mini meta-analysis included participants with and without trauma in the seminal use of the Posttraumatic Growth Inventory reported by Tedeschi and Calhoun (1996). Total participants of this study were 117 university students, of which 54 reported at least one major trauma of great severity within the year before the study and 63 that reported no trauma. Of the
participants with trauma, 23 were male and 31 were female. Of the participants without trauma, 32 were male and 31 were female. The age range of 95% of the participants was between 18 and 28 years. The marital status of the participants found 93% to be single.

The remaining comparison group article’s participants were United States prisoners of war (POWs) from the Vietnam War (Feder, et al., 2008). Of these 30 participants, all were male and they had a mean age of 66.7 years with a standard deviation of 6.0 years at the time of the study. Twenty-eight of the participants were military and two were captured civilians. The ethnicity of the participants in the study revealed 29 (97%) were Caucasian and one (3%) was African American. 24 (80%) of the participants were married.

The data variables in this content and mini meta-analysis examined are the mean averages of the responses the subjects had endorsed on the Posttraumatic Growth Inventory as reported in the six research articles. The range of responses extends from 0 (I did not experience this change as a result of my crisis) to 5 (a very great degree as a result of my crisis). The PTGI has an internal consistency of $r = .90$, a test-retest reliability of $r = .71$, and deletion of individual items did not result in a drop in the alpha below .89, indicating that all items are relatively consistent across the scale (Tedeschi & Calhoun, 1996).

This content and mini meta-analysis reported the results gained from the subjects as mean averages of the sums of the individual variables except for noted instances. The Total PTGI score is obtained by adding up the results of each of the response items (with a range of 0 through 5) for all 21 survey items resulting in a possible range of 0 to 105.
Each of the five factors (New Possibilities, Relating to Others, Personal Strength, Spiritual Change, and Appreciation of Life) are obtained by adding the results of the survey items that correspond with that particular factor to get a summary score. For example, the summary score for the factor Appreciation of Life is obtained from three survey items (My priorities about what is important in life, An appreciation for the value of my own life, and Appreciating each day) with a possible range of 0 to 15. One research article (Feder, et. al., 2008) reported each of the five factors as an average instead of a sum of the corresponding survey item mean scores, thus reporting a range of 0 to 5 for the five factor variables. The remainder of the variables (Feelings of Self-Reliance, Handling Difficulties, Acceptance of the Way Things Work Out, Stronger Religious Faith, Priorities of What is Important in Life, and Appreciating Each Day) are individual survey items and each of these will have a range of 0 to 5. Of particular note within this mini meta-analysis was a study by Pietrzak and colleagues (2010) which used a shortened version of the PTGI of six of the 21 survey items and had the total PTGI score as the sum of these six items only.

For the purpose of examination of the results, this author used a ratio scores based on the mean score against the maximum range number for the variable examined. The author then used the following designations for interpreting the ratio score results: 0 means no effect, >.500 was a moderate degree of positive growth, and >.750 was a great degree of positive growth. This is analogous with one study examined in this meta-analysis (Feder, et. al., 2008). This also allowed for better comparison across studies in which the results reported mean averages of the survey items as opposed to sums of the items (Feder, et.
al., 2008) or used a shortened version of the PTGI (Pietrzak, et.al, 2010). This author calculated weighted averages based on the number of study participants to combine the five factors and the total PTGI ratio scores of three of the four Iraq and Afghanistan War veteran studies. The remaining Iraq and Afghanistan War veteran study (Pietrzak, et.al., 2010) was not combined as it used a shortened version of the PTGI and did not have the necessary data points. These weighted ratio scores were then compared against the ratios scores of the comparison groups.

**Specific Findings**

This mini meta-study examined six categories of respondents for comparison (see Table 1.1 and 1.2). The category of Iraq and Afghanistan War veterans consisted of 5427 veteran participants in three studies (Gallaway, Millikan & Bell, 2011; Lee, Luxton, Reger, &Gahm, 2010; and Benetato, 2011). The remaining Iraq and Afghanistan War veteran study (Pietrzak, et.al., 2010) was not combined as it used a shortened version of the PTGI and did not have the necessary data points. The next four categories of respondents came from the seminal use of the Posttraumatic Growth Inventory reported by Tedeschi and Calhoun (1996). These grouping categories included Women, No Trauma with 31 female participants with no trauma; Women, Trauma with 31 female participants with trauma; Men, No Trauma with 23 male participants with no trauma; and Men, Trauma of 32 male participants with trauma. The last category of participants was from Feder and colleagues’ study of 30 Vietnam War prisoners of war (2008).

The mean PTGI score among Iraq and Afghanistan War veterans ($N = 5427$) was 48.40. The comparison groups all scored greater in total PTGI and the five factors of
posttraumatic growth than the Iraq and Afghanistan War veterans did. Table 1.1 shows the comparison of the five factors of posttraumatic growth and Table 1.2 shows the comparison of the total PTGI score with the mean score and the ratio score of the mean range for that variable in parentheses.

**Table 1.1**

*Mean scores and ratio scores of each respondent category for the five factors of posttraumatic growth*

<table>
<thead>
<tr>
<th>Respondent</th>
<th>N</th>
<th>Mean score (Ratio Score)</th>
<th>F1: Relating to Others</th>
<th>F2: New Possibilities</th>
<th>F3: Personal Strength</th>
<th>F4: Spiritual Change</th>
<th>F5: Appreciation of Life</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iraq/Afghanistan War Veterans</td>
<td>5427</td>
<td>13.69 (.391)</td>
<td>11.13 (.445)</td>
<td>10.79 (.540)</td>
<td>3.67 (.367)</td>
<td>(.610)</td>
<td></td>
</tr>
<tr>
<td>Tedeschi &amp; Calhoun, 1996 (Women, No Trauma)</td>
<td>31</td>
<td>23.94 (.684)</td>
<td>18.26 (.730)</td>
<td>14.65 (.733)</td>
<td>6.48 (.648)</td>
<td>10.16 (.677)</td>
<td></td>
</tr>
<tr>
<td>Tedeschi &amp; Calhoun, 1996 (Women, Trauma)</td>
<td>31</td>
<td>29.68 (.848)</td>
<td>20.94 (.838)</td>
<td>17.90 (.895)</td>
<td>8.29 (.829)</td>
<td>13.45 (.897)</td>
<td></td>
</tr>
<tr>
<td>Tedeschi &amp; Calhoun, 1996 (Men, No Trauma)</td>
<td>32</td>
<td>22.16 (.633)</td>
<td>15.19 (.608)</td>
<td>13.63 (.683)</td>
<td>5.56 (.556)</td>
<td>9.59 (.639)</td>
<td></td>
</tr>
<tr>
<td>Tedeschi &amp; Calhoun, 1996 (Men, Trauma)</td>
<td>23</td>
<td>23.30 (.666)</td>
<td>18.35 (.734)</td>
<td>15.3 (.765)</td>
<td>4.96 (.496)</td>
<td>11.70 (.780)</td>
<td></td>
</tr>
<tr>
<td>Feder, et al., 2008 (Vietnam War POWs)</td>
<td>30</td>
<td>3.001 (.600)</td>
<td>2.601 (.520)</td>
<td>3.851 (.770)</td>
<td>2.901 (.580)</td>
<td>4.001 (.800)</td>
<td></td>
</tr>
</tbody>
</table>

1 Variable obtained as an average of the corresponding survey items; possible mean range is 0-5.
>.500 denotes a moderate degree of positive growth for mean ratio (in parentheses)
>.750 denotes a great degree of positive growth for mean ratio (in parentheses)

**Table 1.2**

*Mean scores and ratio scores of each respondent category for total PTGI score*

<table>
<thead>
<tr>
<th>Respondent</th>
<th>N</th>
<th>Mean score (Ratio Score)</th>
<th>Total PTGI Score</th>
<th>Mean score (Ratio Score)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Mean Range 0-105)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iraq/Afghanistan War Veterans</td>
<td>5427</td>
<td>48.40 (.461)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tedeschi &amp; Calhoun, 1996 (Women, No Trauma)</td>
<td>31</td>
<td>73.49 (.700)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tedeschi &amp; Calhoun, 1996 (Women, Trauma)</td>
<td>31</td>
<td>90.26 (.860)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tedeschi &amp; Calhoun, 1996 (Men, No Trauma)</td>
<td>32</td>
<td>66.13 (.630)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tedeschi &amp; Calhoun, 1996 (Men, Trauma)</td>
<td>23</td>
<td>73.61 (.701)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feder, et al., 2008 (Vietnam War POWs)</td>
<td>30</td>
<td>66.30 (.631)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

>.500 denotes a moderate degree of positive growth for mean ratio (in parentheses)
>.750 denotes a great degree of positive growth for mean ratio (in parentheses)
Basic descriptive statistics were used to gather the frequencies distributions of the variables (see Table 2). This table demonstrated the descriptive variables of the mean ratio scores of the six respondent categories. All of the means of the ratios fell into the moderate degree of positive growth (> .500). All of the maximum levels of posttraumatic growth were at the great degree of positive growth (> .750). Of note was that the minimum level for the factors Personal Strength and Appreciation of Life both fall within the moderate degree of positive (> .500) with the other variables below this level.

Table 2.
Five factors and total PTGI score for respondent categories

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1: Relating to Others</td>
<td>6</td>
<td>.391</td>
<td>.848</td>
<td>.63700</td>
<td>.147968</td>
</tr>
<tr>
<td>F3: Personal Strength</td>
<td>6</td>
<td>.540</td>
<td>.895</td>
<td>.73100</td>
<td>.116929</td>
</tr>
<tr>
<td>F4: Spiritual Change</td>
<td>6</td>
<td>.367</td>
<td>.829</td>
<td>.57933</td>
<td>.154676</td>
</tr>
<tr>
<td>F5: Appreciation of Life</td>
<td>6</td>
<td>.610</td>
<td>.897</td>
<td>.73383</td>
<td>.110173</td>
</tr>
<tr>
<td>Total PTGI Score</td>
<td>6</td>
<td>.461</td>
<td>.860</td>
<td>.66383</td>
<td>.130027</td>
</tr>
</tbody>
</table>

>.500 denotes a moderate degree of positive growth
>.750 denotes a great degree of positive growth

In addition to the use of descriptive statistics, basic inferential statistical analyses of Independent Samples T-tests were used due to the mix of nominal and ratio variables (see Table 3). This table demonstrated the equality of means of Iraq and Afghanistan War veterans against each of the other five respondent categories for the five factors and the total PTGI score. The most significant (< .05) area for equality of means are Iraq and Afghanistan War veterans and Men, No Trauma for the posttraumatic factor of Appreciation of Life (.029). An area of note but not quite significant (.067) is Iraq and
Afghanistan War veterans and Women, No Trauma for the posttraumatic factor of Appreciation of Life. Another area of note but also not significant (.075) is Iraq and Afghanistan War veterans and Vietnam War POWs for the posttraumatic factor of New Possibilities. As the table demonstrates, all the mean scores for the comparison groups were greater than the means scores of the Iraq and Afghanistan War veterans.

Table 3.
*T-test for equality of means of Iraq and Afghanistan War Veterans against comparison respondent groups for the five factors and the total PTGI score*

<table>
<thead>
<tr>
<th></th>
<th>Tedeschi &amp; Calhoun, 1996 (Women, No Trauma)</th>
<th>Tedeschi &amp; Calhoun, 1996 (Women, Trauma)</th>
<th>Tedeschi &amp; Calhoun, 1996 (Men, No Trauma)</th>
<th>Tedeschi &amp; Calhoun, 1996 (Men, Trauma)</th>
<th>Feder, et al., 2008 (Vietnam War POWs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1: Relating to Others</td>
<td>.293</td>
<td>.457</td>
<td>.242</td>
<td>.275</td>
<td>.209</td>
</tr>
<tr>
<td>F2: New Possibilities</td>
<td>.285</td>
<td>.393</td>
<td>.163</td>
<td>.289</td>
<td>.075</td>
</tr>
<tr>
<td>F3: Personal Strength</td>
<td>.193</td>
<td>.355</td>
<td>.143</td>
<td>.225</td>
<td>.230</td>
</tr>
<tr>
<td>F4: Spiritual Change</td>
<td>.281</td>
<td>.462</td>
<td>.189</td>
<td>.129</td>
<td>.213</td>
</tr>
<tr>
<td>F5: Appreciation of Life</td>
<td>.067</td>
<td>.287</td>
<td>.029</td>
<td>.170</td>
<td>.190</td>
</tr>
<tr>
<td>Total PTGI Score</td>
<td>.239</td>
<td>.399</td>
<td>.169</td>
<td>.240</td>
<td>.170</td>
</tr>
</tbody>
</table>

<.05 significance for mean difference against Iraq and Afghanistan veterans total PTGI mean score

**Interpretations of the Findings**

Iraq and Afghanistan War veterans had the lowest posttraumatic growth when compared against other respondent groups in this study. The group with the highest scores of growth were women with trauma (see Table 1.2), which had a great degree of growth (> .750) in all five factors of posttraumatic growth and total PTGI score. All of the comparison groups had at least an overall moderate degree of posttraumatic growth (> .500) as demonstrated by their total PTGI score. Iraq and Afghanistan War veterans
however did not achieve a moderate level of posttraumatic growth as shown by their total PTGI score ratio (.461).

The factor variable in which Iraq and Afghanistan veterans were comparable in equality of means to the other respondent groups was with men without trauma for the posttraumatic factor of Appreciation of Life (.029). Other compared means for equality that were of note but not significant (<.05) was with women without trauma for the posttraumatic factor of Appreciation of Life (.067) and Vietnam War POWs for the posttraumatic factor of New Possibilities (.075).

Of the five factors that had the highest means for all groups were Personal Strength and Appreciation of Life. These were the only two areas in which Iraq and Afghanistan War veterans had a moderate degree of growth (> .500). All comparison groups had at least moderate to great degree of growth in these factors.

**Summary**

The hypothesis that Iraq and Afghanistan War veterans had higher posttraumatic growth the comparison groups of individuals with trauma, individuals with no trauma, and Vietnam War POWs was not supported. This was tested by doing a content analysis to find studies that used the Posttraumatic Growth Inventory (PTGI) on Iraq and Afghanistan War veterans and comparison groups. This author found four research studies with Iraq and Afghanistan War veterans and two studies with comparison groups. This study found that the comparison groups had higher scores in all five factors of posttraumatic growth and the total PTGI scores than Iraq and Afghanistan War veterans. The group with the highest scores of growth were women with trauma (see
Table 1.2), which had a great degree of growth (> .750) in all five factors of posttraumatic growth and total PTGI score. The two areas of posttraumatic growth that had the highest means for all respondent groups were Personal Strength and Appreciation of Life (see Table 2). Iraq and Afghanistan War veterans had moderate degrees of growth (> .500) in these two factors. Iraq and Afghanistan War veterans were most equal in means (< .05) with men without trauma for the factor of Appreciation of Life.
Chapter 5

CONCLUSION, SUMMARY, AND RECOMMENDATIONS

This quantitative and exploratory study examined posttraumatic growth in Iraq and Afghanistan veterans. The study’s purpose was to show that Iraq and Afghanistan veterans were more likely to have posttraumatic growth than veterans that served in other wars such as the Vietnam War and from individuals with trauma not related to war. The secondary purpose was to show that posttraumatic stress disorder was not the only outcome that may arise from deployment or combat experiences. The research study methods used were mini meta- and content analysis of recently published research articles that employed the Posttraumatic Growth Inventory (PTGI) to assess for growth among the returned Iraq and Afghanistan veterans. This study examined four articles with posttraumatic growth data collected from Iraq and Afghanistan War veterans and two articles with posttraumatic growth data from comparison groups. The comparison groups consisted of individuals with trauma, individuals with no trauma, and Vietnam War veterans. The results of those surveys were summarized in the preceding chapter. This chapter will highlight the data findings as well as discuss whether the findings support posttraumatic growth in Iraq and Afghanistan veterans and the implications within the field of social work.

Summary of Study

As noted in Chapter 4, the hypothesis that Iraq and Afghanistan War veterans had higher posttraumatic growth the comparison groups of individuals with trauma, individuals with no trauma, and Vietnam War POWs was not supported. Iraq and Afghanistan veterans in this study scored lowest in comparison to the other respondent
groups. Examining the data, there can be some compelling arguments why the Iraq and Afghanistan War veterans scored lowest for posttraumatic growth.

First, the comparison groups had very small samples (N=32 or less) as opposed to the Iraq and Afghanistan War veterans sample which had 5427 participants. The small samples may have affected the accuracy of the results of their respective studies which may not have been a large enough representative sample. The smaller the sample size, the more likely the result will not be sensitive to the hypothesis test, possibly resulting in Type II errors (Witte & Witte, 2010).

Second, the comparison of university students to soldiers, especially war veterans, presented two groups with likely different viewpoints on growth and life. The approach of the soldier to the survey would likely have been more cynical than from a university student. This perspective comes from the author’s own 26 years of military experience in regard to the outlook of the soldier. Soldiers may be looking at the survey as a means to probe them for possible information that can affect their military career. There is an ongoing negative stigma in the military in regard to mental health services. One of the biggest obstacles is the negative stigma associated with mental health problems by military members, which can cause a gap between the need for services and its actual utilization (Britt, et al, 2008; Corrigan, 2004; Corrigan, 2000).

Finally, when comparing Iraq and Afghanistan veterans to Vietnam prisoners of war, the latter group had forty years to process their experiences. As noted by Elder and Clipp, combat veterans have a broader perspective of life in later years due to their traumatic experiences (1989). The Iraq and Afghanistan War veterans however were still
in the midst of war when the survey questionnaires were given. Many of the soldiers studied would be back in the war zones within the year (Office of the Under Secretary of Defense, 2007). For them, they were still within a long cycle of trauma in which they have not had time to process the posttraumatic effects yet.

The secondary purpose of this study was supported in that Iraq and Afghanistan veterans did report posttraumatic growth on the PTGI in regard to their war experiences. The two areas that Iraq and Afghanistan War veterans were found to have a moderate degree of growth was in Personal Strength and Appreciation of Life factors. These factors had the two highest mean scores overall as noted in the descriptive statistics in Chapter 4. Personal Strength is noted to be the characteristic that includes self-reliance, self-evaluation of competence, individual development, and increased maturity (Tedeschi & Calhoun, 1996; 2004; Frazier, Conlon & Glazer, 2001; Zoellner & Maercker, 2006). This factor aligns strongly with the military emphasis on competence and discipline throughout a soldier’s training. Appreciation of Life could be explained by the soldiers attempting to reclaim a sense of their humanity. They are exposed to being shot at, handling dead bodies, knowing someone who was killed, killing enemy combatants, and discharging their weapons, which are consistently associated with symptoms of PTSD (Grieger et al., 2006; Hoge, Auchterlonie, and Milliken, 2006; Hoge et al., 2004; Hotopf et al., 2006; Kolkow et al., 2007; U.S. Department of the Army, 2006). These military members affected by war related trauma were able to turn these types of stressful life events into positive personal and psychological growth (Pietrzak, et al, 2010).
Implications for Social Work

This research project results suggest the necessity for social workers to be trained in recognizing the needs of the military population. In particular, soldiers exposed to trauma through their combat experiences. Counselors and social workers should be sensitive to positive changes, such as self-reliance and changing life priorities when assessing Afghanistan and Iraq war veterans (Pietrzak et al, 2010). The positive growth that is fostered may help to counter deleterious effects of the veterans’ combat experiences.

The research furthermore indicates the need to instill policies for cultural awareness training of the effects that deployments have on military veterans. Veterans use community services as well as military services depending on availability of resources at the base they are located (Tanielian & Jaycox, 2008). Social workers in proximity to military locations should be trained on the sensitivities of the military culture that they may be exposed. Further, elective classes or modules of curriculum should also be offered to master’s level students interested in working with the military cultural group. This education could offer topics on military lifestyle, effects of combat trauma, and deployment issues to better familiarize social workers with this population.

Recommendations for Further Research

The implications for future research based on the current findings show the need to gather data on the effects of combat trauma on positive growth on military veterans. There is a paucity of research studies on the Iraq and Afghanistan War veterans in terms of posttraumatic growth. Further study would support the Comprehensive Soldier Fitness
program being devised and implemented by the Army. The aim of this program is to move a person toward decreased PTSD, increased resilience, and increased growth (Seligman & Fowler, 2011).

**Limitations**

Noted limitations of this study were the sample size of the caparison studies and the paucity of studies of posttraumatic growth of Iraq and Afghanistan War veterans. This study used only four studies on veterans selected to be the most appropriate for this content analysis and mini meta-analysis. The small samples of the comparison groups may also have affected the accuracy of the results of their respective studies which may not have been a large enough representative sample.

Also, there may be a variety of factors that may influence reactions to trauma. This study did not take into account comorbid factors, such as, premorbid or subsequent trauma to a service member’s deployment.

In addition, not all veterans may have had the same exposure to war. The Army and Marine Corps have noted higher percentage of ground operations than Air Force or Navy service members, and thus have a greater exposure to combat (Belasco, 2009). Areas of operation within combat zones as well as jobs held while deployed likely affected the responses. A soldier doing patrols outside the relative safety of a base may face more frequent and intense trauma than an administrative worker within a sheltered bunker. Reactions may also vary among individuals when faced with trauma based on their training and prior experiences.
Conclusion

Tedeschi and Calhoun in 1996, found that traumatic experiences such as post-traumatic stress disorder (PTSD) led to positive growth in areas like sense of self, relationships, spirituality, and life philosophy. The purpose of this study was to show that Iraq and Afghanistan veterans were more likely to have posttraumatic growth than veterans that served in other wars such as the Vietnam War and from individuals with trauma not related to war. While this hypothesis was not supported in this content and mini meta-analysis, this study did show that posttraumatic stress disorder was not the only outcome that may arise from Iraq and Afghanistan War veterans’ combat experiences. These veterans had positive growth in Personal Strength and Appreciation of Life as reported in four studies that collected data using the Posttraumatic Growth Inventory (PTGI). Social workers should use this information to foster this growth within these military combat veterans. These men and women of the military sacrifice so much for this country, the least we can do as social workers is offer the best level of care we can offer to facilitate their healing process.
References


