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From Combat Veterans to Criminals: Posttraumatic Stress Disorder and Criminal Justice Involvement

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Walden University
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Abstract

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M.S., Walden University, 2011

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Dissertation Submitted in Partial Fulfillment of the

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Forensic Psychology

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Abstract

Posttraumatic stress disorder (PTSD) is currently known as the silent killer among combat veterans who have served in Operation Iraqi Freedom, Operation Enduring Freedom, and Operation New Dawn. Many combat veterans do not know or understand that they may be suffering from mental illness/disorders such as PTSD and turn to maladaptive behavior, resulting in criminal justice involvement (CJI). The goal of this study was to assess a relationship between PTSD and CJI among combat veterans. This study used cognitive behavior theory to understand the relationship between PTSD, CJI, and combat. This study used a predictive correlational design and statistical analysis of retrospective archival data (N=146) provided by the Department of Veteran Affairs to find the correlation between PTSD, CJI, and combat. The 5 research questions were: Does PTSD positively predict CJI in combat veterans? Does criminal history pre combat positively predict CJI in combat veterans who have PTSD? Does combat trauma experience positively predict CJI in combat veterans with PTSD? Does deployment length positively predict PTSD in combat veterans? And do multiple deployments positively predict PTSD in combat veterans? This study determined that PTSD did not significantly predict CJI and that criminal history did not predict PTSD. However, this study did predict that multiple deployments and length of deployment does predict PTSD in combat veterans. This study provides a way to bring change to how veterans are treated in the criminal justice system. This is important for many reasons, such as the positive social change it will have on the veteran community through providing insight on the changes that need to be made in PTSD awareness education and possible change in assessment and treatment of PTSD.

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Dedication

This study is dedicated to my husband, Christopher Van Nevel, for his encouraging support during this rigorous process as well as to my children, Connor and Aaron, who often competed for attention with this dissertation, but in the end always showed me how important my family is. They always managed to encourage me along the way even when I thought there was no way this could get done. Thank you and I love you all very much!

I would also like to dedicate this to my previous Chair, Dr. Jack Apsche, for taking me on when it seemed like no one else would want to work on this, for teaching me about writing, being a professional, and for just being there when I would call to vent about this project. Finally, for being a great mentor and friend and being fun to be around, may he rest in peace.

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Chapter 1: Introduction to the Study

Introduction

> It was as though my body had a mind of its own after I came back. No matter what I did, I couldn't stop the crazy excitement that I felt-the rushes, the craving for something, my heart racing, sweats, hitting the ground, looking for flash glare in windows, and worst of all, feeling as I would jump out of my skin. (A Marine after three tours in Iraq and Afghanistan (as cited in Bruner & Woll, 2011, p. 19)

Posttraumatic stress disorder (PTSD) can cause pain not only to those who suffer from it, but to the individual's family, friends, and/or coworkers. It is also known as one of the leading mental health concerns affecting returning veterans from the current combat zones. The Department of Veteran Affairs in a current survey reported that more than 337,285 of today's veterans suffer from PTSD; 105,067 from substance abuse; and 524,977 from some other mental health issue (Department Of Defense, 2015a). It has been said that "PTSD is the enemy within, a claymore in the mind that is slowly exploding before our very eyes, but unidentified, and therefore invisible, even to those who suffer directly from its effects" (Hafenmeister & Stockey, 2010, p. 88). In the years since September 11, 2001 and the return of combat veterans from Operation Iraqi Freedom (OIF), Operation Enduring Freedom (OEF), and Operation New Dawn (OND), there has been an influx of individuals who suffer from PTSD. These veterans are, therefore, returning home with a higher prevalence of PTSD symptoms that has ever been reported in the past (Hafenmeister & Stockey, 2010; Caron, Podkopaez, & Loyanchan, 2013). This higher prevalence is likely due to the increased diagnostic accuracy proved

by the new version of the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*; APA, 2013, Hafenmeister & Stockey, 2010).

War, at its core, never changes; nevertheless this particular generation of combat veterans has observed a more updated type of warfare. This has resulted in more violent and destructive enemies which have new and creative ways to kill or cause severe damage. For example, the use of improvised explosive devices (IEDs), which are created to yield the maximum amount of damage and destruction. Studies have shown that the weapons used are more destructive and that somewhere between two-thirds of American soldiers have been killed or wounded by IEDs (Zoroya, 2013) Therefore, these veterans are faced with pervasive loss, increased threat to life, and ethical conflict in the field of battle (Bruner & Woll, 2011). Ethical conflict can be anything from knowing that even though this person has a bomb in their hands killing is wrong to disobeying a direct order because what leadership is asking goes against an individual's personal moral code (Elbogen et al., 2014). These veterans are returning home with a more defined kind of PTSD then has been seen in the past (Caron et al., 2013). It is important to note here that as stated in previous research, (as of 1990 and currently) those in the behavioral sciences have been focused on those individuals who experience traumatic events such as war and combat (Hodge, 2006), but not focused on how those events have changed the individual(s) who is/are suffering from PTSD and how it relates to combat and criminal justice involvement (CJI).

Historically, PTSD has been known by many names such as irritable heart, soldier's heart, war neurosis, the most famous other than PTSD, shell shock (, and finally

arriving at PTSD (McCormick-Goodheart, 2013). This has led to PTSD being observed as more violent to the individuals' emotions and their physical appearance than it originally was thought (Elhai, Cook, Cassidy, Ruzek, Deep Ram, & Sheikn., 2005). Those who could be considered to be suffering from PTSD are often reported as having different levels of aggression which could range from mild to severe (Collins & Bailey, 1990; Elbogen et al, 2012). This is not to say that every veteran with PTSD will act with aggression but to say that they are an at-risk group for acting violently. With the development of the most recent *DSM-5*, diagnostic criteria for PTSD continue to be refined and is now considered a severe, lasting response to a traumatic experience (APA, 2013).

In this study, I looked at the increasing number of combat veterans, both with and without prior criminal histories, becoming criminal justice involved after their return home from combat and within that population looking at those who have PTSD. I examined the relationship between CJI and PTSD among the population of combat veterans who were involved with OIF, OEF, and OND. By looking at this relationship, I hoped that the results of this study would help understand the psychological implications that PTSD has on those combat veterans who have become CJI. My review of the literature indicated that there is little research on the psychological implications of PTSD on CJI combat veterans from OIF, OND, and OEF veterans. Another reason this study was so important was that it provided me with an opportunity to identify these psychological implications.

This chapter will continue with background to introduce the study topic. This section will include the intended theory in regards to PTSD, combat, incarceration, and exposure. I will then describe the variables that I examined in this study and provide a brief introduction on how they were statistically measured to find the relationship between variables. Then I will describe the problem and purpose as to why this study was important to not only social change but to the forensic psychology field as a whole. I will then present a description of the intended research questions and hypothesis that I used in this study. The theoretical foundation will also be described in detail, followed by the nature of this study. After presenting the definition of key terms, I will present the research assumptions, delimitations, and possible limitations in detail. Lastly, I will provide the significance of the study to show its importance to social change and as a whole.

Background

Over the past 10 years, PTSD research has increased among the, OIF, OEF, and OND combat veteran population. In addition, it has been observed through previous research that combat veterans are entering the prison system but the reasons for this have not been examined (Elbogen et al., 2012; Philips, 2012; Philips, LeardMann, Grumbs, & Smith, 2010). It is has been predicted by the Department of Veterans Affairs that during 2014, out of the 1.5 million combat veterans returning home from combat, 1 in 5 will have served multiple deployments (Elhai, Frueh, Enghahl & Richardson., 2011). It is also estimated that 300,000 will suffer from some form of mental disorder, mainly PTSD and/or traumatic brain injury (TBI, Elbogen et al., 2014; Hawkins, 2010). It has been

therefore assumed that many of these veterans are at a higher risk of entering the criminal justice system with PTSD post deployment (Hawkins, 2010; Hodge, 2004). There have also been reports that CJI is one of largest problems for Iraq and Afghan war veterans today (Elbogen et al., 2012). Many of these veterans have been also returning home with a diagnosis of PTSD, TBI, or both; in past research these have been linked to behavioral patterns like aggression or violence that have led to CJI problems such as incarceration (Elbogen et al., 2012).

In Vietnam, about 15% of combat veterans are currently diagnosed with PTSD (Elhai, Reeves, & Frueh, 2004), which is lower among U.S. Vietnam veterans than the current percentage of veterans who are coming home from present day warfare which is approximately 17 to 20% (Hoge et al., 2006). Research states that postwar syndromes (such as PTSD) are present in modern wars which has resulted in their nature being varied (Cozza, 2004). In Vietnam, the veterans were treated with forward psychology for determination of PTSD (then called shell shock) and the use of proximity, immediacy, and expectancy (PIE) as treatment (Cozza, 2004). This method is also used now to treat psychological problems in a combat zone (Elhai et al., 2011). Forward psychology (or PIE) was, and is, a method that makes it simple for field medics to provide a turnaround and get soldiers back into combat (Elhai et al., 2011). PIE is used as close treatment on the battlefield; it provides intervention and the belief that the solider is “fit for duty” which allows them to return to the battlefield (Cozza, 2004).

Todays’ combat veterans experience road side bombings, IED explosions (which in Vietnam veterans did not have exposure to), pervasive loss, and traumatic injury

and/or experiences. Another important factor that distinguishes the veterans of the past from the veterans of today is that today's combat veterans have served in multiple deployments. Multiple deployments place them back in the trenches and increase their continued exposure to combat situations (Philips, 2010), which could, in turn, increase their risk of experiencing PTSD symptomology (Bruner & Woll, 2011; Philips, 2010).

PTSD can cause combat veterans to experience flashbacks, intrusive thoughts, and/or nightmares. In some cases, veterans may re-experience violent events (APA, 2013). Occasionally, it has been observed that veterans will act out in ways that lead to criminal acts. In very extreme cases, behavior might be aggressive, as perceptions of current situations might remind the veteran of combat-related service (Bruner & Woll, 2011). This is where it can be hard to differentiate an intentional criminal act from problems related to a mental health condition. In many cases this can be re-experiencing violent events and some of these veterans will act out and not realize what they are doing until it is too late and the criminal act has already taken place. This could be anything; for some, it is defending their comrades and shooting the enemy when in reality they are shooting an innocent. This can be where it is hard to differentiate a criminal act from someone who is experiencing hallucinations (Bruner & Woll, 2011; McCormick-Goodheart, 2013; Phillips, 2010). This study is important to social change because the results shed some light on the increasing problem of CJI among those combat veterans returning home with PTSD.

In this study, I used the most recent data on CJI and combat veterans to include the OIF, OEF, and OND combat veterans. The results of this study provide a better

understanding of how PTSD can affect combat veterans in terms of CJI. Because PTSD has become more common, it is important to understand it better so as to help in preventing it and addressing it when it happens as a first line of defense. The findings of this study provide that knowledge for the service members and their families.

Problem Statement

PTSD is a mental health condition that has the potential to damage or alter the individual's functioning which could result in their perception of reality being changed (APA, 2013a). However, it is uncertain whether PTSD symptomology, such as hallucinations, fear, irritability, anger, substance abuse (though not a direct symptom of PTSD but rather a result of it), social isolation, and paranoid behaviors are significant predictors to incarceration among combat veterans (APA, 2013b). Many combat veterans are returning home without properly being diagnosed (Elbogen et al., 2014; Hodge, 2004), and this has resulted in no evidence to support a history of mental health that could help in explaining their current actions and mental state of mind. There is also the possibility that life events before joining the military are not being taken into account for the predictability of developing PTSD after an individual has been exposed to combat and/or a traumatic experience due to their military affiliation (Ouimette et al., 2011). Events that could have caused trauma prior to military experience for the individual could include child abuse, divorce, a car accident, or physical injury. Even though more is known about PTSD than in the past, there is so much that is unknown, such as predictors of CJI in war veterans with PTSD. Specifically, the relationship of the following

variables with CJI in war veterans has not been examined: (a) number of deployments and (b) lifetime criminal history.

Purpose of the Study

In this study, I focused on combat veterans with PTSD and examined if there was a relationship between involvement in the criminal justice system (incarceration) and PTSD among the combat veteran community. The forensic psychology and military community will benefit from this quantitative study where I determined what can be distinguished about PTSD and CJI as a necessary first step to developing more accurate methods that can be used to identify those combat veterans with PTSD who are at risk of CJI. In this study, I focused on combat veterans from the OIF, OEF, and OND population.

The purpose of this study was to research the potential relationship between CJI, PTSD, and combat among the combat veteran population from OIF, OEF, and OND. The gathered data were used to answer the research questions of the study including the themes of combat exposure; multiple deployments and length of deployment in a combat zone; demographic variables (age, gender, race); and predictor variables. In the data, I looked at (a) multiple deployments (independent variable, (IV)), yes or no; (b) PTSD presence (IV), yes or no; (c) incarceration (i.e., CJI history), yes or no; and (e) deployment length (dependent variable, (DV)). All of these variables helped me determine if the relationship between PTSD and CJI was present or if there was no relationship between them.

Research Questions and Hypotheses

The following research questions and hypotheses guided this study:

1. Does PTSD positively predict CJI in combat veterans?

   H_o1: PTSD does not positively predict CJI in combat veterans.

   H_a1: PTSD positively predicts CJI in combat veterans.

2. Does criminal history pre-combat positively predict CJI in combat veterans who have PTSD?

   H_o2: Criminal history pre combat does not positively predict CJI in combat veterans who have PTSD.

   H_a2: Criminal history pre combat positively predicts CJI in combat veterans who have PTSD.

3. Does combat trauma experience positively predict CJI in combat veterans with PTSD?

   H_o3: Combat trauma experience does not positively predict CJI in combat veterans with PTSD.

   H_a3: Combat trauma experience positively predicts CJI in combat veterans with PTSD.

4. Does deployment length positively predict PTSD in combat veterans?

   H_o4: Deployment length does not positively predict PTSD in combat veterans.

   H_a4: Deployment length positively predicts PTSD in combat veterans.

5. Do multiple deployments positively predict PTSD in combat veterans?

H_o5: Multiple deployments do not positively predict PTSD in combat veterans.

H_a5: Multiple deployments positively predict PTSD in combat veterans.

Theoretical Base

In this study, I used the cognitive behavioral theory (CBT), a well established behavioral science theory, which was developed by Dr. Beck in the 1960s as the theoretical framework (Castro, 2009; Swart, Bass, & Apsche, 2015). Cognitive behavioral theory helped me understand and explain veterans' behavioral functioning during and after a PTSD episode. This theory is commonly used when dealing with the criminal population as well as in the forensic psychology field and has shown great results in understanding criminal behavior (Bartol & Bartol, 2011). This theory is essentially a learning theory which is used to explain human behavior in order to understand the thought process an individual goes through during and after criminal activity has been committed (Bartol & Bartol, 2011).

The purpose of using CBT is to provide a way of blending the cognitive and behavioral approaches (such as behavioral interventions, mindfulness, and other aspects of CBT that I will explain in the literature review in Chapter 2) to help determine a pattern in criminal behavior in combat veterans and PTSD (Pedersen, Callaghan, Prins, Nguyen, &Tsai, 2012; Swart et al., 2015). This particular theory not only provided the tools I needed to observe the changes in personality among veterans with PTSD (Pedersen et al., 2012), but it proved a stepping stone for solidifying the relationship

between combat trauma and CJI (e.g., the sudden changes in emotions and thoughts the combat veteran has in relation to PTSD and CJI). This study provides specific characteristics that can be linked to CJI in those combat veterans from OIF, OEF, and OND with PTSD.

Nature of the Study

This was a quantitative study and I used a predictive correlational design to determine the relationship between PTSD and CJI in combat veterans. This methodology helped in pinpointing the specific relationship between PTSD combat veterans and incarceration. Quantitative research allowed the use of archival data which will provide the numeric description of the intended population of combat veterans (see Creswell, 2009, 2014). This also allowed for a generalization of the characteristics, attitudes, and/or specific behaviors of this particular population. I also conducted post hoc analyses as appropriate. For example, different models pertaining to logistic regression helped in specifically isolating the effect that combat has on the odds of CJI among the combat veteran population. For each of the research questions, the independent and dependent variables changed depending on the analysis used. The DVs were (a) CJI and (b) number of deployments (c) deployment length. The IVs were (a) combat veterans, (b) PTSD. This helped in my determination of the relationship of PTSD among incarcerated combat veterans being more or less likely. There were two levels of PTSD that I measured in this study: undiagnosed PTSD versus diagnosed PTSD in combat veterans who are incarcerated.

Since this study was quantitative in nature, I carried out a multivariate analysis using SPSS. This type of analysis is used to find the relationship among several variables simultaneously (Babbie, 2007; Green & Salkind, 2011). In multivariate analysis, each of the variables involved have different levels (Green & Salkind, 2011); logistic regression is used to find the differences between them. I used logistic regression in this study to specifically isolate the effect combat has on the odds of incarceration among the combat veteran population. This analysis provided a way for me to test the hypothesis of PTSD contributing to CJI of combat veterans.

Definition of Terms

Battle fatigue: Combat stress causalities where individuals are experiencing combat stress reactions to the point where they can no longer function properly. In other words, this is a normal response to the abnormal circumstances of war (Elhai et al., 2005)

Cognitive behavioral therapy: A wide range of therapies that has the belief that negative and unrealistic thinking can cause destructive behavior and emotions. This treatment method's primary focus is to change these beliefs to modify the behavior and emotions into positive instead of negative thinking (Cartwright, 2012).

Combat exposure: When a service member is exposed to traumatic events during combat that might cause trauma (Cozza, 2005).

Combat stress: The natural result of the heavy mental and emotional work required when facing danger (Thompson & Rangel, 2008).

Combat veterans: Military service members who have served in a combat zone for one or more deployments from any branch of the military (Army, Navy, Marines, Air

Force, and National Guard; Department of the Navy, 2009). For the purpose of this study, combat veterans of the Army and Army Nation Guard Minnesota.

Combat zone: Area where there is military combat and/or conflict also stated as a conflict zone (Cozza, 2005).

Conflict zone: Area where one or more nations are having violent disagreement against each other also stated at a combat zone (Elhai, 2005).

Criminal justice involvement: Military service members who have and or who are currently involved with the criminal justice system at the criminal level (misdemeanor offenses) within the court system (Caron et al., 2013). For the purpose of this study, felony offenses were not be included.

Geographic offending patterns: For the purpose of this study, this was the type of crime (i.e., DUI, substance abuse, domestic violence, misdemeanor crimes, but not including serious felonies such as murder).

Posttraumatic stress disorder (PTSD): A psychological distress following exposure to a traumatic or stressful event (APA, 2013).

Assumptions

In this study, I assumed that researching combat veterans can be difficult and controversial; this has been said to be a common assumption in the field of social research as well as research concerning the combat veteran population (Department of Veteran Affairs, 2013). There are many factors that a researcher must look into when considering working with and around veterans in general, not just combat veterans (Department of Veteran Affairs, 2013). One factor is that many veterans do not wish to

talk to outsiders; this meaning that they feel uncomfortable talking to someone who is not a veteran themselves and cannot relate to them (Britt, Green-Shortridge & Castro, 2007, Britt et al, 2008).

In this study, I addressed this assumption by allowing the combat veterans to participate in the study without having the fear of their mental health problems becoming issues among their fellow service members by the use of the archival data set gathered from the VA computerized patient record system (CPRS). The data collected were solely archival data and no participants were interviewed for this study. The previous assumption arose when the veterans originally spoke to the VA researchers that were collecting the archival data that was used for this study. It is my hope from this study that this underlying assumption will help in determining if PTSD in combat veterans is a reason why criminal activity is appearing to be more prevalent in the combat veteran population.

Scope and Delimitations

This study was delimited by the study criteria for participation and by the archival data provided by the Department Veterans Affairs of Minnesota. I included data from the VA of the most recent conflicts in Iraq and Afghanistan from 2005–2014. Data gathered were only included from the archival data if the client file had indications of having served in a combat zone, served multiple deployments, and had been criminal justice involved. To be included, the data had to be complete to its fullest degree.

In this study, I looked at data from both combat veterans with PTSD and combat veterans without PTSD. Therefore, the minimum participant requirement for this study

was that of combat veterans of the most current conflicts, OIF, OEF, and OND as well as those who were a part of the VA's Veterans Justice Program. If they did not meet the minimum participant requirements for the predictor variables and demographics, they were not included in the study. Due to this study being limited to combat veterans of the OEF, OIF, and OND conflicts, I was insensitive to data from the past conflicts such as the Gulf War and cases with incomplete information. Therefore, this study was delimited by complete responses across the measured variables in regards to combat, PTSD, and incarceration (i.e., CJI).

The participants were combat veterans who have served in combat for the Army, Marines, and the Army National Guard of Minnesota between the ages 18–60. Data that has no relevance to linking PTSD to incarceration among the combat veteran population was not included in this study. Additionally, previous research has indicated that combat veterans with PTSD have an increased risk of CJI versus those veterans who have not served in combat (Hoge 2004; Hunter, 2014; Philips, 2010). Therefore, the purpose of this study was to focus on the prediction of PTSD among combat veterans who had been CJI and who were at risk of CJI.

Limitations

Specific aspects that I addressed in this study included that of combat veterans who did not to obtain the proper help until it was too late. Resulting by already in the prison system. As well as those combat veterans who had been incarcerated for criminal activity. This was important because many combat veterans within the different branches of the military are not being diagnosed properly with PTSD (Britt et al, 2008).

At the time of this study, there were two assessment tools that the military used throughout all branches of the military, the Deployment Health Assessment (DOD, 2009) and the Post Deployment Health Reassessment (DOD, 2012) to help with diagnosing mental health problems. These tools are used are completed by self-reporting via the computer and are required of the service members to fill out before deployment and after deployment. If the assessment shows that the individual might be at risk, then they are recommended to see a psychologist assigned to their unit. Since this is a self-report, there is the high chance that the service member might not tell the whole truth so that they can continue to do their job in combat zones such as Iraq and Afghanistan.

Additionally, there are a number of other limitations that might have threatened the internal validity of this study:

- Coexisting Factors: Past criminal history and social status (military rank: enlisted, warrant officer, or officer). Limiting this even more to those combat veterans who have no past criminal history and who act out criminally after deployment then looking at those who have a past criminal history to identify a relationship there. There is the possibility that since the assessment tools used in this study were mainly self-reported, there was the potential for a limitation, which also brought up malingering as another possible limitation.
- Individual differences: Participants may have suffered from an age-based discrimination (meaning older veterans [i.e., Vietnam era]) and had the perception that the younger veterans are malingering their symptoms. This

shows an individual bias that can be related to the stigma and culture of the military. This might also include that of officer and enlisted personnel differences such as the perception that officers are better than enlisted, etc.

- Methodological limitations: A possible limitation could be that if the data were compromised in some way. This meaning that if the data that were gathered by the VA were not collected anonymously. Also, if certain combat veterans were not asked to give their information. A way that I made sure that the data given were taken anonymously was to see if all personal health information was taken from the data set given. Meaning that no personal health information (i.e., names and social security numbers) were not on the data collected from the master data sheet provided by the VA. Another limitation could have been that of age, which could have decreased the amount of data collected. To mitigate this limitation I adjusted the age range to gather the necessary amount of data.

Significance of the Study

The findings of this study contribute to filling the gaps in the research among the different pathways of combat veterans to criminal arrest such as lifetime criminal history (prior to combat exposure and after combat exposure) and multiple deployments in a term of service. The results of this study took a step forward into uncovering the specific characteristics that could be associated between CJI and combat veterans with PTSD. I also took steps toward filling in the gaps in research by providing a new way of looking

at PTSD and how it can relate to CJI in combat veterans in this study. There are many studies out there that focus on PTSD and crime but none that had been specifically designed to look at combat veterans, crime, and PTSD. This focus is what distinguished my study from past research and why the results of this study were able to fill in the gaps in research. The focus for this study was to examine the relationship between PTSD and CJI among combat veterans. In this study, I looked at the possible different levels of combat exposure (multiple deployments and length of deployment in the combat zone) for those involved in OIF, OEF, and OND to help in further defining the nature of PTSD these individuals are experiencing. This was important to understand because every individual may experience the same event in a different way.

There are different levels of PTSD that individuals will experience that can be based upon the type of combat exposure to which they are exposed. This is because everyone is different, and therefore, they experience and react to things differently than someone else would. Some examples are conflicts with Taliban soldiers, road side bombings, mortars, IEDs, and the geographic region in which they were in, such as Iraq and Afghanistan (Nillni et al., 2014). Since individuals may experience the same traumatic event differently, measuring the different trauma intensity levels and symptoms of PTSD is not clear cut (Nillni et al., 2014) and the results of this study were helpful in providing the information needed to help determine those levels and if those individuals with PTSD are at an increased risk of criminal activity and incarceration. The results of this study have the potential to help in defining if there is a relationship between combat veterans with PTSD and CJI as well as determining if combat military service is a

predictor of incarceration, which could have an inverse effect of the potential of the combat veteran becoming imprisoned after service (see Elbogen et al., 2014). In this study, I also considered that there might be a *criminal type* of individual that might be drawn to military duty (see Hunter, 2013b). PTSD in combat veterans has the potential to cause criminal behavior and could improve the mental health stigma with positive social change among the military and prison communities. The results of this study will promote positive social change by providing awareness, intervention, and prevention for combat veterans with PTSD and CJI. Combat veterans work in combat areas and are exposed to extensive traumatic events that are uncommon to civilians. The information that was gained from this study will be used to help in addressing PTSD and CJI in combat veterans. The findings of the study have the potential to help not only the lives of the veterans but the families and the communities in which they live.

Summary and Transition

In the recent years, it has been estimated that 1.5 million soldiers coming home from Iraq and Afghanistan are said to have PTSD and other mental health problems (Hunter, 2013a). This means the number of soldiers who have such battle scars that are not only physical but psychological (unseen scars) is rising as well. As these wars come to a halt, it is time now to place attention on the inevitable aftermath that comes from those who suffer from PTSD (Hunter, 2013a). In Chapter 1, I introduced and defined in detail the scope, problem, and purpose of this study. Combat veterans from OIF, OEF, and OND are increasing, and therefore, problems they suffer will increase. In the problem statement, I identified the need for this study by presenting the facts around the increased

measures for PTSD screening and the decrease of military stigma and culture. I also defined the benefits the results of this study will provide to the community. The background and the intended research questions also helped me exemplify the need for this correlational examination of the relationship between incarceration and PTSD among combat veterans.

In Chapter 2, I will provide an in-depth overview of the literature concerning PTSD and CJI that was relevant to the findings of this study. I will also provide an in depth overview of the new definition of PTSD as according to the new *DSM-5*. I will discuss the CJI and its potential role with combat veterans and PTSD. This chapter will also include my search strategy to find the articles to back up the research hypothesis and questions that were stated in Chapter 1. The theoretical framework of the study and PTSD research will also be explained in this chapter. Chapter 2 will also contain supportive literature on the relationship between PTSD and criminal activity. I will also provide literature supporting barriers to care for combat veterans with PTSD. Also, even though I primarily looked at male veterans and their CJI in this study, there will be a small section on female veterans, their CJI, and their problems with PTSD and combat.

Chapter 2: Review of Literature

Introduction

Military warfare has changed dramatically over the last two decades. New technologies developed in recent years have given rise to more violent and destructive enemies which have new and creative ways to kill or cause damage such as the IEDs (Bruner & Woll, 2011). Therefore, combat veterans are faced with more extreme traumatic experiences such as pervasive loss, increased threat to life, and moral conflict in the field of battle (Bruner & Woll, 2011; Hoge, 2011). Many of these veterans are serving more than one tour of duty and, though there are many physical attributes of war (injury), there are those war wounds that happen in the mind and are difficult to spot. PTSD is a mental wound that causes a war of the mind and is affecting large numbers of military service members (Kopera-Frye et al., 2013).

Over the past 10 years it has been suggested by Philipps (2010) that PTSD research in combat veterans has been steadily increasing. It is my hope that with this study, the results will provide a missing link to PTSD and CJI in combat veterans from OIF, OEF, and OND. There is concern that some combat veterans with mental health problems (i.e., PTSD or TBI) are having major difficulties in returning to civilian life (Taylor, Parkes, Haw, & Jepson, 2012). It has been seen that the OEF, OIF, and OND combat population are subsequently coming into contact with the criminal justice system resulting in a growing problem within the prison system and how to assess and treat combat veterans with mental health issues (Elbogen et al., 2012; Philipps, 2010; Taylor et

al., 2012). OEF, OIF, and OND conflicts have led to increased attention from many media outlets and politicians about the dangers that the service members are facing overseas in Afghanistan and Iraq (Taylor et al., 2012). It is my hope that this study will fill the gaps in research concerning the relationships between CJI and PTSD; CJI, deployment length, and PTSD; and CJI, PTSD, and multiple deployments in combat veterans.

The gaps in current research suggest that there is a need for the continued investigation of the following concerning combat veterans, PTSD, and incarceration: (a) different pathways to criminal arrest, (b) lifetime criminal history, (c) geographic offending patterns, and (d) barriers to care. In this study, I looked at these gaps to help define the relationship between PTSD and CJI among combat veterans. In this chapter, I will cover the most current aspects of combat, PTSD, CJI, and military stigma with today's combat veteran population from OND, OIF, and OEF. In this chapter, I will also provide a review of the literature on the importance of CJI, veteran's courts, treatment courts, stigma and culture of the military, combat exposure, military service and combat, and the most current definition of PTSD as per the new *DSM-5*. Each section will include why the contents are important to the area of forensic psychology and how they are relevant to this study.

Literature Search Strategy

The primary database that I used for retrieving the articles was PsycINFO accessed through the Walden University Library and Google Scholar. I also retrieved articles from SagePUB, PsycArticels, Criminal Justice, and Military Medicine through

the Walden Library. Articles were identified by using a combination of keywords that included but were not limited to *PTSD, combat, combat exposure, incarceration, justice involvement, military, Operation Enduring Freedom, Operation Iraqi Freedom, Operation New Dawn, trauma, military stigma, veterans' courts,* and *veterans* (further detail explained in Table 1). I combined these keywords in many different ways, and some were grouped together so as to find articles that included many aspects of what is being researched in this review. An example of this would be PTSD + incarceration, or PTSD + combat + veterans and so on.

Initially, articles that were dated within the last 5 years were searched. Given that the veteran population of OEF, OIF, and OND is a large population spanning from 2001 until the present though, there were some articles from beyond 5 years from the publication date of this study that were ground breaking for this population and so were included to provide a history of these veterans and combat. I included these articles to increase the body of the literature from which to review. Therefore, articles published within the last 10 years were also selected in order to capture the meaning of not only the original authors but to validate the most current research.

I saw early on in the research process that there were many articles published around 2004–2008 and these were cited in the most recent articles. Because of this fact, they were also cited in this study in order to provide a strong background of the combat veteran population from the conflicts since September 11th, 2001. Articles were also retrieved from the Taylor & Francis web database, VA PILOTS Data Base, and Veterans Courts of Minnesota, using the same keywords that were stated earlier. Some articles

were also given to me to use in the review by fellow colleagues. Some articles were also retrieved from Research Gate, a psychology professional social media site. Other colleagues in the field would send me links to articles that they thought would be good to use for this topic. Some information was also taken from current news and media sites, such as ABC News, BBC News, and the *New York Times*. At the time of the study, PTSD and combat was getting a lot of attention, and I felt it relevant to mention this so as to further solidify the importance of this study.

In order to ensure that the most current research was used, I used the process of searching the reference lists of the articles I had already found in order to provide the most recent comprehensive work. This provided a way for me to expand the review and ensure it was more up-to-date with the most recent information provided. Table 1shows the key words and terms that I used in the research for the chosen topic to find gaps in the research and the key information needed for this study. Other key terms I used in the search strategy included *justice involvement, male veteran health care, female veteran health care,* and *treatment*.

Table 1

Key Term Database Search

Key Root Phrase	Key Terms used with Root Phrase
Women and Men and Veterans	PTSD, Stressors, effective treatment, past sexual assault, past sexual trauma, past trauma
Women and Men and Veterans and PTSD and	Combat trauma, combat exposure, readjustment, family adjustment, effective treatment
Women Veterans, Male Veterans and PTSD and	Combat trauma, combat exposure, etiology, effective treatment

Veterans and PTSD and	etiology
Veterans PTSD and	Treatment, substance abuse or use
Female Veterans and	PTSD
Male Veterans and	PTSD
Female Veterans and PTSD and	Past, children, sexual trauma, depression, combat exposure, substance abuse
Male Veterans and PTSD and	Past, children, sexual trauma, depression, combat exposure, substance abuse
Combat Veterans and	PTSD
Combat and Incarceration and	PTSD
Criminal Justice Involvement and	PTSD, combat exposure, incarceration
Combat Exposure and	PTSD, incarceration
Military Stigma and Culture and	PTSD, mental health treatment, military culture, criminal justice involvement, treatment programs, incarceration, substance abuse
Cognitive Behavior Theory and	PTSD, criminal justice involvement, combat, trauma
Measurement tools and PTSD and TBI	Combat exposure
OND and OIF and OEF and	PTSD, TBI, criminal justice involvement

Theory Behind PTSD, Criminal Behavior, and Psychology

To begin in 1925, Pierre Janet theorized that people develop meaning schemes based upon their past experiences in order to develop coping mechanisms with subsequent challenges that they might face (Friedman, Keane, & Resnick, 2010). It has been argued that when individuals are faced with what was termed “vehement emotions,” they are not capable of developing cognitive maps when integrating the frightening experiences (trauma; Friedman et al., 2010). This argument brought about the cognitive revolution and the development of what is now called the third wave therapy in psychology (Apsche et al., 2012). In the early 1960s, Dr. Aaron Beck recognized the importance of thinking patterns and unconscious mental processes in shaping and motivating behavior (Swart et al., 2015). The goal behind this theory was to change thinking patterns that are seen as the source of their difficulties (Swart et al., 2015).

CBT is considered as one of the foremost ways to work with military service members with PTSD (Goncalves et al., 2010). CBT focuses on the trauma-related thoughts that are associated with PTSD symptomology (Garske, 2011). It is used in conjunction with other treatments, such as PIE, otherwise known as forward psychology; exposure therapy; mindfulness therapy, or Zen Buddhist teachings; and many more that are used to treat PTSD (Swart et al, 2015). CBT is most commonly used when dealing with PTSD in psychological research because it has shown the most results in providing the most accurate responses to PTSD and trauma exposure. CBT theory guides the researcher in psychology in assessing, formulating, and treating (Trower, 2011). CBT theory helps to show the pathway to recovery in the third wave psychology (Trower, 2011). This theory attempts to change behavior by altering thoughts, interpretations, assumptions, and strategies for responding to trauma (PTSD; Garske, 2011; Trower, 2011). A goal of this theory is to break down the condition stimulus that has been developed in response to the trauma and take away its connection with the fear response (Goncalves et al., 2010; Trower, 2011). Meaning that the therapy will break down the condition stimulus and the theory supporting it will describe the relationship which makes it possible for the therapy to use the information gathered to conduct the therapy. CBT also helps to identify the schemas that are causing the intrusive thoughts (Swart et al., 2015). CBT incorporates Zen-Buddhist teachings, such as mindfulness, that embrace acceptance to self and internal experiences (Friedman et al., 2010; Swart et al., 2015). Here the negative experiences, emotions, thoughts, and circumstances are not considered to be problematic but the behavior in which people engage in to avoid the negative

emotions and experiences (Apsche, DiMeo, & Kohlenberg, 2012; Friedman et al., 2010; Swart et al., 2015). This theory is relevant to this study in helping to provide the potential relationship between PTSD and CJI.

CBT, which I used to associate criminal behavior with military service, can be divided into two groups: static and dynamic (see Van Schellen, Apel & Nieuwbeerta, 2012). This particular theory has the assumption that criminal behavior can be explained by underlying personal characteristics and impulses to commit crime (Van Schellen et al., 2012). This is otherwise known as *criminal propensity*, which is developed early in life span and development (Van Schellen et al., 2012). The static group, when applied to military service, would predict that military service could reduce criminal offences because of its emphasis on discipline and close supervision of those who are serving (Van Schellen et al, 2012). The dynamic group that showed criminal behavior with military service illustrates the assumption that life circumstances do indeed influence the development of criminal behavior through adolescence and young adulthood (Van Schellen et al., 2012). One part of the dynamic group was described by Sampson and Laub (1993), where they stated that the key aspects of this theory deal with transitions and turning points in an individual's life. The dynamic group accepts long term changes in the potential for criminal behavior (Van Schellen et al., 2012).

Using this grouping can show enlistment in the military can have the potential to reduce criminal behavior (McCormick-Goodhart, 2013; Van Schellen et al., 2012) because military service members are cut off from their old lives, such as those service members who join leaving their past behind them. An example of this could be that of a

service member who was in a gang situation and needed to get out. The military gave them a new way of life and allowed them to develop new roles and responsibilities in the hopes of changing their old life patterns into new life patterns.

There is another side to the dynamic grouping; instead of helping individuals change their criminal behaviors they can actually develop them (McCormick-Goodhart, 2013). Military service becoming a negative influence on the individual where they learn to resolve conflicts by using aggression and weapons (Van Schellen et al. 2012). Those who have never seen or used a gun in their life are now conditioned and trained to be use them and kill. This may happen as a result that many of the first soldiers who were deployed were National Reservists and did not have the hours of training that the active service members did (Van Schellen et al. 2012). In summary, static groupings when used with CBT can anticipate that there is no long term behavioral change whereas dynamic groupings when used with CBT can expect that military service change criminal propensity. This is where criminality post military service will be a primary focus for this study. In sum, CBT Theory will help in discovering the relationship between PTSD and criminal behavior in combat veterans by understanding the effects of traumatic experiences on the behavior they engage after exposure (Criminal Justice Involvement, CJI). In the following sections there will be descriptions of PTSD, CBT Theory and the many aspects of combat related trauma with Criminal Justice Involvement in relevancy to this study.

Posttraumatic Stress Disorder: Overview

Understanding PTSD is critical to this study. Recently there has been a new version of the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM5)*, (APA, 2013). PTSD has been placed in its own category from Anxiety Disorders to Trauma- & Stressor- Related Disorders (APA, 2013). This new section is specifically designed for those disorders in which individuals have been specifically exposed to a traumatic or stressful event (APA, 2013). Though PTSD is still an anxiety disorder it now has its own more specific classification. Trauma and stressor related disorders are now in their own section of the new DSM. They include the disorders that have exposure to traumatic or stressful events that are listed in the new criterion (APA, 2013). The *DSM5* now describes "psychological distress following exposure to trauma" (APA, 2013, p. 265). It is clear that persons who have been exposed to trauma display a phenotype that separates them from other disorders such as aggression and dissociative symptoms (APA, 2013).

Diagnostic Features of PTSD

PTSD is defined as a disorder where an individual develops symptoms after being exposed to one or more traumatic events that result in severe anxiety about those events (APA, 2013; National Center for Posttraumatic Stress Disorder, 2011 (NCFPTSD)). For that reason the new definition of a traumatic event is, an event that is a life-threating event and, in this case, military combat. There are many key symptoms that one must be experiencing to have PTSD. These are as follows: (a) re living or re experiencing the trauma in some way that scares the individual or causes them to become upset,

aggressive, reckless, and irritable (b) persistent avoidance of anything that might trigger a memory of the event including external reminders, feelings, distressing memories, so as to avoid the event of triggering flashbacks that cause the individual to relive the event (c) staying away from people who remind them of the trauma, essentially isolating themselves from others, and feelings of being completely alone, detached (d) startling easily and feeling like something bad is going to happen at any moment also known as being on guard, loss of sleep, and negative self-image (linked to suicide) (NCFPTSD, 2011; APA, 2013).With this there are six criteria that one must meet to be diagnosed with PTSD: (a) intrusive recollection; (b) a stressor; (c) avoidance/numbing; (d) hyper arousal; (e) duration of the symptoms lasts longer that one month; and (f) functional significance, the disturbance causes clinical, social, occupational disruptions (APA,2013; McGrane, 2011). One differentiating criterion includes the individual cannot be diagnosed with PTSD while they are having a psychologic episode. This has to wait until they are not in a dissociative state.

Directly experienced traumatic events that are most relevant to military service members in combat include but are not limited to combat exposure or a traumatic event. With this there are witnessed events that could cause trauma such as observing threatened or serious injury, unnatural death, or war (APA, 2013, p. 274). One way that someone can re-experience a traumatic event is to have recurrent, involuntary, and intrusive recollections of the event. Another example, returning home from a long deployment the service member could be getting their car fixed at the shop and they hear a tire drill and think that it was an insurgent torturing someone on the street, resulting in anxiety. The

next example is that dreaming or nightmares, here the event can be replayed over and over in their mind, and having the feeling of being terrified (McGrane, 2011). The dreams are marked by intense psychological distress (McGrane, 2011).

Those who suffer from PTSD may seem to be quick tempered and even engage in aggressive or physical behavior (APA, 2013; NCFPTSD, 2011). Resulting in the individual getting arrested and therefor becoming criminal justice involved. An example of this is, the individual is at a barbeque with family and friends and the family dog is playing with the kids and it looks like it is attacking them and the individual immediately goes into protection mode and thinks that the dog is threat when they are not. Only to be stopped by someone calling out to those bringing them back to reality. This is also an example of Criterion 5 (APA, 2013), where the individual can be quick tempered and engage in aggressive or physical behavior.

Most commonly these individuals suffer from feelings of guilt (APA, 2013) about what they did while they were in combat, alienate themselves from others, and have emotional shutdown (Brown, 2008). These individuals might also have an emotional state that no one will understand and what actions they had to take in the combat zone. They keep it all bottled up inside them until it explodes and triggers an episode that has the potential to cause them to act out in a criminal fashion (Van Schellen, Apel & Nieuwbeerta, 2012). PTSD is currently characterized in *DSM5*, by the individual having a heightened sensitivity to potential threats, including but not limited to events that are related to the initial traumatic event or experience (APA, 2013, p. 275). Hyper arousal is the most common effect from PTSD, it can happen in one or more of the five ways, (a)

difficulty in falling or staying asleep (b) irritability and or outbursts of anger (c) hyper-vigilance (d)difficulty concentrating and (e) exaggerated startled response (ducking for cover for example);(APA, 2013; McGrane, 2011).

The symptoms of PTSD can be placed into three typologies: sensation seeking syndrome, depression-suicidal syndrome and dissociative reactions (Gansel, 2014). Of these three the typology that has the most attention among criminal offending veterans, is that of the dissociative reaction, even though this is the rarest of the three. This reaction includes many states of impaired reality such as altered states of consciousness (i.e. flashbacks), where the veteran might go into "survival mode" and act in the way that they might have while in combat reliving the event (Gansel, 2014; Sreenivasan et al. 2013). Since these individuals who are suffering from this, they are not acting in their right of mind and are performing out of their normal consciousness. Thus, resulting those veterans who commit crimes in this state of mind oblivious of their actions and the wrongfulness of such.

PTSD has been alleged to lead to a host of long term complications with family, work, and everyday life (Shen et al. 2010). It can occur at any age, beginning after the first year of life all the way until old age. Symptoms most commonly begin with in the first 3 months after the initial event, although there may even be a delay of symptoms anywhere from months to years after before all the criteria is met for proper diagnosis. What was "delayed onset" is now called "delayed expression" in the *DSM5* (APA, 2013). This delay helps to meet the full criteria of the individual's reaction to the trauma. Since PTSD can result from the lack of coping mechanisms that the individual was unable to

develop properly CBT Theory will help to identity what emotional response was missed in the development of those coping mechanisms. Table 2 below describes the minimum criteria for PTSD diagnosis as according to the new criteria outlined in *DSM5*. It can be seen that the symptoms are divided up in to four groups; (a) exposure to trauma, (b) avoidance, (c) negative symptoms, and (d) arousal. In each grouping there is a description of key the symptoms that can be experienced by and individual with PTSD with in the first 3 months after the traumatic experience.

Table 2

A Brief Version of DSM-5 PTSD Criteria

Diagnosis	**Criteria/Time**	**Symptoms**
Posttraumatic Stress Disorder	≥1 for ≥ 1month	Exposure to Trauma, intrusions: memories, dreams, exposure distress, psychological reactions
	≥1 for ≥ 1 month	Avoidance: internal reminders, external reminders
	≥ 2 for ≥ 1 month	Negative Symptoms: impaired memory of trauma, detachment, negative emotions, emotional numbness, and negative self-worth
	≥2 for ≥ 1 month	Arousal: irritability or aggression, recklessness, hypervigilance, sleep disturbance and impaired concentration. (Nussbaum, 2013, p.197)

Note. This table describes PTSD as according to the new *DSM5* criteria, described by the pocket version of the *DSM5* (Nussbaum, 2013).

Definition of Combat Exposure, Trauma and Stress as it Relates to PTSD

Military service members place themselves in unknown situations more times than they can count and because of that they are placed in danger. This resulting in a type of exposure that has become more common in the last 14 years since 9/11, this is known as combat exposure. Combat exposure can be anything ranging from, sexual assault while deployed to witnessing roadside bombings, IEDs, pervasive loss, injury and massive violence (Nillni et al. 2014). This exposure has serious negative mental health implications on the veterans in both chronic and acute stress reactions (King et al. 2006; Nillni et al. 2014) therefore causing a psychological trauma that will go beyond the battlefield to the return home (Author, 2008). Combat exposure in past research has been linked to a wide range of negative health consequences such as PTSD and incarceration (King et al, 2006). Resulting in combat exposure now currently being linked as a common precursor to the development of Posttraumatic Stress Disorder (PTSD) among those combat veterans who are returning home from OIF, OEF, and OND operations (King et al. 2006; Philips et al. 2010). The development of mental health problems in the military that is initiated by combat exposure has been reported to be one, if not the most important, risk factor for combat veterans who have been exposed to combat situations during their deployment in a combat zone during OIF, OEF and OND (Philips et al. 2010).

This is of concern because combat and traumatic stress in the military is also increasing. Between the years of 2004 to 2007 it was reported that 15 to 17% of veterans

returning from Iraq or Afghanistan reported having experiences of PTSD (Britt et al. 2007). As of 2008 it has been reported that in a sample of 121 cases of veterans who have returned home were involved in the criminal justice system on criminal charges (Author, *War Torn*, 2008) These wars, as a result, have produced a more defined type of PTSD in combat veterans than has been seen previously. In the previous conflicts combat veterans from Vietnam and the Gulf War are experiencing a more in depth classification of PTSD (Shen et al. 2010), even though the soldiers have the potential experience the same scenarios; the veterans can be observing or witnessing them differently. In other words, the veteran experiencing the same thing exposure will have different reactions for everyone who observes it. For example, one soldier might not react to the situation and go about their business as usual while the other solider will relive the experience over and over.

They will have a harder time coping with what happened and turn to other ways of coping such as substance abuse (Culp et al. 2013).This could be for many reasons such as everyone having different ways of coping that they have developed prior. These prior coping mechanisms can either be helpful and healthy for the individual or hinder them. Combat exposure can easily be mistaken for other mental health problems in combat veterans. For the purpose of this study combat exposure will be seen as a precursor for PTSD. For those combat veterans who are returning home the psychological damage from PTSD is real and has the potential to cause these veterans to partake in self-destructive changed behaviors. Some of these changed behaviors are increased alcohol

intake and drug use. Violence in this aspect can be best explained by a quote by psychologist Laurence Miller:

> "violence is a combination of innate predisposition, social reinforcement and environmental circumstance, and "explaining" criminal behavior by cavalierly attributing it to a service-related injury, without talking the hard complexities of each individual case, would be the ultimate disrespect. Therefore, it is important to note that each individual who is suffering from PTSD and or other disorders such as traumatic brain injury each case has to be treated differently and with the utmost respect" (NY Times, 2012).

The coping mechanisms that many combat veterans turn to in order for them to feel in a way "normal" are seen as destructive one of those is substance abuse. Substance abuse makes it hard to diagnose and treat PTSD; the reason is that the substance used numbs out the symptoms so that it makes it difficult to be sure that the individual who is suffering is actually suffering from PTSD and not from some other mental disorder (Author, *War Torn*, 2008). Turning to this negative behavior might be a prior coping mechanism or it might even be part of their own personal issues that they have brought to the table before, during, and after they have experienced the traumatic or stressful event. Some individuals turn to substance abuse so that they can escape from the dissociative symptoms that come along with PTSD known as flashbacks (Tull, 2008). Flashbacks are defined as a re-experiencing symptom of PTSD (APA, 2013; Tull, 2008). This means that the individual might feel or act as if they are back in combat and reliving the traumatic event. This can vary in intensity levels (Severity-acute or chronic) of PTSD diagnosis.

The individual might still have a connection with reality alongside thinking that they are back in combat. At this point the individual has the chance to lose all awareness of what is happening around them and they enter a dissociative state of mind or dissociative episode.

A battlefield symptom is viewed as normal responses to extraordinary circumstances and is also known as combat exhaustion (Hoge et al. 2006); where the soldiers are working under environmental conditions where they are not receiving the proper amount of sleep and rest. These veterans are placed at a higher risk of developing severe mental health problems than ever before (Garske, 2011); therefore stating, they are at a higher risk of incarceration after their term of service. The impact of combat on veterans, from past research, is linked to a wide range of negative health consequences such as PTSD (Garske, 2011; Hoge et al. 2004). The rate of PTSD before deployment to Iraq was measured at 12.2 % and for Afghanistan 5.0%; the rate of PTSD after deployment to Iraq measured at 12.9% and for Afghanistan 6.3%; (Hoge, et al. 2004). In both instances it is seen that the rate of PTSD developing in combat veterans due to combat exposure and/or combat stress increases after they have returned home.

Since the Vietnam Conflict there has been an increasing concern regarding how military service, more specifically combat exposure, impacts the war zone experiences and general well-being of veterans (Greenberg et al. 2007, Cozza, 2005). The experience of combat is something that is unknown to those who have not served; to show that military personnel put themselves at a high risk of developing mental health problems as well as the increasing high risk for being exposed to potentially traumatic events

(Greenberg et al. 2007). This is one reason why veterans who have served in either of the two current conflicts in Iraq and/or Afghanistan are considered to be an "at risk" group for the development of anxiety disorders such as PTSD, which could eventually lead to criminal activity (CJI) as well as impacting the individual's readjustment back into civilian life. Other factors could also be effected- such as financial support, employment and marital problems (Castro, 2009). Although many service members do not have problems re-entering the civilian community there are still many who cannot fully transition from military life to civilian (Taylor et al. 2012). Some can have a wide variety of difficulties such as but not limited to mistrust and on-going mental health problems (Taylor et al. 2012), which is further described in the definition of PTSD from the *DSM5* and the research.

This generation of veterans varies from those who were in past conflicts such as Vietnam and World War II and even the Gulf War (Garske, 2011). With this new group of veterans the military is presented with new questions about combat exposure and combat stress and how it affects those who are deployed in Iraq and Afghanistan (Elbogen et al. 2014). Societal challenges with military service members returning home are ongoing and being in conflict zones at different times give rise to many questions being asked if veterans are linked to a wide variety of very negative health consequences that arise during and after deployment to a combat zone as a result of the stress and exposure (Garske, 2011; Taylor, 2012). Research as stated; because of these challenges there has been a huge debate on military service, being part of the cause of criminal offending among combat veterans (Taylor, 2012). An example of such debate is; that

these veterans who are exposed to combat and were otherwise well adjusted individuals previously are now more prone to violent criminal behavior (Author, *War Torn*, 2008). Meaning, since those individuals can be seen in society as normal may be exposed to violence in such a way that it will eventually be seen as normal to them (Author, *War Torn*, 2008). There are many views on what the "type" of individual who chooses to become a service member and not the service (Taylor et al. 2012), with that said, the military has been known for its attraction to those individuals who have certain characteristics that draw them to military life such as anti-social traits and or other mental health problems (Garske, 2011, Culp et al. 2013). The violent veteran model (VVM) helps to explain the relationship between war, PTSD, and criminal activity (violence) ;(Culp et al. 2013). This model suggests that wartime and combat exposure in a way re-programs individuals to accept the violence and actions that they were involved in as normal activity and become more proficient at it (Culp et al. 2013). This model has been used in many psychological studies with CBT to help in explaining mental health problems in those combat veterans who have behaved in a criminal manner after deployment, (Culp et al. 2013). Therefore further solidifying the use of CBT Theory in explaining how PTSD relates to CJI in combat veterans.

Military service members are exposed to combat situations that civilians do not see in their everyday life. This exposure includes, but is not limited to, events such as convoy mishaps, roadside bombs, IEDs, length, and location of deployment (or multiple deployments, more than one deployment in a year or one right after another), sleep deprivation, inability to stop a violent situation associated with self-blame and survivors

guilt (seeing a fellow soldier getting hurt), housing raids and/or even handling human remains (Britt et al. 2007, Author, 2008). Those are just some of the event triggers that combat veterans might see that have the potential to cause stress and, in turn, might trigger the development of PTSD. It has been theorized that and could be controversial or something as such "war" might have a legitimization of violence among these veterans which has led them to the criminal violence which has led them to CJI (Culp et al. 2013).

PTSD and combat as they relate to each other has been difficult to understand putting it together with stress and trauma has made it complicated, but this study will help in further defining this relationship. Stress in the military is everywhere. It can range from road side bombings, handling human remains, seeing a fellow comrade get hurt to having to shoot and kill an enemy; factors that were stated earlier. Combat stress is used to describe, according to the *Department of Defense*,

> "Normal physiological, behavioral, and psychosocial reactions that were experienced by individuals during and after their time in a combat zone", (DOD, 2003).

There are two parts to combat stress that make it difficult to handle, emotional conflict and combat fatigue. It is becoming more and more common that the individual will have feelings of inability to complete their duties in today's world of violence. Making the use of CBT Theory and how it observes the negative experiences and circumstances in response to avoidance that is associated with the traumatic events of war (Friedman. Keane, & Resick, 2010). Consequently it appears that, the modern wars are becoming more and more destructive than they have been in the past. Therefore, making

it hard in terms of distinguishing between friend and foe. Moreover, the next section I will discuss, stress becoming complication that is brought on by stigma and the culture of the military.

Stigma and Culture of the U.S. Military

It has been said in previous research that there is a reluctance for some combat veterans to seek mental health help, and is largely associated with the stigmatization the veterans received as they served in the military (Burner & Woll, 2011; Kim, Britt, Klocko, Riviere, & Adler, 2011). Brining about the negative attitude towards mental health treatment for those who seek help after being deployed (Kim et al. 2011). This has been known to produce an increasing challenge among those involved with mental health to convince those specific veterans who are suffering psychologically to admit, not only to themselves but to those around them, that they are suffering and need help. Stigma is one of many factors that cause barriers in the care of combat veterans who suffer from psychological problems. Stigma in its self has many factors that could be effecting service members from seeking help (a) previous history of seeking treatment (b) gender (c) attitudes of higher ranking leader (through leaders personal bias) and (d) fear of potential repercussions (Miggantz, 2014, Kim et al. 2011). Stigma, at its core, can have a negative attitude towards an individual or prejudice or negative stereotype (Britt, Green-Shortridge, Brink, Nguyen, & Rath, 2008). There are two types of stigma: public and self. Public-stigma relies on the negative aspects of one's attitude towards mental illness (Britt et al. 2008) and self-stigma happens internally (emotionally with the individual). Stigma can result in the individual becoming very emotionally withdrawn, and fearful, which

could result in them responding inaccurately to the post deployment surveys (Miggantz, 2014). Post deployment surveys are used to help the military to identify those individuals who will be at risk for mental health problems so that they can diagnose and treat (Britt et al. 2008, McGrane, 2011, Miggantz, 2014). It has been suggested that responding accurately to the post deployment surveys will hinder the ability to take leave (time off) after deployment or that they symptoms will decrease or resolve on their own upon returning home (Milliken et al. 2007, Miggantz, 2014).

They lose their self-esteem and become depressed as well as becoming isolated or feeling isolated when they are not (Britt et al. 2007). Along with stigma, discrimination can also cause problems with veterans seeking help for their psychological problems. Discrimination happens as the reaction of prejudice (Britt et al. 2007). For example, a higher officer admitting that they have a problem would feel that they are going to lose the hard earned respect from their fellow soldiers and even quit their job. This, in fact, is not true but it results from the stigmatization that they feel. This could also be an example of one's military beliefs (Miggantz, 2014). Though many veterans are emotionally functional some find it difficult to benefit from things such as positive meaning or enhanced growth, resulting in having increased levels of psychological adjustment (Loew et al. 2014) There are many factors that might influence ones stigma on mental health treatment, such as potential repercussions of admitting to having a problem, attitudes of higher ranking leaders, and previous history of seeking treatment (Miggantz, 2014).

Why is stigma important to understand when looking at combat veterans who have been justice involved? It is important because not only it has been said in past

research that the culture of the military has been known to make or suggest that veterans who suffer from a psychological problem think that if they admit to having a problem than others might look upon them differently; as a consequence, they are scared to admit it (McGrane, 2011; Miggantz, 2014). Also causing veterans to not seek treatment giving the veteran a negative attitude towards treatment (Kim et al. 2011). This also states that they might be perceived as cowards and labeled as malingerers to escape service or to receive compensations (McGrane, 2011). Service members see the repercussions of admitting to mental health issues as negative which could include but are not limited to; fear that reporting their problems might hinder their ability to take leave after deployment or that they assume that their symptoms will decrease or resolve on their own (Miggantz, 2014). Each branch of the military has their own saying or slogan that might seem to the veteran like they are dishonoring their country and military by admitting to needing help. Slogans like "The Marines, The Few, The Proud" and "There's Strong, and then there's Army Strong (McGrane, 2011), give off the perception of being invincible; if not you are weak. Stigma in the military can be observed as a letter that separates service members from each other and associations with mental illness (Kim et al. 2011).

In past studies it has been said that around 35% of combat veterans believed that a soldier in their unit has suffered from combat stress or trauma (Greenberg, Langston, & Gould, 2007) beforehand, during or after their deployment into the combat zone. Of those 35%, around 85% thought that seeking support for their psychological problem would have negative consequences on their military career (Greenberg et al. 2007). Many combat veterans do not admit to having a psychological problem because they are

struggling with the stigma that is closely related to mental health (Kim et al. 2011) and as a result end up not receiving the help that they need. With the negative stigma surrounding the military and mental health disorders it can be seen that many veterans are discouraged to seek treatment for PTSD not only because of the environment at the VA but with the military in general (McGrane, 2011). Another reason why stigma effects proper diagnosis of PTSD is that there are many cases where individuals can go months to years without showing PTSD symptomology (APA, 2013).

Culture provides veterans with unwritten rules that inform and shape how they perceive mental health problems such as PTSD (Greenberg et al. 2007). This, in turn, has created many barriers to care in and out of the military for those who suffer from PTSD and other psychological problems that arise after their combat exposure. One of those barriers is that service members would report stress and pressure to perform which in some cases resulted in work overload (Britt et al. 2007). Research on barriers to care has increased over the past decade or so (Thomas, et al. 2010). The barriers have been classified into three domains which are individual background characteristics, institutional factors, and stigma-related beliefs about mental illness and mental health treatment (Ouimette, et al. 2011). A number of different background characteristics can also influence barriers to care in the stigma and culture of the military. This meaning that traditionally those seen at the VA are mostly male veterans and the population of patients there are male and older (Ouimette et al. 2011). Making it seem that the younger veterans and female veterans would be a bit more uncomfortable seeking care at the VA for feeling out of place (Ouimette et al. 2011).

Some service members who chose to report this feel that they are showing weakness and cowardice for admitting they have a problem which has a high chance in resulting in them making false reports of not having PTSD. The most common stigma to care by veterans has been reported to be that of veterans feeling discomfort when seeking help and the social consequences for seeking care (Ouimette et al. 2011). Barriers to care have also been known to show up as a result of stigma and culture of the military; as consequence service members feel that they cannot ask or receive help with dealing with the stress that is brought on by combat exposure as stated before (Britt et al. 2007). Over all the culture and stigma of the military have the increased potential to cause veterans to slip through the cracks and not get the proper diagnosis that they need. As well as in a way the military itself is having a hard time opening admitting the flaws/mistakes, and the issues that surround the funding of veterans who have mental health problems. Stigma relates to CJI in PTSD combat veterans in such a way that it unknowingly can prevent the veteran from seeking help for their psychological symptoms. As a ramification of not seeking help the combat veteran with PTSD could increase their risk of CJI by seeking out other ways to cope with their PTSD symptomology. Making it so that the individual is unaware of behavioral changes that CBT Theory in this study will contribute in identifying.

U.S. Military Service and Criminal Activity

Military service is considered to have an important influence on an individual's life in multiple ways; one of those ways that is showing concern is that of service in the military and criminal behavior (Van Schellen, Apel, & Nieuwbeerta, 2012). Veterans

with PTSD have inadvertently fallen in to stereotypes that have labeled them to make it seem that they are dangerous. One of these stereotypes is that of a violent "wacko-vet" when they are observed in having a PTSD episode (Sreenivasan et al. 2013). It has been indicated that combat veterans returning home from the current wars in Iraq and Afghanistan are engaging in criminal acts that they would otherwise not engage in. Many of these veterans have no prior criminal record and no psychological history of mental illness (Sontag & Alverez, 2008). It has been an ongoing argument that if it was not for their deployment into a combat zone these veterans would never have committed the criminal offense in the first place (Author, *War Torn*, 2008; Sontag & Alverez, 2008). It has been estimated that approximately 20 to 42% returning veterans from a combat zone have been exposed to some form of psychological problem (Hafenmeister & Stockey, 2010). It is also assumed, in previous research, which criminal activity can occur among those veterans who have PTSD as a result of their dissociation, irritability, and impulse behavior that is occurring from their reliving their traumatic experience (Hafenmeister & Stockey, 2010).

Veterans currently make up of approximately 10% of the incarcerated population (i.e. in prison or jail), with the most up to date information given by the VA indicates that approximately 140,000 veterans were incarcerated as of 2004 (Blodgett, Fuh, Maisel, & Midboe, 2013; Greenberg & Rosenheck, 2008). In the state and federal prisons there are about 0.63% of veterans and about 1.39% civilians in the system; though this number might seem small, in the big scheme of things this is a large number of incarcerated

veterans (Glaze, 2011). The following describes the justice system, veteran's courts, veteran's treatment programs, and the veteran's affairs-veteran's justice program.

Demographic and Offense Characteristics of Veterans in the U.S.

Veterans in the criminal justice system are a high risk population and they also tend to be a lot older than the civilians who are also in the system. Another characteristic about veterans in the system is that they tend to be more educated and most likely to be white non-Hispanic. They are also more likely to be married than the civilian prison population. (Blodgett, Fuh, Maisel & Midboe, 2013, Greenberg, Rosenheck, & Desai, 2007). The majority of the veterans in the system currently served in the Army and or Army National Guard (56 to 57%), and has served a minimum of one term of service (2 to 4 years);(Noonan & Mumola, 2007), with the approximation of 20 to 26% of these veteran's having combat experiences (Blodgett et al., 2013). It is important to note that the demographic characteristics of the veterans involved in the criminal justice system include veterans on parole or probation and there is not information on the OEF/OIF/OND population which brings a point to the importance of the study. PTSD has been involved in the criminal justice system through numerous cases in order to acquit a defendant based on any amount of mental capacity such as insanity (Gansel, 2014).

PTSD and criminal responsibility has the assumption that veterans are different from civilian criminals and, because of that difference, they are therefore deriving a special consideration with sentencing (Gansel, 2014). Veterans in the criminal justice system can be convicted on many offenses just as their civilian counter parts. As stated by the VA more than half of veterans in state prisons (57%), have been convicted of a

violent crime when compared to their civilian counter parts (47%) ;(Blodgett et al., 2013). The violent crimes that are seen by veterans that are most common are that of intimate partner violence and sexual assault of 12 years or younger (Blodgett et al., 2013; Pratt, 2010) resulting in the veterans having longer sentences than that of their civilian counterparts. PTSD is increasing among combat veterans and the training that they receive results in veterans changing their previous behavior to be more aggressive, break down emotions (psychological resistance to killing), and desensitizing to their previous emotions (Gansel, 2014).

Female Veteran, PTSD, and Justice Involvement in the U.S.

Women have been in the military dating all the way back to the Revolutionary War and all the way to today's conflicts in Iraq and Afghanistan. Though women were involved in roles such as hospital corps and nurses corps in 1901 for the Army (Schaffer, 2014) it wasn't until recently that women were being placed on the front lines and doing the same jobs as their male counter parts resulting in them being exposed to the same combat trauma and having an equal risk of developing mental health problems such as PTSD. As of 2013 female military service members make up around 14 % of the enlisted personnel and around 16% of the officer core (GAO, 2013). Women in the military have shown great sacrifice and courage in combat areas and have contributed in ways that have proven their equal abilities to serve in a number of roles in combat (DOD, 2013a). Female service members are experiencing challenges that they are also bringing back home once they have served in combat areas like their male counter parts. Some, if not many, female service members have undergone psychological problems and stressors

such as military service trauma (MST), intimate partner violence, assault, PTSD, and even prior trauma histories before entering the military and many more (Schaffer, 2014). This also results in female service members encountering legal problems and justice involvement in the correctional outreach of the Veterans Justice Outreach (VJO) and the Veterans Treatment Courts (VTC); (Schaffer, 2014).

Female offending veterans represent only a small portion of the incarcerated veteran population (about 1% of both state and federal prison), (VA Women Veterans Task Force, 2012) also resulting in female veterans becoming a smaller portion of the VA community therefore making challenges for the female veteran to get the right care and making the care that they might get to be insufficient based upon resources tailored for the female veteran population (Schaffer, 2014). There is not much information on women veterans; most studies involving veterans mainly focus on the male veterans. It is important to state here that even though the current study will be looking at mainly male veterans the numbers of women veterans will also be included. Female veterans have a lower offending rate especially that of violent crimes than that of their male counterparts (Blodgett et al., 2013). Female veterans are also at risk of PTSD in combat even though it has not been traditionally seen that women are in combat. The most common trauma that is experienced by the female veteran is that of MST, but they are equally exposed to other traumas such as combat trauma, blasts, and witnessing death as are their male counter parts (Chaumba & Bride, 2010).

Women have long served in the military, but they became more prevalent in the later wars such as World War 2 and Vietnam. In today's war in Iraq/Afghanistan they are

not only filling the traditional jobs of doctors, nurses, but they are also taking on the jobs of battalion leader, chief, sergeant, and so forth. Joining the military has already placed them at risk for being exposed to trauma and combat. Specific deployment conditions and stressors for the female veteran are the same as that of their male counter parts, more specifically the harsh physical environments that have the potential to negatively influence physical and mental health (Chaumba & Bride, 2010). As mentioned earlier military sexual trauma is the most common trauma exposure that female veterans experience in combat, otherwise known as military sexual assault. This is used to refer to both sexual assault and/or harassment towards female military service members from their male counter parts (Middleton & Craig, 2012). Sexual trauma in the military has gained more attention over the years since 2001. As a result this research has indicated the increased development of PTSD among female veterans is nine times more likely to occur if exposed to some sort of trauma in the military, sexual or combat (Middleton & Craig, 2012).

Combat exposure for the female veteran has a wide variety of experiences. As stated earlier it can range anywhere from MST to enemy fire, ambush and so forth. It wasn't until very recently that female soldiers were allowed on the front lines exposing them to more trauma than before. The DOD has decreed as of January of 2013 to rescind the previous combat exclusion for female military service members (DOD, 2013b). Research has previously mentioned that on average 11.1 % of female veterans have experienced combat without MST and 18.9% with MST (Middleton & Craig, 2013). Stated previously, even though there is little known about female combat exposure and its

correlation to PTSD, it will be looked at in this current study in order to close the gap. This will be done by looking at the retrospective data provide by the VA, and this will be addressed in a separate section of the results and the needs for further research section. Even though this study has previously stated that it will look at the male veteran population, it is also important to look at the female population. CBT theory will provide here in terms of gender to see that even though the violence is the same it can be experienced differently between male and female combat veterans. Resulting in developing different behavioral patterns as a response to the trauma.

Background of Modern Criminal Responsibly in the U.S.

There are at least two criminal responsibility standards that are considered before any criminal conviction can be placed upon the individuals in question. One is known as the *M'Naughten s*tandard (also known as the insanity plea/defense.) which says that the individual being accused was under a defect of reason not knowing what he/she was doing or does not know what he/she was doing was wrong (Frierson, 2013). This test provides a small range of mental capacity of the individual. It is widely accepted in the United States and the United Kingdom and is as follows:

> To establish a defense on the ground of insanity it must be clearly proved that, at the time of the committing of the act, the party accused was laboring under such a defect of reason, from disease of the mind, as not to know the nature and quality of the act he was doing; or, if he did know it, that he did not know he was doing what was wrong. (Gansel, 2014, p. 159)

The objective of this test is to determine whether or not the defendant knew what they did was wrong and the impact of the consequences of their actions. This test is being used in today's veteran's courts in order to determine those veterans with PTSD who have committed criminal actions in a dissociative state or altered state of mind could not appreciate the injustice of their actions (Gansel, 2014)

The second most commonly used standard is that of the Model Penal Code which was developed by the American Law Institute (ALI) Instantly Test in 1955. This standard is a test that attempts to incorporate the lack of volitional control for the basis of insanity (Frierson, 2013). The goal of this standard is to hold the defendant not responsible in a criminal capacity if they have a mental disease or defect or lacks the capability to understand the consequences of their actions and cannot perform the conduct that is now required of them by law (Frierson, 2013). This test is as follows:

> "A person is not responsible for criminal conduct if at the time of such conduct as a result of mental disease or defect he lacks substantial capacity either to appreciate the criminality [wrongfulness] of his conduct or to conform his conduct to the requirements of the law." (Gansel, 2014, p. 160).

The goal of this test is to ensure that the veteran can appreciate why his or her actions were criminal.

To go with criminal responsibility there is the idea of malingering where some individuals are attempting to use the insanity defense as a way out by trying to fake their symptoms of being mentally incapable. Malingering is a growing concern in the defense that includes combat veteran with PTSD diagnosis (Gansel, 2014). There is another

standard developed specifically for detecting those individuals who choose fake symptoms; this is called the *Miller Forensic Assessment of Symptoms Test (M-Fast)*. This test was developed specifically for those with PTSD or those who choose to fake having PTSD. This test is commonly now used in veteran's courts (described later in this chapter). This test was designed as a structured interview to assess malingering (Ahmadi, Lashani, Hassan-Afzali, Tavavlie, & Mirzaee, 2013). Criminal responsibility when applying PTSD to the insanity defense has been known to cause problems in the past in two common ways: trauma is responsible for the development of the PTSD symptomology and that the PTSD symptoms are directly related to the offence. This is where veteran's courts have been known to help clarify this misconception. Veteran's courts are specifically designed for specific aspects that have to deal with veterans and their special needs.

The U.S. Justice System and Veterans

Those veterans who engage in criminal activity are suffering from many associated behavioral, emotional, social and psychological disturbances that sometimes make it hard for them to keep events straight in their minds; they have a hard time telling the difference between reality and fiction (Brown, 2008; Hafenmeister & Stockey, 2010). The criminal justice system is currently faced with the task of separating veterans from the general population of those who commit crimes into a special court that is designed to deal with those veterans who suffer from a wide variety of mental disorders. Many of these veterans are those who have slipped through the cracks from the stigma and culture of the military's take on mental health. The most common criminal activity that is seen

by veterans are those who have committed a non-violent crime, or have problems with substance abuse, or suffer from other mental health problems (Castille, 2010). There are also those veterans who have committed a felony such as murder. It is common for these veterans to say that they did not know what they were doing, as well as saying that the behavior is not their typical way of doing things. This can be seen in court as taking the insanity defense and trying to prove that PTSD is the cause of their actions and that they were not in the right frame of mind and body at the time of the offense.

This is an objective that many jurisdictions in the criminal justice system are having a hard time handling when it comes to combat veterans entering the court system. It is hard to tell if the veteran is telling the truth about their disorder or if they are making it up so that they can be placed in the special court for veterans to get a lighter sentence; here the requirement is by the preponderance of the evidence provided to the court. There are many states who have begun to develop special courts that are designed for veterans. One such state is that of Minnesota; this state has made a name for itself in dealing with many different types of veterans in the criminal justice system. They have developed a new state law specifically for veterans (Minn. Stat. §609.115 subd. 10). This law identifies veterans in the court system and ensures the veterans that they will receive proper treatment and diagnosis which allows them to have the right sentence for the veteran who is being convicted of the criminal act (http://mncourts.gov/district/4/?page=1241 , 2013).This type of court is placed in a category that is different from the other courts and is known as a specialty court and focuses on treatment of the problem underneath the problem; this meaning the mental

health of the veteran. An example of this new law being used is that of the case Porter v. McCollum (*no. 08-10537, Nov 30, 1009*, Elbogen et al., 2012). This case involved a Korean War veteran who was originally sentenced to death. As a result of this new law the original sentence was reversed; this was because, in the original case, the veteran's mental health and was not taken into effect. The reason for the sentence reversal was because this veteran was properly diagnosed with PTSD and the psychological evidence was not used in the original case for the intimal trial (http://mncourts.gov/district/4/?page=1241, 2013). In today's media there is a current case that can be related to this statement and that is of the Chris Kyle Murder otherwise known as the "American Sniper". Eddie Routh is currently being accused of killing Kyle and Chad Littlefield (Ellis, Morris & Hanna, 2015). Routh is currently being charged with the murder of Kyle and Littlefield, which has resulted in Routh openly admitting to killing both Kyle and Littlefield to the authorities. This was back in February of 2013, and now currently the defense is now pleading for a reversal on the charges by way of the insanity plea (Fernandez & Jones, 2015). His sanity is now in question because of his reported psychological diagnosis of PTSD and Schizophrenia (Almasy, Lett, Morris, & Ellis, 2015). This case is a good example of possible sentence reversal due to mental health diagnosis.

With PTSD being more defined it is being seen that more symptoms are showing up in the current conflicts than had been noticed in the past ones resulting in many veterans making false claims to having PTSD so that they can either get an escape conviction or unnecessary services that could be better used for someone who actually

has PTSD. There is increasingly uncertainty and controversy over holding the veteran with PTSD responsible for their actions (Hafenmeister & Stockey, 2010). This is partly because, in some ways, it is hard to determine if they are suffering from a psychotic disorder in which the individual is suffering from impairment of their reality as in the case of PTSD suffering from hallucinations during an episode (Hafenmeister & Stockey, 2010; Brown, 2008). Individuals are considered accountable for their actions via two ways: Criminal Act (*atcus reus*) and Criminal Intent (*mens rea*). If the mental illness such as PTSD eliminates *mens rea* then only *actus reus* is left; therefore the individual will be found not criminally responsible for their actions (Sparr, 1996). To further increase the credibility of a combat linked defense (for example the veteran having a PTSD episode during the act), is challenged by the diathesis-stress model. This model is used to find the understanding of the veteran's process of emotional derailment that has led them into their current situation with justice involvement. It suggests that there are two factors that can lead to the development of a mental disorder after combat (Sreenivasan et al, 2013). One is that of genetic predisposition and second the interaction with life stressors. In the area in which the veteran is concerned this model is used to determine if the veteran's intrinsic resilience (diathesis) is compromised due to combat exposure (stress). When they return home the veteran is re-introduced to stressors that might be unknown at the time that could lead to decompensation to controlling emotions (Sreenivasan et al, 2013).

Veteran's Courts in the U.S.

Veteran's courts are a new development in the criminal justice system and are becoming more and more popular in many states. They are the newest addition to what is

called the therapeutic justice and/or problem solving courts (Pratt, 2010). The goal of therapeutic justice is to address the cause of the offender; in the case of this study it is the veteran's criminality and it treats and teaches them to remove the problem and eventually return back to the community (Pratt, 2010). Therefore, Problem Solving Courts will seek out and respond to legal problems that are happening with the veteran, such as social, family dysfunction, addiction, domestic violence, mental health, and overall quality of life (Pratt, 2010). Veteran's courts are specifically designed to address the underlying problem to the veteran and their criminal activity (Cartwright, 2012). They focus on the rehabilitation and treatment for those who not only suffer from PTSD but other things as well such as traumatic brain injury and other mental disorders (Cavanaugh, 2013). They work with local authorities in order to provide the best treatment available for the underlying causes of the criminal behavior. This as opposed to traditional courts in simply convicting, sentencing, and sending the offenders to jail or prison (Cavanaugh, 2013). Combat veterans have a main underlying problem that veteran's courts address, combat trauma. This is not traditionally seen in traditional courts because it has been shown to more effectively address the underlying problem. Many veterans have experienced things that are uncommon and unique to the military population and are not seen in the civilian population (Cartwright, 2012).

Veteran's courts have similarities to that of other types of courts such as drug courts and mental health courts in that they do not allow defendants who have been accused of violent crimes to participate in the treatment programs, but still allows them to be sentenced in their court rather than in a traditional court (Cartwright, 2012; Pratt,

2010). They are unique in addressing the problem; this meaning that they have a very different attitude towards the veterans. They are honored for their service and, because of that service, they are diverted from the traditional court to the veteran's court because the government is grateful for their service and sacrifice and are shown a courtesy (Cartwright, 2012). Because these courts are specifically designed to deal with veterans it therefore allows all those involved such as the judge, prosecutors, and public defenders to become experts on the veteran's issues and develop professional relationships with others that may be involved in the process such as treatment providers (Cartwright, 2012; Cavanaugh, 2013).

Veterans with mental health problems such as PTSD may face criminal charges and veteran's courts allow them to be placed with other veterans who suffer in similar ways. PTSD causes veterans to become chronically anxious and this can have two very possible outcomes. One is to turn to drugs and alcohol for self-medication and second is to engage in sensation seeking (Cavanaugh, 2013). They are trying to find excitement that was similar to what they might have experienced in combat to dull their senses and to somewhat get their emotions in check so that they can get through the day (McCormick-Goodheart, 2013). Since today's veterans (OEF/OIF) are unique, as stated earlier, they face multiple deployments (Hodge, 2004; Hoge et al., 2008) and prolonged periods of combat (Cavanaugh, 2013). The trauma that is experienced by them has the potential to lead to a much heightened chronic anxiety that has been seen to lead to the engagement of criminal activity. Veterans who suffer from PTSD and who are most seen in veteran's courts are those who re-experience the trauma in "survivor mode" (McCormick-

Goodheart, 2013). There are three factors that are seen in veteran's courts that are associated with survivor mode in PTSD inflicted veterans which are dissociative syndrome, sensation seeking syndrome, and depression suicide syndrome. Dissociative syndrome is most commonly linked with violent behaviors where the veterans are reacting to situations as they would have while they were in combat which tend to be very aggressive (McCormick-Goodheart, 2013). Sensation seeking syndrome attempts to find excitement that is similar to their combat experiences (McCormick-Goodheart, 2013). Lastly, depression suicide syndrome has been known to motivate criminal activity and is most commonly known as survivor's guilt (McCormick-Goodheart, 2013). Veterans who have a hard time accepting what was experienced while overseas turn to other methods of making the pain that they are experiencing go way (McCormick-Goodheart, 2013). Depression suicide syndrome is one of those ways veterans search for that escape.

Though veteran's courts receive a lot of controversy and criticism, they provide veterans with the tools needed in order to return to the community and to help them with their mental health problems in a safe and secure environment. They allow veterans to be around other veterans who are either being charged with the same charges or similar charges to encourage rehabilitation and reduce recidivism. Though veterans may be committing similar crimes to that of civilians it is only natural that they be placed in a court that is specially designed to deal with their specific problems.

Department of Veterans Affairs Veterans Justice Program in the U.S.

In the development of veteran's courts in America the VA has also developed a program to help its nation's veterans who become involved with the justice system; this program is called the veterans justice program (VJP). This program is designed to provide interventions that will fill the gaps in meeting the very challenging needs of those veterans who are or who have been involved in the judicial system (Blodgett, et al., 2013). The mission of this program is to also partner with the local criminal justice system to help identify veterans and combat veterans who would benefit from treatment programs as an alternative sentencing to jail time or prison time. This program that the VA has developed ensures that the veterans will have great access to exceptional care that is designed for their specific needs, to improve social and clinical outcomes, and prevent things such as re-offending and homelessness (Blodgett, et al., 2013). At this point the VA reaches out to the veterans who have entered the system at four steps point where they are arrested, initial detention, court hearings, and reentry into the community after time served (Blodgett, et al., 2013).

This program partners with other programs that have been developed by the VA to support its mission; these programs include the Veterans Justice Outreach and Health Care for Reentry Veterans. This program includes, but is not limited to, two key points when dealing with justice-involved veterans. The unique treatment needs of these veterans with the main focus point being on mental health and the evidence based treatment needs of these veterans (Blodgett, et al., 2013). One of the questions that they ask in this program that will be included in this potential study is that of the treatment

needs of justice involved veterans. This is because of the problems that are being seen when veterans are reentering their communities after service or incarceration. The VA has found that more than half of their justice involved veterans will have at minimum one mental health concern if not more such as, but not limited to, substance use and/or mood disorders (Blodgett, et al., 2013). They have also found that these veterans will have experienced one lifetime traumatic event with reports of about 87 % of veterans that are incarcerated with a past trauma (Blodgett, et al., 2013).

The second group that this program looks at which is important to this current research is that of justice involved veterans with combat experiences. These veterans, as reported by the VA, are more likely than other justice involved veterans to suffer from mental health problems and, more specifically, PTSD. There is a lot of research on the links between antisocial personality disorder (APA, 2013) and substance use disorder (, APA, 2013), but not too much on PTSD which is why this current study is so important to social research. This program looks at the needs of veterans who are involved in the justice system and looks for ways to help them, not necessarily punish them, just as the veteran's courts that are taking storm across the country.

Importance Between Incarceration and PTSD in the U.S.

Why this is important is because, in a national survey, it is said that about 40% to 70% of the general population, including the military population, has been exposed to some sort of traumatic event in their lifetime (Elhai et al., 2004). Of this population, around 15% of combat veterans are diagnosed with PTSD (Elhai et al., 2004). Transitioning from active duty to civilian life can be hard for anyone, not just those who

were deployed in a combat zone. This time period can prove to provide complications for veterans and prove to be difficult for them resulting in difficulties with coping and managing stress which increases incarceration rates among them(Desai, Greenberg, & Rosenheck, 2007). The transition period, also known as post deployment, can be difficult at best; this can result in some veterans finding it hard to put the war behind them.

The prison population is growing; it keeps growing from year to year. Misconduct (behavior problems) among those who develop these mental health problems and are in the system is closely associated among those individuals who have been deployed in combat zones (Highfill McRoy et al., 2010). It has been said in previous research, that male veterans are at a greater risk of incarceration than male civilians in the general population which has the possibility to present unforeseen problems for their reintegration back into civilian life after prison (Heckman et al., 2007). Many of the individuals who are incarcerated are exposed to not only combat zones, but they are also exposed to other traumatic events (Heckman et al., 2007).

These events can include, but are not limited to, sexual trauma, victims of crime, witnessing a crime, and substance abuse of either alcohol or drugs (Bruner & Woll, 2011). A current example in today's news is that of the Chris Kyle case where the young man accused of his murder ("Routh") is pleading not guilty by reason of insanity, claiming that he thought that in his mind it was him or Kyle, the immediate fight or flight response (Fernandez & Jones, 2015). He is now claiming that he did not know what he was doing even after openly admitting to killing Kyle and claims that his combat experience has changed him (Fernandez & Jones, 2015). Experiencing traumatic events

can lead them to engage in behaviors that they would normally not do like robbery, substance use, risk taking, and acting angry which could lead to someone getting hurt (Heckman et al., 2007; Hunter, 2013a). A reason these veterans are being incarcerated is that they are angry, frustrated and even paranoid; anger is one of the salient problems that combat veterans face (Marshall et al., 2010). Many of these veterans who enter the system are those who went undiagnosed with PTSD prior to finishing their term of service; as a result, it came to the point that incarceration was the only way they could begin to get the help that they needed.

In past research it has been estimated that around 20% of those veterans who have been incarcerated reported having experience with combat exposure (Desai, Greenberg, & Rosenheck, 2007). It can also be said that incarcerated veterans are more likely to be involved in combat than the non-incarcerated veterans. Increased exposure to a combat zone (multiple deployments to a combat zone or duty station) has been shown to increase violent acts and increased hostility among the veterans who have PTSD (Desai, Greenberg, & Rosenheck, 2007). These veterans have an internal struggle with cognitive, social, emotional, and even spiritual issues that, as a result of their PTSD, confuse them and make it feel as if their life is falling apart (Bruner & Woll, 2011). This results in veterans, who are in the system, to lose contact with the outside world; their life line for reintegration makes it hard for them to return to society.

The big picture of the wars is that 4,500 U.S. soldiers died, 32,000 were wounded, and 104,000 Iraqi civilians were killed (Bruner & Woll, 2011; Philipps, 2012). Even though this is less than that of past wars like World War II and Vietnam, the impact is

greater. This is because of the nature of these current conflicts, they are more violent than before and in a way they are more intelligent when it comes to finding ways of violence and destruction (Hunter, 2013a). It is true that most of the combat veterans who have returned home from one of the two most current conflicts have not been arrested, but there is a small population that has (Philipps, 2012) which results in the concern of this new generation of combat veterans. Many of these veterans may suffer from mental health problems that go unnoticed. These members are returning home as defenders of our freedoms but are waging a new battle all on their own. As a result these individuals risk ending up being incarcerated because of these undiagnosed mental health problems such as PTSD. Few studies have directly taken a deeper look at combat veterans and CJI which brings the importance of finding the causes of veterans' PTSD and incarceration. This study will provide a psychological and statistical way of providing empirical support for the relationship between PTSD and CJI among the OIF, OEF, and OND population.

Literature Related to the Methods

Past literature on PTSD has been focused on both qualitative and quantitative methods equally, but when looking at pairing PTSD with criminal activity quantitative research has been done more predominantly (Elbogen et al., 2014, Hodge, 2011,). Therefore indicating that a quantitative method would be more appropriate to establish the relationship between PTSD and CJI. Quantitative methods for this study will establish results in a numerical way and it will use statistical analysis to determine the correlation between PTSD and CJI using the regression model (Treiman, 2009). The research will be

used to examine if PTSD is a precursor to CJI in combat veterans, therefore making quantitative methods more appropriate for this particular type of study to obtain the relationship between the variables (Hodge, 2011).

Summary and Transition

This chapter has provided an in-depth overview of the literature that focuses mainly on the relationship between PTSD, incarceration, and combat veterans while also including justice involvement and veteran's courts and how they plan to handle combat veterans who enter the system. Several models and theoretical assumptions within the current existing literature in relation to the topic of the study were explained in this chapter. Much of the literature has focused on the relationship between incarceration and PTSD that includes the selected population of combat veterans. It also included information on the stigma and culture of the military's take on mental health and to the many reasons why many combat veterans chose to not participate in pre and post deployment examinations and therefore allowing them to not be properly diagnosed with PTSD when they return back into the civilian community. Going further, the difference between incarceration and criminal justice system involvement by the Department of Veteran Affairs and a brief history of justice involvement that includes combat veterans with PTSD.

Chapter 3 covers the most appropriate methodological design for this study. It describes the best statistical procedures that are relevant to the quasi experimental design of the study. Data collection and interpretation and the goals of the overall analysis are also discussed. Gaining access to the archival data from the department of veteran affairs

is described in great detail next. There will also be a description of which measurement tools are the best fit with this study and why.

Chapter 3: Methodology

Introduction

In this quantitative study, I examined the relationship between PTSD and CJI (incarceration) among current combat veterans who had served in OND, OEF, and/or OIF combat operations. I conducted this study to determine if PTSD is a precursor to increasing CJI rates among the combat veteran population. This chapter will include a review of the research design, data collection strategy, and methodology. This chapter will begin with a brief overview of this quantitative research design, rationale, and methodology of the study. This will include the data collection of the CPRS archival data set and data analysis strategies. Next, I will describe the threats to validity that could arise when working with combat veterans. Then, I will describe the participants and sample size in detail. After this, I will provide the ethical concerns and positive social change implications before ending the chapter with an in-depth summary.

Research Design and Rationale

In this study, I employed a predictive correlational research design and used regression analyses to determine the relationship between PTSD, combat exposure, and CJI. Multiple regression and logistic regression (See Table 3) was used to identify the significant relationship between the following categories: (a) combat exposure (those veterans who have served in combat in either OIF, OEF, or OND versus those who did not have combat exposure); (b) PTSD presence that is combat related (i.e., service connected as determined by the PTSD scores in the archival data); (c) CJI, either yes or no; (d) PTSD scores as measured by the VA (provided by the VA master data set); and

(e) number of deployments and deployment length. I used the predictive correlational design of this study to test the research questions and hypothesis of PTSD contributing to the CJI of combat veterans. The use of regression methodology in social research and in this study is recognized as a valid approach to link the predictive factors within the research design of a study (see Mitchell & Jolley, 2007; Treiman, 2009). The reason for this is because regression models are specifically designed to find the relationships between many different variables simultaneously (Babbie, 2007; Treiman, 2009). Therefore, the use of regression for this study provided a way of examining the effects of military combat service on the probability of the individual offending and becoming criminal justice involved. Regression was used to determine the best model for understanding the relationship how PTSD predicts CJI and how deployment variables predict PTSD.

Population

There were approximately 1,296 OIF, OEF, and OND combat veterans from September 2009 to August 2015 in the state of Minnesota per the VA VJO Program. The population of this study was all veterans and the participants were taken from the sample described in the following subsection. Which was taken from this population of Minnesota OIF, OEF, and OND combat veterans.

Sampling and Sampling Procedure

The sample of participants in this study consisted of U.S. military veterans who were living in the state of Minnesota who were a part of the VA VJO Program and who had also served in a combat zone in either OIF, OEF, or OND and had combat exposure

during the time period of 2001 to 2015 Combat exposure in OIF, OEF, or OND means that they had to have been involved in or experienced convoys, patrols, threat to life, or something in combat that had the potential to cause a traumatic experience. Another inclusion criteria for the study participants was that they served more than one deployment, which I looked at in terms of the number of days an individual spent in a combat zone and what happened while in that area. Participants were not excluded if they only participated in one deployment. These individuals were included so as to not limit this sample but to expand it and look at multiple deployments versus a single deployment. This relationship was used to see if participating in one or multiple deployments had a risk of CJI and PTSD.

I used power analysis to determine the number of participants. Power analysis is a standalone tool that is commonly used among the social and behavioral sciences (Faul, Erdfelder, Buchner, & Lang, 2009). The G-Power program was used to conduct the power analysis. This tool provided the effect size calculations for the statistical analyses I conducted in this study.

I used the power values of 0.80 (minimum) to 0.99 (maximum) for logistic regression. The power value refers to the probability that this study will result in a Type 2 error (false negative). In terms of power analysis, an alpha of .05 was specified, and this is commonly used in social sciences (Faul et al., 2009). My review of the literature indicated that specifying a small effect size would be suitable (Faul et al., 2009). Using multiple regression, with a .80 power value is specified and the number of predictors (3 to 4) that I used in this analysis, a total sample size of 68 was indicated. Using a power

value of .99 specified a sample size of 146. This indicated that a sample size between 68 to146 participants was suitable for this study.

In this study, it was not possible to obtain the necessary data from the VA in order to conduct a reliable power analysis for logistic regression. However, Tabachnick and Fidell (2012) advised to test for individual predictors. They recommended that the sample needs to be 104 participants or greater (with at least eight predictors). In this study, no more than three predictors were used per regression analysis. Hence, a sample of 128 was suitable. A sample of 150 would give the analyses I conducted enough power. The master archival data set that consisted of 1,296 veterans provided by the VA Research Department, Minnesota.

Procedure for Recruitment

I used archival data from the CPRS database, a database consisting of the personal health records (PHRs) of veterans throughout the country, provided by the VA in this study. This database was comprised of many sections, of which my use was focused on the CJI section. The CPRS database included all information pertaining to combat veterans, PTSD, and CJI for each variable in this study. The VA obtained the information during the process of veterans enrolling in their VJO Program. This information was provided by veterans filling out the specific questionnaires that relate to PTSD and combat. Participants have to be referred to this program from Veterans Court as part of their sentencing, which I have explained in greater detail in the literature review.

Procedures to Gain Access to Archival Data Set

In order to gain access to the archival data provided by the Minnesota VA, the first thing that I had to do was to contact the head of their research department. This consisted of many phone calls to several personal within the VA system. After sending an e-mail explaining in detail the objectives of this study, the head of research contacted me back and explained the procedures of gaining access to the data. After it was determined that this study would be approved for conducting research at the VA, it was made clear that all ethical procedures and guidelines provided by Walden University and the VA had to be followed in order to gain permission to have access to the archival data set.

After all of the required procedures had been completed for review by the VA research committee (The VA internal review board). This process on average takes about 3 to 6 months, for this study it was 3 months. The primary investigator is the contact within the VA who worked with me to find all of the necessary information pertaining to the study and attended the VA internal review board in my place to defend the study. After approval was granted then the primary investigator and I could began going through the data and working on the study. The VA internal review board approved this study. I was given access to their data, a copy of the VA IRB board approval documents will be placed in the appendix of this document.

Collection of Archival Data

In order to gather more accurate and secure data, I used the CPRS system to obtain the PHRs of veterans provided by the Minnesota VAHCS. The use of archival data allows for the protection of identity to be even more secure. The data were stored at the

VA and were not allowed to leave the campus. The data were analyzed at the VA as per their instructions so as to ensure patient safety and confidentiality. The data that was used from the VA will be stored in a secure location that is deemed fit for storage by the VA.

Instrumentation and Operationalization of Constructs

The PTSD measurement tools that I used in this study were the PTSD-Checklist-Military (PCL-M5; Weathers et al., 2013) and Clinician-Administered PTSD Scale (CAPS-5; Blake et al., 2013; Weathers et al., 2013). These tools were used in identifying the presence of PTSD in the participants and any stressful experiences before and after deployments. The tools also specifically focus on the current symptoms of PTSD that have led to CJI and the participant's entrance into the veteran's justice program by the VA.

Scales

The main goal of the PCL-M5 is to ask individuals about their symptoms in response to "*stressful military experiences*" such as events that happen during combat, loss of life and/or roadside bombings (Author, 2012; Weathers et al., 2013). This is a 20-item self-report measurement tool (score range 1–20) that reflects the *DSM-IV-TR* and now *DSM-5* symptom criteria for PTSD (Groer, Kane, Williams, & Duffy, 2015). This tool has a variety of research purposes for social research such as screening for PTSD, diagnostic assessment of PTSD and or monitoring PTSD symptoms (Author, 2012; Weathers et al., 2013). The scoring of this tool is accomplished by various categories ranging from *low* (1–5), *moderate* (6–7), *high* (8–14), and *extreme* (15–20) PTSD symptoms (Groer et al., 2015; Weathers et al., 2013). This self-report rating scale is 0–4,

with a total symptom severity score ranging from 0–80 (Weathers et al., 2013). This including descriptors such as "*not at all*," "*a little bit*," and "*extremely*" (Groer et al., 2015; Weathers et al., 2013,). A sample item from this scale that is used to determine response and scoring:

> Item: in the past month, how much where you bothered by: "repeated, disturbing, and unwanted memories of the stressful experience?"
>
> Response: 0 = "Not at all" to 4 = "Extremely" (Weathers et al, 2013).

This version of the PCL is tailored specifically for those active and non active duty service members and has been used in many studies where combat veterans are involved. This tool specifically asks the individual about their symptoms in response to stressful military experiences (Groer et al., 2015). The new version of the PCL is designed to reflect the changes to PTSD diagnosis in the *DSM-5* and reflects both the current existing symptom criteria of PTSD and previous symptom criteria of PTSD from *DSM-IV-TR* (Weathers et al., 2013). The PCL-M5 has been validated by its (a) test– retest reliability and (b) high internal consistency in various current research studies (Loew et al., 2014; Wachen et al., 2013). Research has also shown that using the PCL-M5 on PTSD and combat, with an internal constancy of around $\alpha = .81– .94$, increases this measure's validity, and also establishes the test's relevancy to this study when measuring PTSD in combat veterans (see Loew et al., 2014; Wachen et al., 2013).

The second scale that was used by the VA to gather the CPRS data set is CAPS-5. This tool is to be considered to be the number one assessment tool for PTSD (Blake et al., 2013; Weathers et al., 2013). This a 30 item scale divided in to four sections of PTSD

symptoms, criterion B (1to 5), criterion C (6 to 7), criterion D (8 to 14), and criterion E (15 to 20), (Blake et al., 2013; Weathers et al., 2013b). Scoring of this scale is calculated by summing up the severity scores for the 20 DSM-5 PTSD symptoms (Weather et al., 2013b). Criterion A is the Life Events Check List which is explained in detail later. This structured interview is designed to determine the severity or level of PTSD that the individuals are suffering. The range of severity is scored on a 5 point system, "*0 absent, 1 mild/subthreshold, 2 moderate/threshold, 3 severe/markedly elevated, and 4 extreme/incapacitating"* (Weathers et al., 2013b). A sample item from this scale:

> *"In the past month, have you had any unwanted memories of (event) while you were awake, so not counting dreams? How does it happen that you start remembering (event)? If not clear; are these unwanted memories, or are you thinking about (event) on purpose. How much do these memories bother you? Are you able to put them out of your mind and think about something else How often have you had these memories in the past month? # of times" (*Weathers et al., 2013b)

Using CAPS-5 helps in determining if the individual's severity of their symptomology could be violent and have the possibility to cause harm to others around them (Price, Gross, Strachan, Ruggiero, & Acierno, 2013). The questions are specifically designed to target symptoms of the individual's social and occupational functioning (Blake et al., 2013). In other words targeting how the individual responds to the triggers that impair their cognitive functioning (Blake et al., 2013). Research has shown that CAPS-5 has an internal consistency of $\alpha = .70$ to .95, therefore increasing its validity and

relevancy to this study (Price et al., 2013). The mention of these tools here is to state that they were used by the VA to gather their archival data and is important because it is one of the tools that the department of veteran affairs uses when working with those veterans with PTSD.

Secondary Scales Validated by VA Research

The VA also uses of Deployment Risk and Resilience Inventory-2 (DRRI-2; King et al., 2006) in further solidifying the presence of PTSD among veterans (archival data, information taken from patient records). This tool is used by the VA to determine those military service members who are more susceptible to developing mental health problems before and after their deployment into hazardous duty stations. The information here will be provided in the archival data provided by the VA, in the CPRS master data sheet. DRRI-2 assesses all of the possible deployment factors that could trigger problems like PTSD. Some of these factors that are looked at are things like family stressors, aftermath of battle, perceived threat, combat experiences, and preparedness. This tool has also been known to show excellent reliability and validity when determining PTSD in veterans (King et al., 2006; Loew et al., 2014). Another tool that is used by the VA is that of the Life Events Checklist (LEC-5) for the DSM-5. This checklist is a self-report measure that is specifically designed to screen what potentially traumatic events can affect the individual and has also been placed in the master data set. This tool is used in conjunction with the CAPS-5, PCL-M5 and LEC-5 by the VA. This tool stands alone in the assessment of trauma exposure; in this study it will help in determining the level of combat exposure. These measurement tools are valid in any research that involves the

military and PTSD. They have been used time and time again and because of that they have increased their validity throughout the psychology community as a whole. These scales are discussed here because they were used by the VA to gather the archival data that is used in this study.

Operationalization of Variables

The following variables will be operationalized as the following:

- Criminal history will be operationalized by the number of times that the participants have been arrested before and after deployment to either Iraq or Afghanistan.
- The number of deployments will be operationalized by the number of times that participants have been to Iraq or Afghanistan on a continuous tour of duty.
- Combat trauma will be operationalized by the number of times trauma that was experienced while in the combat zone.
- Deployment length will be operationalized by the number of days that participants have been to Iraq or Afghanistan on a continuous tour of duty.
- PTSD will be operationalized by the participants diagnosis after deployment and if possible before and after criminal arrest. This is explained in detail in the previous section.

Data Analysis Plan

To begin here in accordance to data screening and cleaning procedures, 5 years after the completion of this study the data that will be collected will be destroyed as per the VA and IRB instructions. The digital media will be deleted by using a certified data deletion software and the paper files will be shredded, with all personal health information redacted before shredding so as to increase security. Data destruction will be done by the VA because the data will not be allowed to leave VA campus, therefore they will be in charge of data destruction. After the data has been destroyed all researchers involved in this study did be notified of its disposal.

All analyses were run on SPSS using the reduction models and processes described. Table 3 describes the research data plan that will be used to analyze the given data sets. For Questions 1-3, logistic regression will be used: CJI = is the DV and PTSD, criminal history, and CBTE are IVs. For Questions 4 and 5 multiple regression will also be used. PTSD is the DV and deployment length and multiple deployments are the DVs.

Table 3:

Research Data Plan (Predictive)

Research Question	**Statistical Test**
1. Does Posttraumatic Stress Disorder in combat veterans predict criminal justice system involvement?	Logistic Regression
2. Does criminal history pre-combat predict CJI in combat veterans who have PTSD?	Logistic regression
3. Does combat trauma experience predict CJI in combat veterans with PTSD	Logistic Regression

4. Does deployment length predict PTSD in Combat veterans? — Multiple Regression
5. Do multiple deployments predict PTSD in combat veterans? — Multiple Regression

Research Questions and Hypotheses Restated

1. The following research questions and hypotheses were designed to assess the objectives of the study and to place focus on the topic in question. Does PTSD positively predict CJI in combat veterans?

   H_o1: PTSD does not positively predict CJI in combat veterans.

   H_a1: PTSD positively predicts CJI in combat veterans.

2. Does criminal history pre combat positively predict CJI in combat veterans who have PTSD?

   H_o2: Criminal history pre combat does not positively predict CJI in combat veterans who have PTSD.

   H_a2: Criminal history pre combat positively predicts CJI in combat veterans who have PTSD.

3. Does combat trauma experience positively predict CJI in combat veterans with PTSD?

   H_o3: Combat trauma experience does not positively predict CJI in combat veterans with PTSD.

H_a3: Combat trauma experience positively predicts CJI in combat veterans with PTSD.

4. Does deployment length positively predict PTSD in combat veterans?

   H_o4: Deployment length does not positively predict PTSD in combat veterans.

   H_a4: Deployment length positively predicts PTSD in combat veterans.

5. Do multiple deployments positively predict PTSD in combat veterans?

   H_o5: Multiple deployments do not positively predict PTSD in combat veterans.

   H_a5: Multiple deployments positively predict PTSD in combat veterans.

Threats to Validity

Internal Validity

Validity is important to any research within the social sciences. Threats to validity come in many forms and it is important to make sure that the standards are met in their entirety. The measurement tools that have been mentioned will help in securing internal and external validity in this research. They will also ensure the confidentiality in participating in the study. Since this study has a correlational design the data that will be gathered will demonstrate that the independent and dependent variables stated earlier are in fact related to each other (Frankfort-Nachmias & Nachmias, 2008), and that there is a strong relationship between them.

Protecting internal and external validity is key to this study. The measurement tools used in the gathering of the archival data have been used for years by the VA and

other institutions over and over again therefore increasing their validity in the data set provided for this study. Since the measures have been consistently used and refined this will increase the validity of this study and help in ensuring the reliability of the data gathered for this study (Treiman, 2009).

In terms of internal validity it would be to conclude, that the changes in the independent variables causes the changes in the dependent variables (Creswell, 2014; Treiman, 2009). So for this particular study it would mean that PTSD causes the changes in CJI in combat veterans. Or combat exposure causes the changes in PTSD in combat veterans, and lastly if combat exposure causes the changes in PTSD in criminal justice involvement in combat veterans. This study observed these changes through the use of archival data and therefore protecting the participant's identity and ensuring confidentiality. Next potential threat to internal validity is known as selection; this is of concern to the participants in this potential study. Certain participants who will be selected may have been predisposed to PTSD and experienced combat exposure. Such experiences could possible compromise the reliability of self-disclosure offered by participants

External Validity

One external threat to validity in this study is that of those individuals with PTSD who are unreported, in treatment/psychiatric facilities and law enforcement facilities because of issues such as the stigma that follows military service, family relationships, and so forth (Bagalman, 2013). Another external threat to validity in this particular study will be keeping personal bias separate from the facts. This could be anything from letting

personal opinions get in the way of the research to personal thoughts and beliefs getting in the way to looking at the facts. This is not necessarily a bad thing in this study; by knowing and understanding bias it will help me to keep a level head and look at the facts while also using personal experience as a military veteran to keep the passion and importance of the study from not getting to over powered. Even though this type of threat is used for qualitative studies this has relevance to this study because of the researchers own military back ground and veterans status.

Additional Validity Threats

Lastly, a threat to validity to the study is that of malingering/feigning of symptoms of PTSD. Malingering has been seen as very prevalent in a PTSD diagnosis, especially in that of delayed-onset PTSD (Ahmadi et al., 2013). Since PTSD is one of the most common mental disorders and diagnosis among veterans so is the threat of malingering/feigning of symptoms. Malingering is seen in individuals who are seeking treatment for PTSD for their war-related traumatic experience. This can be seen in what is called pseudo-PTSD where the individual is showing what is known as a simulation of the actual disorder (Ahmadi et al., 2013). PTSD is highly susceptible to malingering/feigning because this disorder relies on, in part, self-reports of symptoms from the individuals seeking diagnosis, resulting in the development of many lawsuits (Ahmadi et al, 2013; Miller, 2001).

Additionally PTSD diagnosis has a high rate of symptom overlap which can make a valid diagnosis difficult to determine (Ahmadi et al., 2013). To help in decreasing this in this study the department of veteran's affairs has used the Miller Forensic Assessment

Symptoms Test (MFAST; Ahmadi et al, 2013; Miller, 2001). This test is widely used in forensic settings to detect malingering/feigning in individuals who are being criminally prosecuted with not only PTSD but other mental disorders that have the potential for the individual to malinger/feign symptoms. MFAST is a short structured interview with the main goal to assess malingering of psychotic symptoms in the overall responses from the individuals being assessed (Ahmadi et al., 2013). This test is also highly successful in testing those suffering from PTSD as a result of combat exposure and weeding out those individuals who are malingering/feigning PTSD symptomology. It is important to note here that this test was used by the VA to gather their archival data set and was not used by me as the researcher.

Ethical Procedures

Ethical procedures are important to all studies in social research wither the studies are dealing with human participants, including those relying on archival data. Access to the archival data has been given by the Department of Veteran Affairs. The Walden Institutional Review Board Number for this study is 03-23-16-0188201.

Protection of Identity

Measures that were taken to protect the identity of the participants in this study. To begin with participants' name and any identifying information were retracted or removed producing a completely anonymous database. This meaning that there are no names, addresses, contact information, or anything that allow the participant to be identified. Each personal health record will be numbered and categorized as seen fit. The personal health information of each participant is protected and access is only available

while on the VA campus. The data that will be obtained from the archival data provided from the master spread sheet and the CPRS system. The data set will be placed in a security-protected file on a password protected W-drive that only I and my committee will have access to.

Treatment of Data

The data gathered will be disposed of properly 5 years after the conclusion of this research. All data will be locked away in a secure location at VA, per the department of veteran affairs Research department procedures and protocol. The digital media will be deleted by using a certified data deletion software and the paper files will be shredded, with all personal health information redacted before shredding so as to increase security. Data destruction will be done by the VA because the data will not be allowed to leave VA campus, therefore they will be in charge of data destruction. After the data has been destroyed all researchers involved in this study will be notified of its disposal.

More Ethical Concerns

One final ethical concern for this study if that participants will not have the opportunity to accept or decline participation. The reason for this concern is that information is being pulled from the archival data set. Participants involved in the data set are members of the veteran's justice program within the VA system. Therefore any information pertaining to further research is explained to them when they enter the program.

Summary and Transition

This chapter discusses the methods and procedures that are to be used in this study as well as the statistical methods and designs used to gather relevant information needed to determine the relationship between PTSD, incarceration/justice involvement, and combat veterans. This chapter also discusses the research questions, hypotheses, and methods in which the data that was collected and how it was analyzed, limitations, and the tools used to conduct the study. This chapter also discusses how to gain the access to the archival data through the department of veteran affairs Research Department for the state of Minnesota. Lastly this chapter also explains the ethical considerations pertaining to this study's methodology. The next chapter will cover the findings that are related to the study.

Chapter 4: Data Analysis and Results

Introduction

The purpose of this study was to examine the relationships between the PTSD, CJI, combat trauma experiences, deployment length, and number of deployments in OEF, OIF and OND combat veterans. Focusing on PTSD in combat veterans who have CJI after service, I explored whether the presence of PTSD was or was not a precursor to CJI. The research questions and hypotheses were:

Does PTSD positively predict CJI in combat veterans? PTSD positively predicts CJI in combat veterans.

Does criminal history pre combat positively predict CJI in combat veteran who have PTSD? Criminal history pre combat positively predicts CJI in combat veterans who have PTSD.

Does combat trauma experience positively predict CJI in combat veterans with PTSD? Combat trauma experience positively predicts CJI in combat veterans with PTSD.

Does deployment length positively predict PTSD in combat veterans? Deployment length positively predicts PTSD in combat veterans.

Does multiple deployments positively predict PTSD in combat veterans?

In this study, I found that multiple deployments positively predicted PTSD in combat veterans. In this chapter, I will provide a review of the data collected, demographic characteristics of the participants, descriptive statistics, statistical analysis, and findings related to each of the research questions.

Data Collection

I accessed the archival data on site at the St. Cloud VA Medical Center in St. Cloud, Minnesota in the form of the master data sheet of the VJO program. Quantitative data was collected for this study through this access to participants' PHRs, which I used to randomly select participants from the master data list provided by the VJO program. This was archival data, and therefore, informed consent from individual participants was not needed.

Sample Description

I conducted random sampling to identify participants. Power analysis had indicated that 146 total participants would be needed. Participants were gathered from those who participated in OEF, OIF and OND military campaigns from the years of 2001–2015. That sample was as follows: Of the 1,296 potential participants, 300 met the criteria to be in the study. Of those 300 participants, I randomly selected 146 to participate in the study. There were no discrepancies from the data collection plan presented in Chapter 3. The sample demographics are presented in Table 4, which shows that 91.8% of the participants were men and 8.2% were women.

In 2008, the VA did a study with the RAND Corporation, Center for Military Policy Research on the prevalence of PTSD in a sample of 1,938 veterans from OIF and OEF (Britt et al., 2008). Of that population they found that their study represented about 13.8% of the total population (Britt et al., 2008). In looking at this study with the archival data set containing 1,296 veterans from OIF, OEF and OND, I concluded that the data set could represent around 9.26% of the veteran population, indicating that the sample of 146

randomly selected participants for this study represented an estimated 1.04% of the combat veteran population.

Table 4:
Descriptive statistics for the sample

	Male		Female		Total	
	M	SD	M	SD	M	SD
Age	35	7.5	32.7	8.6	34.9	7.6
PCL scores	56.6	17.4	63.7	20.2	57.3	17.4
Number of deployments	1.9	.80	2.2	.58	2	.79
Number of days deployed	545.4	248.8	595.5	279.9	549.7	250.7
CBTE	1.9	.75	1.8	.83	1.85	0
PTSD after service	1.3	.44	1.3	.42		17.4
PreM CJI	1.9	.30	-	-		.29
PostM CJI	1.2	.38	1.2	.39		.37

Note: None of females in the sample had pre-military CJI pre combat; therefore it has been omitted.

Results

Model Assumptions

I chose to conduct logistic and multiple regression analyses in this study in order to predict the effect of multiple variables to assess how the variables interact with each other. Several assumptions were checked, per the suggestion of Treiman (2009). First, I checked the assumption that in each grouping of the variables the DV was normally distributed. In the analysis of variance models that were conducted for each continuous

variable (PTSD, combat trauma experience number of days deployed, multiple deployments, and PCL scores), the normality assumption was met.

In the assumption of linear relationship between the variables I determined, through scatter plot analysis, that there was in fact a linear relationship between variables. Also, by using scatter plot and data screening, I found that there were no significant outliers and determining that there was no need to manipulate the final data set. Furthermore, the observations in this study were independent from each other, and there was no significant interaction between variables. My analysis of missing values showed that there were no missing values, and therefore, there was no need to replace or change values with in the sample.

Outliers

For this study, the scores that were so far from the other scores in such a way that they skewed the distribution and altered the statistics in the data set were deemed to be outliers (see Filed, 2009). I determined the outliers for this study by standardizing the study variables and searching for the scores that were in excess from the standard deviations in the data screening process. In order to identify multivariate outliers, Mahalanobis distance was used. The accepted χ^2 value for the eight variables at $p < .001$ is 15.90. This did not lead to participants being excluded from the remaining analysis. Box-plots for each of the subscales were conducted in order to determine univariate outliers. I dealt with them by making additions or deductions to the extreme values until they were .5 larger or smaller than the next value. Through this process, I found that were

no multivariate outliers. Therefore, there was no need for data manipulation of the final data set. The data were then explored for evidence of skewness and kurtosis as shown in Table 5, resulting in no evidence for no-normality either for the individual genders or for the total sample size.

Table 5:
Skewness and Kurtosis

	Males		Females		Total	
	Skewness	Kurtosis	Skewness	Kurtosis	Skewness	Kurtosis
Age	1.16	1.23	1.92	4.82	1.19	1.30
PCL Scores	-.47	-4.3	-1.02	-.45	-.49	-.52
Number of Deployments	.46	-.28	.06	.65	.42	-.26
Number of day deployed	.65	.53	-.07	-.64	.58	.34
CBTE Total	.02	-1.28	.35	-1.44	.04	-1.30

Research Questions and Results

Research Question 1

RQ1: Does PTSD positively predict CJI in combat veterans?

$H_0$1: PTSD does not positively predict CJI in combat veterans.

H_a1: PTSD positively predicts CJI in combat veterans.

I used logistic regression analysis to determine the relationship between the variables. The output showed that 121 times out of 146 (82.9 % participants will have CJI, predicting that 25 times out of the 146 (17%) participants will not have CJI, resulting in a classification of the output to be 82.9%. However, the model was not

significant in that χ^2 in Homser and Lemeshow Test was not significant (χ^2= 7.53, p < .05) indicating that CJI was not a significant predictor for PTSD. Therefore, I accepted the null hypothesis and rejected the alternative hypothesis.

Research Question 2

RQ2: Does criminal history pre-combat positively predict CJI in combat veterans who have PTSD?

$H_0$2: Criminal history pre combat does not positively predict CJI in combat veterans who have PTSD.

H_a2: Criminal history pre combat positively predicts CJI in combat veterans who have PTSD.

The sample was split so that only the data for participants with PTSD, as indicated by the PTSD yes/no variable, was used in this analysis. I conducted a logistic regression analysis to predict how criminal history pre combat predicted CJI in combat veterans with PTSD. A test of the full model against a constant only was not statistically significant indicating that the predictors as a set did not have an effect on CJI. A Nagelkerke $R^2$of .004 indicated a weak relationship between prediction and grouping. Furthermore, the Wald Criterion demonstrated that criminal history pre combat did not have a significant contribution to prediction (p > .05). Hence, PTSD after service was not a significant predictor of CJI, so I accepted the null hypothesis and rejected the alternative hypothesis.

Research Question 3

RQ3: Does combat trauma experience positively predict CJI in combat veterans with PTSD?

$H_0$3: Combat trauma experience does not positively predict CJI in combat veterans with PTSD.

H_a3: Combat trauma experience positively predicts CJI in combat veterans with PTSD.

This sample was also split, so that only the data for participants with PTSD, as indicated by the PTSD yes/no variable, was used in this analysis. I conducted a logistic regression analysis was conducted to predict how CBTE predicts CJI in combat veterans with PTSD. I used CBTE as a predictor variable and post military CJI as the IV in the part of the sample of veterans categorized as to having PTSD after service. A test of the full model against a constant only model was not statically significant indicating that the predictors as a set did not have an effect on CJI after service. The Nagelkerke R^2 of .002 indicates a weak relationship between the prediction and the grouping. The Wald criterion demonstrated that CBTE does not have a significant contribution to prediction (p >.05). Hence, PTSD after service is not a significant predictor of CJI, so I accepted the null hypothesis and rejected the alternative hypothesis.

Research Question 4

RQ4: Does deployment length positively predict PTSD in combat veterans?

$H_0$4: Deployment length does not positively predict PTSD in combat veterans.

H_a4: Deployment length positively predicts PTSD in combat veterans.

I used a multiple linear regression analysis to test a model for deployment length predicting post combat PTSD in combat veterans. The model was significant with F (1, 144) = 35.60, $p < .001$. R^2 indicated that 19.8 % of the variance of PCL scores in the sample could be accounted for by the number of days deployed. β_0 value of 40.2 predicted that for every unit increase in the number of days deployed, there was a 40.2 point increase in the score on the PCL. Therefore, I accepted the alternative hypothesis, in that number of days deployed positively predicted PTSD post combat.

Research Question 5

RQ5: Do multiple deployments positively predict PTSD in combat veterans?

$H_0$5: Multiple deployments do not positively predict PTSD in combat veterans.

H_a5: Multiple deployments positively predict PTSD in combat veterans.

I used a multiple linear regression analysis to test a model for multiple deployments in predicting post combat PTSD in combat veterans. The model was significant with F (1, 144) = 38.06, $p < .001$. R^2 indicated that 20.9% of the variance of PCL scores in the sample could be accounted for by multiple deployments. β_0 value of 37.0 indicates that for every unit increase in number of deployments there was 37.0 point

increase in the score on the PCL. Therefore, I accepted the alternative hypothesis, in the number of deployments positively predicted PTSD post combat.

Summary of Results and Transition

In this chapter, I discussed and analyzed the findings and results. As noted for Research Questions 1, 2, and 3, I found that PTSD did not significantly predict CJI (RQ1), criminal history pre combat did not predict CJI (RQ2), and combat trauma experience also did not positively predict CJI (RQ3). Though this was not the case for Research Questions 4 and 5, where there were significant relationships between the variables. Specifically, that deployment length positivity predicts PTSD post combat and that multiple deployments positively predict PTSD post combat. I will discuss the findings, recommendations, and implications of the study in the next chapter.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

In this chapter, I will discuss the findings, conclusions, and recommendations from this study. I conducted this quantitative study to examine the relationships between PTSD, CJI, and combat in veterans after their term of service. There were five research questions that guided this study:

Whether PTSD positively predicts CJI in combat veterans.

If criminal history pre-combat positively predicts CJI in combat veterans who have PTSD.

If combat trauma experience positively predicts CJI in combat veterans with PTSD.

Whether deployment length positively predicts PTSD in combat veterans.

If multiple deployments positively predicts PTSD in combat veterans.

The key findings of this study were as follows: For Research Questions 1, 2 and 3, it was determined that there was no significant relationship between the variables. For Research Questions 4 and 5, I found that there was a significant relationship between the variables. Each finding will be described in further detail in the following sections of this chapter. I conducted this study to help combat veterans and their families understand PTSD and CJI in combat veterans. It was also conducted to shed some light on the problem in regards to PTSD and CJI in combat veterans from OIF, OEF, and OND. The research design for this study was correlational with logistic regression and multiple

regression analyses. The key population of this study included combat veterans from OEF, OIF and OND.

Interpretation of Findings

In this study, I analyzed the relationship between PTSD in combat veterans to determine whether PTSD was a precursor to CJI after service. To accomplish this, I used a sample of 146 combat veterans in the VJO program. Multiple logistic regression analysis was used to determine the relationship between variables and effectively answered the research questions by showing the statistical significance between PTSD, PCL scores, CJI, combat exposure, deployment length, multiple deployments, and CJI History. In this section, I will describe the findings from this research study in greater detail.

The first research question was: Does PTSD positively predict CJI in combat veterans? I found that PTSD did not positively predict CJI in combat veterans. However, the CJI after service numbers were high versus those with CJI before service. The results of this study concerning this question were not as I predicted, indicating instead that PTSD was not a precursor for CJI in this study. This is a different result than those that have been conducted on previous combat veterans from previous conflicts such as Vietnam, World War II, and the Gulf War (Hodge et al., 2006; Wilson & Zigelbaum, 1983). Previous studies have indicated that PTSD causes CJI in combat veterans (Hodge et al., 2006), which is why PTSD and CJI are commonly associated. Their previous placement together could have been because there was not enough known about PTSD as

there is now, such as the specific symptomology and environmental factors that coincide with CJI and combat situations (Hunter, 2016).

The second research question was: Does criminal history pre combat positively predict CJI in combat veterans who have PTSD? I determined that that pre-combat criminal history also does not positively predict PTSD. As in previous research, I predicted that having been exposed to criminal activity prior to enlistment would place the combat veteran at a greater risk to CJI (Hunter, 2013a). But in the results of this study that was not the case, and CJI history prior to enlistment did not result in predicting PTSD in combat veterans.

The third research question was: Does CBTE positively predict CJI in combat veterans with PTSD? I found that CBTE did not positively predict CJI in combat veterans with PTSD. In previous research, this variable was important because it was often paired with PTSD and combat veterans because of the experiences that the combat veterans are exposed to such as fear for their life and the stress that is associated to combat (Hunter, 2013a; King et al., 2006).

However, for Research Questions 4 and 5, the null hypotheses were supported. I found that there was indeed a significant relationship between deployment length and PTSD in combat veterans as well as a significant relationship between multiple deployments and PTSD in combat veterans. Deployment length and multiple deployments both positively predicted PTSD in combat veterans. Therefore, extensive amounts of time in a combat zone or area significantly change the behavior of those who have experienced combat exposure. In previous research, it was indicated that long term

exposure to extreme environments had a significant impact on veterans' cognitive functioning (Kopera-Frye et al., 2013). The results of this study were similar, indicating that the combat veterans who experienced long time exposure to combat developed PTSD. Prolonged and repeated exposure to extreme stressors, such as loss of limbs, loss of life, threats to personal wellbeing and so on, changed their behavioral characteristics and personalities. . These behavior changes become a part of the diagnosis of PTSD.

I hypothesized that there was a relationship between PTSD and CJI based on the assumptions of CBT (see Castro, 2009; Swart et al., 2015); however, these hypotheses were not supported. My hopes to find the blending of cognitive and behavior approaches to determine the overall relationship between the variables to determine the pattern in criminal behavior was conclusive. This result solidified the relationship between multiple deployments, deployment length, and how these variables are a precursor to PTSD in combat veterans. However, the lack of relationship between the intended variables tells us that there are other mediating variables that could be used to determine the correlation in question between CJI and PTSD. With that said, since CBT focuses on thoughts that are related to trauma which is associated with PTSD symptoms (Garske, 2011), in this study I observed that these specific behaviors were not reported in the archival data provided. Examples of such behavior would be night tremors, dissociative states, memory loss, among other symptoms of PTSD as defined by the *DSM-5* (APA, 2013). In this study, the participants'' diagnosis of PTSD was measured by the PCL and PCL-M scores; therefore, it was more difficult to determine which specific behaviors lead to the combat veterans' CJI. In order to indicate which "vehement emotions" were present after the

traumatic events (Friedman, Keane, & Resnick, 2010), that the combat veterans were exposed to. It is possible that the predicted hypotheses for this study were not supported because there were more mediating variables that needed to be looked at to determine what the true cause is of the PTSD and CJI relationship in combat veterans.

To determine the other mediating variables for this study, a second analysis of the data should be conducted including items such as substance abuse (self-medicating with alcohol and drugs); neglect (spousal abuse, sexual abuse, and or verbal abuse to name a few); and a more in-depth look at CJI (using a separate questionnaire for CJI history). All of these items have been seen in combat veterans who have PTSD in previous research that have been conducted on this population. These are possible reasons why PTSD did not predict CJI in this study, so adding these variables to a second analysis could determine an underlying cause of CJI in combat veterans with PTSD. By adding these variables to a future study, it will be easier to determine the emotional pathway that the combat veteran is going through and determine the correct path to recovery using third wave psychology (Garske, 2011; Trower, 2011).

The results of this study have shown that PTSD has been present in some, but not all, combat veterans who have been involved in the criminal justice system (Bartol & Bartol, 2011). The results also confirmed that PTSD was not a precursor to CJI but that CJI occurs in combat veterans whether or not they have PTSD. This could stem from the fact that extended and prolonged exposure to combat has an adverse effect on the cognitive functions of the combat veteran's behaviors. As stated in previous research, this finding could indicate that the combat veteran could be using some alternative method of

coping with the exposure, such as sensation seeking, survivor mode, and/or dissociative reactions (Fuchs, 2013; Wilson & Zigelbaum, 1983). The development of PTSD is just one of many things that could result from combat exposure. Therefore, despite the fact that combat exposure may or may not develop into PTSD, it still has an effect on the combat veterans exposed to it. Though the results for this study were not in line with the predictions, the findings still provide insight to the combat veteran population in question.

Adding to the research knowledge in the field, the results indicating the cognitive behavior changes that PTSD can bring upon an individual might change their knowledge of right and wrong. Therefore, PTSD changes their cognitive functioning where the individuals are acting differently than what is to be considered their normal behavior from family and friends. This could also cause deviant behavior resulting in the potential for combat veterans to be involved with CJI (Swart et al., 2015), which in this study was indicated by the results in a small scale analysis of the data but not solidified in the conclusions that were determined by the research questions and hypotheses for this study. In previous research, it had been observed that CJI and PTSD are commonly associated with each other (NCFPTSD, 2011); however, in this study there was no indication that PTSD causes CJI in combat veterans.

The results of this study were different from those of other studies that have been conducted(see Van Schellen et al., 2012), meaning that even though it was thought that PTSD was a cause of CJI, I determined in this study that CJI in these combat veterans was not a cause of PTSD. This brings about another question as to find a reason why

PTSD is often seen in combat veterans with CJI and to determine what behavioral patterns if any are the cause of CJI and PTSD being frequently seen together. The findings of this study add CJI and PTSD awareness to the combat veterans' population within the VJO Program and the community in which they live. The results also add knowledge on the topic of military deployments predicting PTSD in combat veterans and specifically on how combat trauma exposure increases each time a combat veteran is placed in a combat zone/area for periods of time.

Limitations

Quantitative research can have its limitations (Marion & Oliver, 2012). If there is a statistical error, the results of the analysis have a larger chance to become skewed. The limitations in this study are indicated by the combat veterans that were used in the archival data set which where only those who were provided by an archival data set alone and nothing else. If the data set was to include items such as personal interviews as well as the archival data this could have provided another view to the problem in question therefore giving potential to conduct another study that will include combat veterans from the given population for this study indicating that there might be possible change in the results if that study if it were to be conducted. Using qualitative analysis here would add another dimension to the research to help explain the link between multiple deployments and PTSD.

Another limitation that has been identified for this particular study was that of using PCL scores to determine PTSD and not using personal interviews. Relying on the PCL scores for this study rather than in-depth interviews has only given part of the story.

Do to this, this study observed one side instead of many indicating that if there were in-depth interviews conducted that there might have been different results to this research. In the future this could help in determining if there was social desirability bias when the participants answered the questioners leaving the possibility to do a mixed methods study to answer the research questions the next go around.

Recommendations for Further Research

There has been minimal focus on the direct implications that CJI can have on combat veterans with PTSD and why they seem to be commonly put together. With that being said, this study showed that combat is closely related to PTSD in combat veterans who spend large amounts of time in combat areas. There is still more to see and that, though in this study it was not proven that PTSD causes CJI, it has given a foot step into the bigger picture of this relationship between variables recommending that a similar study be conducted to determine the relationship between CJI and PTSD using different variables other than what was used for this study in order to determine that correlation. Future research could investigate substance abuse, neglect (categorizing as spousal abuse, child abuse and or sexual abuse) as variables mediating the relationship between PTSD and CJI in combat veterans.

Another recommendation for future research relates to looking deeper into why CJI is commonly seen in combat veterans with PTSD. The department of veteran's affairs works closely with all branches of the military and maybe, with their cooperation, there can be a prescreening program developed to help determine this relationship as discussed in the section with limitations. This study could also take a deeper look into the criminal

history that is involved in those veterans with PTSD. Instead of looking at all three (OIF, OEF, and OND) the new research can just look at the first group of combat veterans from OEF combat veterans while looking at the other two groups separately. Then do a compare and contrast method to look at all three groups of combat veterans looking to determine which group of combat veterans are more susceptible to CJI. The reason behind this is that each operation was conducted under different circumstances in our government. Under each operation there were different experiences and different combat situations. Conducting a small compare and contrast between each of the operations there is the possibility that we will see the differences between each operation. The meaning behind this is to look at the history of combat and how it has developed over the years since WWII and or Vietnam as conducted previously (Bruner & Woll, 2011; Taylor et al., 2012).

In addition to developing a more concise CJI screening process, with the focus on PTSD in combat veterans, further research could address the challenges that are placed on treating and assessing PTSD when transitioning from active service in the military to civilian life. The screening process could include a mandatory session with a mental health professional before deploying and one upon return from deployment. This way the changes in cognitive functioning can be monitored more proactively and could even be a way to prevent current trends that are seen such as increasing suicide rates among combat veterans to name one. This could also give rise to the cause of the changes in the cognitive functioning of the combat veteran therefore determining what type of combat veterans are going to be more at risk over the other types of combat veterans (veterans in

a combat zone but not experience combat situations vs those who are in combat zone and experience combat trauma.). A study implementing the screening process and comparing the results from before and after deployment has the potential to determine the underlying factors of how these changes in behavior affect combat veterans and their families.

It is also recommended that a study be conducted as a longitudinal research design. Using this design gives the chance to measure the same sample more than once and ensure that the time period between the measurements are long enough to see the changes needed (Stangor, 2007). This could help in measuring combat exposure and CJI or measuring PTSD and CJI. Using the correlational data that was gathered from this study and the new study through multiple regression to assess the relationships will give a path analysis which could be displayed easily in a diagram known as the path diagram for easier understanding of the results (Stangor, 2007). Keep in mind a limitation for this recommendation for the length of time that it might take to conduct this research.

Further research needs to collaborate with not only the active duty military but with both active duty and veteran community together in order to help find and solve the problem of increasing CJI in combat veterans. The results of this study indicate that there is more research necessary to understand the influence of PTSD on CJI in combat veterans form the OND, OIF, and OEF combat veteran population. Therefore, the findings of this research as well as literature on PTSD in the military identifies the need for further collaboration and rigorous research focusing on addressing the challenges of CJI among combat veterans with PTSD.

Positive Social Change Implications

As previously stated, an estimation of more than 337,285 of today's veterans suffer from PTSD; (DOD, 2015a). With the stigma that PTSD can bring to military society it could be safe to say that there could be more veterans with PTSD than is reported. However, it is not known how the military addresses the needs of the subset of the military population with mental illness such as PTSD. It is also unknown how they compare CJI to PTSD and if they are related to the increase of PTSD veterans within the veteran's justice program. As a result, this study was designed with this in mind and to give rise to developing an answer as to why CJI and PTSD seem to be linked in combat veterans.

The clearest social change implication is the connections between PTSD and length of deployments and multiple deployments. A consistent presence of developing PTSD as a result of deployment has indicated that screening more often before, during, and after deployment is needed. Screening for PTSD more often will be able to develop a more concise way of screening and determining who is at risk and even possibly stopping the development before it happens Furthermore, screening could be conducted after the first 30 days of deployment and again at 90 days and so on for up to a year after that deployment was finished. A reason for this is that it can take up to an average of a year to show signs of PTSD. Therefore, the individual could be CJI before PTSD symptoms are present. With this information it is the hope that this will be developed sooner rather than later. Any research that can improve the screening process of PTSD in combat veterans has the potential for social change. This study can help by disseminating research

findings within the veteran's justice program and combat veterans with PTSD. By including both active military and inactive military service members these research findings have the potential to be received in the community as increasing knowledge and delivering awareness to the growing CJI and PTSD population among combat veterans.

Conclusions

This study focuses on whether PTSD is a predictor to CJI in combat veterans while looking at other variables such as combat trauma experience, CJI history, length of deployment, or multiple deployments that the combat veterans might experience in their term of active duty service. Additional variables in the study included age and gender. While the primary focus of this research was to determine the impact combat has on CJI in combat veterans with PTSD, the results indicated that there was not enough data to support PTSD as a precursor to CJI in combat veterans, but that multiple deployments and length of deployments could be a precursor to PTSD in combat veterans. That is not to say that CJI and PTSD are not related; this means that there needs to be more in-depth research on a larger scale on this potential relationship. Having identified that there is the potential for CJI and PTSD to be related but not conclusive in this study, there is room to grow in developing a more concise study that will discover the true relationship between these variables. Researchers need to continue to act on the urgency of finding the cause of CJI in combat veterans and why it is seen to be in common among those combat veterans from OIF, OEF, and OND with PTSD. In closing; PTSD is an unknown enemy that uses a claymore to destroy the mind and body of those around it, it's invisible and evolving, that who so ever comes in contact with it is changed forever. With more research comes

more knowledge on how to safeguard the mind and those who have sacrificed so much for our freedom.

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