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Combat Service and Posttraumatic Stress Disorder as a Violent Crimes Predictor in OEF/OIF Veterans

Rachel L. Ivory
Walden University

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Walden University

College of Social and Behavioral Sciences

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Rachel Ivory

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Review Committee

Dr. Raj Singh, Committee Chairperson,
Public Policy and Administration Faculty

Dr. Karen Shafer, Committee Member,
Public Policy and Administration Faculty

Dr. Meena Clowes, University Reviewer,
Public Policy and Administration Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2017

Abstract

Combat Service and Posttraumatic Stress Disorder as a Violent Crimes Predictor in
OEF/OIF Veterans

by

Rachel L. Ivory

MPA, Walden University, 2009

BS, Radford University, 2007

Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy
Public Policy and Administration

Walden University

August 2017

Abstract

There is an established link between posttraumatic stress disorder (PTSD) and criminal activity. Of every 100 veterans who served during Operation Enduring Freedom (OEF)/Operation Iraqi Freedom (OIF), 11 to 20 percent are diagnosed with PTSD each year. Previous research has documented that veterans are incarcerated at higher percentages compared to nonveteran inmates, though little published research examines incidence of PTSD relative to violent crime. Using Agnew's general strain theory as the foundation, the purpose of this correlational study was to examine combat service, PTSD, and specific violent crimes as defined by the FBI as murder and nonnegligent manslaughter, forcible rape, robbery, and aggravated assaults; while controlling for branch of service, age, and sex. The sample consisted of 46 OEF/OIF inmates (federal and state) 9 of whom were convicted of a violent crime. Results from the multiple logistic regression analysis showed that combat service, PTSD, sex, and branch of service were not statistically significant predictors of imprisonment of OEF/OIF veterans for violent crime. Age, however, was statistically significant $p = .029$. The findings of this study contribute to social change by providing policymakers and prison administrators nuanced information (i.e., characteristic information – age, sex, branch of service, etc.) about the needs of this unique prison population with regards to reintegration. This may in turn contribute to improved reintegration initiatives to enrich the lives of veterans, their families, and the communities where veterans reside when returning from war. Focusing on reintegration will be very beneficial.

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Dedication

In making it to this stage in my journey I would be remised if I did not thank my family and close friends for their support during this process. They have lived through this entire process with me. It is very rewarding to finally consider myself part of a group of scholarly practitioners who both embarked on and completed a doctoral study. May God bless the veterans of this nation and help them through the challenges they face.

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Chapter 1: Introduction of the Study

Background

Many American veterans have served during times of war. According to the Defense Casualty Analysis System (DCAS; 2016b), a system that maintains a database of military personnel and casualties, the following numbers of soldiers have fought in past wars: World War I: 4,734,991, World War II: 16,112,566, Korean War: 5,720,000, Vietnam War: 8,744,000, and Persian Gulf (includes Desert Storm/Desert Shield): 2,225,000. Nearly 2.7 million service members served during Operations Enduring/Iraqi Freedom (Hautzinger, Howell, Scandlyn, & Wool, 2015).

The DCAS (2016a) also reported large numbers of casualties during each campaign. Therefore, those who returned home may have endured physical injuries as well as suffered mental trauma. Nearly 36% of service members who served in Afghanistan and/or Iraq suffered from a physical or mental lifelong disability (Hautzinger et al., 2015). Of those veterans suffering mental trauma they may have developed posttraumatic stress disorder (PTSD); due to this diagnosis, there is a large body of research that advanced a strong correlation between combat, PTSD, and war.

Iraq war veterans Jessie Bratcher, of Oregon, and Nicholas Horner, of Pennsylvania, both suffered from PTSD (Ray, 2012; Sullivan, 2009). Upon reintegration into civilian life, each encountered a situation which led to the commission of a violent crime. Bratcher, who served in the Army National Guard, shot and killed his fiancée's alleged rapist; while Army veteran, Horner, shot and killed two civilians (*Horner v. Commonwealth*, 2012 a/b; *Bratcher v. State*, 2009). Both veterans were diagnosed with

PTSD, and utilized their diagnosis as a legal defense during their respective trials (*Horner v. Commonwealth*, 2012 a/b; *Bratcher v. State*, 2009).

These veterans are just a few among numerous from the Global War on Terror era who committed violent crimes. Recently, veterans Dioniso Garza III of California, an Afghanistan veteran identified as the suspect of a mass shooting in Houston, Texas on Memorial Day 2016, also suffered from PTSD (Eisenbaum, 2016); and Ivan Lopez, an Iraq veteran being evaluated for PTSD, killed three people and wounded 16 others at Fort Hood before killing himself (Sanchez & Brumfield, 2014). Two other veterans currently sit on death row for murders they committed; Iraq war veterans Courtney Lockhart and John Thuesen, both allegedly suffered from PTSD (Buckwalter-Poza, 2014; Vicens, 2016). Other Iraq war veterans who committed violent crimes included Joseph Lamoureux, who shot at an officer after an incident at home with his wife (King, 2010); Jason Klinkenberg, a veteran who killed his wife and then himself (Rogers, 2009); and Matthew Sepi, who killed one gang member and wounded another (Sontag & Alvarez, 2008), each likely suffered from PTSD.

The Department of Veterans Affairs (2014a) discovered that veterans of Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF; also, known as Operation New Dawn [OND]) have the highest diagnosed rates of PTSD than either the Vietnam or Gulf Wars. PTSD diagnoses have risen among military veterans (Armed Forces Health Surveillance Center, 2011; Blount, Cigrang, Foa, Ford, & Peterson, 2014). Of the approximate 1.2 million veterans who received care in fiscal year (FY) 2010, the U.S. Government Accountability Office (GAO; 2011) reported that 84% was for PTSD

(p. 10). The GAO (2011) ascertained that between FY 2006 and FY 2010 veterans of OEF and OIF represented an increased number of treated cases (p. 14). More recently, Dursa, Reinhard, Barth, and Schneiderman (2014) found that prevalence rates of PTSD diagnoses among OEF/OIF veterans was 15.8% for those deployed and 10.9% of nondeployed veterans for this era (p. 544). The rise in PTSD cases has given cause for researchers to study specific factors that returning veterans face such as the increase of criminal behavior.

Data from the Survey of Inmates in State and Federal Correctional Facilities dataset on prison population's corroborated that there has been an upsurge of crimes committed by veterans. Researchers showed that veterans make up 54% of state and 64% of federal prison inmates, with 4% specifically noted as OEF/OIF veterans (Noonan & Mumola, 2007, pg. 1). Furthermore, Bronson, Carson, Noonan, and Berzofsky (2015) discovered that the percentage of imprisoned veterans between the years of 2011–2012 decreased overall compared to 2004 data. These researchers reported that per 100,000 of the 2011-2012 data, the total of nonveterans/veterans was 653/619 for prison percentages, respectively; and 315/236 for jails. The researchers indicated that 2004 veteran incarceration rates were 687/598 per 100,000 for nonveterans/veteran in prison and 315/236 in jail (p. 3). The only category that increased was veterans in prison, which was 598 per 100,000 in 2004 and 619 per 100,000 between 2011-2012.

In addition, Bronson et al. (2015) found that veterans of OEF/OIF/OND made up 13% of the prison population and 25% of the jail population. Those rates were higher than the 2004 data. However, Tsai, Rosenheck, Kaspro, & McGuire (2013) found that

OEF/OIF/OND veterans, though more likely to have a PTSD diagnosis, were less likely to be incarcerated. Nevertheless, higher rates of PTSD diagnoses were found in incarcerated veterans. As there is a fluctuation of veteran inmate percentages, further research may reveal an uptick of veteran incarceration.

The FBI-UCR Program (2014a) defined violent crimes as murder and nonnegligent manslaughter, forcible rape, robbery, and aggravated assaults. Several researchers established a link between PTSD and criminal behavior. These researchers focused on PTSD and general criminal behavior, such as domestic violence or risk of criminal behavior (Bucher, 2011; Fresneda, 2013; Gansel, 2014; Norman, Elbogen, & Schnurr, 2014); to include several studies germane to veterans of OEF/OIF (Culp, Youstin, Englander, & Lynch, 2013; Frierson, 2013), and others to Vietnam veterans (Calhoun, Malesky, Bosworth, & Beckham, 2004; Wilson & Zigelbaum, 1983). Other researchers focused on PTSD/traumatic brain injury (TBI) and arrest rates for crimes (Elbogen et al., 2012; Sreenivasan et al., 2013; White, Mulvey, Fox, & Choate, 2012), PTSD and other comorbid symptoms that contribute to criminal offenses, such as substance abuse, emotional well-being, and anger issues (Sullivan & Elbogen, 2014; Tinney & Gerlock, 2014; Worthen et al., 2014; Yambo & Johnson, 2014), and military service and criminal activity (Culp et al., 2013).

Research detailing specific types of violent crimes, as defined by the FBI, could not be found. Moreover, researchers who referenced violent crimes in their studies did not specify the type of violence as defined by the FBI; but referred to subjects such as PTSD/violence and the criminal justice system (Auberry, 1985), PTSD and the reactions

due to fear-stress or anger (Braquehais & Sher, 2010; Novaco, Swanson, Gonzalez, Gahm, & Roger, 2012), postdeployment issues due to combat exposure (Olusanya, 2012), and subjects regarding family and community violence (Dupont-Morales, 2011). In this study I seek to address the gap in literature germane to combat service, PTSD, and specific violent crimes as defined by the FBI—controlling for branch of service, age, and sex.

Problem Statement

In recent years, there has been significant media and other attention given to violent acts committed by veterans of OEF/OIF with clinical PTSD diagnoses. The U.S. Department of Veterans Affairs (2014a) reported that out of every 100 veterans who served during OEF/OIF, 11–20% was diagnosed with PTSD each year. Researchers at the RAND Corporation conducted a comprehensive study which confirmed that PTSD was the most prevalent diagnosis of returning OEF/OIF veterans (Tanielian & Jaycox, 2008). Bronson et al. (2015) also found a higher percentage of veterans were incarcerated for violent offenses.

A violent act committed by a military veteran can have a negative impact on the veteran and their family, the victim and their family, the community, and local law enforcement. Lawmakers, military leadership, healthcare personnel, and others are also impacted by these crimes. A possible cause of PTSD related crimes, by military veterans may be due to multiple deployments, lack of military resources to assist the veteran with reintegration, the age of the veteran when entering combat service, or possible mental volatilities of the service member before joining the military.

Although there is some research germane to PTSD and violent crimes, I could not find a body of research on violent crimes as defined by the FBI. Violent crimes are a problem for society. It would be helpful to the veteran populace if researchers could advance a hypothesis to test whether combat service and/or PTSD are predictors for the commission of a violent crime among imprisoned OEF/OIF military veterans. It is important to ascertain if this issue occurs more often with veterans. In this quantitative study, I used a secondary dataset from the U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

Purpose Statement

The purpose of this quantitative nonexperimental study was to predict if combat service and/or PTSD are predictors for the commission of a violent crime among OEF/OIF military veterans who are imprisoned—controlling for branch of service, age, and sex. Researchers have studied a link between PTSD in military veterans and criminal activity (Auberry, 1985; Blue-Howells, Clark, van den Berk-Clark, & McGuire, 2013; Bucher, 2011; Calhoun et al., 2004; Elbogen et al., 2010; Frierson, 2013; Hayman, Sommers-Flanagan, & Parsons, 1987; Hoge et al., 2004; Kulka et al., 1988; Wilson & Zigelbaum, 1983).

Research Questions and Hypotheses

Research Question: Are combat service and/or PTSD predictors for the commission of a violent crime among OEF/OIF military veterans who are imprisoned—controlling for branch of service, age, and sex.

H_0 : Combat service and/or PTSD does not predict that OEF or OIF veterans are imprisoned for committing a violent crime.

H_1 : Combat service and/or PTSD does predict that OEF or OIF veterans are imprisoned for committing a violent crime.

Theoretical Framework

Agnew's (1985/1992/2001) general strain theory (GST) has been used in past research to study criminal behavior. The theory posits that the reaction to experiencing emotional pressure or negative strain can increase antisocial or criminal behavior in some individuals. Agnew's (1992/2001) theory provided guidance on using a quantifiable approach to determine if there is a relationship between combat service or PTSD (identified as the negative emotion or previous trauma) and violence (the reaction/response to the societal issue). Similar research utilized Agnew's theory to quantitatively measure PTSD, specific to veterans, as it relates to crime/criminal activity (Elbogen et al., 2012). Therefore, the use of this theory, coupled with the use of nonexperimental secondary data, may provide quantifiable results that can be generalized to this population. Furthermore, the results would offer guidance on the probability of this prediction.

Nature of the Study

As with previous literature, I too conducted a quantitative study using secondary data. In utilizing a quantitative approach I provided a numerical understanding of the rates for which violent crimes are committed by this specific population. Utilizing Agnew's (1992/2001) GST as the theoretical framework for this study, the outcome

should be consistent with antisocial criminal behavior, which indicated that OEF/OIF veterans diagnosed with PTSD would react to emotional pressure or negative strain.

The independent variables in the study were combat service and PTSD and the dependent variables are murder and nonnegligent manslaughter, forcible rape, robbery, and aggravated assaults (nonviolent versus violent). Additionally, controlling for branch of service, age, and sex allowed for an analysis to determine influence on IV or DV. The secondary dataset used to in this research was the *Survey of Inmates in State and Federal Correctional Facilities, 2004* (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004).

Definitions

Combat veteran: According to section 1710D(c)(1) of the National Defense Authorization Act of 2008, a combat veteran is defined as a military service member who “served on active duty in a theater of combat operations” against a hostile force (to include reservist activated for service), after November 11, 1998.

Operation Enduring Freedom (OEF)/Operation Iraqi Freedom (OIF) veteran: A veteran of OEF/OIF is defined as a service member who served in the U.S. Armed Forces during the following service periods: OEF period of October 7, 2001–December 28, 2014; OIF period of March 19, 2003–August 31, 2010 (Torreon, 2015).

Posttraumatic stress disorder (PTSD): Per the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*; American Psychiatric Association [APA], 2013), PTSD is defined as a trauma and stressor related disorder; in which an individual is exposed to a traumatic event (directly or indirectly). The symptoms associated with

PTSD include the recurrent or intrusive (i.e. reexperience) symptoms after the trauma, to include the avoidance of thoughts or situations that remind the individual of the traumatic event (i.e. people, places, and things). This results in the hyperarousal of symptoms that bring about negative alterations in mood or cognition (see Appendix B).

General strain theory: A theory developed by theorist Robert Agnew, which advances that when individuals experience stressors or strains (e.g. decrease/loss of positive stimuli, introduction of negative stimuli, or goal blockage), the likelihood of a negative response (e.g. antisocial or criminal behavior) increases (Agnew, 1992/2001).

Violent crimes: Are offenses defined by the FBI (2014a, para. 1) as “murder and nonnegligent manslaughter, forcible rape, robbery, and aggravated assault.” These crimes are considered serious and vicious in nature.

Murder and nonnegligent manslaughter: According to the FBI (2014d, para. 1), murder and nonnegligent manslaughter are criminal offenses described as, “willful (nonnegligent) killing of one human being by another.”

Forcible rape: The FBI (2014c, para. 1) defined forcible rape as, “...carnal knowledge of a female forcibly and against her will.”

Robbery: Defined by the FBI (2014e, para. 1), as “the taking or attempting to take anything of value from the care, custody, or control of a person or persons by force or threat of force or violence and/or by putting the victim in fear.”

Aggravated assault: Accordingly, aggravated assault is defined by the FBI (2014b, para. 1) as, “...an unlawful attack by one person upon another for the purpose of inflicting severe or aggravated bodily injury. The FBI—UCR Program further specifies

that this type of assault is usually accompanied by the use of a weapon or by other means likely to produce death or great bodily harm.”

Assumptions

Veterans who participated in the study did so willingly and answered the questions conscientiously and honestly. Moreover, the findings of this study could likely be generalized to veterans who served in noncombat occupations and were diagnosed with PTSD. Furthermore, the secondary data being utilized for this study was both valid and reliable, and protects the confidentiality and anonymity of the participants because information about each individual is not being made available, or needed, for this research. In conducting a quantitative study, researchers interested in this topic can replicate this study in the future.

Another assumption was that men represented the highest recognized group of those who committed a violent crime, because most combat-related military occupational specialties (MOS), ratings/designators, or Air Force Specialty Code (AFSC) positions (military jobs) are held by male service members. Because there is a disparity in literature, with regards to the prediction of whether imprisoned OEF/OIF military veterans, who served in combat and were clinically diagnosed with PTSD that had committed a violent crime, this study may provide further clarification—controlling for branch of service, age, and sex.

Scope & Delimitations

I chose this topic because I wanted to improve the conversation with regards this population to gain a better understanding of the condition, how it affects this population,

the potential outcome due to the diagnosis, and how society can help these individuals. I could have chosen workplace violence, but I did not want to limit my focus to work only. Rather I wanted to provide information to assist in overall reintegration into society.

This study was delimited to the following:

1. Military veterans.
2. Veterans who served in combat theater during OEF/OIF.
3. Were incarcerated for a violent crime.
4. Participants whose PTSD diagnosis was medically accurate.

Because the focus is on military veterans it was not generalized to all individuals in society diagnosed with PTSD. Additionally, the emphasis was on violent crimes and does not focus on literature involving sexual trauma or intimate partner violence. A qualitative approach could have been utilized, where OEF/OIF veterans were interviewed to ascertain how PTSD led to the commission of a violent crime. However, I did not want to cause further mental trauma to the participants, or attempt to find a sufficient participant pool willing to discuss their respective service period. Therefore, I chose to use a quantitative approach utilizing secondary data; which negated the issue of finding participants, subjectivity in interviewing service members, decreasing research cost (i.e. developing an instrument, cost of finding trained interviewers to assist with interviews, etc.), and confidentiality issues in having to identify participants who advised they may cause harm to others.

Limitations

The sample population in this study was limited to veterans convicted in a court of law and were incarcerated. Furthermore, in using secondary data, the sample size was limited to institutions selected by the secondary source. It does not represent veterans who are pending conviction, found not guilty by reason of insanity or diminished capacity, or plead guilty to a lesser charge and not given a prison sentence. Based on the results of this study I am not able to address veterans whose PTSD diagnosis was specifically combat-related, as the diagnosis variable does not specifically ask if the illness is combat-related; rather PTSD could be nonmilitary related. The period for which the secondary data covers was another limitation. The data does not cover the entire period for which OEF/OIF campaigns occurred. However, the study could be replicated later when the new data is available.

Significance of the Study

Because previous researchers established a link between PTSD and crime, I sought to address the problem of specific types of crimes, as it pertains to combat military veterans diagnosed with PTSD. Records reveal that of the more than 1.3 million deployed service members for OEF/OIF missions, service members continued to be diagnosed with PTSD—21,102 from the first deployment (men: 88%; women: 12%); 12,291 from the second deployment (men: 93%; women: 7%); 4,392 from the third deployment (men: 94%; women: 6%); 881 from the fourth deployment (men: 95%; women: 5%); and, 163 from the fifth deployment (men: 94%; women: 6%; Armed Forces Health Surveillance Center, 2011, p. 4). Because researchers found that veterans represented a large number

of inmates (Culp et al., 2013; Greenberg & Rosenheck, 2012; Noonan & Mumola, 2007) and are more likely to be arrested than nonveterans, 30.3% versus 19.6%, respectively (White et al., 2012). Therefore, there was a meaningful benefit to exploring the effects that PTSD has on this population to identify the prevalence of violent crimes.

Extending research to detailed offenses has the potential to benefit a very broad audience. First and foremost, it will assist veterans and their families, both mentally and physically, by providing information on the predictability of an occurrence and the types of occurrences, and it could also assist with bringing about or revamping current reintegration policies and programs. Furthermore, it could have an impact on costs to the community, such as harm (physical/mental), increased taxes due to imprisonment, and contact with local law enforcement; each branch of service, such as troop readiness, punishment and possible confinement, benefits (to include disability costs), and services. This would further impact the medical profession, such as healthcare to veterans and their families, including costs driven by more specialized treatment options, higher health care premiums, and the need for a higher skill of healthcare workers.

Lastly, it was also important to gain information on the prison population to provide data on the characteristics of the inmate population. The impact of monitoring and keeping up with prison data also broadens the audience for whom this study would benefit. This would include the three branches of the government, legislative in making laws applicable to veterans, such as the Comprehensive Crime Control Act of 1984, Insanity Defense Reform Act of 1984, and National Defense Authorization Act of 2008; the executive branch who signs or vetoes laws promulgated by the legislative branch; and

the judicial branch where cases may be heard and decisions are made on whether laws are deemed constitutional. The overall social impact is that this study could foster further understanding of this issue, assist with reintegration services for a more targeted approach, and possibly assist in reducing imprisonment rates and the number of victims to these specific types of crimes.

More importantly as with previous legislature, the government's response to matters of veteran health, welfare, and reintegration (to include employment assistance) has been to create/review multiple policies and programs. To include employment and health related laws, such as the Rehabilitation Act of 1973, Veterans' Preference Act of 1944, Veterans' Employment Opportunity Act of 1998, and Veterans Millennium Health Care & Benefit Act of 1999. For veterans dealing with mental health issues, one such program model is the Total Force Fitness (TFF) paradigm (Jonas, O'Connor, Deuster, Macedonia, 2010; Yosick et al., 2012). In reference to the need for the TFF paradigm, Jonas, O'Connor, Deuster, and Macedonia (2010) observed that, "The military services are experiencing rampant post-traumatic stress disorder (PTSD), scores of injuries, family casualties, and increasing suicide rates," (p. 6). Further explaining that, "...the burden is high and the framework of the current response does not match the circumstance or need" (Jonas et al., 2010, p. 6). The TFF model encompasses eight domains; covering two broad fitness spectrums of veteran health—mind and body (Yosick et al., 2012). The fitness domains, relating to the mind are—psychological, behavioral, social and family, and spiritual (Jonas et al., 2010; Yosick et al., 2012). Because psychological health is an important aspect of service members who have participated in military campaigns, to

include their families, the action taken by the government could have a strong connection to social change and how society lives collectively.

Despite this, there is much more that can be studied as it relates to veterans of the military. Because this study focused upon a nexus between combat service, PTSD, and violent crimes among imprisoned military veterans, it leaves an opportunity for researchers to investigate prior criminal convictions and mental health issues. These issues may be a mediating factor of reintegration, PTSD, and post military criminal convictions.

Summary

With the prevalence of war-related PTSD diagnosis and an increase in criminal activity purported by combat veterans, it is important that researchers explore the link between combat service and/or PTSD and violent crimes. Additionally, controlling for branch of service, age, and sex will allow for an analysis to determine influence on IV or DV. This study in no way diminishes other types of criminal activity. However, it does focus on crimes that are more heinous and/or life ending for victims. As the government responds to societal issues, by creating policies and programs to assist with the mental health and reintegration of veterans it is important to focus on how prevalent veteran violence is. With a lack of research into these specific variables, in Chapter 2 the researcher explored current literature that focused on a link between combat service, PTSD, and criminal activity. Such literature was the foundation for how and why the identified gap is important for society.

Chapter 2: Literature Review

Introduction

The study of PTSD and criminal behavior is not a new concept. The United States has participated in a number of wars and/or military campaigns, such as the Civil War, World Wars I & II, and the Korean War, to name a few. The U. S. Department of Veterans Affairs (2014a) observed that out of every 100 veterans of OEF/OIF (also, known as Operation New Dawn—[OND]), had the highest rates of PTSD diagnoses, identified as being between 11-20%; Vietnam veterans with a rate of 15%; and Gulf War veterans having a rate of 12%. Based on the history of war or military campaigns, it is likely that a conflict will arise in the future which will likely lead to a further rise of PTSD diagnoses in returning veterans. Therefore, if clinicians, lawmakers, and military personnel were provided with continued and relevant research data on the likelihood of violent criminal behavior, a strategy could be developed or refined to assist with mental health and/or civilian reintegration.

With a host of current research literature on the variables of PTSD and criminal behavior, I purposely focused on combat service, PTSD, and violent crimes, defined by the FBI—UCR (2014a) as, “murder and nonnegligent manslaughter, forcible rape, robbery, and aggravated assault” (para. 1). Even though the FBI reported a nationwide decrease in violent criminal offenses by a rate of 4.4%, they noted a five-year decrease of 12.3% between 2009 and 2013. The FBI also reported that the highest violent crime rates by regions were the South (41.1%), followed by the West (23.5%), Midwest (19.4%), and the Northeast (15.8%). As well, for violent offenses, the most prevalent crime was

aggravated assaults (62.3%), followed by robbery (29.7%), forcible rape (6.9%), and murder (1.2%), respectively.

Without seeking a direct correlation to veteran crime rates, it is important to note where the veteran population resides within this nation. The U.S. Census Bureau (2012) noted that 21.8 million veterans live in the United States with California (2 million), Texas (1.6 million), and Florida (1.6 million) having the largest state populace. Of this population 1.3 million veterans served during multiple wars (Gulf War, Korean War, and World War II), with more than 1.3 million wartime veterans in California and Texas, and nearly 1.2 million wartime veterans in Florida (U.S. Department of Veterans Affairs, 2014c). Additionally, the cities with the highest veteran population were in the south and southeast – Killeen, TX (28.9%), Clarksville, TN (24%), Jacksonville, NC (22.6%), Fayetteville, NC (22.1%), and Hampton, VA (20.9%; U.S. Department of Veterans Affairs, 2014c).

This study adds to existing literature by providing empirical data on combat service, PTSD, and the prediction of violent crimes among OEF/OIF veterans who are imprisoned and not just the generality of criminal behavior/activity perpetuated by this specific population.

Search Strategies

To assess and evaluate literature on this topic the following combination of search terms were used: *military or veteran, PTSD or posttraumatic stress disorder, violence or criminal behavior, not intimate partner violence or IPV, prison, violence or criminal act, crime or criminal behavior, combat-related violence and PTSD, incarceration or prison,*

criminal conviction, felony, general strain theory, OIF or OEF, crime or criminal activity, combat-related violence, and criminal or conviction.

The databases, from the Walden University library, for which literature was retrieved, were: Thoreau, Military and Government Collection, SocINDEX with Full Text, PsycARTICLES, ProQuest Criminal Justice, ProQuest Health Management, ProQuest Military Collection, ProQuest Social Sciences, Academic Search Complete, and PsycINFO. In addition, several websites was utilized, such as Department of Veterans Affairs and the Department of Justice, and Google Scholar to retrieve information.

Literature dating as far back as 1948 to more recent literature in 2016 was also searched. I also searched literature germane to PTSD, criminal activity, specific campaigns and/or wars, to include research that utilized Agnew's (1985/1992/2001) GST as the study's framework.

General Strain Theory (GST)

Agnew's (1985/1992/2001) GST will provide the foundation for this study. It has been used in past research to study criminal behavior, more often with adolescents. The theory posits that the reaction to experiencing emotional pressure or negative strain can increase antisocial or criminal behavior in some individuals. GST was the most germane theory in explaining this behavior among veterans in the assumption that military combat experience, coupled with a PTSD diagnosis, would increase criminal behavior. For example, Agnew (1992/2001) hypothesized that individual negative strain/emotion (e.g., anger, stress, frustration, depression, equity, etc.), coupled with a lack of coping skills,

increased the likelihood of committing a crime; whereas, the type of strain is essential to the outcome.

Agnew's (1985) theory provided guidance on using a quantifiable approach to determine if there was a relationship between combat military veterans with a diagnosis of PTSD (identified as the negative emotion or previous trauma) and violence (the reaction/response to the societal issue). Agnew (1992) specifically defined the types of strains (causing negative emotions) that are associated with criminal activity, controlling for age, gender, religion, and social status/class. Those strains, according to Agnew (1992, p. 333), include the following:

- Rejection from parents showing lack of compassion or affection.
- Overzealous or harsh discipline over an infraction for which an individual felt was undeserved or unfair.
- Abuse—physical, mental, or sexual.
- Experiences in school (as adolescents) that were negative.
- Abusive peer relationships (i.e. being bullied).
- Undesirable employment (e.g., abusive management, low pay for physically demanding work, etc.).
- Being unemployed.
- Marital discord.
- Being a victim of a crime.
- Discrimination centering on race, gender, or religion.
- Homelessness.

- Not achieving specific goals (which include monetary wealth).

Similar research on OEF/OIF veterans also employed Agnew's theory to quantitatively measure PTSD as it related to crime/criminal activity (Elbogen et al., 2012). Researchers Elbogen et al. (2012) found that the strain of anger and irritability, in veterans diagnosed with PTSD, correlated to criminal activity; however, they discovered that treating anger and irritability would reduce criminal behavior (p. 1100). As such, this theory related to the research question by building upon the assumption that combat service and PTSD were predictors for the commission of a violent crime among OEF/OIF military veterans who are imprisoned—providing empirical data on the propensity for which this population had or had not committed a violent crime. Again, the use of this theory combined with nonexperimental secondary data, provided quantifiable results that could be generalized to this population.

PTSD and Violence Research

Beginning in 1974, the U.S. Department of Justice, Bureau of Justice Statistics collected data on the prison population for policymakers (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004). The data series initially began with state correctional institutions, before adding data on federal inmates in 1991. This data series has given lawmakers, correctional institutions, and researchers a snapshot of who was confined, in which a quantitative nonexperimental secondary design was employed using the latest survey and these noted variables—combat service, PTSD, and violent crimes.

Additionally, this same data series was utilized so that researchers could study the veteran population and criminal behavior (Culp et al., 2013; Greenberg & Rosenheck, 2012; Noonan & Mumola, 2007), with another recent study focusing on inmate's misbehavior that specifically targeted prior military service and inmates with PTSD (Logan & Pare, 2016). A study by Bronson et al. (2015) researched the prison populace, but utilized a different Bureau of Justice Statistics dataset—the National Inmate Survey.

Culp, Youstin, Englander, and Lynch (2013) found that combat veterans, compared to the overall inmate population, were convicted at slightly higher rates for violence (30.7%), property (24.3%), and sex crimes (10.6%), but had slightly lower rates for drug crimes (18.4%; p. 667). Next, Bronson et al.'s (2015) 2011 – 2012 data, showed that veterans in prison had lower rates in each of the categories, except for violent sex crimes compared to Culp et al. (2013; other violent: 28.9%, property: 11.7%, drug: 14.2%, and violent sexual crimes: 35.4%; p. 5). Then, Bronson et al. (2015) found that rates among jailed inmates were lower than the previous data: Other violent: 15.5%, property: 20.8%, drug: 17.7%, and violent sexual crimes: 11.8% (p. 6).

Consequently, Greenberg and Rosenheck (2012) found that veterans had a higher propensity for imprisonment than nonveterans. Which Bronson et al. (2015) also found that veterans, as opposed to nonveterans, were convicted at higher rates, specifically for violent crimes (though not defined) at a rate of 64% versus 48%, respectively (p. 5). In the last study, Noonan and Mumola (2007) provided data on the characteristics and rates that also showed a large number of imprisoned military veteran offenders. Their breakdown showed that the typical state prisoner was veteran, male, White non-Hispanic,

age 35-44, divorced, and holds a GED (p. 10). The typical inmate in federal prisons was described as veteran, male, White non-Hispanic, age 45-54, divorced, and a high school graduate (Noonan & Mumola, 2007, p. 10). On the other hand, Bronson et al. (2015) noted that the typical prison inmate was a veteran, male, age 45-54, White, divorced, and had some college, and the typical jail inmate was described as veteran, male, age 45-54, White, never married, and had some college (p. 4).

Other researchers also used the Department of Justice dataset. However, the researchers assessed the adaptability of military inmates versus those without a military background (Logan & Pare, 2016). Lastly, White, Mulvey, Fox, and Choate (2012) conducted a study using a different dataset in which they reported that of those arrested veterans committed higher rates of violent crimes (30.3%) than nonveterans (19.6%), to include confirmation that veterans had higher rates of mental illness versus nonveterans, 40.9% and 30.7%, respectively (p. 269). Additionally, there have been historical and foreign research conducted on this population.

Historical and Foreign Research

Over the years, researchers have focused on a correlation between military service and crime. Commissioned by the Veterans Administration (VA) after the passage of the Veterans' Health Care Amendments Act of 1983, Kulka et al. (1988) completed the National Vietnam Veteran Readjustment Study (NVVRS), the largest and most prolific study to date on veterans of the Vietnam War era and the prevalence of PTSD and other mental health issues this population faced and their reintegration into civilian life. A recent study conducted by Hoge et al. (2004), entitled the *Walter Reed Army Institute and*

Combat Study, was aimed at studying U.S. service members performing combat duty in Afghanistan and Iraq. Members of the Army and Marines were the population used in the study. The researchers found that while those who served in each area suffered from mental health issues as a result of combat, service members who served in Iraq experienced higher rates of mental illness compared to their counterparts serving in Afghanistan, with the rate of PTSD diagnoses being that of 12.2% versus 6.2%, respectfully (Hoge et al., 2004).

According to the U.S. Department of Veterans Affairs (2014b), Marine and Army soldiers serving in Iraq dealt with higher rates of combat stressors. In five identifying categories of stressors (seeing dead bodies, being shot at, attacked/ambushed, coming under mortar or rocket fire, and knowing a service member killed or seriously injured), Iraq war veterans had higher percentage rates (U.S. Department of Veterans Affairs, 2014b, para. 5). Marines had more instances of being shot at (97%), followed by attacks/ambush (95%); while Army soldiers saw more dead bodies (94%) followed by instances of being shot at (93%; para.5). Conversely, Army soldiers serving in Afghanistan experienced a much smaller percentage in each category, coming under mortar or rocket fire (84%) being the most prevalent stressor, followed by instances of being shot at (66%; para. 5).

Historically, researchers focused on PTSD and criminal activity of World War II (WWII) veterans (Lunden, 1952), general criminal activity of veterans between 1936-1946—the period when WWII was fought (Willbach, 1948), and Vietnam War veterans (Auberry, 1985; Bouffard, 2014; Calhoun et al., 2004; Hayman et al., 1987; Wilson &

Zigelbaum, 1983). Moreover, Lunden (1952) found that age was a mediating factor and that 70% of WWII vets had a prior criminal record. The data illustrated by Willbach (1948) was intriguing. He asserted that crime in New York City, in 1946, rose exponentially by 89.1% (p. 502). The researcher looked at specific crimes, such as crimes against person/murder, larceny, burglary, and robbery; these crimes are closely related to violent crimes as classified by the FBI (2014a). Though Willbach asserted that returning veterans may have been the cause of an increase in criminal activity, he found that was not the case, as the offenses were committed by a younger age group.

Nevertheless, researchers found that based on time in combat, veterans were more likely to commit a violent crime ($r = .27, p < .05$) and that a large percentage of veterans with PTSD had been charged and incarcerated (Wilson & Zigelbaum, 1983, p. 78). While Calhoun et al. (2004) found that 63% of vets with PTSD had been charged with a crime since leaving war, followed by 54% being arrested more than once (p. 6). Researchers not only found a nexus between PTSD and criminal activity, but agreed that reintegration into civilian life should be the main area of focus (Auberry, 1985; Calhoun et al., 2004; Hayman et al., 1987; Wilson & Zigelbaum, 1983).

In addition to historical studies, research based on foreign countries, such as Argentina (Galiani, Rossi, & Schargrotsky, 2011), the Netherlands (Schellen, Apel, & Nieuwbeerta, 2012), United Kingdom (MacManus et al., 2012), and Serbia (Jovanović, Tosevskić, Ivković, Damjanović, & Gasić, 2009), also focused on this same topic. Three research groups found a correlation between military service and criminal activity (Galiani et al., 2011; Jovanović et al., 2009; MacManus et al., 2012), while another

research group found in a subsequent study that no correlation between military service and criminal convictions existed, especially with veterans from WWII and the Korean War eras (Schellen et al., 2012).

It was asserted that military conscription could lead to criminal activity, in that the military teaches service members how to use weapons but did not link the behavior, of committing a crime, to PTSD (Galiani et al., 2011). Nevertheless, a small link was established, though researchers focused on peacetime conscription and criminal behavior; the propensity for property crimes and white-collar crimes was evident. On the other hand, Schellen, Apel, and Nieuwbeerta (2012), though a link between PTSD and crime among military service members was not established, found that military service reduced crime in the Korean War and World War II era (p. 139) and increased in the Vietnam era (due in part to substance abuse; p. 142). The tendency to participate in crime, linked to military service, was due to the aggression with learning how to use weapons; weaken social bonds with family, friends, and other relationships; and the psychological affects and stress of military service (Schellen et al., 2012, p. 138). However, Schellen et al. (2012) found that prior to joining the military 11.3% of their test subjects had been convicted of a violent offense (p. 151).

Moreover, MacManus et al. (2012) focused on OEF/OIF veterans who served from the United Kingdom; PTSD and substance abuse were the variables used in their study. Theirs results showed a link between PTSD and criminal behavior, though the rates were low among United Kingdom veterans. The most compelling comorbid link noted by MacManus et al. was between substance abuse (alcohol) and violence. In

addition, Jovanović, Tosevskić, Ivković, Damjanović, and Gasić (2009) acknowledged the link between PTSD and violent behavior, but focused on the how sound the instruments clinicians used to predict violent behavior among veterans was. They found that the Historical, Clinical, Risk Management (HCR-20) instrument was both reliable and valid in assessing this risk.

Intriguingly, though a link was found among some foreign studies, Hunt, Wessely, Jones, Rona, and Greenberg (2014) asserted that United Kingdom service members had a much lower rate of PTSD (at approximately 4% in deployed soldiers and 6% among combat veterans) than their foreign allies. The stated reasons were because there were differences in exposure to combat, rate of officers versus enlisted was higher, deployment tours were shorter, and access to long-term healthcare could be easily attained (Hunt, Wessely, Jones, Rona, & Greenberg, 2014, p. 1). A review of historical research and foreign studies proved valuable in illustrating trends among this population and that other countries also established links among veterans who fought for them; establishing that this problem was not merely contained within the borders of the United States.

PTSD Diagnosis—The Strain

Researchers acknowledged that combat-related psychological trauma was given serious attention when Vietnam veterans returned from war, in which the trauma they were exposed to was recognized as a syndrome (Burgess, Stockey, & Coen, 2010; Hafemeister & Stockey, 2010). This trauma was given so much attention that in 1980 the American Psychiatric Association (APA), the leading authority on medically accepted

psychiatric diagnoses of mental health and behavioral conditions, dubbed the condition “Vietnam Syndrome” (later amended to PTSD; Burgess et al., 2010; Galatzer-Levy & Bryant, 2013). This medical diagnosis played a large part in the National Vietnam Veterans’ Readjustment Study commissioned by the Department of Veterans Affairs in response to the promulgation of Public Law 98-160 (Kulka et al., 1988). The Veterans’ Health Care Amendments Act of 1983 was passed in response to providing care to veterans who suffered from PTSD, and other psychological disorders, in reintegrating veterans back into civilian life.

In 2013, the latest edition of *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*; American Psychiatric Association, 2013), the APA moved PTSD from a recognized anxiety disorder to a chapter that identifies trauma and stress or related disorders. GST is rather definitive in advancing that the reaction to negative strain or emotion is the catalyst for which increased antisocial or criminal behavior is the likely outcome (Agnew, 1985 & 1992). According to the APA’s (2013) definition of PTSD there are a number of symptoms/emotions (strains) that affect individuals with this diagnosis. Symptoms and/or emotions such as intrusion (e.g. memories, reflections, flashbacks following the event), avoidance of stimuli associated with traumatic events, negative alterations in cognition and mood, and hyperarousal symptoms (see Appendix B). Researchers noted that one of the changes in *DSM-5* was in diagnosis/symptoms of avoidance/numbing, which changed to avoidance (deleting numbing symptom; Galatzer-Levy and Bryant, 2013), and adding a new symptom of negative alterations in cognition

symptoms (Galatzer-Levy & Bryant, 2013; Soltis, Acierno, Gros, Yoder, & Tuerk, 2014); and the APA (2013) defined additional exposure triggers.

Several researchers focused on symptoms and conditions specific to the diagnosis of PTSD, such as anger and aggression (Angkaw et al., 2013; Larson & Norman, 2014; Morland, Love, Mackintosh, Greene, & Rosen, 2012; Novaco & Chemtob, 2015; Novaco et al., 2012; Worthen & Ahern, 2014; Worthen et al., 2014), frequency and prevalence of PTSD diagnoses (Armed Forces Health Surveillance Center, 2011; Blount et al., 2014, Yehuda, Vermetten, McFarlane, & Lehrner, 2014), and symptoms (Fastovtsov, 2011; Larson & Norman, 2014; Nidiffer & Leach, 2010). With the exception of two studies (i.e., Fastovtsov, 2011, and Nidiffer & Leach, 2010) the previous researchers specifically focused on OEF/OIF veterans. Those researchers explained the difficulties that veterans faced with reintegrating back into civilian life (Armed Forces Health Surveillance Center, 2011; Blount et al., 2014; Larson & Norman, 2014), to include the limited duration of treatment for National Guard and reservists who were deployed (Blount et al., 2014), and the prolonged exposure due to additional deployments (Armed Forces Health Surveillance Center, 2011; Fastovtsov, 2011).

PTSD and Violence/Crime—The Outcome

As affirmed by other researchers, there is an established link between PTSD and criminal activity or violence (Blue-Howells et al., 2013; Bucher, 2011; Elbogen et al., 2010; Frierson, 2013; Novaco & Chemtob, 2015), though most of the studies were specific to general offending, several researchers purported that a prevalent link was not established or nonexistent between the two variables (Donley et al., 2012; Noonan &

Mumola, 2007; Sreenivasan et al., 2013). Though, there are instances where researchers looked beyond general offending and established links to violent crimes (Berger, McNeil, & Binder, 2012; Brown, 2011; Cavanaugh, 2011; Fastovtsov, 2011; Gansel, 2014; Miller, 2012), studies specific to types of violent acts were not the primary focus.

Additionally, when researchers used the term violent crimes it was not clearly defined, and appeared to be related to general offending and not violent crimes as defined by the FBI—UCR (2014a). There were, however, several researchers who focused on and defined types of violence, though specific violent crimes were not the primary focus of their research (Culp et al., 2013; Greenberg & Rosenheck, 2012; Noonan & Mumola, 2007), and one on capital offenses (Wortzel & Arciniegas, 2010). Other researchers, established that research, "...aimed at understanding different types of violence in veterans," (Sullivan & Elbogen, 2014, p. 2) was limited, which is what I aimed to research. Looking at the types of violent crimes would be helpful to military families, clinicians, lawmakers, employers, veteran service organizations, the military, and any other groups whose lives intercept with this population. Nevertheless, PTSD and criminal activity has been the focus of research into these variables as a legal defense.

PTSD and Crime in OEF/OIF Veterans

As previously found, several researchers established a link between PTSD and crime activity/behavior among veterans; specifically, OEF and OIF veterans. Focusing on aspects of reintegration (Brown, 2011; Slattery, Dugger, Lamb & Williams, 2013; Worthen & Ahern, 2014), comorbidity of substance/alcohol abuse (Brown, 2011; Kimbrel et al., 2014; Weaver, Trafton, Kimerling, Timko, & Moos, 2013; Slattery et al.,

2013; Worthen & Ahern, 2014) and other symptoms (Elbogen et al., 2012; Novaco & Chemtob, 2015; Sullivan & Elbogen, 2014), the linkage noted mirrors general research found by other researchers. Researchers also discovered high rates of intimate partner violence (IPV) among OEF/OIF veterans (Angkaw et al., 2013; Fresneda, 2013; Kimbrel et al., 2014). Furthermore, researchers found that psychiatric comorbidity rates varied by outcome—female veterans commit more acts of IPV, while male veterans engage in more violence against strangers (Sullivan & Elbogen, 2014).

PTSD as a Legal Defense

There are an abundance of recent and historic studies where researchers focused on PTSD as a legal defense (Berger et al., 2012; Blue-Howells et al., 2013; Burgess et al., 2010; Calhoun et al., 2004; Gansel, 2014; Grey, 2012; Hafemeister & Stockey, 2010; Miller, 2012; Nidiffer & Leach, 2010; Sreenivasan et al., 2013; Tramontin, 2010; Wilson, Brodsky, Neal, & Cramer, 2011). The defenses used for state prosecutions were defined under three noted rules/tests—M’Naghten rule, Durham rule, or Model Penal Code test (Berger et al., 2012; Burgess et al., 2010; Gansel, 2014; Grey, 2012; Hafemeister & Stockey, 2010; Miller, 2012; Nidiffer & Leach, 2010). Each rule or test allowed the defendant to plead to a lesser charge based on a psychological mental health issue, such as diminished capacity or reason by insanity. However, the federal government has its own standard for which psychological defenses must be measured, which is covered under the enactment of the Comprehensive Crime Control Act of 1984. Contained within this Federal statute is the Insanity Defense Reform Act of 1984 which provides an explanation of legal claims of mental disease or defect as an affirmative defense.

In addition, to the legal defenses used, there has been an upsurge in Veteran Courts established to deal specifically with veterans (National Center for State Courts, 2014). As described by the National Center for State Courts (2014) the purpose of these courts was to offer an alternative to incarceration as handed down in regular state and federal correctional institutions, and the chance to stand before a judicial officer who understands issues veterans face. These courts were designed specifically for veterans who suffered from substance abuse and/or mental health issues, such as PTSD (National Center for State Courts, 2014). The first court being established in New York in 2008 (National Center for State Courts, 2014), the National Association of Drug Court Professionals (NADCP, 2016) declared that there are more than 264 courts in existence today; in which the states with the largest number of courts being in Michigan (22), California (20), Texas and Florida (19; NADCP, 2016). Some researchers specifically studied the possible rehabilitation of OEF/OIF veterans (Fresneda, 2013; Slattery et al., 2013) and all veterans in general (Cavanaugh, 2011; Fresneda, 2013; National Center for State Courts, 2014; Slattery et al., 2013).

My research does not focus on or research a link between PTSD and the defenses used or veteran courts. Rather this information was included as another aspect of what could further be researched, as a facet of reintegration, for those veterans who are convicted of a crime.

Public Policy/Public Administration—Social Aspects

Noted earlier was information on numerous policies and laws promulgated by Congress, as the connection between veteran's well-being and public policy is very

important. Governmental policies and laws can have a dramatic effect, not only on service members, but on society too, as reintegrating veterans with mental health issues back into civilian life has very strong implications for the communities they live in. It is also important for clinicians and members of the community to understand how to better assist this population. The public's outcry in response to legislative matters or issues they feel are important can lead to mass outrage or the development of grass root organizations or strong public support for the nation's efforts, in which responses are sometimes shared via venues such as social media, protests, petitions, lawsuits, and more. One group, Concerned Veterans for America, a watch group/grassroots organization made up of military veterans, stated that their mission was, "...to advocate for policies that will preserve the freedom and prosperity that we and our families so proudly fought and sacrificed to defend" (Concerned Veterans for America, 2017, para. 1). One of the group's focus is fixing health care services for veterans.

As previously mentioned Acts such as, Veterans' Health Care Amendments Act of 1983, Comprehensive Crime Control Act of 1984, Insanity Defense Reform Act of 1984, National Defense Authorization Act of 2008, Veterans' Preference Act of 1944, Veterans' Employment Opportunity Act of 1998, Rehabilitation Act of 1973, and the Veterans Millennium Health Care and Benefit Act of 1999, are all federal mandates that contain matters concerning the veterans of this nation. What happens after the passage of these laws will hopefully assist a service member who returns from war. To progress with helping veterans, new policies or programs will be best served with strong public support, while helping service members and their family.

An evaluation for how the government responds to societal issues germane to veterans, which impact military families and citizens, researchers have conducted studies on the strength and effectiveness of reintegration programs (Jonas et al., 2010; Yosick et al., 2012), as reintegration is vital to a service members successful return to civilian life. An in-depth analysis of each Act and/or veteran reintegration policy or program is not the focus of this research study. Though it is important to include information regarding reintegration for war veterans with mental health issues (such as PTSD or TBI's) as it could be a catalyst for further research. Included in the National Defense Authorization Act of 2008 is a provision for the creation of the Yellow Ribbon Reintegration Program. Under the supervision of the Department of Defense it is a program that requires interagency collaboration to assist with the reintegration of National Guard service members and reservists, upon their return from overseas deployment (National Defense Authorization Act, 2008). The U.S Department of Veterans Affairs (2014c) has a multitude of information specifically for veterans of OEF/OIF. The Veterans Affairs Office developed several guides to not only assist veterans, but to help their families with the reintegration process as well; developed under the promulgation of the Veterans' Health Care Amendments Act of 1983.

Under the guidance of the Department of Defense, an interagency collaboration team developed a program that deals with veteran reintegration, called the Total Fitness Force (TFF) concept (Jonas et al., 2010). This Department of Defense continues to look at ways to address issues concerning our nations veterans, focusing on mind and body, because current paradigms created to assist this population appear to be failing the very

people they were intended to benefit (Jonas et al., 2010; Jonas et al., 2010). The efforts taken by agencies like the Department of Defense, Department of Veterans Affairs, nonprofit groups, veteran organizations, and others on behalf of our veterans are all important to past and current policies and how successful veteran reintegration will be for military families and the communities in which our veterans return to.

If effective reintegration policies and programs were created, analyzed/evaluated, and implemented, it could lead to a better life for service members, their families, citizens within their communities, and society; resulting in a positive change that reduces acts of violence due to a PTSD diagnosis. Have current reintegration programs effectively assisted in reducing acts of violence; especially, if it was determined that crimes were purported by postdeployed veterans diagnosed with PTSD? Further research could be done to answer this proposed question.

Summary

While there was literature germane to combat service and criminal activity, my focus was on combat veterans, with a PTSD diagnosis, from the OEF/OIF era and violent crimes. An analysis on the relationship that branch of service, age, and sex may contribute, was also included. Utilizing Agnew's (1985/1992) GST the strain (PTSD) and outcome (the crime) provided the theoretical foundation to answer the proposed research question. More importantly current literature lead to aspects of other areas, with regards to criminal acts and PTSD, that could be researched further (i.e., Veteran Courts and veteran reintegration program effectiveness). Improving the lives of our veterans, their families, the communities, and society is important; as well as effective clinical treatment

and responses from military personnel and policy makers. Examining the noted variables, the methodology that will be employed in analyzing the 2004 secondary dataset will be explained in Chapter 3; a dataset that has been replicated more than half a dozen times by the U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics (2004). The newest iteration of data will soon be available and will allow for future replication of the data germane to this population.

Chapter 3: Research Method

Introduction

As previously discussed, by conducting this study, I sought to predict whether combat service and/or PTSD were predictors for the commission of a violent crime among OEF/OIF military veterans who are imprisoned—controlling for branch of service, age, and sex with violent crimes being defined as murder and nonnegligent manslaughter, forcible rape, robbery, and aggravated assaults (FBI, 2014a). This was accomplished by conducting a quantitative nonexperimental research design using secondary data. The data was collected for the U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics (2004), entitled *Survey of Inmates in State and Federal Correctional Facilities, 2004*.

Research Design and Rationale

In conducting a quantitative nonexperimental secondary data research design, the variables used were: Combat-service and PTSD (the independent variables; IV)—which included controlling variables branch of service, age, and sex, and violent crime (the dependent variable; DV). I specifically selected cases for military veterans who served during OEF/OIF. Controlling for branch of service, age, and sex allowed for an analysis to determine influence on IV or DV. It was important to include the branch of service in the analysis, because Army and Marine Corps veterans are the two branches of services with the largest representation of service members in theatre during OEF/OIF (U.S. Department of Veterans Affairs, 2014b). Interestingly, Dursa et al. (2014, p. 544) found that OEF/OIF deployed Marine and Army veterans had the highest diagnosed PTSD

rates, 20.6% and 18.6% respectively; to include the highest rates among OEF/OIF era nondeployed veterans—Army at 13.8% and Marines at 10.5%.

The 2004 secondary dataset, which is part of a series of data resources distributed by the National Archive of Criminal Justice Data (NACJD) and archived within the Inter-University Consortium for Political and Social Research (ICPSR), has been used by a multitude of researchers (Inter-University Consortium for Political and Social Research [ICPSR], n.d.). This dataset contained the variables that were explored in this study as posed in the research question. I used the chosen secondary dataset because it was more than adequate to test the variables, and in doing so reduced the amount of time and money needed to conduct the research. Making use of secondary data negates time and resource restraints (as there was no need to recruit participants), develop an instrument, conduct pilot studies, collect data, nor harm participants.

A few researchers used this specific dataset to test the same related variables of PTSD and/or veterans in quantitative studies (Culp et al., 2013; Greenberg & Rosenheck, 2012; Mumola & Noonan, 2007). Though these researchers used different statistical analysis (i.e., binary and multivariate linear regression, multinomial or ordinal logistic regression, or discriminant analysis), I employed a multiple logistic regression analysis to predict the likelihood of whether combat service and/or PTSD lead to the commission of a violent crime, among imprisoned military veterans of OEF/OIF. Further controlling for branch of service, age, and sex as there were multiple independent variables and the dependent variable was dichotomous (nonviolent versus violent). By using a multiple logistic regression analysis method, I contributed to the field of literature related to this

topic by providing a baseline of data that can be used to predict the likelihood of such occurrences. In addition, I ran a descriptive statistical analysis and chi-square test on selected variables as some categorical variables were recoded from nominal to dichotomous variables.

As information, I could have used a discriminant analysis. However, I recoded the dependent variable into a dichotomous variable rather than leaving it in its complex form of more than six levels. Besides a discriminant analysis would have been lengthy and redundant in Chapter 4 of my statistical output. Therefore, I chose the multiple logistic regression analysis as, according to Vogt and Johnson (2011), it was a form of logit regression analysis that allowed me to predict the same outcome of the noted variables in the research question, and is similar in analysis to a discriminant analysis.

Methodology

Population

The targeted population in this study was prisoners in state and federal correctional institutions. The population included prisoners in state and federal correctional institutions in the United States as of June 30, 2003. A U.S. Department of Justice report indicated there were 1,574,700 total inmates in state and federal correctional institutions, as of December 31, 2013 (Carson, 2014, p. 1). Interestingly, the total inmate population in the secondary dataset was 1,323,753 (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004).

Sampling and Sampling Procedures

The population for the secondary dataset consisted of prisons and inmates in United States, for both state and federal institutions. Within the dataset, the sampling design consisted of a combination of probability sample designs, random for both inmates and prisons; stratified for prison locations (i.e., region) and gender; and systematic sampling of inmates, to ensure an adequate sample could be obtained (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004). The sampling unit was an inmate, which represented a finite number.

The sampling frame was taken in two stages; prisons were sampled first and then inmates. The sample of prisons was from the 2000 Bureau of Justice Statistics census files on state and federal facilities, and the institutions provided the list where inmates were selected from (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004, pp. 3-8). Prisons were selected by security level, population, and gender (male and female institutions)—from state and federal prison census files from the year 2000, Bureau of Justice Statistics files from prisons opened as of April 1, 2003, a supplemental file from June 30, 2000 data, and additional data from the Federal Bureau of Prisons of January 4, 2003 (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004, pp. 3-8). Inmates were selected by inmate lists for interviews, and further stratified for federal institutions by drug use (i.e. drug user vs. nondrug user) from a random sample, using a skip interval, conducted from October 2003-May 2004 (p. 8).

The stratified sample resulted in the following data of inmates from various states (Northeast—except for New York; New York; Midwest; South—except Florida and Texas; Florida; Texas; West—except for California; and California) and a sample of 326 state and federal institutions combined:

Table 1

State and Federal Populace/Sampling Totals

	State Institutions					
	Total Population		Stage 1 Prisons		Stage 2 Inmates	
	Prisons	Inmates	Selected	Participated	Sampled	Interviewed
Men	1,435	1,115,853	231	225	13,098	11,569
Women	366	77,404	70	62	3,054	2,930
	Federal Institutions					
	Total Population		Stage 1 Prisons		Stage 2 Inmates	
	Prisons	Inmates	Selected	Participated	Sampled	Interviewed
	148	130,496	40	39	4,253	3,686

From *Survey of Inmates in State and Federal Correctional Facilities, 2004*, by U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004, ICPSR, pp. 3-5.

The sampling frame was adequately chosen so that it included various levels of prisons, genders, and types of inmates (i.e., veterans, drug users, types of crimes, etc.). The researchers selected one of every three drug user to ensure that the drug population was included. This was one of the eligibility criteria used—though this criterion was not a necessity for this research study (U.S. Department of Justice, Office of Program Justice, Bureau of Justice Statistics, 2004). From the given stratum (see Table 1), the sample size was calculated as such, confidence level or 95%, confidence interval of 1.96, and population of 18,185 (federal and state inmates interviewed combined), resulted in a sample size of 2,198 (Creative Research Systems, 2012). Based on this analysis the researchers obtained a sample size that was more than adequate for my research.

Archival Data

By taking advantage of existing secondary data, I did not recruit participants for this study. However, the researchers recruited participants from a stratified list of inmates. According to the U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics (2004) approximately 1 in every 85 men and 1 in every 24 women in state facilities were selected in the state survey and approximately 1 in every 32 men and 1 in every 9 women were selected in the federal survey (p. 8).

Based on stratification of participants, this resulted in a combined total of 18,185 inmates being interviewed (14,499 for state and 3,686 for federal; U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004, p. 8). The inmates who participated did so after being told, both verbally and in writing, that the information would be kept confidential and their participation was voluntary. The interviews were captured via computer-assisted personal interviewing (CAPI), in which surveys were completed on-site. The data was collected during a seven-month period from October 2003 to May 2004 (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004).

I used Walden University's membership with the ICPSR to gain access to the dataset. Once there, I searched for "veterans" and "crime" in the search box and found the *Survey of Inmates in State and Federal Correctional Facilities, 2004*. Further review specified that this was part of a series of data generated or produced every five years (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004). The dataset was available for download and permission was only required for

access to data that consisted of identifiable information. As indicated, if researchers needed restricted information (which contains identifying information) a Restricted Data Use Agreement would need to be completed (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004). However, after reviewing the identifiable information it was not necessary to obtain special permission for purposes of this study, as the needed variables were not restricted, rather they were available by general dissemination of the data.

Instrumentation

This specific secondary dataset had been utilized by other researchers who studied the same variables. In addition, the dataset itself was replicated more than a half dozen times. The first data series, which began in 1974, was specific to state correctional facilities, this continued with the 1979, 1986, and 1991 datasets (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004). However, in 1991 the first dataset on federal inmates was collected. Thereafter, the 1997 and 2004 datasets were combined with state and federal data (see Appendix C for information pertaining to the use of this dataset).

The dataset has been replicated several times, with over 300 published research articles in existence using this specific dataset, this further established reliability and validity of the instrument (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004). Reliability and validity were established in previous literature. First, Culp et al. (2013) found that veterans were more likely to commit a crime ($b = .205, SE = .061, \text{odds ratio} = 1.228$). Next, Greenberg and Rosenheck (2012) also

found a high probability that veterans with a mental illness were also likely to commit a crime (odds ratio of 1.35 for violent crimes). The odds ratio data for mental health was broken into three separate categories, 1.29 = current year mental health diagnosis, 1.37 = night stay in a mental hospital, and 1.21 = receiving professional counseling, all showing the likelihood that veterans would commit an offense. Lastly, Noonan and Mumola (2007) found odds that one in five wartime veterans were incarcerated in 2004.

Not only did the dataset contain nearly 3,000 variables, it included the specific variables related to the research question (i.e. problem) and hypotheses tested in this study (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004). The purpose of the dataset was to assess the prison population for both state and federal correctional institutions. The Department of Justice—Office of Justice Programs designed the dataset and the Bureau of the Census collected the data for the Bureau of Justice Statistics. The variables I used were PTSD, combat service, violent crime, years of service controlling for branch of service, age, and sex. The independent variables (IVs) were PTSD, combat service, branch of service, age, and sex, and the dependent variable (DV) was violent crime.

To test for PTSD, the researcher asked in S9Q9A_4, “Have you ever been told by a mental health professional, such as a psychiatrist or psychologist, that you had - Post-traumatic stress disorder?” (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004, p. 759). In assessing combat service, question S1Q7C asked, “During this time did you see combat in a combat or line unit?” (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004, p. 141). As

such, these questions continued for each of the identified variables. Therefore, it was likely that the instrumentation would measure the variables hypothesized to predict the outcome.

Operationalization

Utilizing the Survey of Inmates in State and Federal Correctional Facilities Questionnaire (SIFCF/SISCF) codebook, the variables were operationalized in several ways (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004). Though coded within the current database, I recoded the variables for analysis in this study. I ran an analysis for PTSD diagnoses, combat status, violent crime, branch of service, sex, and age, selecting OEF/OIF era veterans only for analysis.

Combat service, an independent variable, were operationalized, and measured discretely, by ascertaining whether the inmate saw combat in their respective unit (0 = no, 1 = yes, 9 = missing, don't know, or refused), current coding by the researcher was labeled 1 = yes, 2 = no, 7 = don't know, 8 = refused, and 9 = blank. PTSD diagnosis, another independent variable, were measured discretely (0 = not medically diagnosed, 1 = medically diagnosed, or 9 = information missing, don't know or refused) as the current coding was labeled 1 = yes, 2 = no, 7 = don't know, 8 = refused, or 9 = blank. As such, combat in unit and ever diagnosed—PTSD variables were both analyzed dichotomously as no = 0 and yes = 1.

The other predictor variables were measured discretely as well. However, to interpret the variables and ensure they had meaning, I recoded most with dummy codes and blank data was coded as missing. Branch of Service of service was recoded into

different dichotomous variables: Not Army = 0/Army = 1, not Navy = 0/Navy = 1, not Marine Corps = 0/Marine Corps = 1, not Air Force = 0/Air Force = 1, not Coast Guard = 0/Coast Guard = 1, not other = 0/other = 1, and not two or more (branches) = 0/two or more (branches) = 1. Sex was recoded from male = 1 and female = 2 to male = 0 and female = 1. Age was recoded into categories 18-24 = 0, 25-34 = 1, 35-44 = 2, 45-54 = 3, 55-64 = 4, and 65 and older = 5.

Violent crime (described as a list of offenses) and PTSD (measured by asking if the inmate had been diagnosed with post-traumatic stress disorder), and any other mental/emotional disorder, all utilized the same discrete measuring scale as utilized in measuring combat service (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004). However, the researchers utilized additional variables for violent offense codes (listed below) to provide a discrete measurement. As such, violent offenses—997 = don't know, 998 = refused, and 999 = blank were recoded as missing in the database. The violent offense codes were:

- Murder: Codes 010-012 = 0,
- Voluntary/nonnegligent manslaughter: Codes 015-016 = 1, and manslaughter – non-vehicular: Codes 030-032 = 2,
- Rape (force): Codes 051-052 = 3,
- Armed robbery: Codes 090-092 = 4, and unarmed robbery: Codes 100-102 = 5,
- Aggravated assaults: Codes 120-122 = 6.

These variables were first analyzed as six individual discrete variables with all other crimes coded as 'those nonviolent = 7.' The variables were then be recoded into

two dichotomous variables for logistic regression analysis—nonviolent (no) = 0 or violent (yes) = 1. Doing so assisted in analyzing the data more efficiently. The categories were then measured individually and analyzed for frequency. Additionally, I obtained permission to include the offense codes in the appendix of this dissertation (see Appendix A and Appendix D).

Data Analysis Plan

The main purpose of this study was to predict whether combat service and/or PTSD were predictors for the commission of a violent crime among OEF/OIF military veterans who are imprisoned—controlling for branch of service, age, and sex. The null hypothesis reads that combat service and/or PTSD does not predict that OEF or OIF veterans are imprisoned for committing a violent crime, while the alternative hypothesis reads that combat service and/or PTSD does predict that an OEF or OIF veteran will be imprisoned for committing a violent crime. Results from the two-combined instruments, SIFCF and SISCF, were used to predict the likelihood of such. Statistical Package for the Social Sciences (SPSS) software was used to analyze the data. Before using this data, I cleaned categorical variables that contained nonresponses or missing information. To detect errors and test for assumptions, I utilized several different procedures within SPSS—descriptive statistics (i.e. a summary of the data) and bar or pie charts. I also looked for missing data, outliers (i.e. extreme scores), linearity and multicollinearity. I corrected the errors found by recoding them.

The sample consisted of male and female inmates in both federal and state prisons, and focused on combat military veterans of two specific wars who were

diagnosed with PTSD. By analyzing the type of crimes committed by this population, the percentage of incarcerated veterans was discovered. The branch of service the inmate served in assisted with determining which branch of service had the highest imprisonment rates among this population. Inmates who did not serve in the military were excluded from analysis as this study was germane to veterans who served in the military during OEF/OIF.

I first ran a descriptive analysis to determine the number, range, mean, standard deviation, and variance. The independent variables (combat service, PTSD, branch of service, sex, and age), dependent variable (violent crime), and years of service—discharged (for veterans of the OEF/OIF service era) were all nominal.

The research question was:

Research Question: Are combat service and/or PTSD predictors for the commission of a violent crime among OEF/OIF military veterans who are imprisoned—controlling for branch of service, age, and sex.

H_0 : Combat service and/or PTSD does not predict that OEF or OIF veterans are imprisoned for committing a violent crime.

H_1 : Combat service and/or PTSD does predict that OEF or OIF veterans are imprisoned for committing a violent crime.

Conducting a multiple logistic regression, I built a standard multiple regression with:

- Dependent variable: Violent crime (yes = 1/no = 0).
- Independent variable: PTSD (yes = 1/no = 0).
- Independent variable: Combat service (yes = 1/no = 0).

- Additional independent predictor/controlling variables: Branch of service (not Army = 0/Army = 1, not Navy = 0/Navy = 1, not Marine Corps = 0/Marine Corps = 1, not Air Force = 0/Air Force = 1, not Coast Guard = 0/Coast Guard = 1, not other = 0/other = 1, and not two or more (branches) = 0/two or more (branches) = 1).
- Selected service period: Years of Service—Discharged (yes = 1 for served during OEF/OIF/no = 0 for did not serve during OEF/OIF).

After running descriptive statistics, by selecting inmates who served during the OEF/OIF era (yes = 1/no = 0), the multiple logistic regression analysis was ran to provide the following data on the IV's and DV's to determine group membership. This test examined the relationship between the IV's and DV to determine predictability. Prior to running the analysis, I stratified the data to selected cases, selecting Data > Select Cases > 'If' condition is satisfied > moving YR DISCHD1 = 1 (those serving during OEF/OIF) to analyze these cases only. Using SPSS, I entered the information, as described: Analyze > Regression > Binary Logistic; I then entered violent crimes in the Dependent Variable box, and combat service, PTSD, branch of service—Navy, Marine, Air Force, Coast Guard, and two or other, sex, and age into the Covariates box; leaving the Method on the Enter dropdown selection. Under the Categorical Covariates tab, I placed PTSD, branch of service—Navy, Marine, Air Force, Coast Guard, and two or other, age, sex variables into the box, then selected Indicator and the 'first' radial under the Change Contrast box; branch of service/Army was not included in the analysis so that it could be utilized as the

baseline. Next, under the Options tab, I selected Classification plots, Hosmer-Lemeshow goodness-of-fit, and CI for $\exp(B)$ —95%, then ran the data analysis.

The report of output displayed the resulting tables—*Case Processing Summary, Dependent Variable Encoding, Block 0 = Beginning Block, Classification Table, Variables in the Equation, Variables not in the Equation, Block 1: Method = Enter, Omnibus Tests of Model Coefficients, Model Summary, Hosmer and Lemeshow Test, Contingency Table for the Hosmer and Lemeshow Test, Classification Table, and Variables in the Equation.*

Threats to Validity

The secondary dataset utilized reduced a number of threats. One possible threat to internal validity was history. Frankfort-Nachmias and Nachmias (2008) indicated that an internal threat to history could be an issue if there were events that occurred during this period (p. 96). During the time of data collection one war was in its second year (e.g., OEF began October 2001) and the other was in its infancy (e.g., OIF began March 2003; Torreon, 2015). Though there was not a large representation of OEF and OIF veterans in the dataset, a new iteration of data will be available within the next year (see Appendix E), as the Department of Justice replicates the data approximately every five to six years. In addition, there were a plethora of datasets on prison populations that I could have utilized; however, the chosen dataset was best for my research. At present history remained the only internal threat within this study.

With regards to threats to external validity, I felt that the data could certainly be generalized within the prison populace; especially, since the dataset was funded by the

federal government and represents a large sample of the target population. As previously stated, the Codebook noted that prisons were selected using a probability sampling design (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004). The primary/original universal file was randomized (the intervals), then systematically chosen; as the secondary universal file of prisons was stratified, based on the same criteria used to obtain prisons in the original file. As for the inmates, they were randomly sampled. However, various adjustment factors were used to weight the responses of the inmates interviewed.

The estimation procedures, to provide analysis weights, were calculated separately for each type of institution (state and federal)—basic weight (BW), drug subsampling factor (DSSF), weighting control factor (WCF), duplication control factor (DCF), person noninterview adjustment factor (PNIAF), and control count ration adjustment factor (CCRAF). These factors were used to calculate the pre-constructed weight of the sample interviewed—to include oversampling of the populace.

Ethical Procedures

Walden University's Institutional Review Board (IRB) (approval number 01-13-17-0058460) approved the procedures for this study in which the ICPSR was where the secondary dataset was obtained. The dataset ICPSR 4572 was published by the U.S. Department of Justice, Bureau of Justice Statistics. It was downloaded and kept on a password-protected personal computer, external hard drive, and Microsoft Office OneDrive. The computer and external hard drive are both kept in a secured location at all

times. Five years after the completion of my dissertation the dataset I will delete the information from each of the noted locations. No other ethical issues were applicable.

Summary

I utilized a quantitative nonexperimental secondary data research design to predict if combat service and PTSD were predictors for the commission of a violent crime among OEF/OIF military veterans who are imprisoned—controlling for branch of service, age, and sex. The variables were identified and operationalized to show how they would be measured. Analyzing data on inmates of state and federal institutions, the dataset yielded results to test the stated hypotheses. The results were analyzed in Chapter 4.

Chapter 4: Results

Introduction

The purpose of this quantitative nonexperimental study was to predict if combat service and/or PTSD were predictors for the commission of a violent crime among OEF/OIF military veterans who are imprisoned—controlling for branch of service, age, and sex.

The research question and hypotheses used for this study were as follows:

Research Question: Are combat service and/or PTSD predictors for the commission of a violent crime among OEF/OIF military veterans who are imprisoned—controlling for branch of service, age, and sex.

H_0 : Combat service and/or PTSD does not predict that OEF or OIF veterans are imprisoned for committing a violent crime.

H_1 : Combat service and/or PTSD does predict that OEF or OIF veterans are imprisoned for committing a violent crime.

This chapter will include information on data collection, descriptive statistics and characteristic background of the data, and the results of the multiple logistic regression analysis, and will be organized in that order.

Data Collection

Survey of Inmates in State and Federal Correctional Facilities Questionnaire (SIFCF/SISCF) was the secondary data instrument used by the researchers. The data was collected for the U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics (2004). The sampling was conducted in two stages; prisons were

sampled first and then inmates. The data collection time frame for interviews with state and federal inmates was from October 2003-May 2004, from a list of inmates provided by each institution (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004, p. 3). Inmates were selected by inmate lists for interviews, and further stratified for federal institutions by drug use (i.e. drug user vs. nondrug user) from a random sample, using a skip interval. The sample of state prisons was from two files, the 2000 Bureau of Justice Statistics census files of 1,549 facilities, and a secondary file of 36 prisons that operated and had been opened between June 30, 2000 and April 1, 2003; additional data on 148 federal operated facilities was collected from the Federal Bureau of Prisons of January 4, 2003, with both state and federal facilities selected by security level, population, and inmate gender (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004, pp. 3-8). All total, 301 state institutions were selected for participation, with only 287 participating, and 16,152 inmates sampled resulting in 14,499 interviewed; and 40 federal institutions selected for participation with 39 participating, and 4,253 inmates sampled for interview with 3,686 interviewed (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004, pp. 3-8).

After retrieving the *Survey of Inmates in State and Federal Correctional Facilities, 2004* dataset, from ICPSR through Walden University's membership, the SPSS Federal and State numerical dataset files were downloaded individually and then merged into one SPSS file. The data was cleaned before analysis in order to recode and remove missing and unknown data (don't know and refused)—removing this data by

selecting ‘Discrete missing values’ under the missing values column. IRB (01-13-17-0058460) approval was obtained prior to data retrieval, in which collection of all material was consistent with the parameters set forth and approved by the IRB.

Descriptive Statistics

The following outlines the descriptive statistics—on the variables in the dataset (illustrated by bar charts in Appendix F) of the participants included in this analysis. There were only 46 OEF/OIF cases included in this analysis of which 30 cases fell under the first offense category. Table 2 shows the descriptive statistics for the variables posed in the research question; a filter was added to select cases (i.e., Served During OEF/OIF-Discharged = 1).

Table 2

Frequencies of Independent and Dependent Variables—Federal and State Combined

	OEF/OIF Inmate Population	
	Frequency	Percent
<u>PTSD</u>		
No	41	89.1%
Yes	5	10.9
<u>Combat in Unit</u>		
No	38	82.6%
Yes	8	17.4
<u>First Offense</u>		
Murder	2	6.7%
Armed Robbery	3	10.0
Unarmed Robbery	1	3.3
Aggravated Assault	3	10.0
All Other Crimes	21	70.0
<u>First Off – Violent vs. Nonviolent</u>		
No	21	70.0%
Yes	9	30.0

Note. 1. Data filtered for selected cases, if Served During OEF/OIF—Discharges = 1.

In Table 2, an analysis of the propensity for PTSD showed that a large portion of

the OEF/OIF inmates were not been diagnosed with PTSD (89.1%) compared to those with diagnosed cases (10.9%)—see Figure 1 in Appendix F. OEF/OIF service members who saw combat in unit represented 17.4% (8) cases, while those same service members who did not see combat, represented 82.6% (38) cases—see Figure 2 in Appendix 12. The researchers broke the offense codes into several categories (the list can be found in Appendix D). However, though a breakdown of offenses was not included in the analysis, the information was included to show the most prevalent types of violent crimes. OEF/OIF inmates were convicted equally for armed robbery (10.0%) and aggravated assault (10.0%), followed by murder (6.7%), and unarmed robbery (3.3%), respectfully; all other crimes were noted as 70.0% (21)—see Figure 3 in Appendix F. After recoding the first offenses into specific categorical data, the variable was reduced to a dichotomous (binary) variable to be analyzed logistically—violent (yes) versus nonviolent (no); this includes a combined total for crimes listed in Appendix D. For first offense(s) the dichotomous variable showed that OEF/OIF veterans had a 30.0% imprisonment rate for violent crimes and a 70.0% imprisonment rate for nonviolent crimes—see Figure 4 in Appendix F.

Table 3 provides an analysis of the additional independent predictor variables that were included in the analysis of the OEF/OIF population. Under branch of service, the largest represented branch was the Army (50.07%), followed by the Navy (23.9%), Marine Corps (19.6%), Air Force (4.3%), and Other (2.2%)—see Figure 5 in Appendix F. The category of ‘sex’ shows that men represent 87.0% (40) of OEF/OIF inmates, while women made up 13.0% (6)—see Figure 6 in Appendix F. The analysis for ‘age’ showed

that ages 18-24 (56.5%) make up the largest percentage of inmates, followed by ages 25-34 (28.3%), and ages 35-44 (15.2%) was the smallest represented group range—see Figure 7 in Appendix F.

Table 3

Frequencies of Additional Independent Predictor Variables—Federal and State Combined

	OEF/OIF Inmate Population	
	Frequency	Percent
<u>Branch of Service</u>		
Army	23	50.0%
Navy	11	23.9
Marine Corps	9	19.6
Air Force	2	4.3
Other	1	2.2
<u>Sex</u>		
Male	40	87.0%
Female	6	13.0
<u>Age</u>		
18 – 24	26	56.5%
25 – 34	13	28.3
35 – 44	7	15.2

Results

This study provided a nonexperimental secondary data analysis of imprisoned military veterans—controlling for the relationship that branch of service, age, and sex may contribute to the model. In addition, because Army veterans represented the largest imprisoned group, they were left out of the analysis to serve as the baseline for which the other branches of services could be compared. Stratifying specifically for the veterans of OEF/OIF (see Table 2), the data showed that most imprisoned OEF/OIF veterans did not have PTSD (89.1%), did not see combat in unit (82.6%), and while most offenses were nonviolent (70.0%), of the most prevalent type of violent offenses committed, armed

robbery and aggravated assault were both tied as the top offense (10.0%). Additionally (see Table 3), most of these veterans served in the Army (50.0%), were male (87.0%), between ages 18-24 (56.5%), White (54.3%), and never married (60.9%).

Statistical Assumptions

There were seven assumptions that were first considered before conducting the data analysis. Per Lund Research Limited (2013) they are:

1. Have one dependent variable that is dichotomous: The dependent variable in this study was violent crime which was coded dichotomously (no = 0/yes = 1).
2. Have one or more independent variables that are measured on either a continuous or nominal scale: My independent variables were nominal (categorical).
3. Have independence of observations and the categories of the dichotomous dependent variable for all nominal independent variables should be mutually exclusive and exhaustive: The observations had no relationship; the DV and IV's were coded dichotomously as no = 0/yes = 1. Having only two categories for each variable the participant could only be placed in either the 'no' or 'yes' category, but not both.
4. Have a bare minimum of 15 cases per independent variable: The descriptive statistics indicates that the IV's have 46 participants each; however, there was a limitation in data as combat showed 38 = no/8 = yes and PTSD showed 41 = no/5 = yes. As an updated dataset is due for release in fall or winter 2017 (see

Appendix E), the protocol for the new data could be set up to develop an updated conclusion.

5. There needs to be a linear relationship between the continuous independent variables and the logit transformation of the dependent variable: I only had categorical variables in my dataset.
6. Data must not show multicollinearity: Based on the output of the coefficients (Collinearity Statistics) the IV's were not highly correlated with each other, as the VIF value was 1.000.
7. No significant outliers, high leverage points or highly influential points: As my data was categorical I could not have outliers, as the data was coded no = 0/yes = 1.

So, in an analysis of the Research Question, it read: Are combat service and/or PTSD predictors for the commission of a violent crime among OEF/OIF military veterans who are imprisoned, the dataset showed the following on the hypotheses.

Logistic Regression Analysis

The following analysis was conducted in SPSS.

```
USE ALL.
COMPUTE filter_$=(OEF_OIF_DISC = 1).
VARIABLE LABELS filter_$ 'OEF_OIF_DISC = 1 (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.
LOGISTIC REGRESSION VARIABLES FIR_OFF
  /METHOD=ENTER COMBAT PTSD SEX AGE_1 Branch_Navy Branch_Marine
Branch_AF Branch_Other
  /CONTRAST (PTSD)=Indicator
  /CONTRAST (SEX)=Indicator
```

```

/CONTRAST (Branch_Navy)=Indicator
/CONTRAST (Branch_Marine)=Indicator
/CONTRAST (Branch_AF)=Indicator
/CONTRAST (Branch_Other)=Indicator
/CLASSPLOT
/PRINT=GOODFIT CI(95)
/CRITERIA=PIN(0.05) POUT(0.10) ITERATE(20) CUT(0.5).

```

Table 4

Logistic Regression Predicting the Likelihood of Violent Crime based on Combat, PTSD, Branch of Service, Sex, and Age.

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
COMBAT	.839	1.830	.210	1	.647	2.314	.064	83.622
PTSD (1)	-1.136	1.917	.351	1	.553	.321	.007	13.760
SEX (1)	-2.264	1.969	1.323	1	.250	.104	.002	4.927
AGE_1	-3.215	1.474	4.758	1	.029	.040	.002	.722
Branch_Navy (1)	1.874	1.743	1.156	1	.282	6.511	.214	198.156
Branch Marine (1)	-2.438	2.239	1.186	1	.276	.087	.001	7.025
Branch_AF (1)	20.349	25618.657	.000	1	.999	687515228.074	.000	.
Constant	-16.376	25618.658	.000	1	.999	.000		

a. Variable(s) entered on step 1: COMBAT, PTSD, SEX, AGE_1, Branch Navy, Branch Marine, Branch_AF.

I conducted a multiple logistic regression analysis to determine if combat service and/or PTSD were predictors for the commission of a violent crime among OEF/OIF military veterans who are imprisoned—controlling for branch of service, age, and sex.

The outcome of interest was violent crime. The possible predictor variables were:

Combat service, PTSD, branch of service (Navy, Marine, and Air Force), sex, and age

filtering for service during OEF/OIF. The chi-square was logistically significant ($X^2(7) =$

14.138, $p < .05$). The -2 log Likelihood = 22.514 and the Nagelkerke $R^2 = .533$ indicated

that the variance of crime by the IV's ranged from 38% to 53%. Additionally, the Hosmer-Lemeshow goodness-of-fit was not significant ($p > 0.05$) indicating the model cannot be improved. Results of the logistical model showed that neither combat and PTSD, were statistically significant and did not contribute to the model. Additionally, where sex and age were tested in the model, sex was not statistically significant, only age. For age, with every incremental increase in age, the ratio of committing a violent crime decreased by 96%. As for the branch of service, Army veterans who accounted for 50% (23 inmates) of the inmates served as a baseline for which the other branches of service could be compared; therefore, the odds ratio was in comparison to those in the Army. The results for each branch of service were not statistically significant. However, the data showed that Navy and Air Force veterans were less likely, than Army veterans, to be imprisoned for a violent crime; but Marine veterans were just as likely, as Army veterans, to be imprisoned.

Hypothesis 1 (Null Hypothesis)

The null hypothesis for this research study was: H_0 – Combat service and/or PTSD does not predict that OEF or OIF veterans are imprisoned for committing a violent crime. Utilizing SPSS to perform a statistical analysis, the following variables were applied: IV's—combat service, PTSD, branch of service, sex, and age; DV—first offense (nonviolent versus violent); selecting veterans discharged from 2001 and beyond (which is inclusive of the era for which OEF and OIF occurred). Thus, based on the output, the null hypothesis was not rejected as the IV's, which were not significant, and did not predict that OEF or OIF veterans were imprisoned for committing a violent crime.

Summary

In summation, the null hypothesis posed from the research question was not rejected. It was advanced that combat service and/or PTSD does not predict that veterans of OEF/OIF are imprisoned for committing a violent crime—controlling for branch of service, age, and sex. As for the alternative hypothesis, it could not be accepted; it advanced that combat service and/or PTSD does predict that veterans of OEF/OIF are imprisoned for committing a violent crime. A descriptive analysis of the OEF/OIF veteran population showed that the most prevalent violent crimes were both armed robbery and aggravated assault (3/10.0%), with most crimes falling in the nonviolent category. As the 2004, secondary dataset was the most current Survey of Inmates in State and Federal Correctional Facilities. A correspondence with the U.S. Department of Justice, Office of Program Justice, Bureau of Justice Statistics advised that the new 2016 iteration of this dataset was currently being analyzed and would not be available to the public until fall or winter 2017 (E. Carson, personal communication, November 15, 2016). In Chapter 5, a synopsis of the entire research study will be discussed to include information on an in-depth interpretation of the findings, limitations of this study, recommendations for further research, and the implications to social change.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this quantitative nonexperimental study was to predict if combat service and/or PTSD were predictors for the commission of a violent crime among OEF/OIF military veterans who are imprisoned—controlling for branch of service, age, and sex. Agnew's (1992/2001) GST was used as the foundation for the study. By utilizing a quantifiable approach, the theory provided guidance to determine if there was a relationship between combat service and PTSD (identified as the negative emotion or previous trauma) and violence (the reaction/response to the societal issue). In utilizing the GST I sought to explore the outcome or prediction of violence among this population due to the potential reaction from emotional pressure of negative strain.

Like previous researchers I too employed a quantitative research design using secondary data, from a dataset entitled *Survey of Inmates in State and Federal Correctional Facilities, 2004* (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004). By utilizing this design, I provided numerical data of the prevalence of violence among the imprisoned veteran population. The independent variables in this study were combat service and PTSD and the dependent variable was violent crime, which the FBI (2014a) defined as murder and nonnegligent manslaughter, forcible rape, robbery, and aggravated assaults. The logistic regression analysis also included an analysis on the relationship that branch of service, age, and sex contributed to the research, as well. Based on my proposed research question, and performing a multiple logistic regression, my null hypothesis was not rejected. The independent variables in my

study (combat service and PTSD) were not statistically significant, therefore they do not predict that OEF or OIF veterans are imprisoned for committing a violent crime. On the other hand, the alternative hypothesis could not be accepted; it hypothesized that combat service and/or PTSD does predict that OEF or OIF veterans are imprisoned for committing a violent crime.

I chose this topic because I am a veteran employed in Human Resources in the federal government. With laws governing the employment of veterans (i.e., Veterans' Preference Act of 1944 and Veterans' Employment Opportunity Act of 1998) it is my goal to improve the conversation with regards to hiring or reemploying our combat veterans (regardless if they are diagnosed with PTSD or not). By conducting this research, I will have a better understanding of the condition, how it affects this population, the potential outcome due to the diagnosis, and can speak scholarly and professionally with colleagues and other employers about how society can help these individuals.

Interpretation of the Findings

The dataset was from the 2004 series of the U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics iteration. As such, there was only a small number of imprisoned veterans who served during OEF/OIF—of the 46 veterans only 5 (10.9%) had PTSD, while the other 41 (89.1%) did not have PTSD. As a new iteration, will soon be made available to the public (see Appendix E) this correlation could change. The U. S. Department of Veterans Affairs (2014a) recently observed that out of every 100 veterans of OEF/OIF (also, known as OND), service members had the highest rates

of PTSD diagnoses, identified as being between 11-20%; Vietnam veterans with a rate of 15%; and Gulf War veterans having a rate of 12%. In addition, Hoge et al. (2004) noted that of the OEF (fought in Afghanistan)/OIF (fought in Iraq) veterans, those who served in Iraq experienced higher rates of PTSD as opposed to those who served in Afghanistan; in which the U.S. Department of Veteran Affairs (2014b) observed that those who served in Iraq dealt with higher rates of combat stressors.

As for the prevalence for imprisonment based on branch of service, the dataset revealed that Army (50.0%) and Navy (23.9%) veterans had higher rates of imprisonment. Even though the U.S. Department of Veteran Affairs (2014b) observed that Army and Marine Corps veterans were the two branches of services with the largest representation of service members in theatre during OEF/OIF, in which data indicated that both Army and Marine veterans were more likely to be imprisoned than Navy and Air Force veterans. It was important to note that upon recoding the branch of service variable in SPSS for initial analysis, there were 13 participants who served in two or more branches of service; 11 served in both the Army and Navy, one served in the Army, Navy, and Marine Corp, and one served in all branches.

In an analysis of the propensity for which type of violent crimes veterans were more likely to commit, Culp et al. (2013) indicated that compared to the overall prison population, combat veterans were convicted at slightly higher rates for violence (30.7%) and sex crimes (10.6%; p. 667). In the codebook (U.S. Department of Justice, Bureau of Justice Statistics, 2004), inmate offenses were broken into a listing of five offenses (e.g., first offense, second offense, third offense, and so forth); as I only pulled data for the first

offense committed by the imprisoned inmates. In analyzing the first offense, my examination showed that combat veterans were less likely to be convicted for a violent crime (35.4%) as compared to the overall prison population (37.1%); as well ‘rape-force’ was the category of sex crimes that I analyzed. As such, combat veterans had higher conviction rates in the ‘rape-force’ category (5.5%) than the overall inmate population (3.4%). Additionally, Culp et al. (2013) did not indicate which crimes were categorized as violent or sex crimes, as the FBI—UCR Program (2014a) defined violent crimes, as murder and nonnegligent manslaughter, forcible rape, robbery, and aggravated assaults. Therefore, a comparison to this peer-reviewed data was limited to the offenses I analyzed as violent or sex crime related.

Moreover, Bronson et al. (2015, p. 5) indicated that based on their 2011 – 2012 data, imprisoned veterans had lower rates in each of the categories of offenses, except for violent sex crimes (11.8%) in contrast to Culp et al.’s (2013) data. Whereas, in extracting ‘rape-force’ from the percentage totals, I confirmed that veterans were imprisoned at higher rates for all other violent crimes (32.2%), compared to Culp et al.’s (2013) rate of 28.9% for ‘other violent,’ and Bronson et al.’s (2015) rate of 15.5% for ‘other violent’ crimes. As for violent sex crimes, ‘rape-force’ is categorized as violent in my dataset. I show that the veteran population had much lower rates (6.8%), under the first offense category, than the noted data for Culp et al. (2013, p.5; 35.4%) and Bronson et al. (2015, p. 6; 11.8%).

Furthermore, Greenberg and Rosenheck (2012) established that veterans had a higher propensity for imprisonment than nonveterans; in which Bronson et al. (2015) also

found that veterans, as opposed to nonveterans, were convicted at higher rates, specifically for violent crimes (though not defined) at a rate of 64% versus 48%, respectively (p. 5). In my research, I did not confirm that veterans had a higher propensity for imprisonment versus nonveterans; as veterans were imprisoned at a rate of 9.2% compared to 90.8% nonveterans. However, as Bronson et al. noted, I too found that veterans had slightly higher rates of conviction for violent crimes, as defined by the FBI, at a rate of 39.0% versus 37.1% for nonveterans.

As for a nexus between PTSD and violence, a historical study by Wilson and Zigelbaum (1983) found that there was a correlation between Vietnam veterans, based on their time in combat, and the likelihood for committing a violent crime. A number of other historic, foreign, and recent researchers also found a correlation between PTSD and/or military service and criminal offending (Auberry, 1985; Berger et al., 2012; Blue-Howells et al., 2013; Brown, 2011; Bucher, 2011; Calhoun et al., 2004; Cavanaugh, 2011; Elbogen et al., 2010; Fastovtsov, 2011; Frierson, 2013; Gansel, 2014; Galiani et al., 2011; Hayman et al., 1987; Jovanović et al., 2009; MacManus et al., 2012; Miller, 2012; Novaco & Chemtob, 2015; Wilson & Zigelbaum, 1983); with several noting a link with OEF/OIF veterans. However, based on an analysis of the research question in this study, the null hypothesis was not rejected, as the IV's (PTSD and/or combat service), were not significant, and do not predict that OEF or OIF veterans are imprisoned for committing a violent crime. This confirmed the premise postulated by several researchers (Donley et al., 2012; Noonan & Mumola, 2007; Schellen et al., 2012; Sreenivasan et al., 2013). Likewise, I could not accept alternative hypothesis, which hypothesized that combat

service and/or PTSD does predict that OEF or OIF veterans are imprisoned for committing a violent crime, the IV's were not statistically significant, and does not predict the likelihood of violence occurring by combat veterans of OEF and OIF.

In a study by Noonan and Mumola (2007), they provided data on the characteristics and rates of imprisoned veterans, also indicating a large number of imprisoned military veteran offenders. Their data indicated that the typical state prisoner was veteran, male, White non-Hispanic, age 35-44, divorced, and holds a GED (p. 10), and the typical inmate in federal prisons were described as veteran, male, White non-Hispanic, age 45-54, divorced, and a high school graduate (Noonan & Mumola, 2007, p. 10). Utilizing the same dataset, I combined the state and federal data into one file. Among OEF/OIF veterans, I found that the typical inmate was male and age 18-24—marital status and education were not included in my analysis. Nevertheless, as Bronson et al. (2015) utilized a different dataset, they found that the typical prison inmate was a veteran, male, age 45-54, White, divorced, and had some college, and the typical jail inmate was described as veteran, male, age 45-54, White, never married, and had some college (p. 4).

As I reviewed my findings, related to Agnew's (1992/2001) GST, researchers have found a correlation between the PTSD and/or combat service (the negative strain/emotion) and criminal offending or violent offenses (the outcome). However, based on the results of this study, I could not confirm the predicted outcome based on the framework this theory posits. This may be due to the iteration period of the dataset, as it only covered several years of the campaign and not the entire period. Nevertheless, upon

receipt of the new iteration of data (see Appendix E), replicating this study may show a different outcome.

Limitations of the Study

As noted in Chapter 1, I focused on this topic to gain a better understanding of the predictability for which this specific population is imprisoned for committing a violent crime. However, I noted several limitations to the generalization to military veterans as I embarked on this study. The data was limited to military veterans, who served in combat during OEF/OIF, were clinically diagnosed with PTSD, and were incarcerated for a violent crime. Therefore, the results cannot be generalized to all individuals in society that are diagnosed with PTSD. First, as the dataset is from 2004, it does not cover the entire period for which both campaigns were fought—as Torreon (2015) noted that the service period for OEF was from October 7, 2001 to December 28, 2012 and OIF was from March 19, 2003 to August 31, 2010. Therefore, as the entire period was not covered in the dataset the results cannot be generalized to all veterans during this service period, as the number of imprisoned OEF/OIF could be higher or lower. However, the study could be replicated later when the new iteration is available and may then be generalized within the veteran populace.

With the establishment of Veteran Courts (National Center for State Courts, 2014) another limitation was that violent crimes committed by veterans may have been reduced and/or given an alternative sentence as opposed to incarceration, who are pending conviction, found not guilty by reason of insanity or diminished capacity, or plead guilty to a lesser charge. This secondary dataset, which is from 2004, does not include veterans

who may have received alternative sentences as the first veteran court was not established until 2008 (National Center for State Courts, 2014). Additionally, combat veterans with a PTSD diagnosis, may have been killed by their own hand or police and will never be convicted, such as Dioniso Garza III, who was killed by police (Eisenbaum, 2016); or Ivan Lopez or Jason Klinkenberg who killed themselves after committing a violent crime (Rogers, 2009; Sanchez & Brumfield, 2014).

Furthermore, my research study is limited to the institutions and inmates selected by the secondary source, and the veterans who were convicted in a court of law. Lastly, with regards to the diagnosis of PTSD the researchers asked, “S9Q9A_4: Have you ever been told by a mental health professional, such as a psychiatrist or psychologist, that you had - Post-traumatic stress disorder?” (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004, p. 759). Therefore, the PTSD diagnosis is limited to the general diagnosis, based on the question, and not that of a diagnosis due to combat service.

As for issues of trustworthiness, validity, and reliability, nothing arose from execution of the study. As for the validity of the research the data is collected by the Census Bureau for the Bureau of Justice Statistics and has eight iterations spanning nearly 43 years (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004); the Bureau of Justice Statistics mission is to collect, analyze, and publish statistical data on issues related to criminal justice (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, n.d.). There is no question as to the validity/credibility of the research. Regarding the reliability, the dataset has been

replicated nearly 300 times by other researchers who published research articles utilizing this specific dataset (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2004).

Recommendations

With information provided by previous peer-reviewed literature, one of the recommendations for future research is in extending research into aspects of reintegration (Auberry, 1985; Brown, 2011; Calhoun et al., 2004; Hayman et al., 1987; Jonas et al., 2010; Slattery et al., 2013; Wilson & Zigelbaum, 1983; Worthen & Ahern, 2014; Yosick et al., 2012). By including research into this aspect of military service it may be found that reintegration is a mediating factor in the predicted outcome of violence among the veteran populace. As is noted, with regards to the difficulties veterans face when they return to civilian life (Armed Forces Health Surveillance Center, 2001; Blount et al., 2014; Larson & Norman, 2014) the quality of reintegration is an important aspect to consider testing their effectiveness on facilitating reductions in acts of violence. Another recommendation could be a research study with both U.S. and foreign veterans of war. As Hunt et al. (2014) found, there were lower rates of PTSD among United Kingdom service members, due to the differences in deployment, healthcare, combat exposure, and rate of enlisted versus officers (p. 1).

Thusly, researched literature germane to violent crimes as defined by FBI (2014a) was examined for this study. There was a small number of studies found where researchers focused on specific violent crimes (Culp et al., 2013; Greenberg & Rosenheck, 2012; Noonan & Mumola, 2007) and one that specifically focused on capital

offenses (Wortzel & Arciniegas, 2010). There is limited research on specific types of violent crimes, as noted by Sullivan and Elbogen (2014). As crimes purported by this populace is commonly reported by the media when veteran crimes occur, as noted in the introduction of this study, it would be worth the effort to research the propensity of violence among veterans. More importantly, there are now a large presence of Veteran Courts in the U.S. These courts were first established in 2008, and are specifically for veteran who suffer from substance abuse and/or mental health issues, such as PTSD (National Center for State Courts, 2014). A comparison of offenses and sentencing for violent crimes for veterans imprisoned in state/federal courts compared to Veteran Courts could be and interesting research path.

The last noted recommendation is with regards to the current dataset used for this study. As this is the last publicized series in 2004, the current iteration scheduled for release in either the fall or winter of 2017 (E. Carson, personal communication, November 15, 2016), could possibly show a different statistical outcome for imprisoned veterans of OEF/OIF. Therefore, replicating my research can be done further down the road.

Implications

Implications of public policy can have dramatic effects on the lives of this nations veterans, and has the potential for positive social change. Focusing on this aspect in my research study allows for the opportunity to strongly connect the mission and vision of Walden University to my research. In doing so, I hope to improve the lives of the men and women who serve, or have served, this country so gallantly. To quote Walden

University's commitment to social change, it states in part that, "Positive social change results in the improvement of human and social conditions (Walden University, 2017, p. lxxvii). Deliberately contributing to research, I hope this study will help improve the lives of this nation's veterans and their families, the communities where they reside, reconnecting with previous and potential employers, military personnel, medical professionals who work with this population, and more. With 21.8 million veterans living in the United States (U.S. Census Bureau, 2012), focusing on public policy efforts that can assist in improving the lives of this population by analyzing the propensity for violence, could have a strong social impact on the future of these individuals.

In reviewing public policy, the decisions made affect reintegration programs, healthcare, and criminal justice policies and laws. In Chapter 2, I discussed matters germane to veterans and a focus on social aspects based on existing research. However, there is always more that can be done to aid the veteran populace as historic and current literature illustrate the prevalence of PTSD among military service members and veterans. For example, work related to policies to support strong and viable reintegration programs that target veterans, with mental health issues, and aid the entire family unit would be very beneficial. Expanded research in areas of criminal justice policies to ensure that veterans with mental health issues or those suffering from the effects of combat service are processed through Veteran Courts when they face criminal charges that are within the scope of this court; this would include expanding research into programs and in-depth mental health assessment of service members prior to mobilization.

Additionally, implementing political and military actions to review military readiness into aspects of increasing members of reserve components to support shorter deployments by having a larger reserve force, which may also reduce the need for multiple deployments. Extending social service programs to military families and potential victims of crimes purported by veterans, and a review of state infrastructure and specialized programs to support military service members in rural areas. As I previously stated, this study could have an impact on veterans and their families, victims of veteran crimes and members of the public, military officials and veteran service organizations, healthcare/medical professionals, employers, lawmakers, and other group(s) whose lives intercept with this population. Public policies can have a very positive impact of social change, but it takes a commitment on the part of those involved with the populace to dedicate time and attention to developing and sustaining actions that work well.

The findings of this research study have important theoretical implications. Though Agnew's (1992/2001) GST posits that emotional pressure or negative strain could increase antisocial or criminal behavior in some individuals, and there is literature consistent with this theory (Elbogen et al., 2012), the results of my research are not consistent with the selected theoretical framework and does not add support.

Based on the sample size of OEF/OIF veteran in the dataset the methodological implications may not be appropriate in generalizing the results to a larger audience. Though utilizing a binary logistic regression is appropriate (and is not new in analysis of predictions), a multinomial logistic regression could have been employed if violent crimes were left as two or more categories. However, with such a limited sample size, the

current analysis was appropriate. Practical implications that were previously noted was the suggestion for future research in replicating the study, a comparative analysis of U.S. soldiers versus their foreign counterparts of war, and aspects of reintegration to include treatment options. As such, military/healthcare professionals and employers may be interested in the findings as it may assist with current programs aimed at treatment and hiring practices for this group.

Conclusion

While there is a wealth of literature related to this populace, that affirm that there is a positive correlation between PTSD and/or combat service and criminal activity, the findings of this study contradict the notion that combat veterans are imprisoned for committing a violent crime. Despite the limitation of data specific to the category or types of violent crimes, more research is needed into the effectiveness and development of reintegration programs that provide strong support for our veterans so they may experience a successful reentrance into society after military service. More importantly, the programs and resources currently being utilized should include a targeted specialized approach to assist those veterans with mental health issues with long-term support and/or a smooth transition into a civilian medical program that will continue the process.

Many veterans of this nation have lost their lives serving during wartime, and for those who returned, some developed mental health issues. Those service members with mental health issues may have found it difficult to resume the lives they had prior to their tour(s) of duty; which could have resulted in the commission of a crime – nonviolent or violent. Improving the lives of veterans, by investing time into studying the propensity

for violence, is the overall reason for embarking on this research journey. As a veteran of the Armed Forces I want to be a change agent to help my fellow service members reintegrate back into civilian life successfully. Even if I only play a small part in helping to improve the lives of veterans, it is my hope that my research can in some way have a dramatic effect on assisting this population to have a more productive and positive life upon reintegration.

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Appendix B: DSM 5 – Posttraumatic Stress Disorder

309.81 Posttraumatic Stress Disorder

- A. Exposure to actual or threatened death, serious injury, or sexual violence in one (or more) of the following ways:
1. Directly experiencing the traumatic event(s).
 2. Witnessing, in person, the event(s) as it occurred to others.
 3. Learning that the traumatic event(s) occurred to a close family member or close friend. In cases of actual or threatened death of a family member or friend, the event(s) must have been violent or accidental.
 4. Experiencing repeated or extreme exposure to aversive details of the traumatic event(s) (e.g., first responders collecting human remains; police officers repeatedly exposed to details of child abuse).
 - **Note:** Criterion A4 does not apply to exposure through electronic media, television, movies, or pictures, unless this exposure is work related.
- B. Presence of one (or more) of the following intrusion symptoms associated with the traumatic event(s), beginning after the traumatic event(s) occurred:
1. Recurrent, involuntary, and intrusive distressing memories of the traumatic event(s).
 - **Note:** In children older than 6 years, repetitive play may occur in which themes or aspects of the traumatic event(s) are expressed.
 2. Recurrent distressing dreams in which the content and/or affect of the dream are related to the traumatic event(s).
 - **Note:** In children, there may be frightening dreams without recognizable content.
 3. Dissociative reactions (e.g., flashbacks) in which the individual feels or acts as if the traumatic event(s) were recurring. (Such reactions may occur on a continuum, with the most extreme expression being a complete loss of awareness of present surroundings.)
 - **Note:** In children, trauma-specific reenactment may occur in play.
 4. Intense or prolonged psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event(s).
 5. Marked physiological reactions to internal or external cues that symbolize or resemble an aspect of the traumatic event(s).
- C. Persistent avoidance of stimuli associated with the traumatic event(s), beginning after the traumatic event(s) occurred, as evidenced by one or both of the following:
1. Avoidance of or efforts to avoid distressing memories, thoughts, or feelings about or closely associated with the traumatic event(s).
 2. Avoidance of or efforts to avoid external reminders (people, places, conversations, activities, objects, situations) that arouse distressing memories, thoughts, or feelings about or closely associated with the traumatic event(s).

- D. Negative alterations in cognitions and mood associated with the traumatic event(s), beginning or worsening after the traumatic event(s) occurred, as evidenced by two (or more) of the following:
1. Inability to remember an important aspect of the traumatic event(s) (typically due to dissociative amnesia and not to other factors such as head injury, alcohol, or drugs).
 2. Persistent and exaggerated negative beliefs or expectations about oneself, others, or the world (e.g., “I am bad,” “No one can be trusted,” “The world is completely dangerous,” “My whole nervous system is permanently ruined”).
 3. Persistent, distorted cognitions about the cause or consequences of the traumatic event(s) that lead the individual to blame himself/herself or others.
 4. Persistent negative emotional state (e.g., fear, horror, anger, guilt, or shame).
 5. Markedly diminished interest or participation in significant activities.
 6. Feelings of detachment or estrangement from others.
 7. Persistent inability to experience positive emotions (e.g., inability to experience happiness, satisfaction, or loving feelings).
- E. Marked alterations in arousal and reactivity associated with the traumatic event(s), beginning or worsening after the traumatic event(s) occurred, as evidenced by two (or more) of the following:
1. Irritable behavior and angry outbursts (with little or no provocation) typically expressed as verbal or physical aggression toward people or objects.
 2. Reckless or self-destructive behavior.
 3. Hypervigilance.
 4. Exaggerated startle response.
 5. Problems with concentration.
 6. Sleep disturbance (e.g., difficulty falling or staying asleep or restless sleep).
- F. Duration of the disturbance (Criteria B, C, D, and E) is more than 1 month.
- G. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- H. The disturbance is not attributable to the physiological effects of a substance (e.g., medication, alcohol) or another medical condition.

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Appendix C: ICPRS Permission

From: ICPSR User Support icpsr-user-support@umich.edu
 To: rachel.ivory@waldenu.edu
 Date: Thu, Nov 12, 2015 at 9:22 AM
 Subject: Permission to Cite Codebook - ICPSR (Department of Justice, Office of Justice Program) Dataset ISSUE=221812 PROJ=17

Notification of Request Change

Workspace: ICPSR User Support
 Request: Permission to Cite Codebook - ICPSR (Department of Justice, Office of Justice Program) Dataset
 Request Number: 221812

Description:

Hi Rachel,

As long as you are using the proper citation that is all we ask. And that you let us know about any publication using this data so we can add it to our bibliographic database.

Best regards,

Arun Mathur

ICPSR

From: Rachel Ivory <rachel.ivory@waldenu.edu>
 To: nacjd@icpsr.umich.edu
 Date: Wed, Nov 11, 2015 at 5:17 PM
 Subject: Permission to Cite Codebook - ICPSR (Department of Justice, Office of Justice Program) Dataset

Hello,

My name is Rachel Ivory and I am a doctoral student at Walden University. I am currently working on my dissertation and am using the dataset entitled *Survey of Inmates in State and Federal Correctional Facilities, 2004* (ICPSR 04572-v1) to complete my study. I am seeking permission to include Appendix A (in part) in my dissertation in the Appendix section. However, I am not sure of the process by which to gain permission, or if permission is necessary if properly cited.

Please let me know if there is a specific form that must be completed.

Thank you in advance for your assistance.

Rachel L. Ivory
 Student - Walden University

Appendix D: Offense Codes

MURDER

- 010 Accessory After the Fact, Murder
- 010 Accessory to Murder
- 010 Felony Murder
- 010 Murder
- 010 Murder Accessory After the Fact
- 010 Willful Murder
- 011 Assault and Battery by Force Likely to Produce Death
- 011 Assault and Battery with Intent to Kill
- 011 Assault with Intent to Kill
- 011 Malicious Striking and Wounding with Intent to Kill
- 011 Murder, Attempted
- 011 Shooting with Intent to Kill
- 012 Conspiracy to Commit Murder
- 012 Murder, Conspiracy

VOLUNTARY/NONNEGLIGENT MANSLAUGHTER

- 015 Manslaughter with Intent
- 015 Non-negligent Manslaughter
- 015 Pre-meditated Manslaughter
- 015 Voluntary Manslaughter
- 016 Voluntary/Non-negligent Manslaughter, Attempted/Conspiracy

MANSLAUGHTER/NON-VEHICULAR

- 030 Involuntary Manslaughter
- 030 Manslaughter
- 030 Manslaughter, Non-Vehicular
- 030 Negligent Homicide
- 030 Negligent Manslaughter
- 031 Attempted Manslaughter
- 031 Manslaughter, Non-Vehicular, Attempted
- 032 Manslaughter, Non-Vehicular, Conspiracy

RAPE-FORCE

- 050 Aggravated Rape
- 050 Carnal Knowledge or Abuse, (Sex Unspecified)
- 050 Forcible Rape
- 050 Forcible Ravishment
- 050 Object Rape
- 050 Rape by Force
- 050 Rape of a Child, Force
- 050 Rape, Other than Statutory

050 Sexual Intercourse without Consent
050 Simple Rape
051 Assault and Battery with Intent to Commit Rape
051 Assault with Intent to Commit Rape
051 Assault with Intent to Ravish
051 Burglary with Intent to Commit Rape
051 Rape, Attempted
052 Rape, Conspiracy

ARMED ROBBERY

090 Aggravated Robbery
090 Aiding and Abetting Robbery
090 AR (Armed Robbery)
090 Armed Robbery
090 Armed Burglary
090 Assault and Robbery
090 Carjacking
090 Forcibly and Violently Demanding Money from Another
090 Forcible Robbery
090 Heist, Armed
090 Mugging, Armed
090 Robbery, Armed
090 Robbery by Force
090 Robbery with Violence
090 Robbery with Firearms
090 Robbery with D D W (Dangerous and Deadly Weapon)
090 Robbery, Unspecified
091 Armed Assault with Intent to Rob
091 Armed Robbery, Attempted
091 Assault and Battery with Intent to Rob
091 Assault with Intent to Commit Robbery
091 Carjacking, Attempted
092 Armed Robbery, Conspiracy
092 Carjacking, Conspiracy

UNARMED ROBBERY

100 Heist
100 Heist, Unarmed
100 Mugging
100 Mugging, Unarmed
100 Purse Snatching, Forcible
100 Simple Robbery
100 Strongarm Robbery
100 Unarmed Robbery

101 Unarmed Robbery, Attempted
102 Unarmed Robbery, Conspiracy

AGGRAVATED ASSAULT

120 Aggravated Assault
120 Aggravated Battery
120 Armed Assault
120 Assault, Aggravated
120 Assault and Battery
120 Assault and Battery with a Dangerous Weapon
120 Assault, First Degree
120 Assault on a Child
120 Assault with a Dangerous Weapon
120 Assault with a Deadly Weapon
120 Assault with Intent to Commit a Felony
120 Assault with Intent to Commit a Moral Offense
120 Assault with Intent to Maim or Wound
120 Assault with a Motor Vehicle
120 Assault, Unspecified
120 AWIGBH (Assault with Intent to do Great Bodily Harm)
120 Criminal Injury to Persons
120 Domestic Violence
120 Felonious Assault and Battery
120 Felonious Maiming
120 Firing a Weapon into a Dwellinghouse
120 Maiming and Mutilation
120 Maiming and Wounding
120 Malicious Cutting and Wounding
120 Malicious Shooting and Wounding
120 Malicious Shooting without Wounding
120 Mayhem
120 Point, Aim, and Discharge a Deadly Weapon
120 Striking and Beating with a Weapon
120 Shooting and Wounding without killing
120 Unlawful Wounding
120 Vehicular Assault
120 Wounding
121 Aggravated Assault, Attempted
122 Aggravated Assault, Conspiracy

From *Survey of Inmates in State and Federal Correctional Facilities, 2004*, by US.
Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, Appendix
A, pp. A-1-A-4.

Appendix E: Department of Justice (DOJ) Inquiry

Rachel Ivory <rachel.ivory@waldenu.edu> Fri, Nov 11, 2016 at 1:57 PM
To: askbjs@usdoj.gov
Subject: Dissertation Research - Survey Update Question

Hello,

My name is Rachel Ivory and I am a doctoral student at Walden University. I am currently working on my dissertation and am utilizing the Survey of Inmates in State and Federal Correctional Institutions, 2004, for my data analysis. According to the data set it states that the survey is produced every 5 years; in which the BJS is listed as the surveys investigators. However, I do not see an update analysis of data since the last published series noted above.

In looking on the BJS website I found that the Survey of Inmates in State Correctional Institutions has a new date of 2016 added, but there is no updated information for the SISFC 2004 survey.

I will likely complete my data analysis by February 2017 and am hoping that you can provide me with information on the likelihood of an updated data set being produced prior to that time or whether there is another updated survey that will illicit the same type of inmate analysis that may be beneficial for my use.

As information, I gained access to the data series through the ICPSR for which the current survey was identified as ICPSR 4572.

Thank you for your time. I look forward to your response.

Rachel Ivory
PO Box 518
Castaic, CA 91310-0518

Carson, Elizabeth <Elizabeth.Carson@usdoj.gov> Tue, Nov 15, 2016 at 4:51 AM
To: Rachel Ivory <rachel.ivory@waldenu.edu>, AskBJS <AskBJS@usdoj.gov>
Cc: "Carson, Elizabeth" <Elizabeth.Carson@usdoj.gov>

Dear Ms. Ivory,

Thank you for contacting BJS. The 2016 iteration of the prison inmate survey just came out of the field a couple of weeks ago, and BJS has not yet received a dataset from our data collection agents. We probably won't have an archive file available for public use until sometime in the fall or winter of 2017. I'm sorry we won't have the data available in time for your project.

Please let me know if you have additional questions.

Thank you,

Ann

E. Ann Carson, Ph.D.
Statistician
Corrections Unit
Bureau of Justice Statistics
U.S. Department of Justice
810 Seventh Street, NW
Washington, DC 20531

Appendix F: Figures Illustrating Inmate Statistics

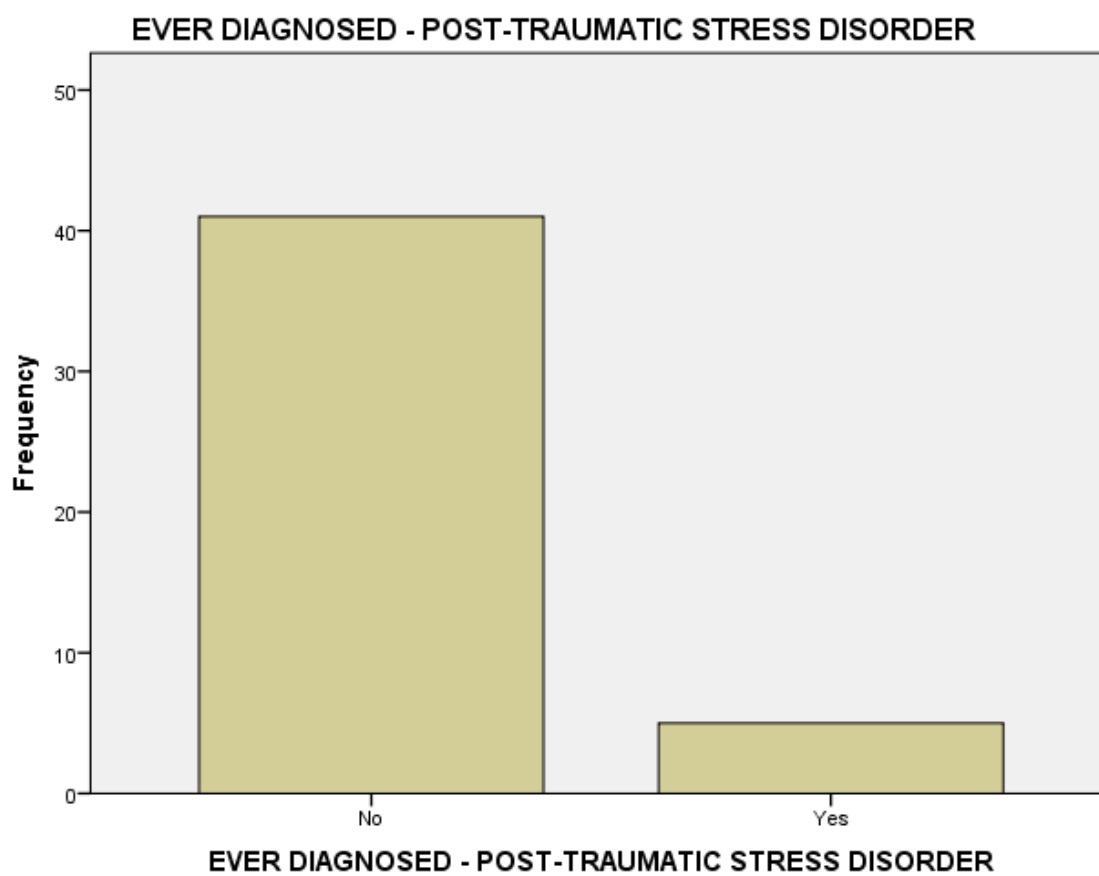


Figure 1. Frequency of OEF/OIF—PTSD

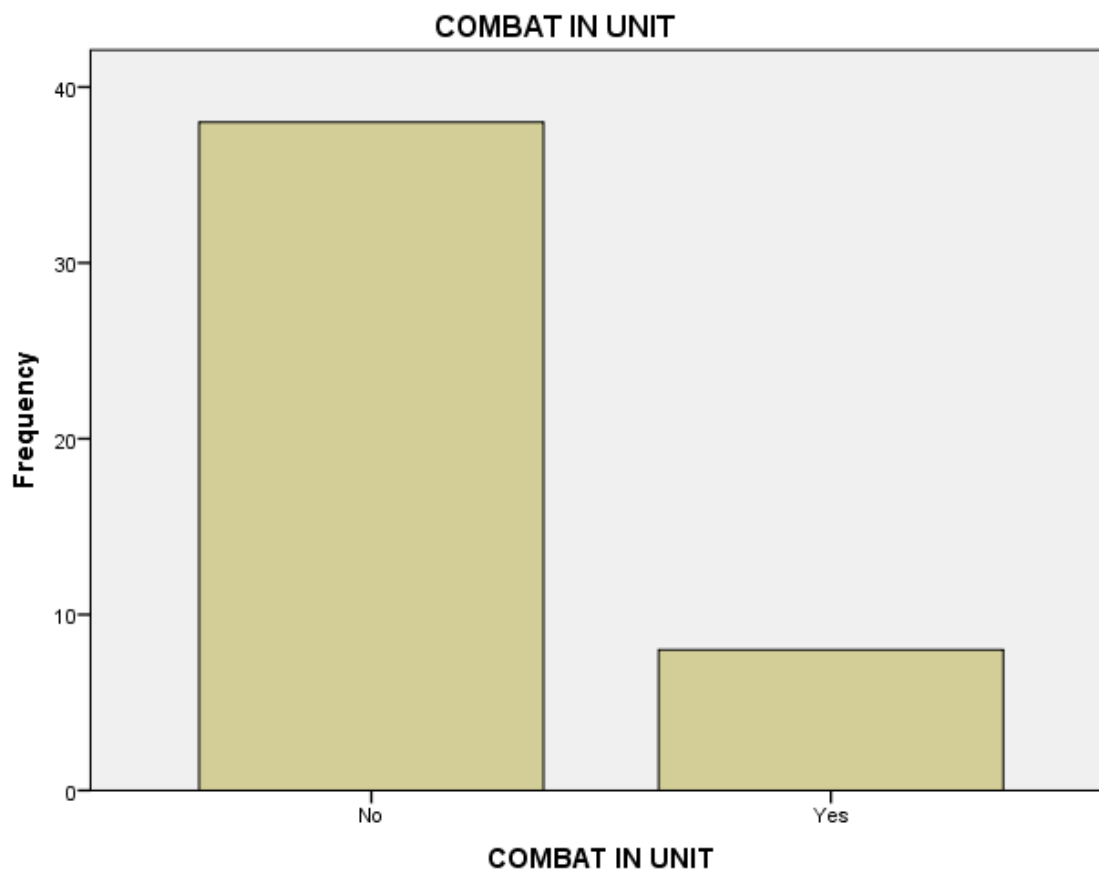


Figure 2. Frequency of OEF/OIF—Combat in Unit

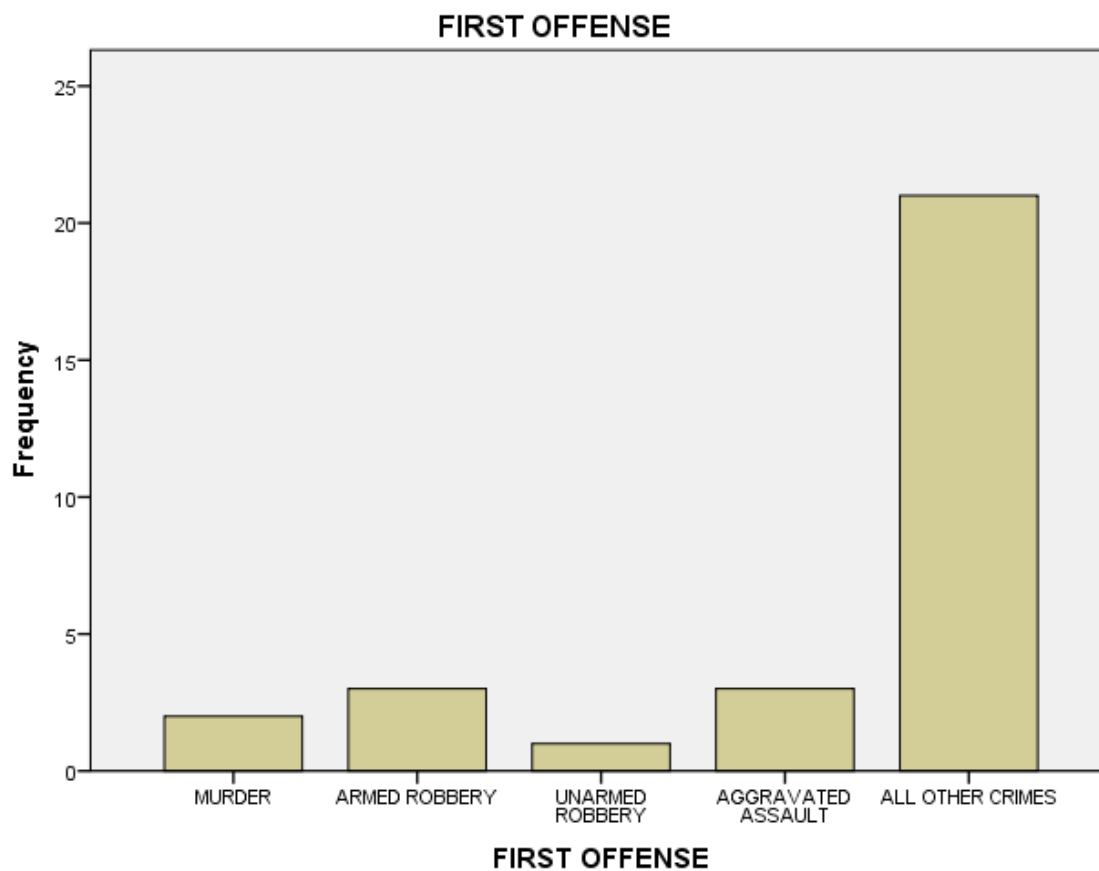


Figure 3. Frequency of OEF/OIF—Offense Type

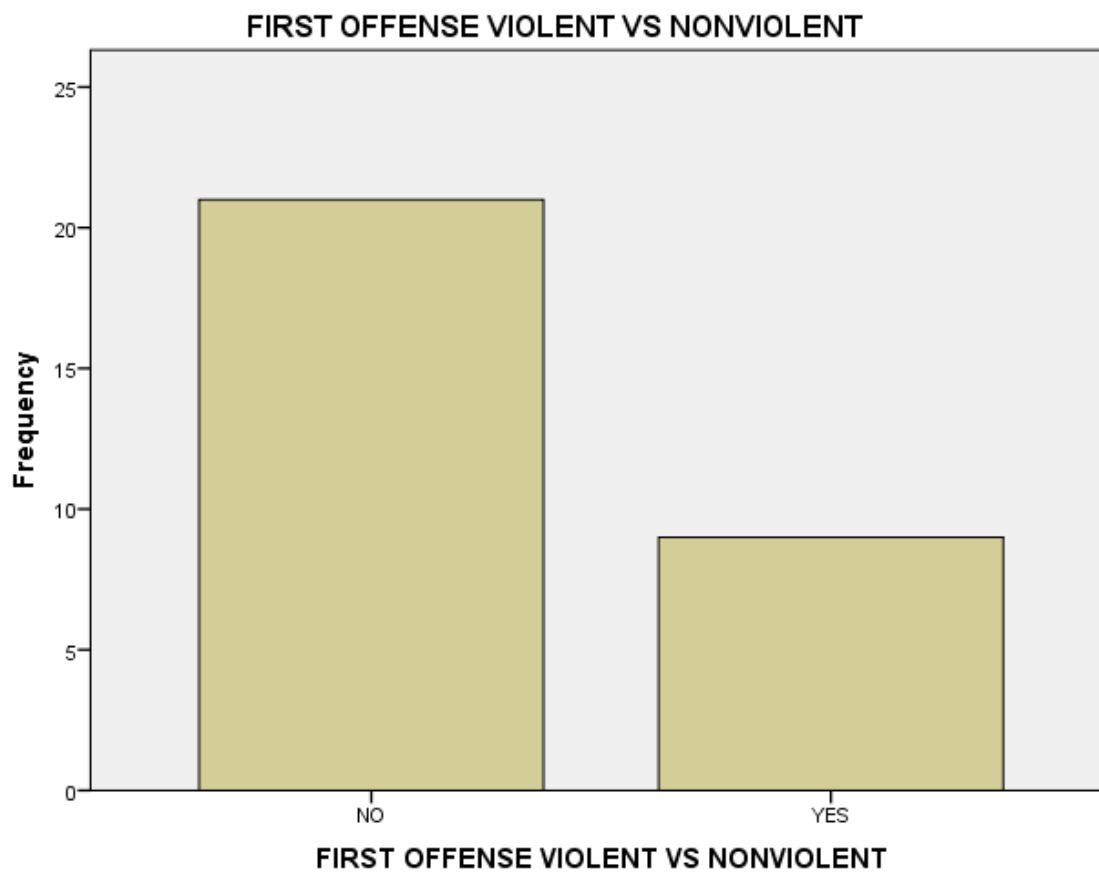


Figure 4. Frequency of OEF/OIF—Violent vs. Nonviolent

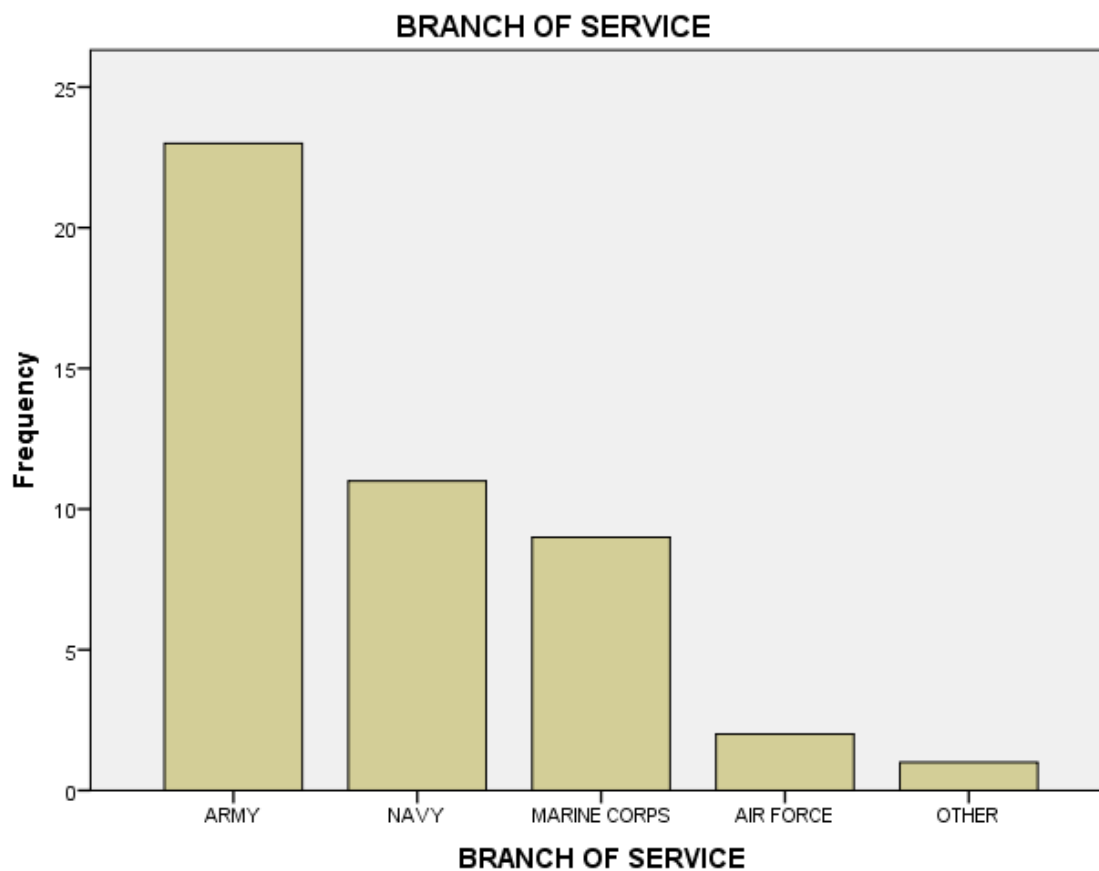


Figure 5. Frequency of OEF/OIF—Branch of Service

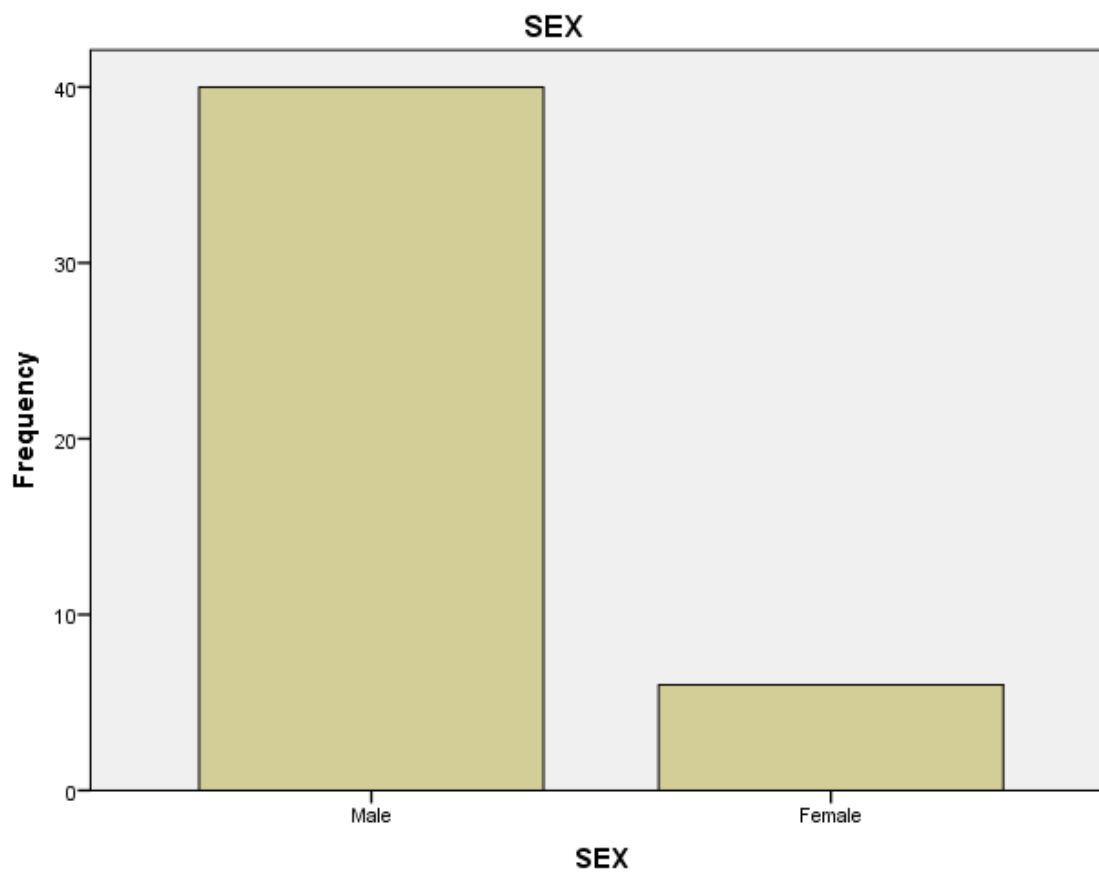


Figure 6. Frequency of OEF/OIF—Sex

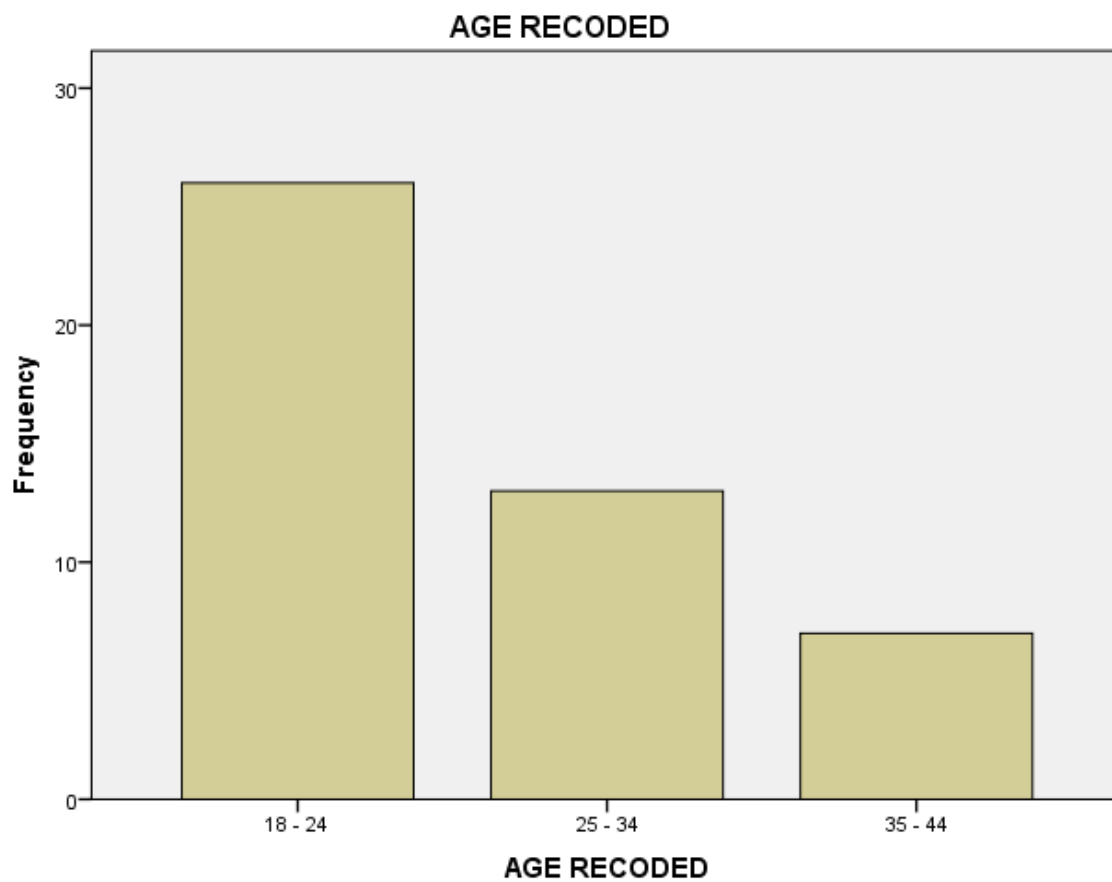


Figure 7. Frequency of OEF/OIF—Age