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Suicide Attempts and Their Contributing Factors Among African American Veterans

Gervline Blaise
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Walden University

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Gervline Blaise

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Walden University
2019

Abstract

Suicide Attempts and Their Contributing Factors Among African American Veterans

by

Gervline Blaise

MHA, Central Michigan University, 2005

BSN, Hunter College, 1994

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Health-Epidemiology

Walden University

July 2019

Abstract

Suicide is one of the leading causes of death in the United States. The rate of suicide attempts among veterans in the United States has increased tremendously since 2001, which has left the Department of Veterans Affairs deeply concerned. The purpose of this study was to examine if there is an association between suicide attempts among African American/Black veterans and mental health support, income level, marital status, education level, and unemployment status. This quantitative study used the socio-ecological model to explain the association of the contributing factors to suicide attempts. Descriptive statistics, chi-square, and logistic regression were used to analyze the 2014 National Survey on Drug Use and Health from the United States Department of Health and Human Services, Substance Abuse and Mental Health Services Administration and Center for Behavioral Health Statistics and Quality. The publicly available dataset contains 55,271 cases with 6,698 Blacks/African American in the study. The findings of the study show 20% of African American veterans who seek support received it and 80% did not in suicide attempts among African American/ Blacks veterans and mental health support, income level, marital status, education level and unemployment status. The study showed there is a need for greater support for African American veterans through either policy or access to more mental health care. The social change implication is that need to be greater advocacy for support for African Americans who experience suicidal thought seeking support. Providing the support, they need can possibly help save lives.

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Dedication

The dissertation is dedicated to those veterans fighting suicide attempts every day and hopefully they will seek the necessary help needed, which will give them an opportunity to fight to see another day. I thank those who are dedicated and committed to the prevention of suicide and may peace come to the families that lost a loved one to suicide. There is hope with effective action and appropriate preventive methods to minimize suicide prevalence in our society.

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Chapter 1: Introduction to the Study

Introduction

For several years, social groups, families, and the Department of Veterans Affairs have worked together to find ways to help veterans cope with their emotions and experiences, especially after war. The U.S. government has always recommended that all veterans be enrolled in programs that will help prevent them from dealing with mental health and social issues alone. Since 2001, the rise in the rate of suicide attempts among veterans in the United States has been of great concern and has left the Veterans Affairs Department seeking possible contributing factors. The Department of Veterans Affairs estimated that at least 20 veterans die each day from suicide, resulting in at least 7,000 deaths in a year (Torbaty, 2010).

A *suicide attempt* is defined as a non-fatal self-directed act or behavior with the intent to have potential serious self-harm (Centers for Disease Control [CDC], 2017), whereas suicide is the self-directed behavior of acting in the intent to die or cause self-violence that lead to death (CDC, 2017). Torbaty (2010) described suicide attempts among veterans as a menace, especially among young veterans. The phenomenon of veterans' suicide attempts has been under-researched, and the result of previous studies have shown to be inconclusive (Nergredo, Melis, & Herrero 2013). In this study, I addressed veterans' suicide attempts to contribute epidemiological knowledge about a unique veteran subgroup's behavior and to find underlying factor that might be contributing to the problem and seek possible prevention. This study's findings can assist healthcare professionals in identifying high-risk veterans for suicide attempts and

effectively minimize the risk. The findings may also compel policymakers to create policies that allow resources for those veterans at risk to seek help and create access to mental health in their community. The knowledge gained helps to create a better understanding of the underlying key contributors as well as the factors that lead veterans to attempt suicide.

In Smith et al.'s (2016) study on the determinants of suicidal attempts among U.S. veterans, suicidal thoughts and behaviors among veterans were a significant public concern and not just a personal or family issue. Goenka (2016) stated that veterans have a 21% greater risk of attempting suicide than civilians in the United States. He explained that middle-aged and older veterans formed a significant portion of those committing suicide, especially African Americans. Geonka (2016) reported 67% of the veterans' suicides had been committed with firearms. The U.S. Department of Veteran Affairs has recently found that veterans who were not registered with the Veterans Affairs commit most of these suicides; therefore, a lack of access to care exists for mental health services since many who attempted or completed suicide were not linked with Veterans Affairs once leaving the military (U.S. Department of Veterans Affairs 2016).

In this chapter, I discuss the foundation, rationale, and significance of this study. I then discuss the statistical methods I used to explore the prevalence of a specific subgroup in suicide attempts and present the current literature on the topic. I also offer the research questions and describe the study's purpose, theoretical framework, assumptions, delimitations, and limitations.

Background

One of the major national priorities is the prevention of suicide among the most vulnerable populations in our society. In the past decade, suicide has become the 10th leading cause of death in the United States. Suicide attempts have become a major expense in the nation since they account for approximately \$37-44 billion in medical costs and work loss leading to a decrease in productivity (Smith, Selwyn, Wolford-Clevenger, & Mandracchia, 2013). Therefore, early assessment of patterns that identify potential risk is crucial for prevention. Researchers' comprehension of the underlying factors helps the attempters become less successful in committing suicide.

Suicide is a significant public health problem that is growing among veterans as in many different groups (Smith et al., 2013). The government, public health professionals, and organizations serving veterans try to identify, assess, and engage the veterans who are vulnerable to attempting suicide to deter them from engaging in such behavior. Copeland et al. (2014) showed African Americans are susceptible a suicide attempts and more need to be done to address that group. Copeland et al. suggested that African American suicide attempts relate to demographic as well as social factors. Economic disadvantage creates an environment that makes veterans feel helpless and hopelessness. The focus has been more on post-trauma and other trigger areas have been neglected.

The rate of mental health problems for veterans exposed to combat is extremely high placing them at greatest risk (Holdeman, 2009). Veterans are usually exposed to traumatic events, and they have higher risks of suffering from post-traumatic stress

disorder (PTSD; Yehuda, 2002). PTSD is one psychological risk factor for suicidal attempt and completion (Bruce, 2010). PTSD can be triggered when an individual feels helplessness and hopelessness and is left emotionally shattered, especially when the situation feels uncontrollable and unpredictable (Bruce, 2010). According to Bruce (2010), PTSD among military personnel may be a physical brain injury that may be the result of a blast during combat, which causes damage to the brain tissues (Bruce, 2010). According to Hoge et al. (2004), the rates of PTSD symptoms among U.S. veterans deployed during Operation Enduring Freedom (ORF) and Operation Iraqi Freedom (OIF) have been reported to be as high as 17%. According to the American Public Health Association (2014), the rates of American veterans, especially those returning from wars in Afghanistan and Iraq, suffering from trauma and mental illness are exceptionally high.

According to the Veterans Health Administration (VHA), suicide is recognized as a primary public health concern, and the VHA has made it a priority to reach out to suicidal veterans by implementing preventive measures that are effective at some level (Copeland et al., 2014). Copeland et al. (2014) indicated that rates of African Americans exposed to trauma are higher than White Americans and that the high rates of exposure to those African American veterans living in urban, economically disadvantaged communities may pose a risk for a suicide attempt (Alim, Charney, & Mellman, 2006). Researchers showed the rates of African American veterans suffering from PTSD has elevated to 33-43%, thus magnifying the risk of African American attempts to suicide (Alim et al., 2006).

Copeland et al. (2014) argued that social and demographic factors might influence suicide attempts in African American veterans. The idea of committing suicide is one that follows a process. May and Klonsky (2016) seemed to agree that most suicides happen after many attempted suicides. Batterham et al. (2015) noted that the suicide attempt rate of African Americans has been below the white's numbers for most decades, but currently, African American numbers are rising, and soon will surpass Whites rates. Some researchers have reported that most African American suicides attempts have gone unreported as a way of avoiding the stigma associated with such deaths (Batterham et al., 2015). Over the years, most researchers have overlooked suicide attempts among African American veterans. Most researchers of them have laid focus on post-traumatic stress disorders, depression, and mental illness and how they all correlate to suicide. In this study, I sought to shed more light on some of the variables examined like social support, marital status, education level, and unemployment factors that may be associated with suicide attempts among African American veterans.

Problem Statement. The prevalence of suicide in veterans is rising and little research is being done among African American veterans. The investigation of suicide attempts provides insight into the relationship of contributing factors and serves as a mechanism to help prevent suicidal behaviors (Pennington, Cramer, Miller, & Anastas, 2015). According to the American Foundation for Suicide Prevention (2016), suicide is one of the leading causes of death in the United States. Even though veterans constitute a small population, they account for at least 18% of suicide deaths and attempts (VA Suicide Prevention Program, 2016). According to Krieger (2001), the rising rate at which

African American veterans commit suicide suggests that both economic and political factors have a role in these deaths. Most suicide attempts are based upon a certain pattern of behavior and are usually linked to psychological and societal issues. Krieger noted several behaviors associated with individuals who attempt or commit suicide. Most people tend to have varying moods, and others undergo various phases of depression, while others fall into addiction to antidepressants or even other drugs that keep them suicidal. Similarly, the number of veterans having suicidal attempts post-deployment are relatively high. Hence, the need for intervention by determining whether factors such as education level, marital status, mental health support, and unemployment status are associated with suicidal attempts is worth investigating.

Nature of the study. I used a quantitative design for this study. A quantitative approach can expand the epidemiological understanding of underlying factors behind suicide attempts among African American veterans. Furthermore, the study will deepen the scholarly understanding of the association between the independent variable (suicide attempt) and dependent variables like mental support, marital status, education, and unemployment in African-Americans veteran populations. The study's findings will contribute to the body of knowledge in a unique way that addresses suicide attempts in African American veterans.

In this study, I used a secondary database to investigate the factors impacting suicide attempts among African American veterans. My goal was to understand some of the factors that contribute to suicide attempts and the measures that can be taken to make suicide preventable.

Theoretical framework: the socio-ecological model. O'Connor and Nock (2014) emphasized that preexisting life events activate suicide attempts. I used the socio-ecological model to understand such contributing factors. The socio-ecological model was developed by sociologists associated with the school of Chicago to study the dynamics of various personal and environmental factors as they relate to self-violence. This framework is used by researchers to bridge the gap between behavioral theories and anthropological theories. It serves as the best model to use in explaining the phenomenon of suicide. Suicide is a complex social problem that may be impacted by various factors. The sociological-ecological framework was explicitly designed to be used in reaching suicide in communities, which permit some structure and interdisciplinary reason to study complex social-ecological phenomenon (Binder, Hinkel, Bots, & Pahl-Wostl, 2013).

The socio-ecological model of prevention framework provides an understanding of the role that social and demographic factors play in influencing individuals as well as groups in suicidal behaviors. Researchers have applied this framework when examining violence prevention and how to appropriately address a suicide attempt. I used this framework as a basis for this study to explain some of the influential factors affecting African American veterans in experiencing higher rates of suicide attempts. The model entails four phases in suicide prevention as shown in Figure 1.



Figure 1. The socio-ecological model.

The first phase is the individual phase, which entails the biological factors that can pose the potential risk of becoming violent towards oneself or even others through genetics and even past personal experiences. Madison et al. (2016) reported that definitions of suicide attempts vary by the individuals defining them. Some researchers believe that a drug overdose should not fall under the category of suicide attempt, but when it comes to risk assessment, substance abuse linking to drugs overdose is considered as a key risk. Some of the key factors that ought to be focused on are socio-economic status, education level, living conditions, and substance abuse. In my research, I found that the environments in which some of these veterans grew up are not very conducive to their well-being, and after extensive training and intense moments at war, going back to such environments can only make things worse (Liu & Miller, 2016). Some of them join the military to run away from their harsh reality of living on the streets where substance abuse and violence are the norms. Such personal experiences, in the long run, end up affecting their personal lives and may even create suicidal behaviors.

Substance abuse may also relate to prescribed medication overdose. Due to the nature of war in places such as Afghanistan and Iraq, some of these veterans are prescribed post-traumatic stress disorder medications to help them cope with their

emotions (Liu & Miller, 2014). According to the latest veteran's affairs health care utilization report, most veterans suffer from PTSD and are enrolled on antidepressants immediately after the war (Martin et al., 2009). According to the American Public Health Association (2014), the rates of American veterans, especially those returning from wars in Afghanistan and Iraq, suffering from mental illness and trauma are very high. The number of soldiers being deployed for war is high, and this increases the number of military personnel that might suffer from PTSD.

Approximately 50% of combat soldiers returning from Iraq are reported to suffer from PTSD (American Public Health Association, 2014). The number of veterans dying from suicide is approximately 22 each day according to estimates from 2010. According to studies, 56% to 87% of military personnel suffering from psychological distress after post-deployment report did not receive psychological help (American Public Health Association, 2014). Now, with easy access to antidepressants and antipsychotics, some of these veterans may overindulge for faster treatment, with some attempting suicide. The rate at which the titration and instigation of antipsychotics and antidepressants occurs is significant in decreasing suicide risk. In a recent study conducted on patients below 24 years, it was noted that patients who started with high doses of antidepressants and antipsychotics were allied with a greater suicide risk attempts, this prompted the process of going slow and low in the initiation stage of taking medications (American Public Health Association, 2014).

Four research reports published in 2004 and 2005 on serotonin-norepinephrine reuptake inhibitors (SNRIs), selective serotonin reuptake inhibitors (SSRIs), and other

classes of antidepressants showed a link to suicide attempts. According to Grunebaum et al., 2004 the FDA reported, the only notable observed variances in relation to suicide attempts and behavior between the drugs was a minor risk of suicide seen with sertraline. A study of patients who were undergoing PTSD treatment at the Department of Veterans Affairs from the year 1999 to 2004 showed that fluoxetine and sertraline, which all fall under the classes of anti-depressants, had higher chances of being linked to having suicide risks which are lower as compared to other antidepressant (American Public Health Association, 2014). It is thus crucial to monitor patients taking all types of antidepressants or any other drugs.

The second phase of the model involves how well the veterans relate to the people in their close circles, which could be family members, relatives, social groups, and even close friends. According to the Department of Veterans Affairs report (2016), veterans require a lot of love, care, and special attention. Some may feel left out, and this may affect them negatively, which may push them to feel less wanted and insignificant, which is a crucial sign of suicide. Some of the key prevention strategies based on this model may include collaboration with close friends and families, enrollment in prevention programs, mentoring and even peer programs designed to facilitate a conducive environment that people can express themselves freely and at the same time reduce isolation (GLSMA, 2004). Most families are encouraged to ensure full participation with their loved one, especially after the war to avoid the risk of them feeling insignificant.

The third phase involves community support. The community that surrounds the individual plays a key role in the reduction of suicide attempts (Hans et al., 2014). A

community aids in how we view the society, and a good community provides good social groups and relationships that withhold an individual from isolation and solitude. Veterans require a lot of love, companionship, and acceptance in their communities, and that is why the Department of Veterans' Affairs is keen on providing community life support groups to keep the after-war veterans connected. It aids them in making more steps forward, meeting other veterans, and creating opportunities for them such as employment and mentorship.

The last and most important phase is the society, which encompasses the individual himself, the community, and the relationships. When the individual understands his or her place in the social and cultural norms that support and accepts the person for who he/she is, then they can live peacefully and happily. Some of the societal factors that come into play in this phase are economic, social, and educational policies that aid in producing good physical and mental health for individuals (CDC, 2015). Society should be more aware of the veterans' needs and provide a platform where these veterans can be appreciated, good mental health benefits, and employment opportunities that are more favorable financially and emotionally. Through such measures, the rate of suicide attempts may be reduced.

Purpose of the study. The main purpose of the study was to examine an association among contributing factors like marital status, unemployment, social support, income, and education level in suicide attempts of African American veterans. Research on this group is underdeveloped and not consistent. Therefore, I aimed to understand the lack of research in suicide attempts of African Americans in the literature and help to

bring better understanding to some of the factors that influence suicide attempts. Perhaps, some contributing factors to suicide attempts may be unique to certain groups. For instance, coping mechanisms and some program interventions that would help Whites may not help African American veterans or vice versa. In addition, I sought to provide a different perspective on how people view or approach veterans who have attempted suicides. The study findings provide insight into suicide rates among the African American community. Given the fact that all veterans, especially African Americans, are prone to high risk of suicide attempts, this study will provide information that can be used to assist veterans and their families.

Significance of the Study. Most researchers have a focus on issues veterans face after experiencing war, including emotional problems, social difficulties, marital problems, and behavior patterns that may cause them difficulties in integrating back to civilian life. After war experiences, living in an impoverished and dangerous neighborhood further affects veterans' mental health.

According to Amzat and Razum (2014), most African Americans are pushed to the idea of attempting or committing suicide due to their social and economic conditions. Many others deal with impoverished communities that may drive them to suicidal attempts. The social change implication is to provide greater support to those who seek help and place a safety net for those who are not reaching out to do so through family and community encouragement. The social change can be addressed in different aspects such as provide economic equality and minimize disparity in those who are most vulnerable or at risk. As society addresses the attributes of suicide attempts, it may facilitate a reduction

in suicidal behaviors. Other changes that can be made include job opportunities, better access to education, improved social support, and easy access to mental health and public awareness and attitudes toward suicide.

Research Questions and Hypotheses. I developed the following research questions and hypotheses are provided to address the objectives of this study:

RQ1 Is there an association between employment status and suicidal attempt among the veterans especially the African American veterans?

H_0 There is no association between employment status and suicidal attempt among African-American veterans.

H_A There is an association between employment status and suicidal attempt among African-American veterans.

RQ2 Is there an association between marital status and suicidal attempt and among African American veterans?

H_0 There is no association between marital status and suicidal attempt among African American veterans.

H_A There is an association between marital status and suicidal attempt among African American.

RQ3 Is there an association between mental health support and suicidal attempt and among African veterans?

H_0 There is no association between mental health support and suicidal attempt among African veterans.

H_A There is an association between mental health support and suicidal attempt among African veterans.

RQ4 Is there an association between education level and suicidal attempt among African American veterans?

H_0 There is no association between education level and suicidal attempt among African American veterans.

H_A There is an association between education level and suicidal attempts among African American veterans.

RQ5 Is there an association between income level and suicidal attempts among African American veterans?

H_0 There is no association between income level and suicide attempts among African American veterans.

H_A There is an association between income level and suicidal attempts among African American veterans.

Assumptions. When dealing with human subjects, certain aspects of behaviors are difficult to measure. I assumed that the data would show some contributing factors like unemployment can affect African American veterans' suicide attempts behaviors. Most previous research has shown strong evidence that suicide attempts have some linkage to employment as a result such behavior create devastation to their families and communities. The other assumption was that not exploring different groups with unique circumstances might limit different approaches to suicide prevention. Not exploring other groups' suicide behaviors may limit researchers to have different approaches to suicide

prevention, which can broaden the scope of prevention.

Summary. The following chapter explores research that has accepted or supported different perspectives on suicide in African American veterans. Chapter 3 describes the methodology, design, sample size, data collections and measures used in the secondary data. The results will be presented in Chapter 4. Thus, Chapter 5 will present the findings in the larger part of the body of the literature.

Chapter 2: Literature Review

Introduction

In the literature review, I extensively examined research focused on mental illness and suicide in African American veterans or African Americans in general. My primary goal in this chapter is to inform the audience of recent academic and clinical knowledge about the topic. The review provided me tools that were applicable in data collection for the main study.

Literature Search Strategies

I searched for recent peer-reviewed literature using Google Scholar, ProQuest Central, SAGE, Psych articles, Psych INFO, the Department of Veterans Affairs website, SAMSHA, Health and Science Databases, and CINHAL plus Medline. I also used the Walden University library to search for recent dissertations and theses. Keywords in these searches included *suicide attempts*, *suicide and veterans*, *African Americans and suicide attempts*, *suicide and education attainment*, *suicide and unemployment*, and *mental support*. The search criteria included historical and current peer-reviewed full text published articles. Suicide has been viewed by many cultures as a taboo or weakness.

However, other cultural groups have viewed it as a sign of strength, a form of sacrifice, or an expected and accepted act (Douglas, 2015). Historically, suicide was not regarded as a public health issue. Suicide came to public awareness through the press during the 17th century due to its increased rate (Pompli, 2010). Prior to the 17th century, suicide was not known to be a criminal act but a moral one (Douglas, 2015). Still today, some people in society believe it is a moral issue, and that little attention or money should be given for its prevention. Tremendous research has been conducted over time with the aim of understanding possible contributing factors that associated with suicide in other groups, but less focus was made on African American suicidal attempts. However, the literature often has produced inconsistent results due to comparison complexity or even the methodological approaches used.

According to Carli and Rozanov (2012), recent observations reveal that more veterans are likely to die of suicide compared to the general population. Among most occupational and social groups, veterans are at highest risk of attempting suicide. There may be social impacts that influence the rise in suicide attempt rates among different groups. My aim in this literature review was to understand the potential and existing risk factors that may lead to attempted suicides among African American veterans. The review will have an additional focus on the general population, but with a special focus on war veterans. To date, there has not been any proven consensus regarding the factors informing suicide attempt rates among veterans. Similarly, different studies have produced different results, which may be due to different periods and sociocultural contexts (York et al., 2013). On the other hand, Carli and Rozanov (2012) reported that

researchers have proven that mental health has been a co-factor in the leading rates of attempted suicides such as depression and anxiety, but maybe these are limited to the problem. The literature indicated that ongoing research needs to be done so other contributing factors can be considered.

Borum (2014) discovered that some issues such as racism, unemployment, and self-identity might influence suicide attempts. Golden and Earp (2012) use the socio-ecological model to understand the reasons behind suicide attempts and found that most of the issues people undergo stem from the society we live in and thus influence suicidal behaviors as individuals. Through this model, the issue of suicide among African American veterans can be explained as one influenced by issues affecting the society and not necessarily resulting from emotional instability (Horowitz et al., 2009). Through this theory, it is safe to say that issues such as unemployment, marital status, education, and mental health support have a large influence on a suicide attempt. Madison et al. (2016) found that other life experiences might play a key role in suicide attempts among veterans beside mental health issues. PTSD, depression, anxiety, and substance use place veterans at a higher risk for suicide attempts (Bullman & Kang, 1994).

Veteran and Suicide. Current research has shown that more people died by suicide than by homicide. There are 36,000 suicides in the United States each year—nearly 100 lives a day. Unfortunately, veterans make up 22 of those suicides daily (Smith, 2015). Veterans are at a three times greater risk than the general population for suicide (Smith, 2015). Smith (2015) reported that within 2 weeks of a major life stressor, a veteran could be on the path to a suicide attempt or complete suicide. Researchers have

shown when some veterans suffer from loss of a job, divorce, social support, lack of education, and relationships problems are risk factors for veterans to have suicidal thoughts. However, Smith indicated that suicide attempts primarily occur due to financial and relationship problems.

Researchers have explained that most war veterans require extensive training on how to cope with their emotions and environments after their exposure to military life (Madison et al., 2016). In a study of veterans who had served in Afghanistan and Iraq between 2001 and 2002, the rate of suicide attempts seemed to increase as years went by (Hamilton & Klimer, 2015). In the first 2 years, there were very few suicide attempts and deaths, but as from the third year, the number of veterans who had taken their lives through a firearm increased tremendously, especially among young veterans between the ages of 18-29 years (Beckman et al., 1996). The earlier people, especially relatives, recognize signs of suicide in an individual, the better. Research conducted in 2013 by the Department of Veterans Affairs and the Department of Defense regarding suicide identification signs and assessment revealed that, for every suicide committed by veterans, there are warning signs that could have been identified to help the individual to seek assistance (CDC, 2015).

According to Kramer (2011), several studies have shown a relationship between suicidal attempts and unemployment. Despite the number of jobless veterans not being high, there have been some individuals within the group whose rates of unemployment are significant. The percentage of unemployed male veterans between ages 18 to 24 is approximately 27%. When the soldiers are deployed, they are adopting a new sense of

belonging, focus, purpose, responsibilities, and achievements. According to Kramer, the workplace can be stressful to the veterans, especially the ones who are mentally vulnerable since there is no substitute for the structure of the military life in civilian life. It can be tough to fit in a civilian life where most of your loved ones and friends have moved on. Some come back with many health issues, particularly mental health.

Jakupcak et al. (2010) conducted a study to determine PTSD as a variable in the correlation between social support and increased suicide risk among the veterans. According to several types of research, the negative attributes in social supports have different dimensions in social relationships resulting in unique effects on the mental health status of an individual. Negative interaction with family members increases psychological distress (Lincoln, Chatters & Taylor, 2005). The researchers assessed the marital status, PTSD, recent suicide attempt, and satisfaction with social networks among veterans. According to the results, veterans who were married were less likely to have high suicide attempts as compared to unmarried veterans, and veterans with a higher satisfaction of their social network had a lower possibility of having suicidal attempts as compared to veterans with lower satisfaction. According to the authors, married veterans and veterans with greater social networks satisfaction had a lower possibility of endorsing thoughts or behaviors that indicate higher suicide attempts.

According to Becerra et al. (2016), one of the priorities in the United States is to prevent suicide among the most vulnerable populations. The rates at which veterans are committing suicide are alarming, hence the need for intervention. The objective of Becerra et al.'s study was to evaluate the relationship between unmet mental health care

needs and suicidal attempts among U.S. veterans. According to the results, 16% of the veterans reported unmet health care need. In the study's population, the researchers observed that unmet health care needs correlated to the increased possibility of suicide attempts. To reduce the burden of suicide among veterans, improved access to care for such vulnerable populations is necessary.

According to Pukay et al. (2012), PTSD frequently occurs with major depressive disorder, and both disorders are correlated to suicide attempts. They conducted a study whose aim was to establish depression's impact on suicide attempts among veterans with PTSD. The study was used to determine the relationship between demographic variables such as minority status, work status, marital status, and education level, and suicidal attempts. According to the results, the researchers observed that veterans with higher education levels had a lower possibility of having suicide attempts compared to those with a lower educational level.

Bossarte et al. (2012) reported little is known about the correlation that exists between suicide attempts among those individuals with military service history. Evidence has been gathered of increased suicide risk among some veterans. According to previous research, Researchers have been reported that the risk of veterans having suicidal attempts rose by 66%. According to Bossarte et al. (2012), a recent study was conducted on veterans, and it was reported that there was a 12.5% occurrence of suicide attempts, which correlated with PTSD and depression, and lack of availability of social support. The Researchers have conducted a study where they used data from a national health survey to determine the correlation and prevalence of suicidal attempts among veterans.

The results obtained in the study showed that there was an increased risk of suicidal attempts, which correlates with a lack of social support and psychiatric diagnoses.

Although there exist no absolute methods in assessing the suicide risks, a risk assessment phase is crucial in the evaluation of suicide attempts among veterans through identifying if there are any known intentions, suicidal impulse or preparatory behavior noted to help prevent suicides (Bagley, 2012).

The Department of Veteran's Affairs always cautions that the moment signs of suicide are spotted no matter how mild they may be; it is crucial to help individuals to seek help early. Madison et al. (2016) explained that most noted behaviors of suicide attempts are usually through writing about suicide or even talking about the idea of suicide with friend and love ones. Although, some individuals may tend to fall into solitude; staying alone in empty rooms and others may even have the idea of purchasing weapons or taking drugs overdose to attempt suicide (May et al., 2016). There are warning signs that people need to pay attention to when someone thinking about suicide. Madison and her team have listed some of the warnings signs of suicide to include three categories as follows: changes in behavior like the use of hard drugs or overdose on medication, feeling the need to be isolated, aggression, oversleeping). In addition, change in speech (feeling trapped and being a burden to others) and changes in mood such as irritability, anxiety, rage, loss of interest and depression (Madison et al. (2016)

Based on their research, Madison et al. (2016) stated that paying close attention to the above-detailed signs might decrease the chances of suicide attempts by at least 40%. However, it is not to say that people should not pay close attention to other variables such

as socio-economic factors. Mann and Currier (2007) stated that most people are predisposed to suicide attempts but the key trigger to take up the action is stress. Some of the predispositions related to suicide attempts among most people are personal characteristics such as pessimism, family history, life stressors or even abuse. War veterans who have such predisposing factors, when they encounter stressors such as mental illnesses have very high risks of attempting suicide (Mann & Currier, 2005). Others who studied suicide have a different explanation for suicide.

Joiner (2009) stated that suicide attempts occur when an individual develops three things: fearlessness to death, desire to die and lack of belonging to a certain group or community. Joiner explained that most veterans acquire the first attribute which fearlessness to death when in training programs and when in deployment in war-stricken situations. Martin et al. (2009) suggested that most suicide attempts are linked to war veterans who have participated in wars in Afghanistan. Reason being, these veterans become naturally desensitized to pain and fear of loss owing to war and death exposure (Zamorski, 2011). According to Joe et al. (2008), cultural variables such as gender and ethnicity have also been linked to suicide attempts in veterans even though there has not been any comprehensive research worked on this matter. For this study, the socioecological model is going to be implemented in trying to understand the case of suicide attempts among African American veterans.

Many theories exist on reasons why people attempt and commit suicide. However, suicide acts cannot easily explain because many factors are interwoven into why someone causes self-harm. Some researchers like Emile Durkheim attempt to

answer many questions that surround suicide acts. Durkheim explained suicide using sociological methods identifying different types of suicide. Durkheim theory supported the underlying cause of suicide was social driven than anything else. However, this theory left out other factors that may contribute to suicidal behaviors. Other theorist presents cause of suicide from an environment, biological and social perspective. However, no theorists had bridged the gap of other stressors that may cause or interlink those factors causing people to attempt suicide.

Summary. Overall, the literature show there is a need for African Americans' suicide attempt behaviors to be researched to help identify possible root causes that lead them to suicide. Many theories have been proposed but none really exposes the true nature of the problem. It will take dedication of researchers to dig into the multi-layer of the problems that may make among African American veterans to end their life. Support is a problem for those in mental health and most who are seeking support having a difficult time receiving it from their communities or society.

Chapter 3: Research Method

Introduction

The objective of this study was to examine an association among contributing factors of marital status, employment, income, education level, mental health support, and suicidal thoughts and suicide attempts among African American veterans. According to previous research, a suicide attempts in African Americans rarely exist when compared to suicide attempt among other groups. To fill the gap in scientific research, I conducted a quantitative study using statistical analysis of an archival dataset from the National

Survey on Drug Use and Health ([NSDUH], 2014) database obtained from the United States Department of Health and Human Services, the division of Substance Abuse and Mental Health Services Administration, and the Center for Behavioral Health Statistics and Quality.

These agencies combined forces to create a large database asking health questions of the U.S. population. NSDUH 2014 measured the frequency and links between drug use and mental health condition in the United States. The survey included other health issues and support for mental health-related disorders. Respondents were asked about income sources, and health care access and coverage (NSDUH, 2014). The mental health questions were asked of adults to measure symptoms of mental health distress or suicide ideations in their worst cases experience in the last 30-day period (NSDUH, 2014). The survey covered information on gender, race, age, ethnicity, marital status, educational level, job status, suicide behavior, veteran status, and current household composition (NSDUH, 2014). This information I used for analysis was collected from 50 states and the District of Columbia.

In this section, I explain the target population and the database used. I also describe the statistical procedure used to evaluate archival data and their sources, including information on reliability and validity. A description of the treatment of data and ethical consideration is also provided. Further, the section will include a review of the research design.

I determined that logistic regression was best to use in this study because it allowed for the use of non-randomized studies. Although correlation is used to predict

relations to support a theory or measure a test and present, I did not intend to measure any test or pretest (Waters, 2017). This technique can be used to show how strong or weak a correlation exists between variables (Cherry, 2017).

Since I was unable to assign the variables, I assumed that the secondary data might show a relationship between the variables. I evaluated secondary data to provide quantifiable, objective, and easy interpretation of results. The data were examined in a way that allowed for generalization that can be applied to a larger population. The quantitative method helped to prevent personal bias from affecting the data. Qualitative design would not have fit for this study because I would not have been able to use it to assess the relationships between the variables. Qualitative studies are geared to gathering information that has trends and similarities. The independent and dependent variables relationships may or may not be directly correlated (Waters, 2017).

Design and Approach

For this study, I used inclusion and exclusion criterion variables to investigate the impact of suicide attempts behavior among African American veterans. A non-experimental secondary database was used to answer the research questions. The quantitative non-experimental archival research was most appropriate to capture a possible association in contributing factors. Archival research can advance knowledge in the epidemiological field by looking at suicide attempts in unique groups such as veterans to identify patterns that can contribute to prevention. In addition, archival data provides a great advantage because it requires less time than primary research.

The non-experimental quantitative approach was appropriate because the independent variable (suicide attempt) cannot be amended, as it would be in an experimental or quasi-experimental study. To test the hypotheses, I used descriptive analysis. The objective was not to show a causal effect, but rather an association if one exists among the variables of mental support, education level, and marital status, unemployment, and suicide attempts.

I used the socio-ecological model in the research to explain suicide attempts or suicide. I reviewed previous studies on suicide attempts among veterans. Walsh and Charnigo (2012) reported some characteristic of communities might be associated with increased suicide rates. One of their findings was that unemployment increases with suicide rate in some counties. The authors used the ecological approach in their study, indicating an association with suicide rate and access to health care.

There have been previously used theories, but none fully explained the suicide phenomenon thoroughly. Quantitative research is deductive process that helps presents results in central tendency, descriptive and frequencies to show trends in the data (Al-Busaidi, 2008). Quantitative research is a reliable and objective method that can be used to statistically generalize a study's findings. It helps reduce the complex pattern to identify quantifying variables in the data. Quantitative researchers test theories and hypothesis and assume the sample size is the representative of the population.

Population and Sampling. Sampling is the process of selecting a portion of the population that will be used to represent the entire population. In this study, the sample was of mixed of ethnicities with participants being males and females. This helped to

prevent or minimize any possible bias toward the outcome. Previous researchers have examined the effectiveness of suicide prevention, but many of the underlying causes are not well studied.

The original study was designed to yield 3,600 respondents per state (NSDUH, 2014). This sample size was considered adequate to support the direction of this study (NSDUH, 2014). The sample allocation process targeted five age groups: 12 to 17 years, 18 to 25 years, 26 to 34 years, 35 to 50 years or older. The achieved sample size for the 2014 survey was 67,901 participants (NSDUH, 2014). The public use file contains 55,271 records, and 6,698 of which were from Black/African Americans that I extracted to use for the analysis. The population was a civilian, noninstitutionalized population of the United States, including residents of no institutional group quarters such as college dormitories, group homes, shelters, rooming houses, and civilians dwelling on military installations (NSDUH, 2014). The mode of data collection through audio computer-assisted self-interview (ACASI), computer-assisted personal interview (CAPI), computer-assisted self-interview (CASI) tool that was used to survey African American veteran participants.

To calculate sample size, three important factors need to be considered. First, the power of the test, which measures the probability of rejecting a false null hypothesis, is usually set at 80% (Westland, 2012). For this study, I set the power at 80% with .05 to be used to provide the researcher with the ability to assure adequate power for finding statistical significance in the study (Suresh & Chandrasekhara, 2012). The second factor is effect size that measures the strength or magnitude of the relationship between the

independent and dependent variables (Sullivan & Feinn, 2012). The effect size can be divided into small, medium, and large. For this study, I selected a medium effect size that could show evidence of the relationship among variables.

The third factor was level of significance, which indicates the result is not likely to occur randomly, and rather is attributed to a specific cause. Thus, significance level allows the probability of rejecting the true null hypothesis. An independent sample *t* test and a two-tail analysis can be used to determine the sample size (McCrum-Gardner, 2010). Establishing a sample size that is optimal for the research study guarantees an adequate power to help in detecting statistical significance — using the G power 3.1.92 to calculate statistical test correlation of exact test using power analysis to compute required sample size given α , power and effective size with parameters two tail for a total sample size of 100 (NSDUH, 2014).

Data Collection methods. The methodology helped in determining the type of data that exist and its usefulness in research. No permission is needed, as this is a public database. One of the advantages of using interviews in this case as a method of collecting data is that the interviewee can interact with the interviewer's one on one and thus, he/she can read different emotions and moods expressed by a participant while answering the questions. The secondary data existence has been recorded for other use, which allowed advancement in research (Toftagen, 2012). The information on suicide provided by the NSDUH-2014 allows lawmakers and communities to take an all hand on deck approach to come up with solution toward violent deaths (CDC, 2016).

Tools of Measurement and Questionnaires. One of the tools used in the collection of the secondary data was a standardized post-traumatic stress disorder checklist with a criterion, which is highly sensitive and specific for symptoms of PTSD, will be used for the assessment. The Diagnostic and Statistical Manual of Mental Disorders was used to determine the precise definition of the symptoms of PTSD were a requirement of the military personnel to attain a sum of fifty on a scale of seventeen to eighty-five points of all the questions in the checklist (Smith et al., 2008). The PTSD checklist is a self-report measure for symptoms of PTSD where the participant is required to rate the seriousness of each symptoms using a Likert-type scale which ranges from one to five where one represents not at all and five represents extremely (Tofthagen, 2012). The analysis of the data is from the questionnaire designed to target American veterans. Sample questions from some of the questionnaires are as follows:

1. In which age bracket do you belong to?
25-35
36- 49
50-60
61 and above
2. Are you employed?
Unemployed
Self-employed
3. Are you enrolled in the veteran's affairs department programs?
Yes

No

4. Have you ever had thoughts of committing suicide?

Yes

No

5. How long ago did you leave the army?

3-8

9-15

16 and above

Validity and Reliability. The core principles for conducting a research study are by ensuring the validity and reliability of the study. These concepts are ways of showing the level of trust and credibility of the results gotten are most accurate. The major areas to be noted in determining the reliability and validity of the research includes the uniqueness of the research questions, precise methods for collecting data, steps undertaken for analysis and conclusion are important to have a good study (Roberts & Priest, 2006).

Validity. The trust level that is associated with the outcomes of the research project is determined by the validity concept. There are two branches of validity that includes external and internal validity. According to Roberts and Priest (2006), the two branches of validity are mutually dependent. Internal validity ensures that the results discovered after the study are real and original due to the procedure used. External validity alludes to the likelihood where the out can be generalized from one group to another.

Reliability. In a quantitative research study, the reliability concept assures the reader that the results obtained are correct and consistent despite the tools utilized during the study. Different devices are utilized for measuring the reliability of the study. Thus, if the study was to be repeated similar outcomes should result. Roberts and Priest (2006) concludes that reliability in a quantitative alludes to the speculation of the discoveries of the research.

Data Analysis. The data analysis process included describing and summarizing the data, identifying the correlation between the variables and forecasting the results. Quantitative analysis will be employed by the researcher to analyze research findings from a previous study with an objective of noting the key themes and consistency in the outcomes of the previous study. A quantitative approach will be used because of the researcher aimed at collecting data that would help in examining a possible association between unemployment, mental health support, economic level, education, and marital status in American veterans' suicide attempts.

The data will be analyzed using statistical packages such as SPSS 21.0 or equivalent software. Quantitative analysis often contains inferential statistics in data analysis. Inferential statistics are the outcomes of statistical tests, which help in the deductions to be made from the collected data and to test hypotheses set and relating the outcomes obtained from the sample. One of the approaches to the study is to make inferences about the population from the sample size.

Logistic Regression will be used in the analysis of the data. Logistic Regression is a statistical method that is used for analyzing data since there will be more than one

independent variables in reporting the results (Bagley and Golomb, 2001). Determining the relationship between variables will occur by presenting tables including to checking for linearity. Thus, the correlation coefficient will be determined if the relationship between the variables is linear. The correlation between the dependent variables, suicide attempts, and independent variables will be determined by Logistic Regression and chi-square analysis. Pearson coefficient can be useful in measuring the strength and direction of the linear association that exists between the variables. The Pearson coefficient ranges from a positive one to a negative one, and a value of zero indicates no association (Mukaka, 2012). Positive 1 indicates there is a positive linear relationship exists between two variables and the negative one indicates there is a negative linear relationship between variables (Mukaka, 2012).

Ethical Consideration. In this study, consideration was taking in how the survey was implemented to the population and the questionnaire assessed for bias. Other ethical consideration could be if any participants' rights were violated in obtaining or in the distribution of the survey. In addition, reviewing the data to ensure if confidentiality was maintained in getting the information. Ethical concerns should be always considered as described by Rajib and Mou (2014). When conducting a study human rights and the reason of the study should benefit the participants and not solely for the benefit of the researcher. The impact the research may have on the participants involve can cause major impact on their personal life. Based on reviewing the process of the secondary data used for this study, no ethical issues arise while NSDUH conducting survey and adherence to human rights in research had been followed. When conducting a questionnaire survey, it

is crucial to make sure the participants are anonymous. One of an integral part when conducting a study according to the Data Protection Act 1998 is ensuring the study considers ethical issues.

Limitations of the Study. There are many advantages and disadvantages to secondary data. Secondary data use decrease expense and save time for a researcher. In this study, there are some limitations as follow:

1. The data used for the study was obtained from the NSDUH-2014 ICPSR3661 database and can be generalized to African Americans that include veterans
2. Even though the research study will be conducted with accuracy and precision, secondary data has certain limitations that will affect the results obtained in the research. The errors that may be present in the data may result in possible biased and missing data that already exist in the dataset.
3. The population focused on for this African Americans that further restrict the information to be spread to other groups.
4. Not much research done on African Americans veterans and suicide attempt

Summary. The approach to the research study is using the secondary data to understand some contributing factors that may lead African American veterans to suicide attempts and finding if any of these variables are significant enough in their contribution to bring someone to the point of suicide attempts. The data allow for some probing of exposure and outcome to be evaluated among the African Americans veterans population but not given full comprehension to the interrelationship of all the variables.

Chapter 4: Results

Introduction

Contributing factors such as income, marital status, employment, mental support, and education have shown to have some impact on suicide attempts or thoughts to a certain degree in some groups. However, many researchers neglected some groups because contributing factors that influence mental health have not been researched at an in-depth level. The purpose of this study was to examine if there is an association between contributing factors that may affect attempts in African Americans. I used data from the NSDUH-2014 to assess African Americans, including veterans, to evaluate the impact of contributing factors and if the variables significantly influence suicide thoughts and attempts in the U.S. population. The objective of the study was to measure an association among variables and see if there are relationships in their interactions. I hypothesized that there is an association among more than one variable in this data.

The NSDUH 2014 is an extension of the previous 5-year survey. Data are collected via a quarterly survey designed to ask several questions to households of people 17 years and older in the United States. The survey included adult mental health questions to obtain information about people experiencing mental distress among other health issues. It also assesses socio-economic status inequalities (National survey on drug use and health, 2014). In the previous year, few responses were gained, so the recruitment process involved a stipend of \$30 to increase participants' response rate. There were 55,271 cases, with 6698 Blacks/African Americans including veterans (NSDUH, 2014). The NSDUH 2014 researchers followed their own procedure in the data collection. The

surveyors made sure the dataset encrypted and collapse all the variables that can be used to identify the individuals in the public file. Further precautions were taken by using data substitution and deletion of state identifiers and a subsample of records in the creation of the file (NSDUH, 2014). There was an adequate data response rate to support and make this study reliable and valid. The region was geographically equal-sized. During the data collection, the same number of interviews were conducted during each collection period. The area sample frame involved census tracts of urban, non-urban, and rural areas. The data that were considered in the study included housing units whose inhabitants completed a full interview or survey. The participants' age ranging from 18 to 25 years, 26 to 34 years, and 50 years and older. The achieved size of the survey for 2014 was 67,901 participants (NSDUH, 2014). I used the secondary data to gain insights on suicidal behavior. In this chapter, I discuss the statistical analysis using linear regression and chi-square to represent the data results. Linear regression analysis was conducted to explain the data to identify and existing relationship among the variables. Whereas, I used chi-square to assess the relationship among nominal variables by measuring each cell counts combination of variables and comparing it with the expected values for that cell.

Demographic Information. The assumption is made adequate cell size requires all cells to have their expected values greater than zero and 80% of cells to have at least five of the expected values (McHugh, 2013). The first condition was met since all the cells had an expected value of greater than zero. One cell ended up having the chi-square of less than 5, as indicated in the education cross tabulation for the categories of suicidal

thoughts in elementary ($n = 1$) and middle school ($n = 0$). As a result, education chi-square and suicidal thoughts should be interpreted and reported carefully.

A univariate analysis was used to show the frequencies and percentages that describe or summarize the data to find patterns in the independent variables like support, income, marital status, education, and employment that split by the dependent variable suicide thoughts and attempts. Following is the bivariate analysis using chi-square to analyze two variables to observe any correlation or association in frequencies of the variables according to who have suicidal thoughts and those who did not. Thus, a result model was used to demonstrate the multivariate analysis by controlling for all other variables to see if support remained as a strong influence on suicidal thoughts. The results of the chi-square test presented below.

The chi-square test for support test indicate with significance, $\chi^2(1) = 93.24, p < .001$, showing a strong relationship between suicide thoughts and mental health support. Those with mental health support had a greater tendency to have suicidal thoughts than expected, while those without mental health support had a lesser tendency to have suicidal thoughts. Since the research question was is there an association between mental health support and suicidal attempt among African veterans, the data show there is great significance; therefore, the null hypothesis can be rejected, and the alternative hypothesis, in this case, was accepted to be true.

Suicide thoughts and income have an association, $\chi^2(3) = 20.09, p < .001$. The following level combinations had observed values that were greater than their expected values: Yes: Less than \$20,000, Yes: \$20,000 - \$49,999, No: \$50,000 - \$74,999, and No:

\$75,000 or more. The following level combinations had observed values that were less than their expected values: No: Less than \$20,000, No: \$20,000 - \$49,999, Yes: \$50,000 - \$74,999, and Yes: \$75,000 or more. The research question of is an association between income level and suicidal attempts among African American veterans? As the data show the income level does have a p value less than .05 indicating the null hypothesis is rejected, then the alternative hypothesis is accepted.

The results of the chi-square test for marital status were significant, $\chi^2(3) = 14.14$, $p = .003$, suggesting that suicide thoughts and marital status have a relationship between the two variables. They both have a combination of observed values that were greater than their expected values: No: Married, No: Widowed, No: Divorced or Separated, and Yes: Never been married. The following level combinations had observed values that were less than their expected values: Yes: Married, Yes: Widowed, Yes: Divorced or separated, and No: Never been married. Addressing the research question of is an association between marital status and suicidal attempt among African American exist. The data show there is a relation, therefore, the null hypothesis is rejected, then the alternative hypothesis is accepted because the cut-off value for marital status is below the set value of p 0.05.

The results of the chi-square test for education appeared to be of no significant, $\chi^2(3) = 4.45$, $p = .217$, suggesting that suicide thoughts and education could be independent of one another. This implies the observed frequencies were not significantly different from the expected frequencies. Education shows no difference or effect on suicide. The data analysis as it relates to education influence on suicide attempt show

lack of significance thus failure occur to reject the null hypothesis, and the alternative hypothesis cannot be accepted.

The results of the chi-square test for employment has significant, $\chi^2(3) = 30.44$, $p < .001$, demonstrating that suicide thoughts and employment are interrelated. The following level combinations had observed values that were greater than their expected values: Yes: Unemployed, No: Employed, Yes: Student, and No: Retired. The following level combinations had observed values that were less than their expected values: No: Unemployed, Yes: Employed, No: Student, and Yes: Retired. Is there an association between employment status and suicidal attempt among African-American veterans. The significance level was below the cut-off value, so the null hypothesis was rejected and accept the alternative hypothesis for employment. Frequencies and percentages are presented in Table 1.

Table 1

Frequency Table for Nominal Variables

| Variable | Suicidal Thoughts | | χ^2 | P | Cramer's V |
|----------|-------------------|---------------|----------|--------|------------|
| | Yes (n = 208) | No (n = 4679) | | | |
| Support | | | 93.24 | < .001 | .14 |
| Yes | 42 (20%) | 223 (5%) | | | |
| No | 164 (80%) | 4436 (95%) | | | |

| | | | | | |
|-------------------------------------|-----------|---------------|-------|-----------|-----|
| Income | | | 20.09 | < .001 | .06 |
| Less than \$20,000 | 99 (48%) | 1678 (36%) | | | |
| \$20,000 - \$49,999 | 77 (37%) | 1666 (36%) | | | |
| \$50,000 - \$74,999 | 16 (8%) | 609 (13%) | | | |
| \$75,000 or more | 16 (8%) | 726 (16%) | | | |
| Marital status | | | 14.14 | .003 | .05 |
| Married | 28 (13%) | 1126 (24%) | | | |
| Widowed | 5 (2%) | 144 (3%) | | | |
| Divorced or separated | 25 (12%) | 575 (12%) | | | |
| Never been married | 150 (72%) | 2834 (61%) | | | |
| Education | | | 4.45 | .217 | .03 |
| Elementary school | 1 (0%) | 19 (0%) | | | |
| Middle school | 0 (0%) | 54 (1%) | | | |
| High school | 115 (55%) | 2329 (50%) | | | |
| Undergraduate or Graduate school | 92 (44%) | 2277 (49%) | | | |
| Employment | | | 30.44 | < .001 | .08 |

| | | |
|------------|-----------|---------------|
| Unemployed | 83 (40%) | 1138 (24%) |
| Employed | 108 (52%) | 3085 (66%) |
| Student | 13 (6%) | 216 (5%) |
| Retired | 4 (2%) | 237 (5%) |

Note. Due to rounding errors, column-wise percentages may not equal 100%.

Variance Inflation Factors (VIFs) measure the variance in variables to determine if there is any interrelationship between the independent and dependent variables. They quantify the severity of variance inflation factor to estimate the regression in the sample regarding the presence of multicollinearity between predictors. High VIFs indicate increased effects of multicollinearity in the model. VIFs greater than 5 are cause for concern, whereas VIFs of 10 should be considered the maximum upper limit (Menard, 2009). All predictors in the regression model have VIFs less than 10. Table 2 presents the VIF for each predictor in the model.

Table 2

Variance Inflation Factors (VIF) for Support, Income, Marital Status, and Employment

| Variable | VIF |
|----------------|------|
| Support | 1.01 |
| Income | 1.21 |
| Marital status | 1.22 |
| Employment | 1.23 |

Overall there were significant in the model, $\chi^2(10) = 104.60, p < .001$, a telling sign that support, income, marital status, and employment had a significant effect on the odds of observing the Yes category of suicide thoughts. McFadden's R-squared was calculated to examine the model fit, where values greater than .2 are indicative of models with an excellent fit (Louviere, Hensher, & Swait, 2000). The McFadden R-squared value calculated for this model was 0.06. The regression coefficient for support No was significant, $B = 1.64$ OR = 5.14, $p < .001$, indicating that for a one-unit increase in support No, the odds of observing the Yes category of suicide thoughts would increase by approximately 414%. The regression coefficient for Income \$20,000 - \$49,999 was not significant, $B = 0.00$, OR = 1.00, $p = .983$, indicating that income \$20,000 - \$49,999, did not have a significant effect on the odds of observing the Yes category of suicide thoughts. The regression coefficient for Income \$50,000 - \$74,999 was not significant, $B = 0.54$, OR = 1.71, $p = .062$, indicating that Income \$50,000 - \$74,999, did not have a significant effect on the odds of observing the Yes category of suicide thoughts. The regression coefficient for income \$75,000 or more was significant, $B = 0.58$, OR = 1.79, $p = .045$, indicating that for a one-unit increase in income \$75,000 or more, the odds of observing the Yes category of suicide thoughts would increase by approximately 79%. The regression coefficient for Widowed was not significant, $B = -0.42$, OR = 0.66, $p = .422$, indicating that widowed, did not have a significant effect on the odds of observing the Yes category of suicide thoughts.

The regression coefficient for Divorced or Separated was not significant, $B = -0.33$, OR = 0.72, $p = .254$, indicating that Divorced or Separated, did not have a

significant effect on the odds of observing the Yes category of suicide thoughts. The regression coefficient for Never been married was significant, $B = -0.54$, $OR = 0.58$, $p = .015$, indicating that for a one-unit increase in Never been married, the odds of observing the Yes category of Suicide thoughts would decrease by approximately 42%. The regression coefficient for employed was significant, $B = 0.57$, $OR = 1.77$, $p < .001$, indicating that for a one-unit increase in employed, the odds of observing the Yes category of suicide thoughts would increase by approximately 77%. The regression coefficient for Employment Student was not significant, $B = 0.23$, $OR = 1.26$, $p = .467$, indicating that Employment Student, did not have a significant effect on the odds of observing the Yes category of Suicide thoughts. The regression coefficient for Retired was significant, $B = 1.17$, $OR = 3.21$, $p = .032$, indicating that for a one-unit increase in Employment Retired, the odds of observing the Yes category of Suicide thoughts would increase by approximately 221%. Table 3 summarizes the results of the Logistic Regression as the final adjusted model showing the predictor of suicide ideation among African America service members. They are seeking support despite the general belief that African American do not seek counseling.

Multivariate logistic Regression Results. The Binary and Multivariate Logistic Regression were used to assess suicide thoughts and other variables; Married and Employment were used as a reference category. Several levels of education were limited leading to the regression not united, and education has assessed to have no significant association based on preliminary Chi-square tests, the variable for education was not entered in the regression analysis. Binary Logistic Regression was conducted to examine

whether Support had a significant effect on the outcome of *suicide thoughts after controlling for Income, Marital Status, and Employment in the final model result Table 3.*

Table 3

Final Adjusted Model of Multivariate Logistic Regression Results showing predictor suicide thoughts among African American veterans with Support, controlling for Income, Marital Status, and Employment

| Variable | <i>B</i> | <i>SE</i> | 95% CI | χ^2 | <i>P</i> | <i>OR</i> |
|----------------------------|----------|-----------|----------------|----------|----------|-----------|
| (Intercept) | 1.57 | 0.29 | [1.00, 2.13] | 29.41 | < .001 | |
| Support No | 1.64 | 0.19 | [1.27, 2.01] | 74.47 | < .001 | 5.14 |
| Income \$20,000 - \$49,999 | 0.00 | 0.17 | [-0.32, 0.33] | 0.00 | .983 | 1.00 |
| Income \$50,000 - \$74,999 | 0.54 | 0.29 | [-0.03, 1.10] | 3.48 | .062 | 1.71 |
| Income \$75,000 or more | 0.58 | 0.29 | [0.01, 1.16] | 4.01 | .045 | 1.79 |
| Widowed | -0.42 | 0.52 | [-1.43, 0.60] | 0.64 | .422 | 0.66 |
| Divorced or Separated | -0.33 | 0.29 | [-0.91, 0.24] | 1.30 | .254 | 0.72 |
| Never been married | -0.54 | 0.22 | [-0.98, -0.10] | 5.89 | .015 | 0.58 |
| Employment Employed | 0.57 | 0.16 | [0.25, 0.89] | 12.52 | < .001 | 1.77 |
| Employment Student | 0.23 | 0.31 | [-0.39, 0.84] | 0.53 | .467 | 1.26 |
| Employment Retired | 1.17 | 0.54 | [0.10, 2.23] | 4.62 | .032 | 3.21 |

Note. $\chi^2(10) = 104.60, p < .001, \text{McFadden } R^2 = 0.06$

Marital Status Baseline=Married

Employed Baseline=Unemployed

Results Conclusion. The results show those who were likely to attempt suicide include those who did not seek support with those who are retired. The analysis seems to show individuals employed were protected from suicide thoughts. When looking at support and suicide thought, the chi-square column is 93.4 showing a strong relationship between support and suicide thoughts. Out of everyone who had suicidal thoughts, 20% were supported and 80% were not supported. Therefore, support is a determining factor

for suicide thought or attempt. Even when controlling for other variables in the last model support is more domineering with its influence on suicide thoughts. In fact, Support remained strong at 74.47 in its influence on suicidal thoughts even after controlling for Marital Status. Although Support went down from 93.4 to 74.47 but still strong indicating support is a contributing factor that need to be examine more closely in suicide behavior. More need to be done regarding providing support to those who seek or do not seek them alike.

Chapter 5: Findings, Conclusions, and Recommendations

Introduction

Suicide is defined as an act where someone takes his or her own life (Centers for Disease Control and Prevention, 2017). Suicide effects all groups; however, veterans—especially younger ones—take their life more frequently. Many lives are lost unnecessarily when suicide is a preventable phenomenon. Many studied have been done to find out how to address suicide in society. However, there is not one approach to suicide because it involves many complex issues that may have many origins.

Suicide is not only a public health issue, but also an ethical problem. Many who perceived suicide attempt or suicide as a solution experience hopelessness, helplessness, depression, trauma, or deprivation by society in some way. When any group is deprived of autonomy, it creates circumstances that seem to have no other solution other than to end their life. Suicide usually occurs in clusters with people with similar situations and problems (Smith, 2015). Suicide is not an event that occurs suddenly; sometimes it relates to demographics, income, education, marital status, and mental health issues or

other life constraints that can be addressed (Smith, 2015). Veterans differ among non-veterans' in suicidality behavior in that many veterans—especially those who serves in combat or were exposed to war zones—are likely at the highest risk for suicide. Those exposed to trauma must deal with depression, PTSD, other mental health issues, and other stressors that may serve as triggers. Some veterans are emotionally shattered from their experiences and need an outlet (Bossarte, 2012).

If resources are not available to deal with suicide behavior, suicide will remain a growing concern in the United States. Suicide should never be a solution to problems for veterans or the general population. Most veterans who commit suicide are not registered with the VA. Therefore, many of their mental health needs are not captured. Although the aspect of mental health is being addressed for some of those veterans, interventions should be in place for screening prior to the veterans leaving service. Suicide seems to occur mostly in vulnerable groups, with it being the 10th leading cause of death (Smith, 2015). Suicide is a great expense in the U.S. healthcare system, resulting in extreme health costs, lives lost, and families devastated (Smith et al., 2013). Suicide affects many aspects of society such as a decrease in productivity (Krieger, 2001). If suicide were well understood, interventions would help attempters deal with their underlying problems more effectively.

The rise of suicide among veterans is very concerning, particularly in certain groups like African Americans that were not considered high-risk groups (Pennington, Cramer, Miller, and Anastas, 2015). Analyzing suicide behaviors in certain groups can help identify patterns and ultimately prevent suicides. In the African American

population, Krieger (2001) identified political and economic factors besides the political and psychological factors of suicide. Many of these contributing factors must be addressed first to address suicide on a deeper level. Therefore, the purpose of the study was to understand if there are associations or links in contributing factors of employment, marital status, mental health support, income and education, and suicide thoughts and attempts. Many researchers point to different factors, but some need to be explored further in African Americans. Suicide should remain on the highest alert particularly in vulnerable population.

Many veterans without mental health diagnoses have remained at risk for suicide. Some provisions need to be made for those who are unable to cope with their circumstances. Many who have died from suicide seem to think there was no other way out of their situations, or their situations would not get any better. Although there is no single way to address suicide, some groups' suicide behavior tends to be more prevalent and can be triggered through circumstances. Smith et al. (2013) argued that suicide is a major public health issue that can be decreased. Society needs to have a better response to those who attempt suicide and try to put safety nets in place to capture those who are on the path of suicide. Bruce (2010) stated that triggers need to be recognized early in suicide population. Understanding helplessness and hopelessness may help people deal with their emotional problems.

Many researchers agree that suicide is a multi-facet problem and needs to be tackled in different forms. Many existing approaches to decrease suicides have not addressed minority groups. Affective strategies can exist that target many groups,

especially subgroups. For instance, the group that is exposed to war has a greater chance of suicide attempt and need to be addressed with urgency. Holdeman (2009) declared that post-traumatic exposure veterans should take caution by having access to outreach programs in their community. Copeland et al. (2014) showed that African Americans/Blacks are highly susceptible to suicide thoughts and attempts and more need to be done to address that group. Copeland et al. suggested that African Americans' suicide attempts relate to demographic as well as social factors that should be politically addressed, particularly in those who suffers economic disparities. The author noted that social problems lead to suicide thoughts. Economic disadvantage creates an environment that makes people feel helpless and hopeless. The researchers' have been more on PTSD, while other areas of triggers seem to have been neglected.

Interpretation of Findings

The findings of the study are aligned with those in most of the literature. I reviewed that indicated contributing factors such as mental support is essential to deterring people from committing suicide. Other contributing factors such as the research questions were on employment, marital status, income, and mental impact on suicide thoughts. The data show some statistical significance, therefore, contributing factors need in-depth research for effective intervention that buys time to help people from suicide attempts. Mental health support is essential among African Americans, especially for those who does not have a family support network. Little or no support has been shown in the effort for African Americans who seek mental health support. As one of the research questions was to explore is support has statistically significant on suicide

attempt, which based on the results it clearly shows support does affect suicide thoughts. The figures for suicide thoughts and attempts are underestimated because a large percentage of attempted or suicidal thoughts are not reported or talked about in the African American community (Smith et al., 2013). Lack of mental health support shows to have a negative impact on suicidal thoughts and suicide attempts among African Americans (Smith et al., 2013). The literature indicated that mental health support can serve as a protective factor to mitigate suicide in African Americans and other groups. African American with little or no mental health support seems to have a greater chance of experiencing suicide thoughts and attempts (Smith, Selwyn, Wolford-Clevenger & Mandracchia, 2013). The literature shows large mental health support networks are needed from families, friends, and communities can help save lives (Smith et al, 2013). Mental health support is an open window for people to discuss their situations or express their feelings and work out conflict and find avenues other than taking their own life.

Mental health support is as important to deter suicide behavior as finding a treatment for heart attacks and strokes in the population. There are safeguards or safety nets for medical problems, but limited safety nets for suicide. Therefore, society needs to start building a chain of survival for suicide attempt to prevent suicide as it does for stroke and heart attack victims. The standard treatment for stroke and heart attack survival involves collaboration among emergency medical services and healthcare facilities. The same collaboration should exist in early detection for suicide attempters. Mental health support with guaranteed access in people communities when there is a possibility someone may take their life. Table 1 shows a great significance in suicide

thoughts even when controlling for the other three variables. In Table 3, support showed great strength as one of the variables that need great attention and focus. Some of the literature I reviewed in Chapter 2 had little to say about support. The result of the data showed support could possibly refrain people from suicidal attempts.

The research question of is there an association between employment status and suicidal attempt among the veterans especially the African American veterans? The statistical significance for Employment indicates strong evidence of its contribution to suicide with a p-value of .001. The question of Is there an association between marital status and suicidal attempt and among African American veterans? Marital Status with a small p-value that shows statistical significance of .003, which shows some influence on suicide thoughts. However, Support value shows most significant with a p-value of .001. Whereas, Income showing statistical significance as well. The research question of is there an association between education level and suicidal attempt among African American veterans? In contrast, education has a large p-value of .217 that is greater than > 0.05 , indicating a no statistical significance of influence as a contributing factor for suicide thoughts in this study. The variability widens the value at .217 for education showing that the independent variable is unequal across the range values. The other variables mentioned show influence on suicidal behavior as previously shown with other research. However, the result of this study for education does not fall align with some research findings. Pukay and Martin et al., (2012) reported that people with higher education tend to have fewer suicide thoughts to attempts. The finding of this study confirms that there is variability in some of the contributing factors to suicide thoughts

across groups. It shows the variability in the independent variable (support) and dependent variable (suicide thoughts) as a predictor of significance to suicidal behavior.

Most of the literature focuses on PTSD and other mental illness diagnoses in groups with little research on contributing factors in African Americans/Blacks and veterans to determine valid significance regarding education. According to Beccerra et al., (2016), the US primary focus is to prevent suicide in venerable groups, but 16% of veterans indicated their care needs had not been met regarding mental health issues (Pukay& Martin et al., 2012). Suicide attempts as Joiner, 2009 described have three areas of needs to be addressed are the desire to die, not being afraid to die and belongingness. Joiner expressed a connection of belonging to a community, which would help with discouraging the act of suicide. Access physical support by means of facilities and resources and emotional support from families, friends and communities as well as society is an import factor in addressing suicide. For prevention to be effective in any group, these three areas need to carefully assess and address with urgency. Therefore, the more connection people must others and their community provide a sense of being mattered and thus help those with suicide tendency to seek help and want to be alive to see another day.

Limitations of The Study. Using secondary data from NSDUH-2014 as a public use dataset diminishes the control of variables. The way the variables are formed or coded decrease the way the researcher can arrange them to run the analysis. The databased may have been used in similar ways to answer similar research questions that maybe presented in other research. The way the data collected may not be able to answer

all the research questions fully, but it gives an idea of how the variables are examined which may give insight to suicide behavior or thoughts. The data can be generalized to African Americans/Blacks that include veterans due to the fact it assessed their suicidal thoughts.

The accuracy of the results may be affected by missing data are not replaced by dummy coding to achieve the same result. In this, study careful procedures were followed to minimize biased through analyzing the data. The population focused on is only African Americans/Blacks and veterans, which limit the study to all other groups. More researchers need to focus on groups like Blacks and veterans. Although, this study is not exclusively veterans, but the data included both groups that gives a glance on suicide thoughts and attempts of the groups. The trustworthiness of the information depends on how honestly participants self-reported the information in the survey. The validity and reliability of the data depend on the precise and correct information and the tools used to gather the data. Since this data was collected using a computer-based system and self-reporting mechanism, data may have been introduced to some bias this can cause some bias. However, when repeating similar studies, the result should be aligned with little differences as it did with previous research.

Implication for Positive Social Change. Having high quality or multiple sources of social support is beneficial for great out comes to influence health in the aspects of quality of life of mental health population. The support individuals get from family, friends, community, and society impact their mental as well as their physical wellbeing. Forming a robust relationship with others socially and emotional serves as a protective

factor to suicide. Existing strong social networks for suicidal attempters and those thinking of suicide significantly can decrease the risk of morbidity and mortality rate. The construct of community as first prevention needs to be interwoven into established mental health networks. The implementation of suicidal interventions that lead to prevention will influence the lives of the individual, families, and society. Suicide is a preventable act and working in a networking arena will reduce the rate of suicide among all groups not only African Americans and veterans.

Recommendations. Research should be ongoing to figure out specific drivers to suicidal thoughts and attempts. If society addresses some of those contributing factors to provide protecting factors that people can use to prevent engaging in suicidal behavior will save many lives. Understanding the mechanisms and associations of suicide attempts give insight of design interventions that can be implemented to save lives. Providing effective tools such as the budding system that serves as an internal network of Rapid Responders. Rapid Responders teams would be people with mental health skill sets which could at least one family member to provide people with immediate help. Suicides as a phenomenon that although it is complex can be researched a methodological way to provide different solutions. There need to be more health professionals interested in Suicidology to figure out triggers that will help those who cannot see beyond the thought of suicide attempts. More mental health centers need to be placed in communities that provide easy access and prevent people from waiting too long for access, the waiting may lead to a full-blown crisis.

Defining suicide as a society's problem will help awaken the public across communities. A strong message needs to be sent out regarding there is no shame to mental health needs because suicide is everyone's problem. The emphasis needs to be on treatment and engagement in conversation. The discussion on ways society can play a responsible role in providing adequate access to community resources. First responder care for mental illness in a person's own community is where to begin to stop the cycle of suicide. Promoting public awareness can be through generating campaigns, mass advertisement through newspapers, social media, TV, radio, and information in malls, churches and barbershops or beauty shop — these areas are where people generally have time to pause and absorb information. Highlighting triggers to suicide alerts the public of those who are maybe suffering from suicide thoughts. Knowing the signs to look for introduces early treatment. Planning talk shops on suicide in communities' churches and schools allow for open discussions and solutions.

Understanding suicidal behavior is the key to interrupts the cycle of suicide. The long-term negative effect of disparities may have those in early stages of suicidal acts thinking that is their only means of dealing with life's problems. Addressing basic support such as access to decent wages and adequate housing help people who are walking a thin line between life or death. Sharing information from multi facilities regarding people circumstances can help prevent a tragic death. The code of suffering in silence with the thought of keeping suicide thoughts or attempts as a secret should not be a common place. Instead creating a platform for those who are thinking about suicide should be one

of acceptance from society. A well-established community with social programs and managed mental health would capture those that are in trouble before it is too late.

Conclusion. Overall, the data shows suicide is one area that needs a lot of attention, which can start before suicide attempt occurs. Some interventions are effective to prevent suicide. The early the individual is identified as being at risk, he/she should be placed on a monitoring watch within his or her own suicide prevention network in their own community, and if hospitalization is necessary, then it can be taken care of from the community that automatically connects people to the mental health care system. The emphasis of not placing shame and stigma on suicide will allow people to know it is ok to reach out for help. More outreach is needed in communities to discuss suicide and the actions to take with resources readily available in the community for prevention.

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