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Factors influencing Hispanic soldiers seeking treatment for alcohol abuse : secondary analysis of the Army Study to Assess Risk and Resilience of Servicemembers (STARRS)

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FACTORS INFLUENCING HISPANIC SOLDIERS SEEKING TREATMENT FOR

ALCOHOL ABUSE: SECONDARY ANALYSIS OF THE ARMY STUDY TO ASSESS

RISK AND RESILIENCE OF SERVICEMEMBERS (STARRS)

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FACTORS INFLUENCING HISPANIC SOLDIERS SEEKING TREATMENT FOR ALCOHOL ABUSE

A DISSERTATION

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Abstract

This study examined factors that influenced whether Hispanic soldiers will elect to seek treatment for alcohol abuse. The data for this study were collected using archival data from the Army Study to Assess Risk and Resilience in Servicemembers (STARRS) survey conducted between the years 2011 and 2013. The STARRS dataset consisted over 21,000 surveys but for this study the sample size was specific to Hispanic soldiers with alcohol abuse (n= 917). The impact of seven independent variables on the dependent variable of treatment seeking was examined in the final statistical model. The seven independent variables examined were primary language, gender, marital status, age, immigrant status, psychological distress, and confiding in partners. To analyze the data, this study used a binary logistic regression to examine the outcome variable, treatment seeking in Hispanic soldiers with alcohol abuse. The results of the binary logistic regression analysis demonstrated that from the seven independent variables under consideration, only psychological distress and gender influenced treatment seeking. The mathematical model accurately classified 71.3% of the cases.

Keywords: Hispanic, soldiers, alcohol abuse, treatment seekin

Chapter I-The Problem and Justification of the Study

High rates of alcohol abuse continue to affect many individuals in the United States. According to the Substance Abuse and Mental Health Services Administration (SAMHSA), in 2013, an estimated 17.0 million individuals, 12 years or older, in the United States were dependent on or abused alcohol (SAMHSA, 2014).

Unfortunately, alcohol abuse impacts many in the United States military as well. According to the National Institute on Drug Abuse, personnel in the United States military are reported to have heavier use of alcohol, tobacco and prescription drugs when compared to civilians (NIH, 2013). The percentage of active duty personnel who engaged in heavy alcohol use increased significantly from 1998 to 2008 from 15% to 20 % and binge drinking increased by 12 %, from 35 % to 47 % (Bray, Brown, & Williams, 2013; NIH, 2013). A study found that in a group of American military veterans who were admitted to treatment for substance abuse over half identified alcohol as the concerning substance. Despite alcohol being a substance of concern in the military population, many service members struggling with alcohol abuse will not seek treatment (Center for Behavioral Health Statistics and Quality, 2010)

In the United States, the Hispanic population also has heavier use of alcohol, but is less likely than non-Hispanic whites to seek treatment (NIH, 2013). In a comparison across key national surveys Hispanics, along with non-Hispanic American Indians, had the hightest prevalence of binge drinking in the past year, with more than a quarter of Hispanics reporting binge drinking twelve or more times per year, having notably high estimates of binge drinking across the surveys (McKinney & Caetano, 2016). Hispanics have low rates of treatment seeking for alcohol and substance use, but when reporting receiving treatment, Hispanics have higher treatment attrition rates than non-Hispanic whites and have reported lower service satisfaction

rates, low treatment quality and more unmet needs in comparison to other racial/ethnic groups (Mancini, Salas-Wright, & Vaughn, 2015). A study examining documented care for unhealthy alcohol consumption across race/ethnicity in the Department of Veteran's Affairs healthcare system found that Hispanic Veterans had the lowest prevalence of documented alcohol related care (Williams, Bradley, Gupta, & Harris, 2012).

Marriage and Family Therapists are encountering a growing general population and a specific Hispanic military population with alcohol use problems. Consequently, the increasing demand for alcohol abuse treatment, in particularly vulnerable populations, suggests dedicated therapeutic attention and warrants focus on the factors contributing to alcohol abuse. The purpose of this study was to identify factors that influence the likelihood for Hispanic soldiers to seek treatment for alcohol use.

Statement of the Problem

At 9.8%, Hispanics have the highest rate of serious use and dependence of alcohol and substances in the United States in comparison to whites, 9.2%, and blacks, 8.1 percent (Warner et al., 2006). Research has shown that most Hispanics with substance use also have cormorbid alcohol use, yet the Hispanic population is less likely to seek treatment for alcohol and substance use problems than non-Hispanic whites (NIH 2013; Warner et al., 2006).

Service members in the United States military commonly abuse alcohol. 40% of United States military veterans have a life time history of alcohol use disorder (Fuehrlein et al., 2016). About 50% of returning service members are in need of mental health treatment for alcohol and substance abuse but only half receive adequate care (SAMHSA).

Past studies show Hispanic veterans had significantly higher lifetime rates of alcohol abuse or dependence than other racial/ethnic groups (Ruef, Litz, & Schlenger, 2000). No

research has examined treatment seeking among Hispanic soldiers. It is important that research is conducted to close the gap of knowledge regarding Hispanic soldiers and alcohol abuse. The purpose of this study was to identify factors that influence the likelihood for Hispanic soldiers to seek treatment for alcohol abuse. The findings of this study could result in an improvement of cultural awareness and treatment in mental health towards this specific population.

Background of the Problem

Hispanics are more likely to need treatment for alcohol abuse when compared to non-Hispanics and are less likely to receive treatment. The literature states that the Hispanic population is faced with barriers when seeking mental health treatment including treatment for alcohol use. These challenges include factors such as language barriers due to Spanish often being the primary language among this population. When receiving treatment, Hispanics have higher treatment attrition rates than non-Hispanic whites and have reported lower service satisfaction rates, low treatment quality and more unmet needs in comparison to other racial/ethnic groups (Mancini, Salas-Wright, & Vaughn, 2015). In addition to the possible obstacles the Hispanic community is faced with, there is a shortage of culturally competent clinicians who can communicate with Spanish-speaking individuals like those in the Hispanic community, resulting in inequalities in access to healthcare and health disparities.

Alcohol abuse impacts United States service members, their families, their units and their communities. Service members in the United States military commonly abuse alcohol. In fact, reports show 40% of United States military veterans have a life time history of alcohol use disorder (Fuehrlein et al., 2016). Alcohol misuse has undoubtedly been associated with poorer scores for general health, lower social functioning and role limitations due to physical health problems in military members (Waller, McGuire, & Dobson, 2015)

The Substance Abuse and Mental Health Services Administration (SAMHSA) reports an estimated 23.4 million veterans and 2.2 million service members in the United States. From those 2.2 million service members, about 50% of returning service members are in need of mental health treatment and only half received adequate care. With only half receiving the adequate care, many of the service members are left untreated for alcohol abuse. According to the 2012 Demographics Report prepared for the U.S. Department of Defense, 11.3% of active duty, 10.1% of reserve members, and 12.2% of the veterans are of Hispanic ethnicity. Having the data laid out provides some limited insight into the scale of the problem but cannot characterize the extent of the problem alcohol abuse has on individuals, families or other groups among us. Furthermore, the impact is clear when concentrating on a specific population, in this case, Hispanic soldiers.

Biopsychosocial Framework

The biopsychosocial framework is influenced by the idea of nature versus nurture and emerges from the ecological approach which focuses on humans' evolution and adaptation as they interact with their environment (White & Klein, 2015). The biopsychosocial model assumes that the interactions between an individual's biology (genetics), psychology (mental health/personality), and social world (sociocultural environment) impact the way one experience their health or illness. According to the biopsychosocial framework, all three factors are assumed to construct the development of an individual, concluding that not one factor is adequate to do so on its own (Lakhan, 2006).

Dr. George Engel, one of the developers of the biopsychosocial approach, believed that the biomedical model, based on positivistic epistemology, was narrowly focused with cause and effect thinking, did not consider addressing multiple levels of influence from societal to

molecular, nor did it fully address a patient's' experiences (Borrell-Carrió, Suchman, & Epstein, 2004; Engel, 1992; Smith, 2002). The purpose of the model was to move away from the linear cause and effect tendencies of the biomedical model. As a result, the biopsychosocial model expands on the ecological framework. The biopsychosocial model views human functioning as being influenced by the environment as well as biological, psychological and social factors. Engel believed that no condition could be explained or determined by one single factor (cause and effect), shifting to a post-positivistic view (Engel, 1992; Ghaemi, 2009). Like systems theory, the biopsychosocial model focuses on multiple levels, emphasizes holism and avoids the assumption of linear causality.

In considering the biopsychosocial model's applicability to alcohol abuse among Hispanic soldiers, the complexities of each description present significant parallels. Alcohol abuse is presently examined and treated through biological, psychological, medical and social approaches. Often, one method is chosen over the others, not allowing alternative options or perspectives to become acknowledged. When addressing a complex issue such as alcohol abuse between both the Hispanic and military population, the proposed biopsychosocial model can be an appropriate modality to use.

The biopsychosocial approach can be applied to the Hispanic military personnel by taking the multidimensional factors into consideration. For this specific population those psychological and sociological factors affecting substance abuse may include acculturation issues, language barriers, social stability, discrimination, community, peers and so on (Masiak, 2013). Taking all of these factors and working on them one at a time can be more efficient than a reductionist model, such as the biomedical model, which only takes the biology factor into consideration. For example, the biomedical model may view a predisposition to substance abuse

through genetics, without regarding any other influential factors that this minority group might be impacted by. This study aimed toward understanding how multiple systems impact Hispanic soldiers to seek treatment for alcohol abuse. Viewing this research through the lens of the biopsychosocial model will allow for a clearer understanding, consideration and awareness of the multiple levels influencing Hispanic soldiers to seek treatment for alcohol abuse.

Justification for the Study

As of July 2013, the U.S. Census Bureau reported approximately 54 million Hispanics living in the United States, the fastest growing minority group in the United States, making up 17% of the total population of the U.S. (Office of Minority Health & Health Equity, 2015). Hispanics continue to be the fastest-growing minority population in the United States, resulting in a large number of service members of Hispanic ethnicity serving in the U.S military (Office of Minority Health & Health Equity, 2015). The impact of alcohol has on both the military and the Hispanic community is clear (Ruef et al., 2000). This dissertation has practical and clinical relevance. First, Marriage and Family therapists gained knowledge of the Hispanic military population in regard to seeking treatment for alcohol use in order to minimize health disparities among this underserved population. Second, this study raised awareness for Hispanic soldiers and allow for clinicians in general to become more culturally aware and competent when working with Hispanic soldiers. Third, this research added to the existing literature on alcohol abuse regarding Hispanic individuals in the United States, alcohol abuse among service members of the United States military and alcohol abuse in the Unites States as a country. Fourth, this study examined the unique intersection of these three specific populations in order to examine what factors influenced Hispanic soldiers to seek treatment for alcohol abuse, minimizing the gap in the literature in reference to Hispanic soldiers and alcohol abuse.

With the information provided, researchers, scholars, therapists, the military, mental health, as well as the general public will be able to use the knowledge provided by this study to make better decisions when addressing the issue of alcohol abuse among this specific population. In addition, this study will allow for improvement in the mental health field as well as guide clinicians towards minimizing the health disparities that exist in the military and Hispanic community by becoming aware of which factors contribute towards them seeking treatment and providing services that meet the specific needs of this population. Being able to recognize those factors will serve towards providing culturally competent mental health treatment for Hispanics in the military and Hispanics in the general population.

Research Questions

This study will examine which variables have the most influence on treatment seeking among Hispanic soldiers utilizing archival data from the Army Study to Assess Risk and Resilience in Servicemembers (STARRS) survey. Based on the selected variables from the dataset, the following research question will be examined in this study:

1. Does primary language, gender, marital status, age, immigrant status, comorbid disorders, concern for loss of confidentiality, being perceived as weak, treatment from others, feeling embarrassed and encouragement from partners influence Hispanic soldiers to seek treatment for alcohol abuse?

From these research questions, two hypotheses were generated.

H_0 = There will be no significance in influence on primary language gender, marital status, age, immigrant status, comorbid disorders, concern for loss of confidentiality, being perceived as weak, treatment from others, feeling embarrassed and encouragement from partners on Hispanic soldier's attempts to seek treatment for alcohol abuse.

H_1 = Primary language gender, marital status, age, immigrant status, comorbid disorders, concern for loss of confidentiality, being perceived as weak, treatment from others, feeling embarrassed and encouragement from partners will influence Hispanic soldier's attempts to seek treatment for alcohol abuse.

Limitations

Three limitations may affect this study and its outcomes. One limitation is the sample size. Although the overall survey sample size is large at 21,449 surveyed soldiers, the actual sample population of soldiers that are Hispanic is 3,210, not nearly as large as the complete population. Therefore, broad-based generalizations about factors influencing Hispanic soldiers to seek treatment for alcohol abuse can only be projected from about 14.9 % of the total population surveyed of 21,449.

Another limitation of this study is the amount of missing data. Although the STARRS survey provides a large amount of data, there is considerable missing data. Because the STARRS was a self-administered survey, soldiers taking the survey sometimes left survey questions blank, not answering all items of the survey, resulting in an incomplete survey. Consequently, data analysis results may have been substantially altered if all questions were answered, resulting from a collection of complete data.

Based on a limited number of interviews with current and prior active duty service members, it is widely recognized that service members often do not answer questions associated with mental health when there is a perception of career impact. The Army STARRS survey was designed to assess areas including soldiers' psychological and physical health. The survey included questions regarding the soldiers' psychological resilience, mental health, and risk for self-harm. Due to the nature of the questions being asked in this survey, another limitation to the

study may include responses that do not completely reflect the extent of the desire for treatment. Many service members are concerned about the linkage of mental health and their careers. Consequently, the reported number of unanswered questions may have modified the results.

Definitions

The following is a list of terms with their definitions to facilitate the reader in understanding this study.

Alcohol abuse. The term used to describe an individual who is not dependent on alcohol but has a drinking problem that may result in issues at home, school, work and/or dangerous legal or social problems. (National Institute of Health, 2018)

Army STARRS. The Army Study to Assess Risk and Resilience in Service members (STARRS) is a survey conducted over the period of 3 years (2011-2013) at multiple deployment installations (Ursano, Murray, Ronald & Heeringa, 2015).

Biopsychosocial model. A multi-systemic model of health that explains the biological, social, and psychological aspects of one's life have an impact on illness and vice versa (Engel, 1992).

Hispanic. The term "Hispanic," is used to describe an ethnicity and not a race. One usually identifies as a Hispanic if they, or their ancestry, are from a country where Spanish is spoken (Oxford Dictionary, 2016).

Service member. The term "Service member" means a member of the "uniformed services." These includes the armed forces (Army, Navy, Air Force, Marine Corps, and Coast Guard), the Commissioned Corps of the National Oceanic and Atmospheric Administration (NOAA) and the Commissioned Corps of the Public Health Services (U.S Department of Veterans Affairs, 2014).

Soldier. A person who serves in the Army ("SOLDIER | definition in the Cambridge English Dictionary," n.d.).

Substance abuse. The action of injection, ingestion, or inhalation of an object that is damaging to the health of an individual, usually altering the mind and causing impairment, clinically and functionally (Harrington, 2014; Wulffson, 2015).

Treatment seeking. "Sequence of remedial actions that individuals undertake to rectify perceived ill-health (The University of British Columbia, 2015)."

Chapter II-Literature Review

Hispanics make up the largest and most rapidly growing minority group in the United States. More than 50 million people, or 17 % of the population in the United States is Hispanic ("Alcohol and the Hispanic Community," 2015). At 9.8 %, Hispanics have the highest rate of serious use and dependence of substances in the United States in comparison to whites 9.2 %, and blacks, 8.1 % (Warner et al., 2006). Research has shown that most Hispanics with substance use also have comorbid alcohol use, yet the Hispanic population is less likely to seek treatment than non-Hispanic whites (NIH 2013; Warner et al., 2006).

An average of one in every ten Hispanics are dependent on alcohol at some point in their life. Over 33% of Hispanics, compared to 22.8% of whites, will have repeating or persistent alcohol problems ("Alcohol and the Hispanic Community," 2015). Alcohol abuse affects Hispanics in the military as well. The number of Hispanic service members has rapidly risen in recent decades in the United States. Hispanics make up 12% of active-duty personnel, three times the amount in 1980 (Parker, Cilluffo, & Stepler, 2019). Hispanic service members have exhibited high rates of problematic drinking, and being Hispanic has fallen under certain military demographic groups that have been found likely to engage in frequent drinking (Schumm & Chard, n.d.).

Research shows that treatment seeking among individuals with alcohol abuse is substantially low. Most individuals with alcohol problems do not seek or receive treatment ("Substance Abuse and Mental Health Services Administration & Office of Applied Studies," 2009). Similar patterns exist in Hispanic service members with alcohol abuse (Williams, Lapham, et al., 2012).

Various factors have been found to influence treatment seeking among Hispanics, military and the general population. Among Hispanics, primary language and immigrant status influence treatment seeking. In the military population comorbid disorders, concern for loss of confidentiality, being perceived as weak, feeling embarrassed and encouragement from partners to seek treatment and in the general population gender, marital status, age, and pressure influence treatment seeking.

Although there is a rapid increase in Hispanic service members, there is a limited amount of literature regarding the factors that influence Hispanic soldiers to seek treatment for alcohol use. The increasing demand for alcohol and substance abuse treatment in particularly vulnerable populations suggests dedicated therapeutic attention, and warrants focus on the factors contributing to the alcohol abuse epidemic.

This study was conducted to serve multiple purposes: to minimize the gap in the literature in reference to Hispanic soldiers and alcohol abuse by contributing to the existing knowledge and literature on the Hispanic military population and treatment for alcohol abuse, and to serve as a tool to raise awareness for this specific population to allow clinicians to become more culturally conscious. This study intends to investigate the relative influence of primary language, gender, marital status, age, immigrant status, comorbid disorders, concern for loss of confidentiality, being perceived as weak, treatment from others, feeling embarrassed and encouragement from partners on seeking treatment for alcohol abuse among Hispanics soldiers.

Alcohol Abuse

As the third leading lifestyle cause of death in the nation, in the United Stated 17.6 million people (one in every twelve adults) suffer with alcohol abuse or dependence. Hispanics

have the highest rate of alcohol abuse and are more likely to consume higher volumes of alcohol than other racial/ethnic groups.

Several million Americans engage in binge drinking behaviors that may result in alcohol problems. An estimated 40% of hospital beds in the United Stated are being used to treat health conditions related to the consumption of alcohol. More than half of all adults have a family history of problem drinking or alcoholism ("The National Council on Alcoholism and Drug Dependence, Inc. (NCADD): Facts about Alcohol," 2018). In comparison to their counterparts who live in their country of origin, Hispanics living in the United States engage in higher rates of alcohol abuse and have higher rates of alcohol-related problems (Caetano, 2003; Caetano & Mora, 1988; Cherpitel & Borges, 2001; De La Rosa, Khalsa, & Rouse, 1990). When compared to civilians, military personnel have heavier use of alcohol, tobacco and prescription drugs (NIH, 2013).

Among the Hispanic military population. Frequent heavy drinking occurs among a significant amount of United States military personnel. Heavy drinking varies among ethnicities and certain military demographic groups.
High rates of engagement in problematic drinking has been found among Hispanic service members (Schumm & Chard, n.d.).

Using the National Veterans Readjustment Study, Ruef and colleagues found that Hispanic veterans have significantly higher lifetime rates of alcohol abuse or dependence and greater substance use dependence problems than other race/ethnic groups (Hispanics, 50.1%: Blacks, 35.8%: and Whites/others, 38.9%) . In comparison to blacks and whites/others, Hispanics also have higher current rates of alcohol use disorder (Hispanics, 15.2%: Blacks, 11.7%: and Whites/others, 10.9%). Researchers also found that Hispanic veterans of the Vietnam

era have higher rates of PTSD in comparison to veterans of other racial/ethnic groups. In addition to higher rates of PTSD, factors such as racism in the war zone, readjustment to their life after war and experience of more overall distress were all considered possible contributions towards alcohol and substance abuse among Hispanic service members (Ruef et al., 2000).

Among the general population. The National Survey on Drug Use and Health (NSDUH) found that in 2016, 136.7 million Americans reported current use of alcohol. Out of the 136.7 million Americans reporting current use of alcohol, binge alcohol use was reported by 65.3 million and heavy alcohol use was reported by 16.3 million. Although data collected showed that underage drinking was reported at a lower percentage in 2016, approximately two out of five young adults that completed the 2016 survey were binge alcohol users, and one out of ten were heavy alcohol users (Substance Abuse and Mental Health Services Administration, 2017).

According to the Substance Abuse and Mental Health Services Administration (SAMHSA), in 2013 an estimated 17.0 million individuals, twelve years or older, in the United States were dependent on or abused alcohol. Over 7% of American adults suffer from an alcohol use disorder and relapse rates are between 40-60% ("Alcoholism Treatment," 2018). In 2010, the Treatment Episode Data Set reported that alcohol treatment totaled 41% of the all substance abuse treatment ("Statistics on Drug Addiction," 2018). Alcoholism takes an estimated 216 lives every day and approximately 79,000 lives per year. In addition, an estimated $223.5 billion in alcohol related federal, state and local governments spend expenses. Alcohol related accidents are estimated to cost $14 billion per year ("Alcoholism Treatment," 2018).

Among the Hispanic population. Hispanics and non-Hispanic American Indians have the highest prevalence rate of binge drinking in the last past year, with more than a quarter of Hispanics reporting binge drinking twelve or more times per year, having notably high estimates of binge drinking. Additionally, Mexican Americans reported a higher prevalence of binge drinking in comparison to non-Hispanic whites and non-Hispanic blacks, and Hispanics have the highest rate of motor vehicle crashes related to alcohol consumption. Researchers compared substance use among different races/ethnicities using key national surveys that measure alcohol and drug use and estimates of present prevalence of substance use, abuse, dependence and treatment across race/ethnicity (McKinney & Caetano, 2016).

Hispanic and African American drinkers were substantially more likely than whites to account for social consequences of drinking and symptoms of alchohol dependence, indicating that there are racial/ethnic differences in alcohol related problems among current drinkers. Social disadvantages, specifically in the form of racial/ethnic stigma, played a significant role in the contribution to racial/ethnic differences in alcohol related problems. Furthermore, Hispanic and black drinkers were 1.5 times more likely than whites to indicate experiencing one or more social consequences, such as financial, relationship and employment problems as a result of drinking and symptoms of dependence. These findings resulted from a study assessing racial/ethnic disparities in relation to negative social consequences of drinking and alcohol dependence among black, white and Hispanic Americans, specifically if and how disparities relate to heavy alcohol consumption and pattern, and the extent to which social disadvantages such as poverty, unfair treatment, and racial/ethnic stigma may account for disparities (Mulia, Ye, Greenfield, & Zemore, 2009).

Rates of heavy drinking and alcohol related problems between 1984 and 1995 remained the highest among Hispanic men. Data for the study was collected from two nationwide probability samples of United States households, using one-hour interviews conducted in the interviewees home by trained interviewers. The first sample was conducted in 1984 and the second in 1995.

Results indicated an increase (between 1984 and 1995) in alcohol problems among Hispanic men. On the contrary, alcohol problems remained stable among white and black men. Specific findings showed that the rates of three or more alcoholic problems for men of each ethnic group for these two years were 12% and 11% for white men, 16% and 13 % for black men and a noticeable increase from 9% to 16% for Hispanic men. However, for women in all three ethnic groups alcohol problem prevalence remained stable and low. Caetano and Clark (1998) examined the trends in alcohol related problems among whites, blacks and Hispanic between the years 1984 and 1995.

Among the military population. Personnel in the United States military are reported to have lower levels of illicit drug use when compared to civilians, but heavier use of alcohol, tobacco and prescription drugs (NIH, 2013). A report conducted by the Center for Behavioral Health Statistics and Quality in 2010 found that in a group of American military veterans who were admitted to treatment for substance abuse, over half identified alcohol as the concerning substance (2010).

Data from a large nationally representative sample of United Stated veterans were collected to evaluate the prevalence of lifetime and past year alcohol use disorder (AUD), common psychiatric comorbidities associated with lifetime alcohol use disorder and parallels of lifetime and past year probable alcohol use disorder. The prevalence of lifetime alcohol use was

42.2% and past year probable alcohol use 14.8% and veterans with a lifetime alcohol use disorder have considerably high rates of lifetime and current anxiety and mood disorders, past suicide attempts, drug use disorder, and current suicidal ideation. This study found that over 40% of United States military veterans have a life time history of alcohol use disorder, furthermore veterans with a history of life time alcohol use disorder are also burdened with comorbid psychiatric issues such as elevated rates of suicidal attempts and ideation. Additionally, it was found that various socio-demographic characteristics, for instance male sex, lower education and younger age, and clinical characteristics, such as depression and trauma, are associated with an increased risk of developing an alcohol use disorder among this population. Researchers analyzed the data from the National Health and Resilience in Veterans Study (3157 veterans 21 years and older) and assessed life time alcohol abuse and dependence as well as correlates of alcohol use disorder which included psychiatric comorbidities, suicidality and demographic characteristics (Fuehrlein et al., 2016).

In comparison to the general population, there were fewer risky drinkers and abstainers in the military sample but more who drank at a lower risk level. Additionally, younger age groups, non-commissioned officers, lower ranks, reserve and veterans were more susceptible to alcohol dependence and harmful drinking. Alcohol misuse was undoubtedly associated with poorer scores for general health, lower social functioning and role limitations due to physical health problems in military members. Researchers used a logistic regression to compare drinking behaviors between the military personnel sample and the general population, examining for risky drinkers, low risk drinkers, and abstainers and conducted linear regression models to assess the association between alcohol misuse and social functioning scores (Waller et al., 2015).

The percentage of active duty personnel who engaged in heavy alcohol use increased significantly from 1998 to 2008 from 15% to 20%. Binge drinking also increased by 12% from 1998 to 2008, from 35% to 47%. An increase in serious consequences correlated with intensity of drinking, showing binge drinkers with higher rates of serious consequences when compared to non-binge drinkers in the past month and heavy drinkers showed more than double the rate of serious consequences than binge drinkers. The study also found that combat exposure has a significant impact on alcohol use, showing that no combat exposure resulted in a less likelihood of heavy or binge drinking, and high combat exposure was heavily associated with increased rates of alcohol use, further illustrating the impact alcohol has on military personnel. To collect the data, the population-based Department of Defense health behavioral surveys were reviewed from the year 1998-2008. Researchers examined the evolution of binge and heavy drinking in United States active duty personnel and used a two-stage probability design, having a random sample selected from 60 military installations worldwide in the first stage, and stratifying active duty personnel by gender and pay grade and selecting them randomly in the second stage. (Bray et al., 2013).

Treatment Seeking for Alcohol Abuse

Despite the continuity of high rates for alcohol abuse in the United States, help seeking behaviors for alcohol abuse remain low in the general, military and Hispanic population. Although it is clear that alcohol abuse is a nationwide concern, many do not seek treatment. Most individuals with alcohol problems do not seek or receive treatment ("Substance Abuse and Mental Health Services Administration & Office of Applied Studies," 2009). As little as 10.9% of individuals in need for specialized treatment received care ("Statistics on Drug Addiction," 2018).

Among the Hispanic military population. Only one study has examined Hispanic service members and treatment seeking for alcohol problems. Williams and colleagues examined the variation in documented care for unhealthy alcohol consumption across race/ethnicity in the Department of Veteran's Affairs healthcare system. Results showed Hispanics have the lowest prevalence of documented alcohol related care. Of all the eligible patients who participated in the study, only 32% reported alcohol related care, showing the adjustment prevalence to be 35.3% for black, 28.9% for white and 27.3% for Hispanic participants, resulting in significant differences in documented alcohol related care among the three groups. Williams and associates utilized secondary quality improvement data collected for the VA Office of Quality and Performance between July 2006 and June 2007. A sample of black, Hispanic and white VA outpatients who screened positive for unhealthy alcohol use was examined for the study. The prevalence of alcohol related care among these three groups was estimated using logistic regression models (Williams, Lapham, et al., 2012).

Among the general population. The general population in the United Stated has low rates of treatment seeking for alcohol abuse. Many individuals who meet the lifetime criteria for alcohol or illicit drug abuse report never having sought help and those who do seek help often report lengthy delays of one to seven years to initiate help seeking behaviors (Gayman, Cuddeback, & Morrissey, 2011). According to the literature, these variables have shown a significant influence on treatment seeking for alcohol abuse in the general population: Gender, marital status, age and pressure.

The National Epidemiologic Survey on Alcohol and Related Conditions surveyed 43, 093 persons about their alcohol use and treatment seeking. Of the 30.3% who met the criteria for alcohol use disorder, only 14.6% reported ever seeking treatment, including self-help group

participation. Participants found to be more likely to utilize services for alcohol treatment were male, divorced/separated, older. Additional factors contributing towards treatment seeking include living in the West/Midwest, lower educational levels, income and greater mood, personality and drug use disorders. Researchers found that the most common reasons for not having sought treatment included the belief that one should have the capability to handle their drinking problem themselves, believing that the problem will improve on its own, the belief that one can stop drinking on their own and thinking that their alcohol use problem was not severe enough to require treatment (Cohen, Feinn, Arias, & Kranzler, 2007).

Individuals struggling with alcohol problems often note receiving pressure from a mixture of sources. A study examined whether there is a positive association between receipt of pressure and seeking treatment. Current drinkers from the National Alcohol Survey from 1984 to 2005 were selected for the study. Results for this study showed that the rate of help seeking in the past year was 1.6% across all of the surveys. Alcohol Anonymous was found to be the predominant source for those who sought help with mental and physical health being the second most common source sought. Help seeking behaviors were reported to be accompanied with pressure in 80% of those seeking help in 1984 and 1990, 57% in 1995, 64% in 2000 and 61% in 2005, illustrating the association between past year receipt of pressure and help seeking (Korcha, Polcin, Kerr, Greenfield, & Bond, 2013).

Among the Hispanic population. Minority groups have lower rates of treatment seeking behaviors. Minority groups including Hispanics are also less likely to engage, retain and be satisfied with alcohol related care. Hispanics and African Americans are less likely than whites to seek treatment for alcohol abuse. This has been found to be especially true among those with

higher levels of alcohol abuse and dependence (Chartier & Caetano, 2011; Schmidt, Ye, Greenfield, & Bond, 2007).

In the United States, the Hispanic population has continued to manifest significantly higher rates of substance but is less likely than non-Hispanic whites to seek treatment (NIH, 2013). The Hispanic population struggles with alcohol abuse yet rates for treatment seeking in this population are low. The Hispanic population is faced with barriers when seeking treatment. These challenges include factors such as language barriers due to Spanish often being the primary language among this population. When receiving treatment, Hispanics have higher treatment attrition rates than non-Hispanic whites and have reported lower service satisfaction rates, low treatment quality and more unmet needs in comparison to other racial/ethnic groups (Mancini et al., 2015). Primary language and immigrant status influence treatment seeking for alcohol abuse among Hispanics.

Non-Hispanic Caucasian adolescents without the diagnosis of substance use are more likely to obtain treatment than Hispanics and African Americans. Furthermore, findings showed a difference in race/ethnicity regarding receipt of service at higher levels of substance use demonstrating that non-Hispanic Caucasians were more likely to get treatment for substance use than Hispanics or African Americans. The samples for this study were male serious juvenile offenders (N= 638) and were drawn from the longitudinal Pathways to Desistance Study. Mansion and Chassin (2016) conducted this study to test whether race/ethnicity affects the relationship between substance abuse and the receipt of treatment services.

Substance use and service utilization patterns of United States-born and foreign-born Hispanics in the United States were examined by Mancini and colleagues. Data for this study were collected from wave one (2002-2003) and wave three (2004-2005) of the National

Epidemiologic Survey on Alcohol and Related problems and the data were analyzed using a series of logistic regressions models. The lifetime prevalence of service use among US-born and immigrant Hispanics was compared to non-Hispanic white substance users. Researchers also compared utilization of services among US-born and Hispanic immigrant substance users in the United Sates. Researchers found that the lifetime prevalence of substance use was higher among US-born Hispanics than Hispanic immigrants. Additional findings showed that Hispanic substance users were less likely to utilize any form of substance abuse treatment than non-Hispanic white substance users, immigrant Hispanic substance users were less likely to receive substance use treatment than US-born Hispanics, and Hispanic immigrants were less likely to use treatment services from health care providers when compared to non-Hispanic whites (Mancini et al., 2015).

Among the military population. Existing studies on alcohol use and treatment seeking in the military population tend to combine alcohol and substance abuse. Personnel in the United States military are reported to have heavier use of alcohol, tobacco and prescription drugs, but lower levels of illicit drug use when compared to civilians, but heavier use of alcohol, tobacco and prescription drugs (NIH, 2013). A report conducted by the Center for Behavioral Health Statistics and Quality in 2010 found that in a group of American military veterans who were admitted to treatment for substance abuse, over half identified alcohol as the concerning substance (2010). Comorbid disorders, concern for loss of confidentiality, being perceived as weak, feeling embarrassed and encouragement from partners to seek treatment show an impact on treatment seeking behavior for alcohol abuse among service members.

Often distressed service members and veterans will not seek mental health treatment, despite the availability of services available. Alcohol and substance abuse in association with

negative views towards treatment may further impact treatment-seeking behavior. Veterans with co-occurring substance use disorder (SUD) reported fewer positive attitudes towards seeking help in comparison to veterans without comorbid SUD. In addition, the evaluation of treatment was noticeably lower among veterans with SUDs. Researchers examined the attitudes towards seeking mental health treatment among a sample of 143 male OEF/OIF veterans who were diagnosed with posttraumatic stress disorder with or without a substance use disorder. The participants completed the Attitudes Towards Seeking Professional Psychological Help-Short Form and baseline assessments. Data were analyzed using ANCOVA to compare treatment attitudes among veterans with (N=34) and without (N=109) substance use disorders. A post-hoc ANCOVA was conducted to compare the average on the two Attitudes Towards Seeking Professional Psychological Help-Short Form subscales, Openness to Seeking Treatment, and Value/Need in seeking treatment (Meshberg-Cohen, Kachadourian, Black, & Rosen, 2017).

An evaluation of factors related to treatment utilization for alcohol abuse among 585 returning National Guard Service Members in Michigan between February 2009 and September 2009 was conducted. Service members completed an anonymous survey assessing their mental health as well as substance use problems, past mental health experiences and functional status. Results found that 36% of the service members who completed the survey met the criteria for alcohol misuse and 31% reported receiving any mental health service in the past year. Factors influencing participants on their decision to seek treatment for substance abuse most commonly included service members not wanting their misuse of alcohol to be on their record (30%), concern with being perceived as weak (24%), concern on being treated differently by their leaders (22%) and embarrassment (22%). In addition, service members with alcohol misuse commonly claimed encouragement from their partner/spouse influenced their decision to seek

treatment for alcohol misuse. The outcome variables the investigators examined were alcohol misuse and receipt of any mental health service within the last year. Demographic, military characteristics, and mental health symptoms were included in the survey as well. Bivariate analyses were conducted (Burnett-Zeigler et al., 2011).

Biopsychosocial Framework

This study used the biopsychosocial perspective to conceptualize and examine the factors that influenced Hispanic soldiers seeking treatment for alcohol abuse. In reviewing the literature, multidimensional factors were considered in an attempt to examine the impact that multiple factors have on treatment seeking in comparison to reductionist models. The existing literature on treatment seeking and alcohol abuse among the general, military, Hispanic, and Hispanic military all showed to be impacted by biological, psychological and social factors, allowing us to understand how multiple systems impact Hispanic soldiers to seek treatment for alcohol abuse. Examining the current study through a biopsychosocial lens allowed for a clearer understanding, consideration and awareness of the multiple levels influencing Hispanic soldiers to seek treatment for alcohol abuse.

Conclusion

The purpose of this study was to examine the influence that primary language, gender, marital status, age, immigrant status, comorbid disorders, concern for loss of confidentiality, being perceived as weak, feeling embarrassed and encouragement from partners on Hispanic soldiers seeking treatment for alcohol abuse.

Primary language and immigrant status have been shown to influence treatment seeking for alcohol abuse in the Hispanic population (Mancini et al., 2015). Research has found that gender, marital status, age and pressure are influencing factors in the general population in

seeking treatment for alcohol abuse (Cohen et al., 2007; Korcha et al., 2013). Comorbid

disorders, concern for loss of confidentiality, being perceived as weak, feeling embarrassed and

encouragement from partners to seek treatment show an impact on treatment seeking behavior

for alcohol abuse among service members (Burnett-Zeigler et al., 2011; Meshberg-Cohen,

Kachadourian, Black, & Rosen, 2017). A study found that Hispanics have the lowest prevalence

of documented alcohol related care but there is a gap in the literature regarding influences on

treatment seeking for alcohol abuse in Hispanic soldiers (Williams, Lapham, et al., 2012).

Chapter III-Methods

Although service members and Hispanics show high rates of alcohol abuse, the rate of treatment seeking is low. Literature on alcohol abuse and treatment seeking exists for both the military and Hispanic population but there is limited literature on Hispanic service members and treatment for alcohol abuse, specifically factors influencing treatment seeking for alcohol abuse among Hispanic soldiers. Using existing data from the Army Study to Access Risk and Resilience among Service members (STARRS), the purpose of this study was to identify factors that influence the likelihood for Hispanic soldiers to seek treatment for alcohol use.

This study used a binary logistic regression design to examine which variables have the most influence on treatment seeking among Hispanic soldiers. The variables of gender, marital status, age, immigrant status, psychological distress, concern for loss of confidentiality, being perceived as weak, treatment from others, feeling embarrassed and confiding in partner on the likelihood of seeking treatment for alcohol abuse were assessed. While the literature showed comorbid disorders and encouragement from partners as significant influences on treatment seeking for alcohol abuse, the STARRS does not have those specific variables. Therefore, to measure comorbid disorders, this study used "psychological distress." To measure encouragement from partners this study used "confide in partner." Both of these alternative variables from the STARRS dataset remained consistent with the literature.

Data Collection

The data for this study were derived from a secondary dataset, publicly available through the Interuniversity Consortium for Political and Social Research (ICPSR). The study used data from the All Army Study (AAS) component from the existing Army Study to Access Risk and Resilience among Service members (STARRS) administered by the Interuniversity Consortium

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for Political and Social Research (ICPSR). The Army Study to Assess Risk and Resilience in

Service members (STARRS) is an extensive study of mental health risk and resilience among

military personnel. The AAS component of the Army STARRS dataset examined the

psychological and physical health of soldiers. Combat exposure, encounters during training and

non-combat operations, and life and work experiences across all phases of Army service,

including data on soldiers' psychological resilience, mental health, and risk for harm is also

studied in the AAS.

Participants

The participants from the secondary dataset, the STARRS, used for this study were active

duty and activated National Guard and Reserve members of the United States Army. The

STARRS survey was conducted in a span of roughly two years, between 2011 and 2013, at

multiple deployment installations. A total of 21,449 U.S active duty soldiers anonymously

completed the STARRS survey, 14,909 (69.5%) Anglo and 3,210 (15.0%) Hispanic. The

participants for this study consisted of 917 soldiers from the STARRS dataset who identified as

Hispanic and abuse alcohol.

Measuring Instruments of STARRS Survey Items

STARRS data were collected through computer assisted self-interviews and paper and

pencil interviews. The variables in the STARRS study were measured using the following

instruments: Joint Mental Health Advisory Team 7 (J-MHAT 7) Operation Enduring Freedom

2010 Afghanistan, Patient Health Questionnaire (Spitzer, Kroenke et al. 1999), Sheehan

Disability Scale (Sheehan, Harnett-Sheehan et al. 1996), Brief Insomnia questionnaire (Kessler,

Coulouvert et al. 2010; Roth, Coulouvart et al. 2011), Graded Chronic Pain Scale (Von Korff,

Ormel et al. 1992), Pain Catastrophizing Scale (Sullivan MJ 1995), World Health Organization

(WHO) Composite International Diagnostic Interview (;Kessler and Ustun 2004), Adult ADHD Self-Report Scale (Kessler, Adler et al. 2005; Adler, spencer et al. 2006; Kessler, Adler et al. 2007), Composite International Diagnostic Interview Screening Scale (Kessler, Farley et al. 2010), Columbia Suicide Severity Rating Scale (Posner, Oquendo et al. 2007;Posner 2009), Hurricane Katrina Community Advisory Group (Katrina Baseline Survey), Deployment Risk and Resilience Inventory (King L 2006; Vogt, Proctor et al. 2008), Life Events Questionnaire (Brugha and Cragg 1990), 2008 Department of Defense Survey of Health Related Behaviors among Active Duty Military Personnel (RTI International 2008), National Comorbidity Survey Replication (Kessler, Berglund et al. 2004; Kessler and Merikangas 2004), Land Combat Study (Hoge, Castro et al. 2004), Hurricane Katrina Community Advisory Group (Katrina 12- Month Follow-up Survey), Mental Health Advisory Team VI (MHAT VI) Operation Enduring Freedom 07-09, Dyadic Adjustment Scale (Spanier 1976), Structured Clinical Interview for DSM-IV-TR Axis II Personality Disorder (SCID II Interview; First MB 1997), and Family History Screen (Weissman et al. 2000). The Army STARRS team developed additional survey questions.

Instruments used to measure variables of current study. Survey items used in the STARRS dataset to identify marital status, immigrant status and alcohol intake among the soldiers were constructed using the World Health Organization (WHO) Composite International Diagnostic Interview. The World Health Organization (WHO) Composite International Diagnostic Interview was developed to aid public health professionals worldwide in carrying out community surveys which would then allow the results from the surveys to be collected and compared using the same instrument (Kessler & Üstün, 2004). The World Health Organization Composite International Diagnostic interview is designed to bring about diagnosis utilizing the criteria and translation of both the DSM and the ICD systems and has been translated to different

languages using the standard WHO translation and back-translation protocol (Kessler & Üstün, 2004). To assure validity of the instrument, the WMH-CIDI developed a clear-cut protocol for modifying the instrument. Users who wish to modify the diagnostic questions are asked to include the proposed alternative questions as well as the original WMH-CIDI. In addition, users conducting modifications are asked to conduct blind clinical follow-up interviews to evaluate whether the alternative questions increase the consistency of the WMH-CIDI diagnosis with clinical diagnosis (Kessler & Üstün, 2004)

For the variable of psychological distress used in the current study, the STARRS dataset utilized the PTSD checklist to screen for signs of post-traumatic stress disorder (Bliese, Wright et al. 2008; Weathers F October 1993). The PTSD Checklist is a 17-item self-report measure that reflects symptoms of PTSD congruent to the DSM-IV (Bliese, Wright et al. 2008; Weathers F, 1993). The self-report instrument can be completed on average between 5-10 minutes and in addition to screening individuals for PTSD, this instrument serves as a diagnostic assessment of PTSD and monitors the change in PTSD symptoms (Bliese, Wright et al. 2008; Weathers F, 1993). This instrument can be scored using a total symptom severity score by summing the scores of the 17 items, and /or using a structured clinical interview (Bliese, Wright et al. 2008; Weathers F, 1993). Presumptive diagnosis can also be scored in various ways using this instrument. One can determine whether a participant meets the symptoms based on the criteria of the DSM-IV, symptoms ratings, and/or combining methods to make sure that the participant being screened meets the severity and the symptoms for PTSD (Bliese, Wright et al. 2008; Weathers F ,1993). Items in the STARRS dataset related to depression derived from the "Family History Screen (Weissman et al. 2000)." The Family History Screen is a brief tool that is a favorable screener for collecting lifetime psychiatric history on a participant and their immediate

family (FHS; Weissman et al. 2000). The screener usually takes 5-20 minutes and collects information on 15 psychiatric disorders and suicidal behavior. The Family History Screen best demonstrates its validity when screening for anxiety disorders, major depression, alcohol and drug dependence, and suicide attempts (FHS; Weissman et al. 2000).

The STARRS survey items that measured treatment-seeking behavior utilized the "Joint Mental Health Advisory Team 7 (J-MHAT 7)" instrument and the "Operation Enduring Freedom 2010 Afghanistan and the Land Combat Study (Hoge, Castro et al. 2004)." Joint Mental Health Advisory Team 7 (J-MHAT 7) Operation Enduring Freedom 2010 Afghanistan was conducted at the request of senior operational leaders (Office of the Surgeon General (ARMY) Falls Church VA, 2011). The purpose of the Joint Mental Health Advisory Team was to survey Service Members in Army and Marine units to assess behavioral health in land of combat forces, examine the delivery of care for behavioral health in Operation Enduring Freedom, and to provide suggestions for maintenance and improvement to the command (Office of the Surgeon General (ARMY) Falls Church VA, 2011). Data collection was conducted by random selection of Soldiers and Marines during July and August of 2017. Soldiers and Marines completed the anonymous survey, 911 surveys were collected from 40 Army maneuver unit platoons, 335 from 13 Marine platoons and eighty-five surveys were collected from behavioral health personnel in the Afghanistan Theater of Operations (Office of the Surgeon General (ARMY) Falls Church VA, 2011). Survey data were analyzed, secondary data sources were examined, focus group interviews with Soldiers, Marines and behavioral health personnel were conducted and lastly the briefing and draft report were written by the J-MHAT 7 team (Office of the Surgeon General (ARMY) Falls Church VA, 2011). The Land Combat Study was conducted during multiple time

points between the year 2003 and 2009. The purpose of this study was to demonstrate behavioral and mental health trends among service members across the years (Hoge, Castro et al. 2004).

The survey items for primary language, ethnicity, and gender were not measured using specific instruments and were developed by the personnel who conducted the Army STARRS Study (see Appendix A for the list of the measuring instruments of the current study).

Procedure

The data accessible to the researcher for this study was already a de-identified existing dataset (see Appendix B for data management agreement). Soldiers answered the existing survey anonymously and no personal information linking to any of the soldiers can be identified. The original researchers previously collected the informed consent for this database. Soldiers were asked to report to the site where the data were collected and received briefing from study facilitators for the consent. Participants then privately decided whether or not to give consent to participate in the self- administered Army STARRS survey. This protocol took place each time data was collected for the survey.

Statistical Analysis

The present study used a binary logistic regression design to test the principal hypothesis that primary language gender, marital status, age, immigrant status, comorbid disorders, concern for loss of confidentiality, being perceived as weak, treatment from others, feeling embarrassed and encouragement from partners will influence Hispanic soldier's attempts to seek treatment for alcohol abuse (see Appendix C for the list of survey items from the STARRS survey used for this study). The purpose of a binary logistic regression is to explain the relationship between predictors, or independent variables and the predicted variable, or dependent variable. Because the dependent variable is dichotomous in this study, seeking treatment for alcohol abuse yes/no,

a binary logistic regression was chosen as the statistical model rather than a simple linear

regression.

Chapter IV- Results

This study aimed to examine some of the factors that influenced Hispanic soldiers to seek treatment for alcohol abuse. The independent variables analyzed for this study were psychological distress, age, primary language, encouragement from partners, marital status and immigrant status. The dependent variable was seeking treatment.

The data for this study were collected using a secondary dataset, publicly available through the Interuniversity Consortium for Political and Social Research (ICPSR). The study used data from the All Army Study (AAS) component from the existing Army Study to Access Risk and Resilience among Service members (STARRS) administered by the Interuniversity Consortium for Political and Social Research (ICPSR). The Army Study to Assess Risk and Resilience in Service members (STARRS) is an extensive study of mental health risk and resilience among military personnel. The AAS component of the Army STARRS dataset examined the psychological and physical health of soldiers. Combat exposure encounters during training and non-combat operations, and life and work experiences across all phases of Army service, including data on soldiers' psychological resilience, mental health, and risk for harm is also studied in the AAS.

The variables for this study were selected from survey items in the STARRS dataset. These selected variables were based on the existing literature on alcohol, military, Hispanics, Hispanic service members and treatment seeking for alcohol abuse. To form a sample of Hispanic soldiers with alcohol abuse, 3,210 soldiers who indicated they were Hispanic were selected. From those 3,210 the study selected 917 who indicated some form of alcohol abuse. This sample of 917 was used to examine the influence of gender, marital status, age, immigrant status, psychological distress, concern for loss of confidentiality, being perceived as weak,

treatment from others, feeling embarrassed and confiding in partner on seeking treatment for

alcohol abuse.

The statistical model used for this study was a binary logistic regression. A binary

logistic regression was chosen to explain the relationship between the dependent variable,

seeking treatment, which was coded as a binary variable, yes or no, and the seven independent

variables.

Descriptive Data of all Variables

Hispanic. In the STARRS dataset, the survey item used to identify Hispanics asked the

soldier "Are you Spanish/Hispanic/Latino?" If the soldiers chose "no, not

Spanish/Hispanic/Latino," they were classified as non-Hispanic. Of the 21,449 soldiers in the

STARRS, 3,210 identified as Spanish/Hispanic/Latino (see Table 1).

Table 1

Spanish Origin

Checked if Not of Spanish Origin				
	Frequency	Percent	Valid Percent	Cumulative Percent
Checked	17852	82.3%	84.8%	84.8%
Unchecked	3210	15.0%	15.2%	100.0%
Subtotal	21062	98.2%	100.0%	
Missing	387	1.8%		
Total	21449	100.0%		

Note. STARRS survey asked, " Are you Spanish/Hispanic/Latino?" Check all that apply.
Table 1 shows the numbers for those who checked "No, not Spanish Hispanic/Latino"

A frequency was also done to examine how many soldiers specifically identified as

Mexican, Cuban, and Puerto Rican or of other Spanish descent. A total of 3,377 responses were

recorded. A possible explanation for the difference between 3,210 and 3,377 could be that some soldiers indicated more than one Latino descent (see Table 2).

Table 2

Detailed Spanish Origin

	Frequency	Percent	Valid Percent	Cumulative Percent
Mexican	1502	7.0%	7.1%	7.1%
Puerto Rican	785	3.7%	3.7%	10.8%
Cuban	94	0.4%	0.4%	11.2%
Spanish-Other	996	4.6%	4.7%	15.9%
Subtotal	3377			

Alcohol abuse. Of the 3,210 Hispanic soldiers, 917 soldiers reported that they abuse alcohol (see Table 3). If participants indicated yes to any of the twelve items regarding consequences of alcohol use from the STARRS survey, they were considered to abuse alcohol. If the Hispanic soldier checked "Less than one day a week," "1-2 days a week," "3-4 days a week," "Every or nearly every day" on any of those twelve items, they were considered to abuse alcohol for this study. The twelve items were grouped into one item and classified as Hispanic soldiers with alcohol abuse.

Psychological distress. The item used for this study to examine the variable of psychological distress was the soldiers experience of psychological distress in the past 30 days. Soldiers were asked to check one of the following: All or almost all of the time: Most of the time: Some of the time; A little of the time; None of the time. For this study if the soldier chose anything other than "none of the time," they were categorized as experiencing psychological

distress in the past 30 days. Table 4 shows responses of this study's sample size: 917 Hispanic

soldiers with alcohol abuse.

Table 3

Alcohol abuse

"In the past 30 days has your alcohol use…"				
	Yes*	Never	Missing	Total
Interfere with responsibilities	105	2402	703	3210
Cause arguments	141	2364	705	3210
Under the influence and could get hurt	83	2421	706	3210
Use out of control	112	2394	704	3210
Thought of not using made you worried	81	2423	706	3210
Worried about use	115	2383	712	3210
Feel need to cut down or stop	174	2327	709	3210
Feel annoyed about people complaining about your use	99	2401	710	3210
Feel guilty about your use	131	2373	706	3210
Eye opener in morning to relieve shakes	34	2445	731	3210
Arrested because of use	30	2137	1043	3210
Subtotal	1,105			

* *Note.* "Yes" column is the aggregate of the responses "Every or nearly everyday,"
"3-4 days a week," "1-2 days a week," and "Less than one day a week."

Table 4

Psychological Distress

	Frequency	Percent	Valid Percent	Cumulative Percent
All or almost all of the time	35	3.8%	4.7%	4.7%
Most of the time	48	5.2%	6.5%	11.2%
Some the time	97	10.6%	13.1%	24.3%
A little of the time	144	15.7%	19.5%	43.8%
None of the time	416	45.4%	56.2%	100.0%
Subtotal	740	80.7%	100.0%	
Missing	177	19.3%		
Total	917	100.0%		

Note. STARRS survey asked, "In the past 30 how often did you experience psychological distress?"

Age. Hispanic soldiers ranged between the ages of 19 and 57 (see Table 5). The most prevalent age range in the sample was soldiers between the age of 19 and 24. This is typical of the most prevalent age range of soldiers in the Army (Reynolds & Shendruk, 2018).

Primary language. Primary language was determined with one item from the STARRS survey, which asked the soldiers what their primary language was. The soldier could check "English," "Spanish" or "other" for primary language (see Table 6). Out of the 917 Hispanic soldiers with alcohol abuse, 718 reported English as their primary language; fifteen chose "some other language," 184 soldiers left that question unanswered and none indicated Spanish as their primary language.

Gender. The variable for Gender in the STARRS asked the soldiers to check "Male" or "Female." Of the 917 Hispanic soldiers with alcohol abuse, about 90.0% were Male, and about 9.0% Female. The remaining six did not respond (see Table 7).

Confide in partner. To measure encouragement from partners, the item examining "confide in partner" was utilized from the STARRS dataset. The soldiers were asked if they confided in their partner (see Table 8). The soldiers had the option to check one of the following options: All of the time; Most of the time; More often than not; Occasionally; Rarely; Never. If the soldier checked anything other than "Never" they were considered to confide in their partner for the purpose of this study.

Table 5

Age

	Frequency	Percent	Valid Percent	Cumulative Percent
19-24	423	46.1%	46.4%	46.4%
25-29	254	27.7%	27.9%	74.3%
30-34	116	12.6%	12.7%	87.0%
35-39	58	6.3%	6.4%	93.4%
40-44	45	4.9%	4.9%	98.4%
45-49	11	1.2%	1.2%	99.6%
50 and older	4	0.4%	0.4%	100.0%
Subtotal	911		100.0%	
Missing	6	0.7%		
Total	917	100.0%		

Note. Data consists of continuous numbers from 19-57 and have been aggregated for ease of description

Table 6

Primary Language

	Frequency	Percent	Valid Percent	Cumulative Percent
English	718	78.3%	98.0%	98.0%
Some other language	15	1.6%	2.0%	100.0%
Subtotal	733	79.9%	100.0%	

	Frequency	Percent
Missing	184	20.1%
Total	917	100.0%

Note. STARRS survey asked, "What is your primary language?"

Table 7

Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	832	90.7%	91.3%	91.3%
Female	79	8.6%	8.7%	100.0%
Subtotal	911	99.3%	100.0%	
Missing	6	0.7%		
Total	917	100.0%		

Note. STARRS survey asked "Are you female or male?"

Table 8

Confide in Partner

	Frequency	Percent	Valid Percent	Cumulative Percent
All the time	145	15.8%	36.1%	36.1%
Most of the time	99	10.8%	24.6%	60.7%
More often than not	45	4.9%	11.2%	71.9%
Occasionally	68	7.4%	16.9%	88.8%
Rarely	30	3.3%	7.5%	96.3%
Never	15	1.6%	3.7%	100.0%
Subtotal	402	43.8%	100.0%	
Missing	515	56.2%		
Total	917	100.0%		

Note. STARRS survey asked, "How often do you confide in your partner?"

Marital status. Marital status was determined by whether the soldiers checked "Married." If they checked any other option, they were categorized as "not married" for the purpose of this study (see Table 9). Of the 917 Hispanic soldiers with alcohol abuse, about

40.0% were not married, about 38.0% checked "Married" and 193 did not answer or were missing data.

Seek treatment. The dependent variable "Seek Treatment" was identified by the item in the STARRS dataset asking if in the past twelve months the soldier had sought treatment with medication, counseling, or both medication and counseling. If the soldier chose medication, counseling, or both medication and counseling, they were identified as "seeking treatment" for the purpose of this study. If none of those options pertained to the soldier, they left the item unchecked and were classified under the "no treatment" group (see Table 10). Of the 917 Hispanic soldiers with alcohol abuse, about 73% did not seek treatment and 27% sought treatment.

Immigrant status. This study identified immigrant status by using the item in the STARRS dataset that asked the soldier if they were born in the United States. The soldier had the option to check "Yes" or "No" (see Table 11). Of the 917 Hispanic soldiers examined in this study, forty-three of them checked "No," indicating that they were immigrants.

Reasons for not seeking treatment. This study identified concern of loss for confidentiality, perceived as weak, treatment from others, and embarrassed by using the items in the STARRS dataset that are listed below (see Table 12). For each of the four variables, the soldier was asked; "In considering alternative sources of treatment, how important would each of the following reasons be to you?" The soldier had the option to choose: Very important; Somewhat important; Not very important; Not important at all. Three responses were coded as "Yes:" Very important; Somewhat important; Not very important. One response was coded as "No;" Not at all important. The variables with the greatest missing data were eliminated from the

statistical model: concern of loss of confidentiality (67% missing data), being perceived as weak

(83% missing data), embarrassed (83% missing data), and pressure (83% missing data).

Table 9

Marital Status

	Frequency	Percent	Valid Percent	Cumulative Percent
Not married	376	41.0%	51.9%	51.9%
Married	348	37.9%	48.1%	100.0%
Total	724	79.0%	100.0%	
Missing	1	0.1%		
Subtotal	192	20.9%		
Missing	193	21.0%		
Total	917	100.0%		

Note. STARRS survey asked, "What is your marital status?"

Table 10

Treatment

Past 12 Months

	Frequency	Percent	Valid Percent	Cumulative Percent
No treatment	671	73.2%	73.2%	73.2%
Treatment	246	26.8%	26.8%	100.0%
Total	917	100.0%	100.0%	

Table 11

Immigrant Status

Born in the United States

	Frequency	Percent	Valid Percent	Cumulative Percent
No	43	4.7%	6.1%	6.1%
Yes	660	72.0%	93.9%	100.0%
Subtotal	703	76.7%	100.0%	

Missing	214	23.3%
Total	917	100.0%

Note. STARRS survey asked, "Were you born in the US?"

Table 12

Reasons not to seek treatment

In considering alternative sources of treatment, how important would each of the following reasons be to you?	Yes*	No	Missing	Total
...unit leaders would be less likely to find out …	98	78	617	917
...might harm your career, ...leadership might treat you differently, or...seen as weak.	27	39	792	917
...talked to friends or relatives instead.	17	35	792	917
You were embarrassed.	81	44	792	917

* NOTE: Three responses were coded as "Yes:" Very important; Somewhat important; Not very important. One of the responses was coded as "No:" Not at all important."

Statistical Model

A binary logistic regression was performed to assess the impact of primary language, gender, marital status, age, immigrant status, psychological distress, concern for loss of confidentiality, being perceived as weak, treatment from others, feeling embarrassed and confiding in partner on the likelihood that respondents would seek treatment for alcohol abuse. Missing data compromised the initial binary logistic regression of the influence of eleven variables on seeking treatment; only three people had complete data on all eleven variables. Furthermore, all three of the soldiers sought treatment, causing no statistical advantage to the modeling at that point. As a result, the researcher stated a more focused set of hypotheses that required fewer variables.

The revised model contained seven independent variables (immigration status, mental health psychological distress, respondents age, primary language, gender, confiding in partner and marital status). The model as a whole explained 23.3% to 31.4% of variance in treatment seeking (Cox and Snell R square = 23.3%; Nagelkerke R squared = 31.4%), correctly classifying 71.3% of overall cases (percentage of accuracy in classification, PAC).

In the model only two of the seven independent variables showed statistical significance, gender and psychological distress. The major factors in this model that influence treatments seeking in Hispanic soldiers were gender ($p = .008$) and psychological distress ($p =. 000$). Immigrant status ($p =.817$) age ($p = .969$), primary language ($p = .999$), marital status ($p = .251$) and confiding in partner ($p = .937$) did not contribute significantly to the model. Of the two predictors in the model, the strongest predictor of treatment seeking was psychological distress, recording an odds ratio of .597 indicating that Hispanic soldiers experiencing psychological distress in the past thirty days were .597 times more likely to seek treatment for alcohol abuse (see Table 13).

Table 13.

Regression

Variables	B	S.E.	Wald	df	Sig.	Exp (B)	95% CI
Immigrant Status	0.188	0.814	0.054	1	0.817	1.207	0.245-5.957
Psychological Distress	-0.515	0.146	12.409	1	**0.000	0.597	0.449-0.796
Age	20.733	28405.972	15.762	28	0.969	0.701	0.000
Primary Language	22.053	17453.48	0.0	1	0.999	37800651404	0.000
Gender	-1.298	0.487	7.095	1	*0.008	0.273	0.105-0.710
Confide in Partner	-0.065	0.103	0.393	1	0.531	0.937	0.766-1.1347

							0.321-
Marital status	-0.42	0.366	1.316	1	0.251	0.657	1.347

Of the 3,210 soldiers who self-identified as Hispanic, 917 or 28.5%, reported alcohol abuse. Of 917 Hispanic soldiers with alcohol abuse, the majority did not seek treatment. Twenty-seven percent of the sample size sought treatment for alcohol abuse and 73% did not. Treatment for alcohol abuse was identified if the individual reported seeking medical treatment, counseling, or both. Of the seven independent variables examined, this study found that only gender and psychological distress significantly influence treatment seeking for alcohol abuse among Hispanic soldiers.

Chapter V-Discussion

The aim of this study was to examine which factors influenced Hispanic soldiers seeking treatment for alcohol abuse. The data for this study were collected using the STARRS secondary dataset. The findings of this study indicate that gender and psychological distress were the only factors to show a statistical significance in treatment seeking for alcohol among Hispanic soldiers. Of the two factors that were found to have a statistically significant influence in treatment seeking, psychological distress showed to have the highest significance ($p =. 002$) in comparison to gender ($p =. 033$). Despite the existing literature, immigrant status, age, primary language, confiding in partner and marital status were not statistically significant in this study.

The results of this study are contrary to previous research. Previous studies have found that in the general population gender, marital status, age and pressure are influencing factors in the general population in seeking treatment for alcohol abuse (Cohen et al., 2007; Korcha et al., 2013). In the Hispanic population, existing studies report primary language and immigrant status influence treatment seeking for alcohol abuse in the Hispanic population (Mancini et al., 2015). Among service members, studies found that comorbid disorders, concern for loss of confidentiality, being perceived as weak, feeling embarrassed and encouragement from partners to seek treatment impact treatment seeking behavior (Burnett-Zeigler et al., 2011; Meshberg-Cohen et al., 2017). While previous research found additional factors to influence treatment seeking for alcohol abuse, the results that were statistically significant to this study did build on existing evidence by supporting the influence of gender and psychological distress on treatment seeking for alcohol abuse. This study provides a new insight and contributes a clearer understanding of Hispanic solders, alcohol abuse and treatment seeking.

The results may suggest that gender and psychological distress are the only factors significantly influencing treatment seeking among Hispanic soldiers with alcohol abuse. A plausible explanation for the lack of influence of immigrant status, age, primary language, confiding in partner and marital status is the gap or lack of research and literature on treatment seeking for alcohol abuse in Hispanic soldiers.

The findings of this study may have been limited due to the level of specificity for this study and the use of a secondary dataset. Since gender and psychological distress were statistically significant in this study, it would also be interesting to examine if heightened distress motivates soldiers to seek treatment and also examine the possible interaction of gender. Follow up research for this study could include an analysis comparing the percentage of treatment seeking for alcohol abuse in the STARRS dataset within different racial/ethnic groups.

Limitations

The generalizability of the present results is limited. First, the sample size for this study was significantly smaller than the actual sample size of the STARRS dataset. 3210 soldiers identified as Hispanic. Out of the 3,210, 917 reported abusing alcohol and out of 917 Hispanic soldiers with alcohol abuse, 246 sought treatment. Therefore, a broad-based generalization about factors influencing Hispanic soldiers seeking treatment for alcohol abuse can only be projected from a fraction of the total population surveyed.

Missing data is also a limitation in this study. Due to the nature of some of the survey questions, soldiers taking the survey sometimes left survey questions unanswered, resulting in incomplete surveys. The reported number of unanswered questions may have modified the results.

In order to join the military, soldiers are required to be competent in reading and writing

English. One of the factors studied was primary language. Although past studies report primary language to be of significant influence on treatment seeking behaviors in the Hispanic population, the language requirements to join the military may have impacted the outcome of that variable for treatment seeking in this study.

Conclusion

This study contributes to the gap in literature on Hispanic Soldiers seeking treatment for alcohol abuse. This study also allows for future scholars to compare their findings on this specific topic. Furthermore, the findings of this study serve as a starting point towards awareness and further research on Hispanics, the largest minority group in the United States, and alcohol and treatment seeking, a continuing issue in the United States and the military.

Further research on Hispanic soldiers, alcohol abuse and treatment are needed. Future studies should take into account the risk of missing data when utilizing secondary datasets or even when collecting ones own data. Future research should also take into consideration the dynamics and characteristics of the population being examined. For instance, the military mostly consists of males, therefore limiting the ability to generalize the results and findings to all soldiers including female soldiers.

Examining factors from additional angles would open up discussion for the possibility of different influences on treatment seeking for alcohol abuse among Hispanic soldiers. Perhaps a study using the STARRS dataset comparing the factors influencing Hispanic soldiers seeking treatment for alcohol abuse to other racial/ethnic groups would be of significance to the literature. Research examining the same variables of this study but among veterans instead of active duty soldiers could also be an approach taken for future research.

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Appendix A

Instruments Used to Measure Variables of Current Study

Survey items used in the current study to identify marital status, immigrant status and alcohol intake among the soldiers were constructed using the World Health Organization (WHO) Composite International Diagnostic Interview (Kessler & Üstün, 2004). The World Health Organization Composite International Diagnostic interview is designed to bring about diagnosis utilizing the criteria and translation of both the DSM and the ICD systems and has been translated to different languages using the standard WHO translation and back-translation protocol (Kessler & Üstün, 2004).

For the variable of psychological distress used in the current study, the STARRS dataset utilized the PTSD checklist to screen for signs of post-traumatic stress disorder (Bliese, Wright et al. 2008; Weathers F October 1993). The PTSD Checklist is a 17-item self-report measure that reflects symptoms of PTSD congruent to the DSM-IV (Bliese, Wright et al. 2008; Weathers F, 1993). This instrument can be scored using a total symptom severity score by summing the scores of the 17 items, and /or using a structured clinical interview (Bliese, Wright et al. 2008; Weathers F, 1993). Presumptive diagnosis can also be scored in various ways using this instrument. One can determine whether a participant meets the symptoms based on the criteria of the DSM-IV, symptoms ratings, and/or combining methods to make sure that the participant being screened meets the severity and the symptoms for PTSD (Bliese, Wright et al. 2008; Weathers F ,1993).

Items in the current study related to depression derived from the "Family History Screen (Weissman et al. 2000)." The Family History Screen is a brief tool that is a favorable screener for collecting lifetime psychiatric history on a participant and their immediate family (FHS;

Weissman et al. 2000). The screener usually takes 5-20 minutes and collects information on 15 psychiatric disorders and suicidal behavior. The Family History Screen best demonstrates its validity when screening for anxiety disorders, major depression, alcohol and drug dependence, and suicide attempts (FHS; Weissman et al. 2000).

Items that measured treatment-seeking behavior in the current study utilized the "Joint Mental Health Advisory Team 7 (J-MHAT 7)" instrument and the "Operation Enduring Freedom 2010 Afghanistan and the Land Combat Study (Hoge, Castro et al. 2004)." Joint Mental Health Advisory Team 7 (J-MHAT 7) Operation Enduring Freedom 2010 Afghanistan was conducted at the request of senior operational leaders (Office of the Surgeon General (ARMY) Falls Church VA, 2011). The purpose of the Joint Mental Health Advisory Team was to survey Service Members in Army and Marine units to assess behavioral health in land of combat forces, examine the delivery of care for behavioral health in Operation Enduring Freedom, and to provide suggestions for maintenance and improvement to the command (Office of the Surgeon General (ARMY) Falls Church VA, 2011).

Appendix B

Data Management Agreement

The data management agreement of ICPSR requires that the confidential data only be used for research or statistical purposes relative to the research, and for no other purpose whatsoever without the prior written consent of ICPSR. In addition, ICPSR requires that no attempt be made to identify private persons, no confidential data of private person(s) will be published or otherwise distributed, and for confidential data to be protected against deductive disclosure risk by strictly adhering to the obligations set forth on the agreement to use the data.

Appendix C

Relevant STARRS Survey Items

- Are you Spanish/Hispanic/Latino?

  a) Yes
  b) No

- What is your primary language?

  a) English
  b) Spanish
  c) Some other language

- In the past 30 days has your alcohol use…

  a) Interfere with responsibilities
  b) Cause arguments
  c) Under the influence and could get hurt
  d) Use out of control
  e) Thought of not using made you worried
  f) Worried about use
  g) Feel need to cut down or stop
  h) Feel guilty about your use
  i) Eye opener in morning to relieve shakes
  j) Arrested because of use

- How often in the past 30 days did you experience psychological distress?

  a) Most of the time
  b) Some of the time
  c) A little of the time
  d) None of the time

- Are you male or female?

  a) Male
  b) Female

- How often do you confide in your partner?

  a) All of the time
  b) Most of the time
  c) More often than not
  d) Occasionally

    e) Rarely
    f) Never

What is your marital status?

    g) Not married
    h) Married

- Which did you receive from all of your providers for these problems in the past 12 months?

    a) Medication
    b) Counseling
    c) Both medication and Counseling

- Were you born in the U.S.?

    a) No
    b) Yes

- How old are you? ___

- In considering alternative sources of treatment, how important would each of the following reasons be to you?

    a) ...unit leaders would be less likely to find out
    b) might harm your career, ...leadership might treat you differently, or...seen as weak.
    c) ...talked to friends or relatives instead.
    d) You were embarrassed