# An Evaluation of the Differences in Self-Reported Serious Psychological Distress, Race, Income, and Insurance Status

By

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## Abstract

Mental health is an on-going public health concern that has become a more prominent issue over the last several years. While suicide rates continue to rise, many individuals still do not receive mental health treatment. Further, a large population of adults with mental health disorders do not receive treatment for their condition despite overall increases in treatment rates in the past 20 years (Walker, Cummings, Hockenberry, & Druss, 2015). The purpose of this study was to evaluate the occurrence of serious psychological distress across race categories and income levels as well as the rate of insurance coverage for mental health needs across race categories for those who have reported mental health problems within the last year. Research has shown that individuals from different ethnicities may have different barriers in accessing health services. This study employed a cross-sectional design utilizing data from the 2017 California Health Interview Survey (CHIS). One-way ANOVA tests were used to evaluate separately differences in serious psychological distress across race categories and income levels. A Kruskal Wallis H test was used to evaluate differences in mental health insurance coverage across ethnicity categories. The findings of this study determined a significant difference in serious psychological distress across ethnicity categories ($p < .01$). A significant difference was also found in serious psychological distress across income levels ($p < .01$). However, no difference in insurance coverage was found across ethnicity categories.



*Key words: serious psychological distress, ethnicity, income levels CHIS, mental health insurance*

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# Review of Literature

## Introduction

A large population of adults with mental health disorders do not receive treatment for their condition despite overall increases in the rates of treatment in the past 20 years (Walker, Cummings, Hockenberry, & Druss, 2015). Psychological distress has been defined as different subjective states that may consist of depression, anxiety, and/or somatic symptoms (Mouzon, Taylor, Nguyen, & Chatters, 2016). Serious psychological distress (SPD) can cause various and continuous health problems that can be severe enough to cause moderate-to-serious impairment in social, occupational, or school functioning; it eventually requires some form of treatment (Weissman, Pratt, Miller, & Parker, 2015). Diagnosis of SPD is often based on answers to six survey questions from the Kessler-6 scale, which is used internationally in public health surveillance systems to assess individual's recent feelings of sadness, restlessness, hopelessness, nervousness, worthlessness, and sense that everything is a burdensome effort (Kobau, Sapkota, & Zack, 2019). The responses of the six-item question range from "none of the time," coded as 0, to "all of the time," coded as 4. The answers are then summed, and totals range from 0-24. According to research, those who score above five have a moderate mental health illness, and those who score above 13 have a severe mental health illness (Prochaska et. al., 2012). This tool has demonstrated excellent internal consistency and reliability.

The mental health services access information that this study focused on included insurance for psychological and psychiatric services. Psychology and psychiatry are similar professions in which trained, licensed providers prevent,

diagnose, and treat mental health illness. Specifically, their goal is to improve the mental wellbeing of individuals. Psychological services address the emotional, social, work, school, and physical health concerns individuals might experience at some point in their lives. Counseling services provided by psychologists aim to help people alleviate feels of distress and resolve crises to improve their overall wellbeing (American Psychological Association [APA], 2019a).

Psychiatrists also provide diagnoses and treatment but take it a step further by potentially prescribing medications for the mental illness the individual is experiencing (World Health Organization [WHO], 2019). There are several types of therapies that psychiatrists provide depending on the diagnosis of the individual, but the overall goal is to eliminate troubling symptoms that the patient is feeling. The medications used by psychiatrists are given after completing thorough evaluations as with any medical condition. Common medications prescribed include antidepressants, stimulants, hypnotics, mood stabilizers, and sedatives. Medications, along with therapies, are provided to patients who are diagnosed with serious mental health issues (APA, 2019b).

In one study, it was reported that more individuals are reporting the use of mental health services but not those who need it the most (Olfson et. al., 2018). More specifically, roughly one-third of individuals who have serious psychological distress do not receive the care they need (Olfson et. al., 2018). Concerningly, this means that people with less psychological distress or mental health issues may be receiving unnecessary psychiatric drugs that might then be impacting their health, while those who need treatment are not receiving it.

Being underinsured or lacking insurance is one of the reasons why individuals may decide not to pursue treatment even if they have SPD. Another reason for not seeking services may be the public stigma surroundings mental illness, and individuals may be too embarrassed to receive treatment. According to a report regarding attitudes towards individuals seeking mental health services, one-third of 5,692 respondents reported feeling somewhat to very embarrassed about their friends knowing about their seeking out help from mental health professionals (Viverito et al., 2018). These findings suggest the need for mental health interventions and intentional awareness to address public stigma around mental health services.

**Mental Health Care Among Ethnicities**

As reported in the National Comorbidity Survey Replication, only 33% of adults with any mental illness and 41% of adults with serious mental illness reported receiving mental health treatment in the previous year. People who are less likely to receive treatment tend to be male, black, Hispanic, younger, uninsured, and of low socioeconomic status (Walker et al., 2015). Overall, SDP affects 3.3% of non-Hispanic white, 3.7% of non-Hispanic black, and 3.8% of Hispanic adults (Weissman, Pratt, Miller, & Parker, 2015).

Diversity in the United States has been predicted to continue growing. The APA (2017) stated that by the year 2044 over half of Americans are expected to be of a minority population. In addition, research has stated that people from racial/ethnic minority groups are less likely to receive mental health care. For example, in 2015, among adults with any mental illness, 48% of Whites received mental health services compared with 31% of blacks and Hispanics and 22% of Asians (APA, 2017).

Factors that might create a barrier for individuals of different racial and ethnic groups accessing mental health treatment might include: lack of insurance, being underinsured, mental illness stigma (which is often greater among minority populations), lack of diversity among mental health care providers, lack of culturally competent providers, language barriers, distrust of the health care system, and inadequate support for mental health service in safety net settings (uninsured, Medicaid, Health Insurance Coverage other vulnerable patients) (APA, 2017).

In a comprehensive report from Substance Abuse and Mental Health Services Administration ([SAMHSA] 2014) regarding the differences among ethnicities in mental service use, adults with SPD reported their unmet needs in relation to their necessity for mental health treatment. This report combined data from the 2008-2012 National Survey on Drug and Health (NSDUH) to illustrate the differences among ethnicities when it comes the use of mental health services and the barriers that lead to unmet mental health needs (SAMHSA, 2014). One of the reasons why adult participants reported having an unmet need for mental services included "cost" or "insurance coverage," meaning that they could not afford the cost out-of-pocket or that their insurance did not cover mental health services (SAMHSA, 2014).

Several studies have shown that there is a difference in mental health utilization across ethnicities. A study conducted in China showed that Chinese elderly with mental disabilities were less likely to seek mental help due to the lack mental health awareness (Chao, Ning, Gong, & XIaoying, 2017). In addition to these findings, only 46% out of 2,526,145 participants had ever used mental health services (Chao et al., 2017).

The Hispanic population is among one of the fastest growing ethnicities in the United States, and there is a large disparity in this population utilizing mental health services compared to other minorities (Keyes et al., 2012). In a study published in *The Journal of Health and Social Behavior*, it was reported that among ethnicities seeking mental help, 7.5% of Whites, 5.7% of Blacks and 4.7% of Hispanics reported help seeking behavior (Ojeda, 2008). The results indicated that each ethnicity dealt with factors that reduced the probability of individuals seeking mental services, such as fear of the mental health system aligned with stigma (Ojeda, 2008). Further, because a large population of Hispanics and Asian Americans deal with a language barrier, they are less likely to use health care services, specifically mental health services (Burnett-Zeigler, Lee, & Bohnert, 2018).

Several barriers exist between individuals and their mental health utilization due to stigma or simply denial. Due to this, minorities prefer to depend on informal mental health help rather than using mental health services from professionals (Sheehan, Walsh, & Liu, 2018).

**Hispanics and Psychological Distress**

A newly released U.S. Census Bureau reported that the U.S. Hispanic population reached a record of 59.9 million in the year 2018, which as an increase of 1.2 million over the previous year (Flores, Lopez, & Krogstad, 2018). In an early release report of results from the National Health Interview Survey, between January and March 2017, indicated that 4.6 % Hispanics reported having SPD compared to 3.4% non-Hispanics Whites and 3.8% African Americans (NCHS, 2017).

According to research, SPD and major depressive conditions are becoming more prevalent among Hispanics. One of the majors concerns that Hispanics face is the U.S. immigration policies that have affected this population mentally. In a 2018 report published in *The Journal of Adolescent Health*, it was reported that nearly 40% of Hispanic parents reported having negative emotional consequences due to the immigration policies; more specifically, 65% reported they very often or always worried about family members getting separated (Roche, Vaquera, White, & Rivera, 2018). This study also reported a 300% increase of prevalence of the effects of current immigrant policies on Hispanics, affecting not only parents but also children (Roche et al., 2018). Only about 10% of Hispanics who need it seek mental health treatment since most lack of insurance, misunderstand mental health, and have cultural concerns or expectations (National Alliance of Mental Illness [NAMI], 2019). The barriers that Hispanics face on a daily basis are numerous and include struggles with health literacy, mistrust regarding citizenship status, financial constraints, transportation difficulties, and language barriers. In addition, research reported that many elderly Hispanic individuals are not included in studies regarding mental health. It is critical for researchers and clinicians to be aware of the many cultural factors that influence research and treatment in Hispanics both young and old (Alvarez et. al., 2014).

**Asian Americans and Mental Health**

Several research studies have shown that stress can lead to severe mental health issues. In a study that examined how perceived everyday discrimination is associated with psychological distress among Asian Americans and whether there

was an association with either education or place of education, the results showed that discrimination is associated with higher levels of psychological distress among this population (Zhang & Hong, 2013). In addition, the rates of mental health services seeking behavior among Asian Americans is at an all-time low. Research states that only about one-third of the total Asian population in the United States utilize mental health services (David, 2010).

In terms of Asian Americans facing psychological distress, many studies show that this population reports that psychological distress interferes with their daily activities due to factors such as discrimination, education, marital status, and income (Zhang & Hong, 2013). In fact, Southeast Asian refugees are at-risk for post-traumatic stress disorder (PTSD) associated with trauma experienced before and after immigration to the United States (U.S. Department of Health and Human Services [HHS], 2018). One study found that 70% of Southeast Asian refugees receiving mental health care were diagnosed with PTSD (HHS, 2018). For Asian Americans, the rate of serious psychological distress increases with lower levels of income as it does in most other ethnic populations. The overall suicide rate for Asian Americans is half that of the white population (HHS, 2018).

**African American and Psychological Distress**

As reported by the HSS's Office of Minority Health, black/African Americans are 20% more likely to report SPD compared to white Americans (Mental Health America [MHA], 2019). This is because African Americans are more likely to experience numerous encounters with racial discrimination, prejudice, violence, and poverty. In a study published in *The American Journal of Public Health*, U.S.-born

African Americans and African-born foreigners had higher levels of poverty, between 51 to 57%, as well as higher levels of psychological distress than their white counterparts, and 13 and 14% reported having a Kessler-6 level of 13 (Krieger et. al., 2011). Those who reported having high levels of psychological distress also reported taking action by talking to a friend rather than going to a mental health service facility.

In addition, being below the poverty line makes individuals three times more likely to develop a psychological distress disorder. Regardless of the implementation of the Affordable Care Act, in 2014, African Americans were still six times more likely to be uninsured than white Americans (Families USA, 2019). African Americans living below the federal poverty line are likely to develop a psychological disorder and will be less likely to have access to mental health services due to lack of health insurance coverage as well as other financial limitations. Additionally, poverty level affects mental health status. African Americans who are living below the poverty line are three times more likely to report psychological distress compared to individuals who are far above the line. Overall, in comparison to the non-white Hispanic population, African Americans are 10% more likely to self-report having psychological distress (HHS, 2017).

**Whites and Psychological Distress**

Recent statistics have shown the rise in suicide among non-Hispanic Whites. Suicide is the tenth leading cause among non-Hispanic Whites, and researchers have reported that the causes for suicide among this group have seemed to be "epidemics of hopelessness" and "epidemics of despair" (Samson, 2018). These causes of suicide

define the condition of serious psychological distress among this group, although results indicated that only 3% of white Americans reported having serious psychological distress (Samson, 2018). Several studies reported that minorities seem to have higher SPD than white Americans, such as African Americans and Asians (U.S. Department of Health and Human Services [HHS], 2019) As previously mentioned, it is more common and prevalent that Africans and Asian deal with the circumstances of discrimination, stigmas surrounding mental health within their cultures, and outside stressors such as education and social status. Moreover, the racial category of non-Hispanic Whites is heterogonous, meaning individuals who fall under this category come from European, North Africa, or the Middle East backgrounds. A study conducted analyzing 11 years of data from the NHIS found that SDP is higher among individuals with a Middle Eastern background, and they are more likely to seek mental health help than individuals from a European background. It was also reported that overall foreign-born, non-Hispanic Whites were less likely to report seeing a mental health professional compared to their U.S.-born counterparts (Dallo, Kindratt, & Snell, 2013).

**Income and Mental Health**

There are two possible factors why psychological distress is more prevalent among lower income individuals. First, poor mental health can lead to a lower income or vice versa low income can lead to poor mental health (Orpana, Lemyre, & Gravel, 2009). It has been proven that income impacts healthcare utilization among individuals. Individuals with a lower socio-economic status are less likely to utilize mental health services and are less likely to stay consistent with the services they

receive (Packness et al., 2017). Further, people with a lower economic status face more hardships that those with a high economic status. Low income individuals' deal with barriers such as financial limitations to afford basic needs, underpaid jobs, unhealthy living environments, and limited access to health care services due to being uninsured or underinsured (WHO, 2017). In a study published by the National Center for Biotechnology Information (NCBI), it was determined that individuals with lower income levels were at higher risks for serious psychological distress due to having challenges such as unemployment, living in unhealthy neighborhoods, experiencing negative life events, and having expectations set by others (Orpana et al., 2009).

As reported in a recent study, more individuals of lower income household living in urban areas self-reported having SDP due to overcrowded communities, higher rates of crime, unstable economic conditions, pollution, lack of basic needs, and fear of lack of resources (Firdaus, 2018). This study's purpose was to identity the differences of SDP across income levels. The results showed that those with lower income levels were more likely to report having SDP versus those with higher incomes; overall, higher income level individuals reported to have a better mental health status (Firdaus, 2018). According to another study, individuals of low economic status were less likely to use mental health outpatient treatment when the services were located further from their home (Packness et al., 2017).

The NCHS Data Brief 2015 stated that 8.7% of adults with incomes below the federal poverty level had serious psychological distress in comparison with 1.2% of adults who were well above the poverty level (Weissman, Pratt, Miller, & Parker, 2015). According to key findings from the NCHS report, as the income level among

adults increased, SDP decreased (Weissman et al., 2015). It was also reported that 30% of adults between the ages of 18-64 with serious psychological distress were more likely to be uninsured compared to 20.5% who were insured but did not report having serious psychological distress (Weissman et al., 2015). A 2018 study that assessed the impact of the Affordable Care Act on individuals dealing with SPD revealed that individuals of lower income households were more likely to be uninsured or were financially limited in their ability to afford mental health care services compared to those who did not have a low income and had SPD (Novak, Anderson, & Chen, 2018).

**Conclusion**

Serious psychological distress has been reported among different ethnicities due to different circumstances varying among discrimination, stigma, way of living, lack of resources and income levels. Although there have been different options when it comes to healthcare coverage, there are still individuals who may not know what their health care plan covers, might be underinsured, or may not have the financial capability to afford mental health services. The goal of this study was to determine if there is a difference in self-reported serious psychological distress across ethnicities and if those who reported interest in getting mental health services were aware what their mental health insurance would cover. Additionally, this study looked at income levels and self-reported SPD.

**Purpose of the Study**

Serious psychological distress is a mental health illness known to cause barriers in one's daily living routine when it becomes severe. The purpose of this

study was to identify the differences in the self-reported SPD, mental health coverage across ethnicities, and SPD across income levels. According to recent reports, the prevalence of mental health illness is anticipated to rise in the near future, resulting in a higher demand for mental health services (MHA, 2019). Research has shown that there are disparities among ethnicities in terms of unmet mental health needs due to individuals being unable to afford or have sufficient health coverage for mental health care. Additional research is needed to identify the difference among ethnicities when it comes to mental health utilization. This study will help identify the differences and discuss the barriers among psychological distress, mental health insurance coverage, income levels, and ethnicities.

**Research Questions**

There are three questions addressed in this study:

1. Is there a difference in self-reported serious psychological distress across racial/ethnicity categories?
2. Is there a difference in self-reported mental health insurance coverage across racial/ethnicity categories for those reporting interest in seeing a mental health provider because of "problems with [their] mental health, emotions or nerves or your use of alcohol or drugs" in the last 12 months?
3. Is there a difference in self-reported serious psychological distress across income categories?

**Hypothesis**

H1: There is a difference in self-reported serious psychological distress across racial/ethnicity categories.

H2: The distribution of insurances covering treatment for mental health is not the same across racial/ethnicity categories.

H3: There is a difference in self-reported serious psychological distress across income categories.

## Method

### Design

This study used a cross-sectional design. Secondary data was obtained from the 2017 California Health Interview Survey (CHIS) developed by the UCLA Center for Health Policy Research, California Department of Health Care Services, and the California Department of Public Health. CHIS consists of data collected and methodology created by SQL Server Reporting Services (SSRS), an independent research firm that specializes in reaching a highly diverse population sample size. The SSRS interviewed one adult, adolescent, and child, if present, from each sampled household (CHIS, 2017). The survey asks questions regarding demographics, health status, health conditions, health-related behaviors, health insurance coverage, access to health care services, and other health and health-related issues (CHIS, 2017).

### Procedures

In collaboration with SSRS, the CHIS has been conducted bi-annually since 2001-2011, and the 2017 CHIS was collected between June 2017-December 2017 (CHIS, 2017). In order to meet these objectives, CHIS recruited a dual-frame, multi-sample design: the random-digit dial (RDD). The data collection method of the CHIS consisted of telephone surveys in a non-industrialized region of California. To provide a sample characteristic of California's demographics, the RDD system used called both landline and cell phone telephone numbers. Half of the numbers called were landlines and the other half were cell phones, so that there would be a fair opportunity to reach both type of telephone platforms.

The survey asked questions regarding one's overall health condition, health-related behaviors, health insurance coverage, access and utilization to health care services, health status, and addressed other health related conditions (CHIS, 2017). Roughly 80% of questions from CHIS 2016 were applied to CHIS 2017. Additional substance use questions were added for adults and adolescents, and child development questions were added for children. Geographic stratums were created to divide the 58 counties in the state to allocate a sufficient number of adult interviews in each stratum groups. Moreover, which each geographic stratum, residential numbers were randomly selected consisting of one adult with an adolescent and/or children.

In collaboration with UCLA Center for Health Policy and Research, an independent nonprofit institute, RTI created the methodology and collected the data for CHIS 2016-2017. For all sampled households, RTI staff interviewed one randomly selected adult in each sampled household and one adolescent and one child, if present, in the household and the sampled adult was their parent or legal guardian. The average adult interview took about 41 minutes to complete. English interviews were of a shorter duration that the other languages.

In order to obtain the complex demographics of people living in California, there were a variety of different languages in which the interviews were conducted: English, Spanish, Chinese (Mandarin and Cantonese dialects), Vietnamese, Korean, and Tagalog. To improve sample coverage of California residents, CHIS 2017 chose a sample of individuals within California zip code boundaries who had cell phone numbers out of state to include those individuals who may have recently moved into

the state. Also, to include a variety of age groups, the data collection included oversampling of residents under the age of 65 to increase the opportunity of capturing data from households that included teenagers and children (CHIS, 2017).

**Participants**

The 2017 CHIS surveyed a total of 21,294 households, compromising of 21,153 adults, 448 adolescents, and 1,600 children who live in the State of California. The ethnicities which were represented in the CHIS 2017 collected data cycle were 62.9% non-Hispanic Whites, 22.5% Hispanics, 5.9% Asian only, 5% African American, 1.0% American Indian, and 2.8% other/two or more races. For this specific study, the sample size was drawn using G*Power Software, Version 3.1.92, with a medium effect size of .3, an alpha level of .05, and a power of 80%, which provided a minimum sample size of 190 participants. In order to assure a large enough sample size for the question involving a subgroup of survey respondents with mental health needs, a 5% random sample was drawn three times and verified to match the demographic characteristics of the entire CHIS sample. The complete sample consisted of 2,078 respondents, and there was a sample size of 344 for the analysis involving insurance status for those with mental health needs.

The analysis involving a sample size of 344 participants was derived from a subset question which required excluding a portion of the respondents, thus limiting the sample. The participants who were eligible and included in this sample size were those who answered "Yes" to the subset question, "*Was there ever a time during the past 12 months when you felt that you might need to see a professional because of problems with your mental health, emotions or nerves or your use of alcohol or*

*drugs?*" Out of the participants who answered "Yes," they were then asked to answer the following question, "*Does your insurance cover treatment for mental health problems, such as visits to a psychologist or psychiatrist?*" Limiting the sample size to those who only answered "Yes" to the subset question regarding the need to see a professional was essential to run the statistical analysis efficiently.

**Independent and Dependent Variables**

This study consisted of three questions. The independent variable for the first two research questions was the respondents' ethnicity/race. This was measured by the question, "*Please tell me what you identify yourself as*," followed by the options of: "Hispanic," "non-Hispanic White," "African American," "American Indian/Native," "Asian only," and "Other/two or more ethnicities" (CHIS, 2017).

The independent variable for the third question was household income. The question used to measure this variable was as followed, "*What is your best estimate of your household's total annual income from all sources before taxes in 2016?*" This was an opened-ended question which was then grouped in 19 income level categories after data was collected. The categories range from "under 10,000" to "over 180,000" (CHIS, 2017).

The two dependent variables that aligned with the research questions identifying the differences among ethnicity and income levels were serious psychological distress and mental health insurance. SPD was measured by the Kessler-6 scale, a tool that measures non-specific psychological distress while screening for mental health issues among the general population (Yiengprugsawan, Kelly, Tawatsupa, 2014). The Kessler-6 scale is composed of the following six

questions: "*How often during the past 30 days did you feel nervous? How often did you feel hopeless? How often did you feel restless or fidgety? How often did you feel so depressed that nothing could cheer you up? How often did you feel that everything was an effort? How often did you feel worthless?"* (CHIS, 2017). For each question, a value of 0, 1, 2, 3, or 4 was assigned to the answer. The answer categories for the Kesseler-6 scale were the same for all six questions; participants had the options to answer with any of the following: "All of the time = 4," "Most of the time = 3," "Some of the time = 2," "A little of the time = 1," or "None of the time = 0" (CHIS, 2017). Responses to the six items were summed to yield a K6 score between 0 and 24 with higher scores indicating a greater tendency towards mental illness (Prochaska, et. al., 2012).

The CHIS question regarding mental health asked, "*Does your insurance cover treatment for mental health problems, such as visits to a psychologist or psychiatrist?*" The options for the answers were "Yes," "No," "Don't have insurance," "Refused," or "Don't Know" (CHIS, 2017). A follow-up question was asked of those who previously answered "Yes": "*Was there ever a time during the past 12 months when you felt that you might need to see a professional because of problems with your mental health, emotions or nerves or your use of alcohol or drugs?*" Those who answered "No" to the question regarding the need to seek mental health skipped the insurance coverage question, hence it did not apply to them. This resulted in the data reported as missing or "inapplicable" responses, which then were recoded and deleted from the dataset.

**Data Analysis**

The population included in this survey included individuals 18 years of age or older and males and females. The independent variables in this study were income levels and ethnicity, while the dependent variables were psychological distress and mental health insurance coverage. A one-way ANOVA test was used to analyze the differences among self-reported serious psychological distress, a continuous variable, across ethnicities.

The second dependent variable, mental health insurance status, was based on a question only asked of those respondents who had previously answered that they had a need for mental health services. A Kruskal-Wallis H test was used to evaluate differences in mental health insurance coverage across ethnicities for those who reported interest in seeking mental health services. This analysis was conducted to illustrate the differences in self-reported coverage of mental health insurance coverage across race/ethnicities. The data for this particular group only included individuals who responded "Yes" to "*Was there ever a time during the past 12 months when you felt that you might need to see a professional because of problems with your mental health, emotions, or nerves or your use of alcohol or drugs?*" Participants who answered "Yes" were directed to answer the following question, "*Does your insurance cover treatment for mental health problems, such as visits to a psychologist or psychiatrist?*" The sample size that was used for this particular test was 344 respondents as they were the ones who answered "Yes" to considering seeking mental health care.

For the third question, an ANOVA test was used to identify the differences in self-reported psychological distress across income levels.

# Results

## Participant Demographics

To evaluate this study's research questions, secondary data from the CHIS 2017 survey was used. A total of 2,078 respondents were included in this study to answer the research questions regarding serious psychological distress and income levels. Among the 2,078 participant sample size, 62.7% (1,303) were non-Hispanic Whites, 22.6% (470) were Hispanic, 6% (125) were Asian only, 4.7% (97) were African Americans, 1.3% (27) American Indians, and 2.7% (56) were other/two or more races/ethnicities (see Table 1). Participants had the opportunity to self-report their estimated household income from the year 2016. The total number of income levels reported were classified into 19 categories varying from "less than 10,000" to "over 180,000" (see Table 2).

To answer the research question regarding mental health coverage status across ethnicities, only a sample size of 344 was used. This sample size was reduced due to the inapplicability of those who answered "No" to seeking mental health services. The demographics for this sample size were: 63.3% (218) non-Hispanic Whites, 22.7% (78) Hispanics, 3.5% (12) Asian only, 3.5% (12) African Americans, 1.7% (6) American Indian/Native, and 5.2% (18) other/two or more races/ethnicities.

## Major Findings

**Self-reported ethnicity and serious psychological distress.** For the purpose of this study, the differences in levels of self-reported serious psychological distress across ethnicities were evaluated. To assess participants' mental health status, a series of six questions were asked such as: "*During the past 30 days how often did you feel*

*nervous, hopeless, restless or fidgety, depressed that nothing could cheer you up, feel that everything was an effort, and worthless?*" These questions all had the same answer options of "All of the time," "Most of the time," "Some of the time," "A little of the time," or "None/never." In order to analyze the differences of SPD among ethnicities, a one-way ANOVA was used. The results indicated that there was a significant difference among self-reported SPD across ethnicities, ($F(5, 2{,}072) = 8.79$ $p < .05$). Hispanic participants ($m = 4.19$, $sd = 4.167$) had a relatively high mean value on the SPD scale compared to non-Hispanic white ($m = 3.23$, $sd = 3.565$.), African American ($m = 2.91$, $sd = 3.345$), and Asian respondents ($m = 3.13$, $sd = 3.248$). Participants who identified as other or two or more races/ethnicities had the highest mean value and greatest variation on the serious psychological distress scale ($m = 5.59$, $sd = 5.239$). See Table 3 for results.

**Self-reported mental health insurance coverage across ethnicities.** A Kruskal Wallis test was used to answer the second research question to compare insurance status for those who said they had considered seeking mental health care across race ethnicity categories. The number of individuals in each race category was Hispanic ($n = 78$), non-Hispanic white ($n = 218$), African American ($n = 12$), American Indian/Alaskan Native ($n = 6$), Asian ($n = 12$), and other/two or more races/ethnicities ($n = 18$). Results indicated no significant difference in self-reported mental health insurance coverage across race/ethnicity for those who have mental health needs ($H(5) = 3.892$, $p = .565$). Mental health coverage for those who reported interest in mental health services did not vary among ethnicities. See Table 4 for results.

**Serious psychological distress and income.** The third question in this study analyzed the differences in self-reported SPD across income levels. To determine if there was a difference in self-reported SPD across income levels, an ANOVA test was conducted. The results indicated a significant difference in self-reported SPD across income levels ($F(18, 2059) = 3.02$, $p < .05$). The mean score for all income categories were: "less than 10,000" (m = 4.91, sd = 4.991), "10,000-19,999" (m = 4.33, sd = 4.524), "20,000-29,999" (m = 4.11, sd = 3.923),"30,000-39,999" (m = 3.59, sd = 3.866), "40,000-49,999" (m = 3.53, sd = 3.81), "50,000-59,999" (m = 3.59, sd = 3.73), "60,000-69,999" (m = 3.15, sd = 3.257), "70,000-79,999" (m = 3.25, sd = 4.161), "80,000-89,999" (m = 3.03, sd = 3.167), "90,000-99,999" (m = 2.94, sd = 2.873), "100,000-119,999" (m = 3.17, sd = 4.086), "110,000-119,999" (m = 3.45, sd = 4.086), "120,000-129,000" (m = 2.63, sd = 3.511), "130,000-139,000" (m = 3.54, sd = 3.697), "140,000-149,999" (m = 3.08, sd = 3.511), "150,000-159,999" (m = 3.26, sd = 3.072), "160,000-169,999" (m = 3.15, sd = 3.222), "170,000-179,000" (m = 1.73, sd = 1.667), and "over 180,000" (m = 2.83, sd = 3.088).

The income levels at which individuals were more likely to have SPD were "less than 10,000" (m = 4.91, sd = 4.991) and "10,000-19,999" (m = 4.33, sd = 4.524). The income levels at which individuals were less likely to report SPD were "120,000-129,000" (m = 2.63, sd = 3.511) "170,000-179,000" (m = 1.73, sd = 1.667), and "over 180,000" (m = 2.83, sd = 3.088). As income levels increased, SPD decreased, and as income decreased, SPD increased. See Table 5 for results.

## Discussion

### Summary of Major Findings

The purpose of this study was first to identify if there was a difference in self-reported serious psychological distress across race/ethnicities. In addition, this study sought to determine if there were differences among those who reported the need of wanting to seek mental services and their mental health insurance coverage status. Lastly, a third statistical analysis was run to determine if there was a difference in self-reported SPD across income levels.

The first research question sought to identify if there was a difference in self-reported SPD across ethnicities using a one-way ANOVA. According to the results, the null hypothesis was rejected, indicating a significant difference in self-reported SPD across ethnicities. These results were consistent with previous research regarding the differences of SPD across race/ethnicities. According to Chang and Hong (2013), different ethnicity groups face a variety of different barriers that increase their risk for mental health issues. More specifically, previous literature found differences in self-reported psychological distress among Hispanics, African American, Whites, American Indians, and others. For instance, in the National Health Interview Survey (2017), Hispanics were found to have a higher prevalence of psychological distress than other races/ethnicities. Much of the previous literature also indicated that there were several factors as to why some ethnicities experience distress than others, such as discrimination and/or financial strains.

When comparing the insurance status for those who said they had considered seeking care across race ethnicity categories, it was hypothesized that mental health

insurance coverage would be different across ethnicities for those who reported to have mental health needs. Results indicated that there was not a statistical significance in self-reported mental health insurance across ethnicities for those who reported having mental health needs. These results are inconsistent when compared to previous literature, which found that African Americans were six times more likely to be uninsured compared to non-Hispanic Whites (Families USA, 2019).

This study focused on identifying the differences in self-reported SPD across ethnicities and income, and mental health insurance for those individuals that felt like they needed mental help (CHIS, 2017). The findings in this study suggested that ethnicity and income levels do have a large influence in individuals having serious psychological distress. To further support these findings, previous research identified several factors that helped understand why there might be differences across income levels and ethnicities when reporting levels of distress. Some of these factors may have been due to lack of mental health resources, living in underdeveloped communities, facing discrimination, striving to meet certain life expectations, or facing/dealing with unemployment, underinsurance, cultural beliefs, and public stigma. Future research should focus on identifying the differences of mental health utilizations across age groups and ethnicities.

Lastly, when looking at the differences in self-reported SPD distress across income levels, it was hypothesized that there was a difference in reported psychological distress across income levels. Results indicated that there was a difference of self-reported psychological distressed across income levels. To illustrate, those who reported having a higher household income, 180,000 being the

highest, were less likely to report being psychologically distressed compared to those who were of lower income. Previous studies showed that individuals of lower income levels more frequently reported SPD compared to those of higher-level income due to facing barriers such as lacking education, working underpaid jobs, living in rural communities, lacking resources, and lacking health insurance (WHO, 2017). Individuals within lower income households face difficulties fulfilling their daily needs due to financial constraints, resulting in them reporting different levels of emotional distress compared those of higher income who have less to worry about affording basic necessities.

**Public Health Implications**

This study focused on comparing the differences of SPD across ethnicities, income levels, and mental health insurance coverage among those who reported interest in seeking mental health services. The results portrayed a disparity in SPD and mental health issues across ethnicities and income levels. This information can be useful to public health agencies, professionals, community members, and policymakers to reduce mental health public stigma and increase mental health resources.

Although there are opportunities for affordable mental health services and treatment for mental disorders, there are still people that do not seek out or receive treatment. Some of the challenges faced in public health regarding mental health is increasing awareness about mental health, removing the stigma associated with receiving treatment, and improving access to mental health service for all people. Public health agencies should start incorporating mental health services along with

their chronic disease prevention services, sexual transmitted disease facilities, and substance recovery treatments, and lastly, they should implement more programs that surround the education of the Mental Health Parity Act, insurance, and mental health (CDC, 2005). Future research should focus on understanding, measuring, and monitoring mental health disparities among minority populations as well as those of lower-income households. Involving fair diversity in those who participate in the research and those who conduct research will result in the study being more culturally competent. This will help future mental health workers and policymakers to understand the factors that these populations are facing and close the gap in mental health disparities.

Mental health issues have come to the forefront in the United States with many individuals being diagnosed with a mental condition and suicide being the tenth leading cause of death in the nation. Individuals dealing with mental health conditions often report encountering barriers when attempting to access mental health services such as the cost of mental health care and insurance, prejudice and discrimination, and structural barriers like transportation (NAMI, 2019). It is necessary and of great significance to provide resources and education regarding the 1996 Mental Health Parity Act and the health care insurance policies that are affected by this law to help people understand the differences among the insurance coverages in mental health and other opportunities to seek help if necessary.

The Mental Health Parity Act's purpose is to provide equal benefit for mental health and substance abuse services in insurance plans as they do for "physical health" (SAMHSA, 2016). This means that all financial responsibilities, such as co-

pays and medical bills, number of visits accounted for, and out-of-network benefits, are treated the same for mental health use and physical. However, this law does not require all insurances to include mental health benefits, and employers who have complied with the Act's requirements have found alternative limitations on mental health services coverage for their employees (MHA, 2019). Strong state parity laws are one of the critical foundations for ending discrimination in the coverage of mental health and substance use disorder services; there is a large gap in between those who are not aware of the law and those who are, and a large number of insurance companies that abide by the law. To address the issue of mental health access, policymakers at the federal level should mandate the parity law to be a requirement for all states, provide funding to train insurance company employees on the law, provide enforcement on insurance companies and detect parity violations, and incentivize those who are working in the mental health field to increase parity (American Public Health Association, 2019).

One large reason why individuals are hesitant to acknowledge that they have a mental health illness or reach out to mental health services for treatment is stigma around mental health. From a public health perspective, non-profits or community level agencies should plan to form community coalitions and train them to promote mental health awareness, resources, and education about mental health parity. The end result of community coalitions advocating for mental health and breaking the stigma should be sustaining the work and recruiting more individuals to join the cause.

In conclusion, although public health faces several barriers on the ongoing issue of mental health, through advocacy, policy development, and community involvement change can be made. It is critical for all to come together for a larger impact.

**Study Limitations**

This study consisted of various limitations. To begin, CHIS 2017 data was collected using a self-reported questionnaire that can entail recall bias from those who participated. The answers to the questions asked are retrospective, and the accuracy of participants' answers can be impacted by respondent bias. In addition, the interviews were conducted by phone which entailed the possibility of having a weak connection and an individual misunderstanding the questions that were asked. Additionally, the mean interview completion time was 41 minutes, possibly indicating individuals rushed and did not answer the questions to their best attempt.

Another limitation found in this research is the geographic location; this study was only conducted in the State of California. Given the participants included in the sample size for this study, one of the limitations was that there was an uneven number of individuals representing each ethnicity. More specifically, 62.7% of the respondents who were non-Hispanic White, 22.6% were Hispanic, 6% were Asian only, 4.7% were African Americans, 1.3% American Indians, and 2.7% of other or more races/ethnicities (CHIS, 2017). These values are not representative of the ethnic and race demographics in the State of California.

In addition, the 2017 CHIS gave the participants the opportunity to skip questions, resulting in blank responses. The blank responses also caused there to be a

smaller sample size due to less data for certain questions. This feature of the survey may have lead to a Type II error because of the sample size and the results from the second research question. The research question was in relation to mental health insurance status, and some respondents were categorized as "inapplicable." Due to the fact that the data for this question had to be recoded, it may have underestimated the capacity of the results. In addition, research has found that many Americans are completely unaware of the Mental Parity Law, which mandates insurance companies include mental health coverage (APA, 2019a). Participants did not have enough time to research their responses or call their insurance companies and ask if it covered mental health services; hence, they answered immediately without confirming that they may have insurance that in fact does cover mental health services.

Finally, there is a limitation with the mental health coverage question. Although the Kessler-6 scale is shown to be effective, it limits the opportunity to identify other severe mental health illnesses that individuals might be dealing with such as bipolar disorder, PSTD, severe depression, or attention deficit hyperactivity disorder. Overall, even though this study assessed current SPD, it failed to seize the opportunity of giving participants the option to report other mental health conditions.

**Conclusion**

The intention for this study was to look at the differences of self-reported serious psychological distress across ethnicity and income categories separately, and the differences of mental health status across ethnicities for those who reported interest in seeking mental health services. Results showed that participants from different ethnicities had different levels of psychological distress as well as those

from different income categories. The Hispanic category reported having more SPD compared to other ethnicity/race groups. Additionally, the individuals of lower income households were more likely to report SPD to those from the higher income categories, according to the results from this study. There were no differences in mental health insurance status across ethnicities for those who showed interest in mental health services.

According to previous research and the results from this study, people from different ethnicities report different levels of psychological distress because of the different barriers each of them might be facing. As mentioned in the study, public health should focus on monitoring, assessing, and identifying mental health disparities in minority populations and lower income. This will help research and mental health programs understand the level of mental health awareness that needs to be reached to these populations. Additionally, understanding vulnerable populations in the U.S. will also bring in new tactics and resources on how to break mental health stigma.

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## Appendix A: Tables

Table 1

| | n | % |
|---|---|---|
| White non-Hispanics | 1,303 | 62.7 |
| Hispanic | 470 | 22.6 |
| African American | 97 | 4.7 |
| American Indian/Alaskan | 27 | 1.3 |
| Asian Only | 125 | 6 |
| Other/Two or more races | 56 | 2.7 |

*Demographics for Ethnicity Categories*

Note: n = 2,078; % = percentage. Data Source: 2017 California Health Interview Survey

Table 2

| | *n* | % |
|---|---|---|
| Less than 10,000 | 106 | 5.1 |
| 10,000-19,999 | 214 | 10.2 |
| 20,000-29,999 | 223 | 10.7 |
| 30,000-39,999 | 166 | 7.9 |
| 40,000-49,999 | 151 | 7.3 |
| 50,000-59,999 | 128 | 6.2 |
| 60,000-69,999 | 139 | 6.7 |
| 70,000-79,999 | 110 | 5.3 |
| 80,000-89,999 | 107 | 5.1 |
| 90,000-99,999 | 82 | 3.9 |
| 100,000-109,999 | 147 | 7 |
| 110,000-119,999 | 42 | 2 |

*Demographics for Income Levels*

Note: n = 2,078; % = percentage. Data Source: 2017 California Health Interview Survey

Table 2 (continued)

| | *n* | % |
|---|---|---|
| 120,000-129,000 | 68 | 3.3 |
| 130,000-139,000 | 28 | 1.3 |
| 140,000-149,999 | 25 | 1.2 |
| 150,000-159,999 | 72 | 3.5 |
| 160,000-169,999 | 33 | 1.6 |
| 170,000-179,000 | 22 | 1.1 |
| Over 180,000 | 139 | 6.7 |

*Demographic Details for Income*

Note: n = 2,078; % = percentage. Data Source: 2017 California Health Interview Survey

Table 3

*Results from One-Way ANOVA Test for Serious Psychological Distress Across Ethnicities*

| | Sum of Squares | df | Mean Squares | F |
|---|---|---|---|---|
| Between Groups | 616.424 | 5 | 123.285 | 8.799 |
| Within Groups | 29,031.037 | 2,072 | 14.011 | |
| Total | 29,647.461 | 2,077 | | |

Note: Significant level = p<. 01

Table 4

| | N | *df* | Sig. |
|---|---|---|---|
| Self-reported mental health insurance across ethnicities | 344 | 5 | 0.565 |

*Results from Kruskal-Wallis H Test Analyses*

Note: Significant level p= 0.565

Table 5

*Results from One-analysis ANOVA Test for Serious Psychological Distress across Income*

| | Sum of Squares | df | Mean Squares | F |
|---|---|---|---|---|
| Between Groups | 761.606 | 18 | 42.311 | 3.016 |
| Within Groups | 28,885.855 | 2,059 | 14.029 | |
| Total | 29,647.461 | 2,077 | | |

Note: Significant level = p<. 01

# Appendix B: IRB Approval

**IRB No.:** 046-1819-EXM

**Project:** Factors that Create a Barrier for Mental Health Utilization among the Elderly Population

**Date Complete Application Received: 10/23**
**Date Final Revision Received:** 11/13

**Principle Investigator:** Michelle Holguin
**Faculty Advisor:** Sanggon Nam

**College/Department:** CHS

**IRB Determination:** Exempt Application Approved – Student research using deidentified, secondary data, publically available. . Data analyses may begin, in accordance with the final submitted documents and approved protocol.

**Future Correspondence:** All future correspondence about this project must include all PIs, Co-PIs, and Faculty Advisors (as relevant) and reference the assigned IRB number.

**Approval Information:** At the completion of the project, you are to submit a Research Closure Form.

**Researcher Responsibilities:** The researcher is responsible for ensuring that the research is conducted in the manner outlined in the IRB application and that all reporting requirements are met. Please refer to this approval and to the IRB handbook for more information.

**Date:** November 14, 2018