Psychological Distress, Feelings of Worthlessness, and Family Life Impairment Among Adults of Different Race Ethnicities and Varying Levels of Educational Attainment

by

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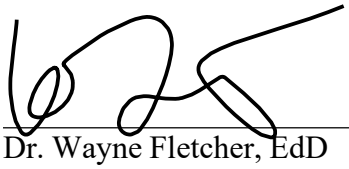

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Abstract

The United States population is made up of many different race and ethnicity categories, and as of 2018, approximately 40% of the population identified as racial ethnic minorities (U.S. Census Bureau, 2020). These diverse groups have different social norms and pressures, family structures, cultural beliefs, and other factors that influence how they view higher education and mental health issues as well as how relationships are developed between family members. The purpose of this study was to examine differences in self-reported psychological distress, feelings of worthlessness, and family life impairment among individuals of different educational levels and in different race and ethnicity categories. This cross-sectional study used secondary data from the 2019 California Health Interview Survey (CHIS). One-way analyses of variance (ANOVAs) were utilized to separately evaluate if there were statistically significant differences in self-reported psychological distress among adults of different race and ethnicity categories and of varying levels of educational attainment. A statistically significant difference was found in self-reported psychological distress amongst adults of different race and ethnicity categories ($p = .003$) and of varying levels of educational attainment ($p = .048$). Two-way ANOVAs were used to evaluate differences in self-reported feelings of worthlessness and in self-reported family life impairment among adults experiencing psychological distress of different race and ethnicity categories and levels of educational attainment. A statistically significant difference was found in self-reported feelings of worthlessness among adults of different race and ethnicity categories and levels of educational attainment ($p = .016$). A statistically significant difference was found in self-reported family life impairment among adults experiencing psychological distress of different race ethnicity categories and levels of educational attainment ($p = .041$). Though it is clear that higher levels of psychological distress are found in racial and ethnic minorities, further

research needs to be conducted to determine which specific factors influence psychological distress in minorities and how they can be addressed.

Key words: psychological distress, feelings of worthlessness, family life impairment, race ethnicity, educational attainment

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Review of Literature

Introduction

The United States population is diverse and consists of many different race ethnicity groups. These diverse groups have different social norms and pressures, socioeconomic statuses, levels of educational attainment, family structures, and cultural beliefs. These factors play a role in influencing how racial and ethnic groups view higher education, mental health issues, and family relationships. Higher education is a stepping-stone for social mobility in the United States, no matter the race or ethnicity group (Bathmaker et al., 2016). This research explored different race and ethnicity groups with varying levels of educational attainment and examined the relationship of race and ethnicity with self-reported psychological distress, feelings of worthlessness, and family life impairment. This research provided further insight into the barriers of higher education for different race and ethnicity groups and could possibly inspire new solutions that cater to the unique obstacles that different race and ethnicity groups face when obtaining higher levels of education.

Race Ethnicity in the United States

As of 2018, approximately 40% of the U.S. population identified as racial ethnic minorities (U.S. Census Bureau, 2020). According to the U.S. Census Bureau (2020), in 2019 the United States had a population of 328.2 million people, with the race ethnicity distribution of 60.1% White, 18.5% Hispanic, 12.2% African American, 5.6% Asian, 2.8% Multiple Races, 0.7% Native American/Alaskan Native, and 0.2% Native Hawaiian/Other Pacific Islander. California is the most populated state in the United States, with nearly 40 million people (Johnson et al., 2021). California is also arguably more diverse than other states as California

residents are 39% Latino, 36% White, 15% Asian or Pacific Islander, 6% African American, and <1% Native American or Alaskan Natives, and 3% Multiple Races (Johnson et al., 2021).

Race Ethnicity and Education Levels

Different race and ethnicity groups have varying levels of educational attainment (National Center for Education Statistics [NCES], 2019). The *Status and Trends in the Education of Racial and Ethnic Groups 2018* report included information on educational attainment levels by different race and ethnicity groups, including undergraduate enrollment rates, post-baccalaureate enrollment rates, and degree fields (NCES, 2019). In 2016, Asians had the largest percentage of college enrollment rates at 58% followed by White (42%), two or more races (42%), Hispanic (39%), African American (36%), Pacific Islander (21%), and Native American/Alaskan Native (19%) (NCES, 2019). The race and ethnicity group with the highest rate of adults ages 25 and over who did not complete high school was Hispanic adults at 33% (NCES, 2019). Young adults who were unemployed and not enrolled in higher education was lowest among Asian young adults (10%) and highest among Native American/Alaskan Native (31%).

African American, Latino, Asian American, and Pacific Islander children who feel connected to their community and have strong racial identity tend to have higher academic performance, while those who have negative views on their racial identity perform poorly in academics (Rivas-Drake et al., 2014). However, for African Americans, access to positive learning opportunities may skew these findings (Rivas-Drake et al., 2014).

Education Levels and Levels of Psychological Distress

Students engaged in higher levels of education report higher levels of psychological distress as more added stressors increase the probability of psychological distress (Deasy et al.,

2014). The levels of self-reported stress are elevated within populations of students in higher education (Robotham, 2008). Emotional familial support plays a significant role in high academic achievement as it boosts positive psychological states and promotes student participation in classes (Roksa & Kinsley, 2018). Some studies found that even though Asian American students may be performing well academically, some may be performing poorly psychologically and socially (Qin, 2007). Many Asian immigrant parents work long hours and therefore, spend limited time with their children (Qin, 2007). Moreover, the time spent with their children is focused on their children's education and less on other facets of their development (Qin, 2007).

Social support, such as family support, is positively related to academic persistence (Nicpon et al., 2006). Qin (2007) reported that differences in parenting styles and parent-child relationships influence whether or not high academic performing Asian American students experience psychological distress, including anxiety, depression, and worry. In African American, Latino, Asian American, and Pacific Islander adolescents, positive feelings regarding race ethnicity have been linked with academic performance and psychosocial adaptability (Rivas-Drake et al., 2014). Students with lower self-motivation and social support are more likely to demonstrate decreased mental health and increased academic stress (Uji & Kawaguchi, 2021). Those adolescents with mental health issues, such as hopelessness and depression, experience reduced academic self-efficacy and are less ambitious about attaining educational goals (Lipson & Eisenberg, 2018).

Education Levels and Family Life

Families where parents have more difficulty adapting to the new culture, causing a cultural gap between generations, have been correlated with poor mental health outcomes, such

as psychological distress and self-esteem issues (Lui, 2015). Parental educational support and family socioeconomic status affect academic performance (Li & Qiu, 2018). Students who lack family encouragement and support from their teachers often have lower academic performance (Barros de Souza et al., 2019). In one study, students who had closer relationships with their parents tended to be less distressed, while students who reported having emotionally distant relationships with their parents were more distressed (Qin, 2007). Intergenerational cultural conflicts, including high academic and behavioral expectations, result in a further disconnect between parents and children. Children may hide poor academic performance and other information that does not fit the traditional cultural norm from their parents (Qin, 2007). Though higher levels of educational attainment and higher socioeconomic standing are linked, further research is needed to look at the toll these "successes" may have on mental health and family life (Caro et al., 2009).

Race Ethnicity and Mental Health Stigma

Racial ethnic minorities do not utilize mental health services as often as the ethnic majority for various reasons, including cultures' biases towards mental health and lack of knowledge on how to access conventional mental health services (Dow, 2011). Immigrants make up many racial and ethnic minorities, whose mental health is greatly influenced by moving from their home countries (Dow, 2011). As immigrants migrate to foreign countries, they face new cultures and unfamiliar customs (Dow, 2011). Undocumented immigrants are less likely to seek mental health treatment because of mistrust, fearing that mental health professionals will report them and they will be deported (Dow, 2011).

Culture plays a prominent role in how people display psychological distress, address health issues, and make mental health treatment decisions. Many minority populations have

reported feeling uncomfortable utilizing mental health services because of a lack of familiarity (Dow, 2011). Religion also plays a role in culturally affecting mental health as certain religious activities, such as prayer and meditation, can positively influence people's overall well-being (Dow, 2011). Some cultures believe supernatural forces are the cause of mental illnesses (Dow, 2011). Since cultures vary in beliefs about if mental illness is influenced by internal versus external forces, these beliefs dictate how they seek treatment (Dow, 2011).

Further, mental health stigma is prominent in many cultures. African American and Latino populations have reported using their families as support instead of seeking professional mental health treatment (Dow, 2011). Various minority cultures keep their mental health issues hidden and patients isolated (Lin et al., 1978). One study found ethnicity to be the primary determinant in how mental health treatment is sought for different racial and ethnic groups in Vancouver (Lin et al., 1978). In comparison to other race ethnic groups, White individuals were often more proactive about obtaining mental health treatment for themselves or had the support from their families to seek mental health services (Lin et al., 1978).

Purpose of the Study

Reports provided by the U.S. Department of Education showed that different race and ethnicities have different levels of educational attainment (NCES, 2019). Students with higher levels of education have reported higher levels of psychological distress (Deasy et al., 2014). The purpose of this study was to examine if there are differences in self-reported psychological distress, feelings of worthlessness, and family life impairment among individuals of different educational levels and from different race ethnicity categories. The results from this study could allow for a better understanding of mental health and family life among people of different races

and ethnicities and educational backgrounds and could be used to adapt health education programs to better serve different race and ethnicity groups.

Research Questions

Research questions that were examined are:

1. Is there a statistically significant difference in self-reported psychological distress amongst adults of different race ethnicity categories?

2. Is there a statistically significant difference in self-reported psychological distress amongst adults of different levels of educational attainment?

3. Is there a statistically significant difference in self-reported feelings of worthlessness amongst adults of different race ethnicity categories and levels of educational attainment?

4. Is there a statistically significant difference in self-reported family life impairment amongst adults who experienced psychological distress of different race ethnicity categories and levels of educational attainment?

Hypotheses

The first research question hypothesized that there is a statistically significant difference in self-reported psychological distress among adults of different race ethnicity categories. The second research question hypothesized that there is a statistically significant difference in self-reported psychological distress among adults of different levels of educational attainment. The third research question hypothesized that there is a statistically significant difference in self-reported feelings of worthlessness among adults of different race ethnicity categories and levels of educational attainment. The fourth research question hypothesized that there is a statistically significant difference in self-reported family life impairment among adults of different race ethnicity categories and levels of educational attainment.

Method

Design

A cross-sectional study was used to examine if different race ethnicity groups with varying levels of educational attainment have statistically significant differences in levels of psychological distress, feelings of worthlessness, and family life impairment. Secondary data from the 2019 California Health Interview Survey (CHIS) were used.

Procedures

Data were collected through the random-digit-dial telephone sampling method as well as through online surveys (CHIS, 2019). The CHIS is an online and telephone survey conducted annually on over 20,000 California residents from 58 California counties (CHIS, 2019). The CHIS survey collects data on various health topics and conditions, such as general health status, health insurance, mental health, health behaviors, and women's health. The CHIS randomly interviews a wide range of age groups from children, adolescents, and adults and includes people from various racial and ethnic backgrounds to represent California's diverse residents (CHIS, 2019).

California addresses were randomly sampled, and adults of those households were sent letters to participate in an online study using a secure password or provided a number to call and participate in the survey with a live interviewer. Ninety percent of surveys were completed online (CHIS, 2019). The CHIS surveys were conducted in six different languages to accommodate California's multicultural populations, including English, Spanish, Chinese, Vietnamese, Korean, and Tagalog (CHIS, 2021). SQL Server Reporting Services (SSRS), an independent research organization contracted with UCLA Center for Health Policy Research, collected the 2019 to 2020 CHIS data from September 2019 to November 2020 (CHIS, 2019).

Participants

Though the CHIS survey collects data on various age groups, this study used data from adults ages 18 and older. For 2019, 22,160 adults participated in the CHIS survey (CHIS, 2019). To calculate the minimum sample size for the study, the G*Power Software, version 3.1.9.2, was used. Using a medium effect size of 0.30, an alpha level of 0.50, and power of 80%, a minimum sample size of 153 was needed for all analyses. A random sample of 2,000 records was selected from the original adult sample of 22,160 to assure appropriate subsample sizes for each race and ethnicity and educational level category. This sample was greater than the minimum sample of 153 and was representative of the original sample.

Independent Variable

In this study, there were two independent variables: race ethnicity, measured in the 2019 CHIS adult survey public use file (PUF) as OMBSRR_P1, and educational attainment, measured in the 2019 CHIS adult survey PUF as AHEDC_P1. The OMBSRR_P1 variable was a categorical variable with six values: 1 = Hispanic, 2 = White Non-Hispanic (NH), 3 = African American only Not Hispanic, 4 = American Indian/Alaskan Native Only NH, 5 = Asian Only NH, and 6 = Other/Two or More Races. The AHEDC_P1 variable is an ordinal variable with nine values: 1 = No Formal Education or Grade 1-8, 2 = Grade 9-11, 3 = Grade 12 H.S. Diploma, 4 = Some College, 5 = Vocational School, 6 = AA or AS Degree, 7 = BA or BS Degree/Some Grad School, 8 = MA or MS Degree, and 9 = Ph.D. or Equivalent.

Dependent Variable

There were three dependent variables used in this study. The first was serious psychological distress, which was measured in the 2019 CHIS adult survey PUF as DSTRS_P1. The second was feelings of worthlessness in the last 30 days, which was measured in the 2019

CHIS adult survey PUF as AJ34. The last was family life impairment in the past 12 months, which was measured in the 2019 CHIS PUF as FAMILY2. The data were first cleaned to remove invalid and skipped responses before the analysis was run.

The DSTRS_P1 variable used the Kessler (K6) scale that contains six questions that evaluated the mental health status of California residents, with the scale ranging from 0 to 24. The Kessler (K6) scale includes questions on feelings of nervousness, hopelessness, restlessness, depression, worthlessness, and more. The AJ34 variable is an ordinal variable with six values: -2 = Proxy Skipped, 1 = All of the time, 2 = Most of the time, 3 = Some of the time, 4 = a little of the time, and 5 = Not at all. For this variable, the values of -2 were removed, and a recoded variable of AJ34RECODE was created. However, this data set did not actually contain any -2 values as it was likely that these lined up with the records already removed for DSTRS_P1.

The FAMILY2 variable was an ordinal variable with five values: -2 = Proxy Skipped, -1 = Inapplicable, 0 = None, 1 = Moderate, and 2 = Severe. This variable was only collected for participants who had experienced some psychological distress. Of the 2,000 random samples, only 346 participants experienced serious psychological distress and were qualified to participate in the family life impairment question. For this variable, the values of -2 (Inapplicable) and -1 (Skipped) were removed, and a recoded variable of FAMILY2RECODE was created to clear out all invalid data.

Data Analysis

To answer each of the four research questions, one-way and two-way ANOVAs were utilized. For the first question, a one-way ANOVA was used to determine if there was a statistically significant difference in self-reported psychological distress among adults of different race ethnicity categories. For the second question, a one-way ANOVA was used to

determine if there was a statistically significant difference in self-reported psychological distress among adults of different levels of educational attainment. For the third question, a two-way ANOVA was used to determine if there was a statistically significant difference in self-reported feelings of worthlessness among adults of different race ethnicity categories and levels of educational attainment. For the last question, a two-way ANOVA was used to determine if there was a statistically significant difference in self-reported family life impairment among adults of different race ethnicity categories and levels of educational attainment.

Results

Participant Demographics

The 2019 CHIS included 22,160 adult participants, 2,000 of whom were randomly sampled and utilized to answer the research questions in this study. The random sample of 2,000 participants assured appropriate subsample sizes in each race and ethnicity and educational level category. Of the participants, 887 (44.4%) were male and 1,113 (55.7%) were female. Of the sample population, 338 (16.9%) were Hispanic; 1,318 (65.9%) were White, Non-Hispanic (NH); 64 (3.2%) were African American Only, Not Hispanic; 1 (0.1%) was American Indian/Alaskan Native Only, NH; 234 (11.7%) were Asian Only, NH; and 45 (2.3%) were Other/Two or More Races. Of the sample, 37 (1.9%) had No Formal Education or Grade 1-8; 32 (1.6%) had completed Grade 9-11; 246 (12.3%) had completed Grade 12 or a H.S. Diploma; 341 (17.1%) had Some College; 110 (5.5%) had completed Vocational School; 178 (8.9%) had an AA or AS Degree; 630 (31.5%) had a BA or BS Degree/Some Grad School; 299 (15%) had a MA or MS Degree; and 127 (6.4%) had a Ph.D. or Equivalent (see Table 1).

Major Findings

A one-way ANOVA was used to evaluate the first research question, "*Is there a statistically significant difference in self-reported psychological distress amongst adults of different race ethnicity categories?*" A statistically significant difference was found in self-reported psychological distress among adults of different race ethnicity categories ($F(5, 1994) = 3.690$, $p = .003$). Tukey's HSD was used to determine the nature of the differences between race and ethnicity categories. This analysis revealed that those who identified as Other/Two or More Races ($M = 4.84$, $sd = 3.861$) had the highest levels of self-reported psychological distress in

comparison to White, Non-Hispanic (NH) (M = 3.31, sd = 3.605) who had the lowest levels of self-reported psychological distress (see Table 2).

A one-way ANOVA was used to evaluate the second research question, "*Is there a statistically significant difference in self-reported psychological distress amongst adults of different levels of educational attainment?*" A statistically significant difference was found in self-reported psychological distress among adults of different levels of educational attainment (F(8, 1991) = 1.958, p = .048). Tukey's HSD was used to determine the nature of the differences between levels of educational attainment. This analysis revealed that those with Some College (M = 3.98, sd = 4.291) and No Formal Education or Grade 1-8 (M = 3.97, sd = 4.488) had the highest levels of self-reported psychological distress in comparison to Ph.D. or Equivalent (M = 2.76, sd = 3.009) who had the lowest levels of self-reported psychological distress (see Table 3).

A two-way ANOVA was used to evaluate the third research question, "*Is there a statistically significant difference in self-reported feelings of worthlessness amongst adults of different race ethnicity categories and levels of educational attainment?"* A statistically significant difference was found in self-reported feelings of worthlessness among adults of different race and ethnicity categories and levels of educational attainment (F(8,29) = 1.531, p = .016) with those in higher educational attainment categories more frequently reported feelings of worthlessness. For overall self-reported feelings of worthless across all race and ethnicity categories, as there was an increase of educational attainment, there was an increase of self-reported feelings of worthlessness with No Formal Education or Grade 1-8 (M = 4.57, sd = 1.042), Grade 9-11 (M = 4.63, sd = .907), Grade 12/H.S. Diploma, (M = 4.59, sd = .847), Some College (M = 4.67, sd = .778), Vocational School (M = 4.72, sd = .623), AA or AS Degree (M = 4.72, sd = .644), BA or BS Degree/Some Grad School (M = 4.69, sd = .680), MA or MS Degree

(*M* = 4.81, *sd* = .540), and Ph.D. or Equivalent (*M* = 4.84, *sd* = .479). For Asian only individuals, self-reported feelings of worthlessness for individuals with MA or MS Degrees (*M* = 4.74, *sd* = .535) and Ph.D. or equivalent level education (*M* = 4.75, *sd* = .672) were higher in comparison to Grade 12/H.S. Diploma (*M* = 3.78, *sd* = 1.481). Tukey's HSD was used to determine the nature of the differences between race and ethnicity categories and levels of educational attainment (see Table 4).

A two-way ANOVA was used to evaluate the fourth research question, "*Is there a statistically significant difference in self-reported family life impairment amongst adults experiencing psychological distress of different race ethnicity categories and levels of educational attainment?"* A statistically significant difference was found in self-reported family life impairment among adults experiencing psychological distress of different race ethnicity categories and levels of educational attainment ($F(8,29) = 1.373$, $p = .041$). A comparison of mean levels of family life impairment across race ethnicities and educational attainment levels revealed varied results across race ethnicities. Specifically, African American individuals in lower educational categories experienced higher levels of family life impairment than those in higher education levels, while Hispanic individuals reported an inverse experience with higher levels of family life impairment occurring at higher educational levels. African American individuals reported the following values for family life impairment: No Formal Education or Grade 1-8 (*M* = 2.00, *sd* = not reported), Grade 9-11 (*M* = 1.33, *sd* = .577), Grade 12/H.S. Diploma, (*M* = 1.47, *sd* = .800), Some College (*M* = 1.46, *sd* = .582), Vocational School (*M* = 1.41, *sd* = .507), AA or AS Degree (*M* = 1.44, *sd* = .527), BA or BS Degree/Some Grad School (*M* = 1.07, *sd* = .716), MA or MS Degree (*M* = 1.32, *sd* = .612), and Ph.D. or Equivalent (*M* = 1.14, *sd* = .690). Hispanic individuals reported the following values for family life impairment:

No Formal Education or Grade 1-8 (*M* = 1.12, *sd* = .703), Grade 9-11 (*M* = 1.18, *sd* = .703), Grade 12/H.S. Diploma, (*M* = 1.24, *sd* = .623), Some College (*M* = 1.32, *sd* = .666), Vocational School (*M* = 1.35, *sd* = .595), AA or AS Degree (*M* = 1.33, *sd* = .643), BA or BS Degree/Some Grad School (*M* = 1.24, *sd* = .680), MA or MS Degree (*M* = 1.42, *sd* = .593), and Ph.D. or Equivalent (*M* = 1.07, *sd* = .466). Tukey's HSD was used to determine the nature of the differences between race and ethnicity categories and levels of educational attainment (see Table 5).

Discussion

Summary of Major Findings

This study aimed to determine if there were statistically significant differences in the self-reported experiences of psychological distress, feelings of worthlessness, and family life impairment among individuals of different educational levels and in different race and ethnicity categories. The study examined a random sample of 2,000 adults from data collected through the 2019 CHIS. The one-way and two-way ANOVAs were performed and showed significant differences for all four research questions.

The first research question examined if there was a statistically significant difference in self-reported psychological distress among adults of different race ethnicity categories. A one-way ANOVA was performed and revealed statistically significant differences. A previous study has shown that culture plays a prominent role in how people display psychological distress and racial ethnic minorities do not utilize mental health services due to many reasons, including cultural biases, lack of knowledge and access, and stigma (Dow, 2011). This study aligned with previous findings as White NH participants reported the least psychological distress compared to all other race ethnicity categories. Asian Only NH and Other/Two or More Races reported the highest levels of self-reported psychological distress. This finding aligned with a study that found Asian American students having high levels of psychological distress despite performing well academically (Qin, 2007).

The second research question examined if there was a statistically significant difference in self-reported psychological distress among adults of different levels of educational attainment. A one-way ANOVA was performed and revealed statistically significant differences across levels of educational attainment. A previous study showed that students engaged in higher levels of

education report higher levels of psychological distress as more added stressors increase the probability of psychological distress (Deasy et al., 2014). Even though this study revealed statistically significant differences in self-reported psychological distress among adults of different levels of educational attainment, this study did not yield similar results to previous studies. Those who obtained a Ph.D. or equivalent level of education reported the least amount of self-reported psychological distress. Those who obtained some college experienced the highest levels of self-reported psychological distress. Several factors may have affected this result as those with doctorate education levels may have developed coping mechanisms to better manage higher education stresses. Those who reported some college experience may still be enrolled in college, possibly accounting for some component of the reported higher stress levels compared to those who have already attained a degree. These findings may also suggest that those with a doctorate level of education may also have lower levels of other stress-related factors, such as higher socioeconomic standing, that may affect their overall levels of psychological distress.

The third research question examined if there was a statistically significant difference in self-reported feelings of worthlessness among adults of different race ethnicity categories and levels of educational attainment. A two-way ANOVA was performed and revealed statistically significant differences. For the majority of racial and ethnic categories, those in higher educational attainment categories more frequently reported feelings of worthlessness. The Asian Only category reported a mean value of nearly one full point higher for feelings for worthlessness when comparing those with graduate or doctoral level degrees to those with Grade 12/H.S. Diploma education. This result aligned with a previous study that found that even though Asian American students may be performing well academically, some may be performing poorly psychologically and socially (Qin, 2007). It is not within the traditional norm for Asian

Americans to perform poorly in academics (Qin, 2007). This suggests that Asian Americans may be obtaining higher education to meet family expectations and traditions, which increases their feelings of worthlessness.

The fourth research question examined if there was a statistically significant difference in self-reported family life impairment among adults who experienced psychological distress of different race ethnicity categories and levels of educational attainment. A two-way ANOVA was performed and revealed statistically significant differences. A comparison of mean levels of family life impairment across race ethnicities and educational attainment levels revealed varied results across race ethnicities. African American individuals with lower educational attainment reported experiencing higher levels of family life impairment than those with higher education levels. For Hispanic individuals, the inverse was reported with higher levels of family life impairment occurring at higher educational levels. A prior study looking at psychological well-being of African Americans and Latino Americans found that while both African Americans and Hispanic individuals were distressed by low-income, only African Americans were distressed by low education (Mirowsky & Ross, 1980). This may play a role in why there is an increase in family life impairment for Hispanics with higher educational attainment because their families may not find education as an important influencing factor to socioeconomic status and therefore may not be as supportive of their children in obtaining higher education. However, this finding does not fully align with previous studies as a prior study reported that African American, Latino, Asian American, and Pacific Islander individuals who feel connected to their community and have strong racial identity tend to have higher academic performance (Rivas-Drake et al., 2014).

Even though these results may not wholly align with previous findings, they provide further insight into the complexity of mental health, family life, race ethnicity, and levels of educational attainment among different racial and ethnic categories. Though it is clear that higher levels of psychological distress are reported in racial and ethnic minorities, further research needs to be conducted to identify which factors have the most influence on psychological distress in minorities and how these factors can be addressed. The results of this study may be the foundation for future research studies and aid public health professionals on how to further develop programs that teach coping mechanisms and other strategies to manage psychological distress in minority populations.

Study Limitations

Because this study used secondary data collected in the 2019 CHIS, there were several limitations. Due to the data for CHIS being collected through online surveys and random-digit-dial telephone sampling, a limitation is self-report bias. Social desirability bias may have occur because participants may have answered questions based on what they felt was socially acceptable or what survey collectors wanted to hear. Recall bias may have occurred because participants may not have accurately remembered previous experiences. Some questions asked participants to recall the past 30 days. Cultural stigma may have prevented some participants from providing truthful answers because of the sensitive nature of questions on psychological distress, feelings of worthlessness, and family life impairment. With online surveys, only those who were technologically savvy and had access to the Internet could participate. For telephone calls, participants may be less likely to answer calls from unknown numbers and could limit the diversity of participants in the study.

Even though the CHIS data collection staff oversampled various minority populations in an attempt to ensure a representative sample, the distribution of the population was a limitation. Of the 2,000 participants, 1,318 participants identified as White NH compared to one participant who identified as American Indian/Alaskan Native only. California's population consists of 36% White, and <1% Native American or Alaskan Natives (Johnson et al., 2021). There was also a larger pool of participants with a college degree, with 630 participants with BA or BS Degree/Some Grad School. In comparison, there were fewer participants from lower education levels, such as 246 participants with Grade 12/H.S. Diploma.

The telephone interviews for the 2019 CHIS took an adult on average about 46 minutes to complete. Because the survey was very long, this may be a limitation because it is unknown if participants were engaged or distracted during the survey. Participants were not required to answer all the questions, which may have limited the availability of data.

Public Health Implications

The findings from this study showed statistically significant differences in self-reported psychological distress, feelings of worthlessness, and family life impairment among individuals of different educational levels and race ethnicity categories. Findings in this study are crucial for reducing health disparities and providing more racial and ethnically sensitive resources to minorities. With further knowledge on race- and ethnicity-related stigmas, barriers, and other factors that may affect psychological distress and feelings of worthlessness, public health professionals will be better equipped to develop mental health programs and services better suited for minority populations.

Policy writers should collaborate with federal and state government agencies and community-based organizations, such as the National Alliance on Mental Illness (NAMI), the

Substance Abuse and Mental Health Services Administration (SAMHSA), and the National Institute of Mental Health (NIMH), to create policies and fund more programs that advocate for mental health services that are more accessible and equipped to address specific mental health concerns of minority populations. Medicaid is one of the largest funders of mental health services in the United States (Medicaid, 2021). Minority populations make up approximately 47% of Medicaid enrollment, even though minority groups only make up 36% of the US population (Andrews et. al., 2015). Further resources and sensitivity training need to be provided to public health professionals, so they can educate other professionals on how to address the mental health needs of minorities. Trust between educators, providers, and the BIPOC community needs to be further developed to reduce cultural mental health stigma and other barriers that prevent minorities from accessing the current and future available mental health services. The availability of mental health services in different languages are needed and more practitioners from minority backgrounds may aid in fighting against culture-based mental health stigma as patients feel more satisfied with their care when they are seen by practitioners of the same race or ethnicity (Hopkins, 2002).

Many colleges and universities provide mental health services on campus to support their students' needs. In 2015 to 2016, 56% of undergraduate students reported being first-generation college students in the United States (RTI International, 2019). Many first-generation college students face other stressors alongside educational stressors, including financial stress, family and cultural pressures, and being the first to navigate higher education stressors. Providing mental health services geared towards racial and ethnic minority students would alleviate educational stressors and provide students with resources when faced with cultural and family life stressors.

Future Research

Though some research is available on the factors that affect the psychological distress in racial and ethnic minorities, further research needs to be conducted on stress coping mechanisms for individuals of different ethnicities and education levels. Though the level of education is linked with psychological distress, feelings of worthlessness, and family life impairment, there are many other influencing factors. Additional studies to further differentiate between the stresses of obtaining a higher education degree with other external stressors, such as socioeconomic status, on students is needed. Further implementation research needs to be conducted to provide mental health practitioners with evidence-based approaches to reducing barriers and increasing usage of mental health services on college campuses by first-generation and racial and ethnic minority students. Further research needs to be done to best address the most common student mental health issues, including depression, anxiety, stress, and addiction, and develop innovative ways to provide better mental health resources to students so that they are better equipped to handle stress and increase their likelihood of successfully completing their higher education degree.

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Appendix

Table 1

Participant Demographics (n = 2,000)

Characteristic	*N*	%
Gender		
Male	887	44.4
Female	1113	55.7
Race Ethnicity		
Hispanic	338	16.9
White, Non-Hispanic (NH)	1318	65.9
African American Only, Not Hispanic	64	3.2
American Indian/Alaskan Native Only, NH	1	0.1
Asian Only, NH	234	11.7
Other/Two or More Races	45	2.3
Educational Attainment		
No Formal Education or Grade 1-8	37	1.9
Grade 9-11	32	1.6
Grade 12/H.S. Diploma	246	12.3
Some College	341	17.1
Vocational School	110	5.5
AA or AS Degree	178	8.9
BA or BS Degree/Some Grad School	630	31.5
MA or MS Degree	299	15
Ph.D. or Equivalent	127	6.4

Table 2

One-way Analysis of Variance Comparison of Rate of Self-Reported Psychological Distress Amongst Adults of Different Race Ethnicity Categories

	N	Mean	SD	F	P
Rate of PD by Race Ethnicity				3.690	0.003
Hispanic	338	3.96	4.231		
White, Non-Hispanic (NH)	1318	3.31	3.605		
African American Only, Not Hispanic	64	3.64	4.509		
American Indian/Alaskan Native Only, NH	1	6.00			
Asian Only, NH	234	4.06	4.254		
Other/Two or More Races	45	4.84	3.861		
Total	2000	3.56	3.846		
					*p<.05

Note. The ANOVA revealed a significant difference in self-reported psychological distress amongst adults of different race ethnicity categories. Source: 2019 California Health Interview Survey.

Table 3

One-way Analysis of Variance Comparison of Rate of Self-Reported Psychological Distress Amongst Adults of Different Levels of Educational Attainment

	N	Mean	SD	F	P
Rate of PD by Educational Attainment				1.958	0.048
No Formal Education or Grade 1-8	37	3.97	4.488		
Grade 9-11	32	3.00	4.450		
Grade 12/H.S. Diploma	246	3.83	4.254		
Some College	341	3.98	4.291		
Vocational School	110	3.41	3.444		
AA OR AS Degree	178	3.62	3.806		
BA OR BS Degree/Some Grad School	630	3.58	3.835		
MA OR MS Degree	299	3.14	3.204		
Ph.D. OR Equivalent	127	2.76	3.009		
Total	2000	3.56	3.846		
					*p<.05

Note. The ANOVA revealed a significant difference in self-reported psychological distress amongst adults of different levels of educational attainment. Source: 2019 California Health Interview Survey.

Table 4

Two-way Analysis of Variance Comparison of Rate of Self-Reported Feelings of Worthlessness Amongst Adults of Different Race Ethnicity Categories and Levels of Educational Attainment

Source	Type III Sum of Squares	df	Mean Square	F	P
Corrected Model	31.137	42	.741	1.531	.016
Intercept	1683.938	1	1683.938	3477.481	.000
OMBSRR_P1	2.077	5	.415	.858	.509
AHEDC_P1	10.480	8	1.310	2.705	.006
OMBSRR_P1 * AHEDC_P1	13.776	29	.475	.981	.495
					*p<.05

Note. The ANOVA revealed a significant difference in self-reported feelings of worthlessness amongst adults of different race ethnicity categories and levels of educational attainment.

Source: 2019 California Health Interview Survey.

Table 5

Two-way Analysis of Variance Comparison of Rate of Self-Reported Family Life Impairment Amongst Adults Experiencing Psychological Distress of Different Race Ethnicity Categories and Levels of Educational Attainment

Source	Type III Sum of Squares	df	Mean Square	F	P
Corrected Model	26.706	51	0.524	1.373	0.041
Intercept	503.593	1	503.593	1320.789	0.000
AHEDC_P1	3.31	8	0.414	1.085	0.370
OMBSRR_P1	5.623	5	1.125	2.949	0.012
AHEDC_P1 * OMBSRR_P1	17.296	38.00	0.455	1.194	0.193
					*p<.05

Note. The ANOVA revealed a significant difference in self-reported family life impairment amongst adults experiencing psychological distress of different race ethnicity categories and levels of educational attainment. Source: 2019 California Health Interview Survey.