11-15-2023

Mental Health Stigma, Cultural Barriers, Ethnicity and Treatment Seeking Among College Women

Alandrea Martin, PhD, LMFT
Walden University

Walden University

College of Psychology and Community Services

This is to certify that the doctoral dissertation by

Alandrea Martin

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Jennifer Rounds-Bryant, Committee Chairperson, Psychology Faculty
Dr. Brandy Benson, Committee Member, Psychology Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2023

Abstract

Mental Health Stigma, Cultural Barriers, Ethnicity and Treatment Seeking Among College Women

by

Alandrea Martin

MA, Argosy University, 2013

BS, University of Phoenix, 2005

Dissertation Submitted in Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Psychology

Walden University

November 1, 2023

Abstract

The diagnosis of a mental illness disorder can be an unpleasant experience for anyone. Deciding whether to seek treatment for the disorder can be a complicated decision. Stigma and cultural beliefs are barriers that may prevent people from seeking treatment for mental illness. The purpose of this study was to address the gap in determining the prediction of stigma, cultural barriers, and treatment seeking among Caucasian, African American, and Asian American college women. Help-seeking theory was used to explore people's beliefs, and actual help-seeking behaviors. Previous researchers proposed that the help-seeking process entails identifying symptoms, considering resources, and disclosing the issue to mental health professionals. The sample in this study consisted of 100 college women aged 18–35 years. A flyer was used for recruitment, and data collection was done by Survey Monkey across social media platforms. A closed-ended six-item questionnaire was used to assess the participants' stigma surrounding mental health. An 11-item measure was used to assess potential cultural barriers to help-seeking behaviors. A one-item questionnaire was used to assess the participants' willingness to seek treatment for anxiety. The core goal of the study was to find out the willingness of women to seek mental health treatment. Results revealed that mental health stigma and ethnic group was not a significant predictor of mental health treatment seeking, but cultural barriers were a significant predictor. The findings may be used to promote positive social change on college campuses to encourage adequate therapist staffing to address any increase in mental health treatment seeking after COVID-19 with a consideration to African American, Asian American and other minority therapists.

Mental Health Stigma, Cultural Barriers, Ethnicity and Treatment Seeking Among College Women

by

Alandrea Martin

MA, Argosy University, 2013

BS, University of Phoenix, 2005

Dissertation Submitted in Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Psychology

Walden University

November 1, 2023

Dedication

This work is dedicated to all the women suffering with mental health illness while attending college who may have challenges with seeking help due to experiences of stigma or cultural barriers. May you find the courage to seek mental health treatment, treat your mental health illness, and soar to higher heights in life.

Acknowledgments

For my daughter, Clishe, keep reaching for the stars and know that the sky is the limit and that all things are possible. For my grandson, Casen King, who inspired me to keep pressing.

For my family, for believing in me when I thought I did not have the strength to continue. Thank you for your love and support.

To Dr. Jennifer Rounds-Bryant for your encouragement, continued guidance, and support throughout this journey. This could not have been possible without you. I appreciate all that you do. You are truly amazing.

To my committee, Dr. Benson, Thank you for your support and guidance. It made all the difference.

Table of Contents

List of Tables

Chapter 1: Introduction to the Study

Mental illness is a significant problem amongst university students. According to Eisenberg et al. (2011), approximately 32% of university students have reported having some type of mental illness. These issues include anxiety, depression, suicidal ideation, and an increased amount of stress (American College Health Association [ACHA], 2009). According to Corrigan et al. (2014), mental illness may have a tremendous effect on people's education, employment, and relationships. Although there are effective mental health interventions, many people suffering from mental illness do not seek out the care needed. A report from the World Health Organization (WHO, 2001) indicated that approximately 40% of the world's population is affected by mental illness. Approximately 60 million Americans experience mental illness each year, and only 59.6% of individuals diagnosed with mental illness reported that they had received treatment.

Stigma in psychology refers to a situation where an individual is viewed in a negative way because they have different traits, behaviors, beliefs, or even physical conditions compared to other people (Fokuo et al., 2017). Stigmas about mental illness can make those suffering feel different from the rest. Stigmatization creates barriers for students, preventing them from seeking help for mental health disorders (Vidourek et al., 2014). A few commonly held beliefs about people with mental illness are that they dangerous, unpredictable, responsible for their illness, or inadequate. In most societies, mental illness is a topic that is not openly discussed. This makes it even more difficult for victims to seek help. The societal expectations around mental health and the stigma that

surrounds mental illnesses have led to increased cases of discrimination in the workplace and impact social or educational opportunities (Corrigan et al., 2014). At the same time, certain social factors, such as gender, social status, race, age, and ethnicity, also play a major role in determining whether or not a mental illness victim seeks help.

Individuals living with mental illness who have low income and are uninsured are more likely to drop out of care (Lazar & Davenport, 2018). Although the factors that lead to mental illness are constant across all races and social classes, some factors play out in certain groups more than others. Although various racial and ethnic groups experience mental disorders; there is a considerable difference among these groups in regard to care: 16.6% of White adults receive mental health services, compared to 7.6% of African American adults and only 6.5% of Asians (Budhwani et al., 2012). This is largely attributed to the economic disposition of these groups in terms of being able to afford health care, their social status, and in a big way, the societal definitions and beliefs around mental health and seeking help. This study addressed the gap in the literature outlined by Han and Pong (2015), Jennings et al. (2015), and Masuda et al. (2009) by evaluating the relationship among stigma, cultural barriers, and seeking treatment for anxiety among a sample of Asian college women. The synthesis of literature will close the gap by establishing the existence of stigma across diverse ethnic groups, as well as the main causes of mental health stigma and its impacts on the number of women seeking treatment for mental health issues such as anxiety. The results of this study will be beneficial information to clinicians, college staff, and families. The study may be used as a resource to assist students and patients seeking mental health treatment. Further, the

study will contain a background of the problem, indicate its purpose, and pose research questions that will be a guideline for the research. The theoretical framework, the nature of the study, definitions, assumptions, limitations, scope and delimitations, and the significance of the study and implications for social change will also be reviewed.

Background

College students across the world are at risk for mental health disorders due to numerous stressors of experiences at school. According to the WHO (2001), indicators of mental illness include risks of violence and social exclusion, among others. Furthermore, transition from high school to college is a very challenging period that could result in mental health illnesses. Aldiabat at al. (2014) addressed stigma and social awareness for administrators, educators, and health care providers to help promote culturally sensitive and collaborative multidimensional programs for students diagnosed with a mental illness. Findings from their study indicate that there are risk factors such as transition, technology, and social inclusion that pose barriers to seeking mental help. The consequences for failure to seek mental help include risk of drop out, alcohol and drug abuse, and an increase in the number of cases of psychosocial problems in society.

Han and Pong (2015) provided insight on Asian American cultural values and barriers that impact an individual's willingness to seek professional psychological help. The authors sought to determine the degree of mental health stigma and its contribution towards mental-health-seeking behaviors among Asian American college students. The findings from the study indicated that stigma and cultural differences were a major contributor to mental health cases among Asian American college students. Jennings et

al. (2015) identified a prominent concern in college-aged students seeking treatment for mental illness and its impact. The authors sought to investigate the barriers that keep college-aged students from seeking treatment in hopes of providing useful recommendations to assist with treatment-seeking behaviors. The results indicated that higher perceived stigma and self-inflated stigma played a role towards a negative treatment attitude among victims.

Masuda et al. (2012) provided insights on the stigma and stressors associated with African American college students and treatment seeking for their illness. The authors investigated whether mental health stigma and self-concealment were associated with attitudes towards seeking professional psychological treatment. The results from the study revealed that stigma and self-concealment were directly related to help-seeking attitudes among the group. Other psychosocial factors, such as poverty, lack of access, and transportation, were also explored in relation to help-seeking attitudes towards mental health services. The study found that mental-health-seeking behavior declined as poverty, lack of access to health care, and lack of transportation services increased. Corrigan and Watson (2002) addressed the impact of stigma in addition to the challenges and prejudices associated with people who struggle with mental illness. The authors provided strategic approaches (protest, education, and contact) for future education in promoting treatment-seeking behavior. The strategies advocate for educating people and insisting on positivity around mental health while increasing contact with victims. The aim of the strategies is to educate people on the existence of mental health and remove negative beliefs, hence reducing the stigma around mental health. Corrigan and Watson

suggested that the more educated a person is on mental health, the lower the chances of being impacted by societal and self-stigma from mental illness. Corrigan et al. (2014) focused on mediating and moderating effects of stigma on care-seeking and treatment participation, in addition to considering other barriers that may affect treatment of a mental illness. The study revealed that knowledge on mental health and cultural relevance are key players in reducing mental illness stigma and, in turn, increasing the chances of a patient seeking medical attention when needed.

Problem Statement

Individuals who suffer with mental illness do not always seek out mental health treatment (U.S. Department of Health and Human Services, 2001). Barriers to seeking mental health treatments include self-perceived mental health stigma and unfavorable cultural beliefs about seeking mental health treatment. Both of these obstacles have adverse effects on mental-health-seeking behavior. In a study conducted by Luu et al. (2009), 210 Vietnamese American participants were assessed for cultural beliefs about mental health treatment seeking using a 10-item instrument. The results from the study indicated that most participants had a culture-related attitude towards mental health and mental illness treatment. Religious beliefs around animism within certain cultures stipulate that human beings and animals have souls and spirits that are controlled by a higher being. Jennings et al. (2015), using a one-item measure, assessed 246 undergraduate college participants between the ages of 18–19 and 20–24. The measure used in the Jennings et al. (2015) study assessed the participants' perceptions of stigma and self-stigma in regard to mental health treatment-seeking. Their measure also

evaluated the participants' self-reliance for addressing mental health issues, self-reported mental health problems, and attitudes towards treatment-seeking and treatment-seeking behavior. Upon regression analyses, the results revealed that higher perceived mental health stigma, higher mental health self-stigma, and higher self-reliance predicted negative attitudes towards seeking mental health treatment. The results indicated that perceived stigma -TS (β = -48 p < .01), self-stigma -TS (β = -.66 p .01), and self-reliance -MHP (β = -.33, p < .01) were significant unique predictors, unlike stigma -TS.

A study was conducted by Masuda et. al. (2012) using 163 African American female college students. The purpose of the study was to evaluate the associations between mental health stigma, self-concealment, and help-seeking attitudes for mental health treatment. The college students completed the Attitudes Towards Seeking Professional Psychological Help (ATSPPH) questionnaire to measure their mental health help-seeking attitudes (Fischer & Turner, 1970). The results indicated that both mental health stigma and self-concealment have a negative association with help-seeking attitudes. Previous experiences of seeking mental health treatments were associated with a more favorable help-seeking attitude and lower mental health stigma (Fischer & Turner, 1970). Han and Pong (2015) conducted a study with 66 Asian American participants to measure their willingness to seek mental health treatment. Upon using a single-item questionnaire, they inquired whether participants would be willing to seek professional help for their mental health illness and included an open-ended question asking the participants to elaborate on their answers. The results revealed that 43 (65.2%) of the participants were open to seeking help to maintain their mental health and 23 (34.8%)

revealed that they would not seek help to maintain their mental health (Han & Pong, 2015). After a review of participants' elaborated responses, the reason revealed for initially not seeking help was the participants' belief that having mental illness was shameful and represented a negative reflection on the individual, their immediate family, and their ancestors.

The literature provides evidence that mental health stigma and mental health treatment cultural barriers can hinder college students from seeking mental health treatment (Jennings et al., 2015). These results were based on research that was done within one small group of students at a time. The relationship between the variables for a geographically dispersed sample of college students is unknown. Jennings et al.'s (2015) recommendations for future research included using a larger, more demographically diverse sample. Masuda et al.'s (2012) recommendations for future research included investigating the role of mental health stigma and other contributing factors, such as socioeconomic status, cultural values, and religious practices, as they may be relevant to help-seeking attitudes of African American college students. Han and Pong (2015) recommended using a larger population of other Asian American students for future research studies. The study addressed the gap in the literature outlined by Han and Pong (2015), Jennings et al. (2015), and Masuda et al. (2012) by evaluating the relationship among mental health stigma, mental health treatment cultural barriers, and seeking treatment among a sample of African American, Asian American and Caucasian college women.

Purpose

This quantitative study investigated the relationship between mental health stigma, cultural barriers to mental health treatment, and treatment seeking among African American, Asian American, and Caucasian female college students. The independent variables were mental health stigma and cultural barriers to mental health treatment. The variables measured were individually held beliefs. The dependent variable was student's willingness to seek treatment. Participants were recruited through social media. The study's survey was administered through Survey Monkey. The results collected from the surveys were analyzed to determine the existence and extent of a relationship between stigma, cultural barriers, and participants' willingness to seek mental illness treatment. Other variables in the model included age, ethnicity, and gender. The regression model applied in the analysis of the data gave insight into factors that affect the independent variable the most. The model obtained was helpful for future studies and for policy makers within the health care system. It may allow them to address some of the challenges brought about by patients' inability to seek medical help.

Hypothesis of the Study

The present study hypothesized that mental health stigma is closely associated with a patient's unwillingness to seek medical help. I also purported that factors such as gender, age, and ethnic group affect a person's willingness to seek help. Through this study, I sought to either validate or invalidate this null hypothesis through an online survey carried out among college students.

Research Questions

The research questions used for the study were as follows:

RQ1: Does mental health stigma predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women?

$H_0$1: Mental health stigma does not predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

H_a1: Mental health stigma significantly predicts mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

RQ2: Does age predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women?

$H_0$2: Age does not predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

H_a2: Age significantly predicts mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

RQ3: Do cultural barriers predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women?

$H_0$3: Cultural barriers do not predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

H_a3: Cultural barriers significantly predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

RQ4. Does ethnic group predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women?

$H_0$4: Ethnic group does not predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

H_a4: Ethnic group significantly predicts mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

RQ5: Does age mediate the relationship between ethnic group and mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women?

$H_0$5: Age does not mediate relationship between ethnic group and mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

H_a5: Age significantly mediates the relationship between ethnic group and mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

Framework

The theory of help-seeking was used for the study. Help-seeking theory is used to explore people's beliefs, attitudes, intentions, and help-seeking behaviors. *Help-seeking* is an attempt or activity carried out by someone who believes they are in need of psychological assistance from a clinic, counselor, or psychologist. This theory was tested by using the independent and dependent variables of stigma and college biologically identified African American, Asian American, and Caucasian women seeking mental health treatment as identified in the research questions. According to Jennings et al. (2015), help-seeking decisions involve a process of awareness of symptoms, resource considerations, and a willingness to disclose the issue and seek help. During the process, barriers are brought to awareness that may influence treatment-seeking. In this study, these barriers included stigma and cultural barriers. The study evaluated how stigma affects participants' ability and willingness to seek treatment. This was done through an evaluation of variables such as mental illness stigma, age, gender, ethnicity, and cultural beliefs. I used various methods to determine the existence of a relationship between these factors and help-seeking attitude among women in college (the target population).

A person who engages in help-seeking might also use informal supplies, including peer groups or family support, to improve a situation or problem (Karabenick & Newman, 2006). The term *help-seeking* originates from medical sociology literature that

examined *illness behavior*. *Illness behavior* is a term that refers to human health behavior. Mechanic (1978) studied the way people monitor their bodies and define and interpret their symptoms.

Nature of Study

This was a quantitative study that used a cross-sectional survey design. It was administered via web-based service. The researcher used nonprobability sampling. Participants were recruited through social media and consisted of African American, Asian American, and Caucasian college women 18 years and older who suffered with a mental illness. The study recruited a target audience enrolled in college. A Survey Monkey link was provided on social media. Completed data were retrieved from Survey Monkey and analyzed using descriptive statistics and regression.

Definitions

Anxiety: An emotion characterized by feelings of tension, worried thoughts, and physical changes that may increase blood pressure. May involve avoidance of situations and tasks out of worry. Perspiration, trembling, dizziness, or rapid heartbeat may occur (Kibble, 2015).

College women: Students of female gender ages 18 and up attending an online or campus university to receive a postsecondary education.

Culture: The arts and other manifestations of human intellectual achievement regarded as a collective group of people (Masuda et al., 2012).

Stigma: Defined as a mark of disgrace or negative attitude held by others (Vidourek et al., 2014).

Treatment: Symptom awareness, consideration of resources, and a desire to disclose the issue and seek assistance (Jennings, et al., 2015).

Assumptions

The researcher assumed that the topic was important because it involved the role of mental health stigma and cultural barriers that may impact help-seeking treatment among Caucasian, African American and Asian college female students. The results of the study provide helpful information that can be used to support college students, clinicians, and families seeking mental health treatment. It was assumed that each participant in this study fully understood the questions asked in the survey. The researcher assumed that the participants were not influenced by anyone while completing the survey and that they responded to each question to the best of their ability. The researcher also assumed that each participant had a basic understanding of stigma and cultural beliefs associated with their anxiety diagnosis. Furthermore, it was assumed that the resource used (Survey Monkey) provided ease so that participants felt comfortable and secure with their responses. One theoretical assumption was that participants had full awareness of their mental illness symptoms and that their help-seeking behavior was authentic in identifying the stigma and cultural barriers that impacted their decision to seek treatment. With using logistic regression as the statistical test, there is the assumption of linearity between the dependent variable and the independent variables. According to Pramesh and Aggarwal (2017), it is assumed that the relationship between the predictor variables and independent variables is uniform, and such an assumption may not be true for certain associations.

Scope and Delimitations

The purpose of the study was to investigate the relationship between mental health stigma, cultural barriers to mental health treatment, and treatment seeking among African American, Asian American, and Caucasian female college students. The scope of the study encompassed African American, Asian American and Caucasian women with mental health illness. The delimitations of the study specific to ethnic groups and variables were selected to avoid duplicating previous studies. Another delimitation of the study was the choice of a quantitative study to investigate the relationship between mental health stigma, cultural barriers to mental health treatment, and treatment seeking among African American, Asian American, and Caucasian college students using a larger population. A qualitative design was not chosen for this study because the research questions were correlational in nature and qualitative methods would not be used. The study had a limitation to female Caucasian, African American and Asian participants in college age 18 and older with a mental health illness. This was the population about which this study was conducted to fill a gap. In addition, the participants used in the study were currently pursuing a secondary education in the United States.

Limitations

This study had several limitations. The number of participants was limited to 100 females pursuing secondary education. Limiting participation to those who are female eliminated a male perspective on stigma and treatment-seeking for mental health illness. This may have resulted in the knowledge and resources necessary to conduct a thorough quantitative study. Also, this was a quantitative study with a structured survey. This

design restricted participants from elaborating on their responses. A qualitative study would have involved focus groups with a smaller sample population to accommodate more in-depth questioning and close observation in order to provide insights into participants' stigma and treatment seeking for mental health illness.

Significance

This study investigated the relationship of female college students and their motivation to seek treatment for their mental health. Insights from this study may assist those who work with college women by offering education and support to those suffering with a mental illness who may be reluctant to seek treatment. The researcher's aim is to promote positive social change through the use of this study by presenting its findings at local college conferences, behavioral health seminars, and annual presentations at local clinics and support groups. People who attend such conferences and seminars will listen, improve their mental health awareness, and possibly be more open to accepting the resources offered. This may encourage more people to initiate mental health treatment when it's needed and create positive change.

Summary

While living with a mental health illness can be difficult and frustrating, seeking treatment for the illness may be beneficial in handling the stress, frustration and stigma associated with the illness. The purpose of this quantitative research was to investigate Caucasian, Asian and African American female college students who suffer with mental illness and whether stigma and cultural barriers predict seeking treatment for their mental

health. The intent was to offer education, resources, and support to college students suffering with a mental illness.

Chapter 2: Literature Review

Introduction

Mental illness can affect people from all walks of life and age groups. It can involve changes in thinking, mood and behavior (Friedman, 2015). According to the Substance Abuse and Mental Health Services Administration (SAMSHA, 2014), an estimated 9.8 million people ages 18 and older have been diagnosed with a mental health disorder. This number represents 4.0% of adults in the United States. According to DeFreitas et al. (2018), half of college-aged students exhibit some type of mental health illness regardless of their age, cultural background or gender. However, some students are predisposed to mental illness. Such predisposition can result from social, economic, and religious factors affecting the student. For example, a student who is facing discrimination based on their gender or ethnicity is more prone to mental illness than a student who is not. This explains why more Black women students suffer from mental illness as compared to white males within the same school setting. Therefore, understanding of the impact of mental health stigma on minority college students is important.

Kramer et al. (2002) analyzed cultural factors that affect the mental health of Asian American students. Asian Americans are the fastest growing racial group in the United States (Kramer et al., 2002). The ethnic group is also one of the most diverse in the United States, with at least 43 ethnic subgroups speaking over 100 languages and dialects. Because Asian Americans make up a large percentage of non-White students in most American universities, they were a key group in this study. Studies by Kramer et al.

(2002) gave insight into some of the factors that determine a victim's ability and willingness to seek mental illness help. The study focused on factors such as age, language, level of acculturation, gender, family structure, and religious beliefs. The authors found that language plays a key role in a victim's ability to communicate in an attempt to seek help. This is closely related to the level of acculturation. *Acculturation* refers to an individual's level of culture acceptance. The longer one has been in the United States, the better their level of communication in English. The study also illustrated that men are more rapidly acculturated than women. Religious beliefs analyzed in the study indicated that Asian American patients are less likely to seek treatment as a result of their religious beliefs around mental health and western medicine.

Half of all students attending college in the United States reported having a mental health disorder (Jennings et al., 2015). Students attending secondary education are at an increased risk of developing a mental health disorder due to inherent stressors brought on by the college setting (Pedrelli et al., 2015). These stressors include the developmental transition from adolescence to adulthood, increased responsibilities, and inherent collegiate responsibilities (Aldiabat et al., 2014). According to the 2015 National College Health Assessment, approximately 35% of all college students reported depression or depression-like experiences, 58% reported overwhelming anxiety, and 10% reported seriously considering suicide (ACHA, 2016). Additionally, approximately 14.5% of college students reported being diagnosed or treated for depression, 17% reported being diagnosed or treated for anxiety, and 11% reported being diagnosed and treated for both anxiety and depression symptoms (ACHA, 2016).

Kearns et al. (2015) conducted a study to investigate 493 college student attitudes towards help-seeking with an age range of 18–61. In this study, a 10-item scale was used and scored on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Questions were addressed in relation to suicide or mental health to predict attitudes and willingness of a person to seek professional help from resources in the university (e.g., "I would feel inferior to ask a therapist for help in my university."). The scale yielded a Cronbach's alpha of 0.87. The results of the study indicated that stigma of help-seeking was prominent amongst participants with a mean score of 33.83 (*SD* = 7.26). Females were found to have a higher stigma towards the help-seeking process than males.

Literature Search Strategy

The Walden University library was used to access numerous electronic databases including Ebscohost, PSYCArticles, and PSYCInfo. The researcher also used Sage Full Text Citation, SocIndex, and Google Scholar. Search terms that were used were *mental illness*, *mental health*, *college student*, *university*, *anxiety*, *stigma*, *cultural barriers*, *help seeking*, *help-seeking theory*, *treatment, female,* and *women*.

Theoretical Framework

Early Research on Help-Seeking Theory (1962–2014)

Help-seeking theory was the theoretical framework for this study. Help-seeking theory is used to explain how people's beliefs, attitudes, and intentions lead to help-seeking behaviors (Mechanic, 1978). According to Mechanic (1978), an individual with a mental health illness must have a willingness or desire to seek help. Individuals might

seek help by asking for advice, learning more information, asking for general support, or pursuing treatment. *Help-seeking* is defined as a process where a person becomes increasingly more aware of their symptoms, identifies them as an issue, and begins to seek help to address them (Pace et al., 2018). According to Pace et al. (2018), awareness is an important step in facilitating the persuasion to seek help. Mental health services appear to be a problem in communities and on student campuses where students are unaware of services offered for mental health treatment.

The two dimensions of help-seeking are formal and informal. Formal help-seeking is assistance from professionals who are specialists and general health care providers. However, this may also include help sought after from non-health professionals, such as teachers, clergy, and community workers who provide advice, support and/or treatment. Informal help-seeking is assistance from friends and family members. Asian Americans are often perceived to experience little or no psychological problems with mental health illness (Sue & Morishima, 1982). Research shows that Asian Americans do suffer from mental health issues. According to Atkinson et al. (1984), Asian Americans do not view psychological services as a credible source of help. Those who do seek help for mental illness treatment have a significantly higher dropout rate than Caucasians. Due to the belief that seeking mental health treatment services will bring disgrace to the family, Asian Americans tend to resolve their problems on their own with the understanding that mental health can be maintained by avoiding bad thoughts (Roots, 1985).

Research evidence has suggested that Asian Americans underutilize mental health services despite being subjected to all the stressors that are experienced by other ethnic minority groups (Atkinson & Gim, 1989). According to Bui and Takuchi (1992), Chinese Americans' willingness to seek mental health treatment depends on the perceived credibility of mental health professionals. Lack of agreement, truth, cultural values, and belief may cause individuals to avoid seeking mental health treatment services. Successful forms of treatment involve thoughts and feelings associated with mental health distress. Asian Americans tend to believe in the avoidance of morbid thoughts and repression of emotions. Language barriers, or lack of mental health providers who speak the same language or dialect, also play a role in Asian Americans' lack of treatment for mental health (Chung & Lin, 1994). Several characteristics of passive coping strategies displayed by the Asian American population include avoidance, withdrawal, minimizing the issue, and wishing the problem to go away. These coping strategies may lead to a denial of the need for help and may result in lack of treatment (Cheng & Furnham, 2001).

According to Phan (2000), there are limited studies on the Vietnamese American population. In their study, Young et al. (1987) found that the Southeast Asian group reported nonexistent utilization of psychiatric services in the health care system. Additionally, Vietnamese participants reported the fewest number of symptoms in mental health assessments, with 91% of the participants having three or fewer mental health symptoms. Another study conducted by Holzer et al. (2001) discovered that the Vietnamese population seldom utilized mental health services and avoided services where the mental health providers were of a different culture. Furthermore, when mental

health services were utilized, the Vietnamese participants chose to select physicians of Vietnamese or Chinese ethnicity rather than mental health specialists of a different ethnic background.

According to Neighbors (1992), research has suggested that age is also a factor in determining the lack of utilization to seek mental health treatment. Mental health utilization differs according to age regardless of race and ethnicity. For example, most individuals would prefer to use informal help or choose their own strategies to cope with psychological or mental illness difficulties. African American individuals between the ages of 18 and 24 are more likely to rely on themselves than older African American adults. According to Dobalian and Rivers (2008), among African Americans, psychosocial factors such as poverty, lack of access to services, transportation, racial and ethnic mismatch, and mistrust of providers were shown to have an impact on attitudes and intentions to seek mental health. While African American college students are found to experience anxiety symptoms as much as students from other ethnic backgrounds, they are less likely to utilize mental health services from professional mental health providers (Masuda et al., 2012).

Lack of knowledge and lack of financial resources have been identified as potential barriers by Asian Americans seeking treatment for their mental health illness (Kung, 2003). A study conducted by Kung (2003) examined perceived barriers amongst Chinese Americans seeking mental health treatment. It used a sample of 1,747 Chinese Americans and a seven-item measure survey. The seven-item measure included treatment credibility, recognition of need, loss of face, time, cost, language, and knowledge of

access. Respondents were asked to rate their responses from 1 = *not at all* to 4 = *very true*. The results of the study proved that the cost of treatment was the biggest barrier to mental health treatment, followed by language, time, knowledge of access, recognition of need, credibility of treatment and fear of judgement.

Caucasian students perceived more benefits to seeking mental health services than minorities. In a study conducted by Chandra and Minkovitz (2007), females had more positive attitudes towards mental health treatment than males. The researchers found that females were significantly less likely to hold stigma-related attitudes toward mental illness and help-seeking (Chandra & Minkovitz, 2007). Crowe at al. (2016) examined how stigma impacted help-seeking behavior. It was determined that mental health stigma had an impact on the reluctance to seek mental health treatment. The following studies have been provided in detail to support early research on theory.

A study conducted by Atkinson and Gim (1989) measured cultural identity and attitudes towards mental health services. The authors used a total of 557 Asian American students (263 Chinese Americans, 185 Japanese Americans and 109 Korean Americans). The participants completed a survey that consisted of a demographic questionnaire, a modification of the Suinn Lew Asian Self Identity Acculturation Scale, and a questionnaire that used an adaption of the Attitude Toward Seeking Professional Help Scale (ATTSPHS; Fischer & Turner, 1970). The questionnaire consisted of 29 items. Each item was scored on a 4-point scale, ranging from 1 = *strongly disagree* to 4 = *strongly agree*. Suinn et al. (1987) recommended that respondents be divided into low, medium, and high acculturation levels, according to their scores. This resulted in a 3x2x3

(Ethnicity x Gender x Acculturation) design that included two empty cells (low-acculturation scores divided at the mid-score to create two categories, low and high acculturation) and a 3x2x2 multivariate analysis of variance (MANOVA). This was computed with the Stigma, Need, Openness, and Confidence subscores of the ATSPHS, which served as the dependent variables. Regardless of ethnicity and gender, the most acculturated students were most likely to recognize personal need for professional psychological help. They were the most tolerant of the stigma associated with psychological help and most open to discussing their problems with a psychologist (Suinn et al., 1987).

A study conducted by Barksdale and Molock (2009) used 219 primarily female participants of African descent enrolled in an undergraduate program, The authors used a 20-item measure to assess the participants' current levels of self-reported problems and intention to seek health from a mental health provider. Each of the 20 items was rated on a 4-point rating scale (0 = *not at all a problem*, 4 = *severe problem* and 0 = *not willing* and 4 = *willing*) with a Cronbach's alpha of 0.91 after using multiple linear regressions to explore the relationship between perceived norms and help-seeking intentions. Analyses revealed that males had a higher perceived peer norm and that family norms were a stronger predictor of intentions than peer norms for females. Individually, peer norms and family norms were related to help-seeking intentions. When perceived norms were analyzed together, only negative family norms were related to intentions.

In a study conducted by Luu et al. (2009), a total of 210 Vietnamese American participants were surveyed about their help-seeking attitude towards the use of mental

health services in their community. A 21-item measure was assessed using the Suinn-Lew Asian Self Identity Acculturation Scale (SL-ASIA; Suinn et al., 1987). Each question was based on a 5-point Likert scale ranging from 1 = *more Asian identification or less acculturation* to 5 = *more Western identification or high acculturation*. The results of the study indicated that there was a significant association between cultural barriers, spiritual beliefs, age, and help-seeking attitudes.

Current Research on Help-Seeking Theory (2015–Present)

In a study conducted by Jennings (2015), it was proposed that help-seeking decision making involves a process of becoming aware of symptoms, considering various resources, and then disclosing the issue. Studies on mental health have found increased help-seeking behavior among college students (Chen et al., 2018). Scholars have used help-seeking theory to examine how individuals monitor their bodies and define and interpret their symptoms. They have also examined whether participants sought measures for preventive or remedial action from a health care agency or elsewhere (Chen et al., 2018).

Self-stigma and negative public attitudes towards people with mental illness may impede self-seeking behavior. College students are more likely to seek help, which is important due to the increased first onset of mental disorders during the college years (Chen et al., 2018). Jennings et al. (2015) proposed that a help-seeking decision involves a process of awareness of symptoms, resource considerations, and a willingness to disclose the issue. According to Pace et al. (2018), there are a number of barriers associated with mental health-seeking. Mental health stigma is a barrier that may affect a

student's desire to seek help. Students who feel stigmatized may feel that they will be discriminated against or treated differently due to the negative views that society places on individuals with mental health issues. Another barrier that may interfere with mental health seeking is a lack of knowledge and awareness. The lack of awareness makes it difficult for students to seek help. In order for students to receive the support necessary for mental health treatment, it is essential that they are aware of resources available to them for mental health treatment.

Other researchers have determined multiple barriers that may impede upon help-seeking treatment amongst ethnic minority populations (Saint Arnault et al., 2017). According to these authors, barriers include therapist misunderstanding, language barriers, mistrust, and stigma. In s study conducted by Saint Arnault et al. (2017), a cross-sectional design on 402 women in South Korea was used to identity factors that influence help-seeking behavior among college student women in the community. For help-seeking intention in mental health, a nine-item questionnaire was given to the participants. A scale of 1–7 was used to rate participants' responses (1 = *never agree*, 7 = *completely agree*) on their willingness to consult with a total of nine formal resources. The reliability for the scale was Cronbach's alpha 0.79. The results of the study indicated that there was a significant, but weak, positive correlation between perceived need and help-seeking intentions for formal mental health help ($r = 0.09$, $p < 0.05$). In the path analysis, significant factors influencing help-seeking intentions were perceived need, attitude, and belief toward mental illness, and attitude had the greatest effect. These factors accounted

for 12.2% of the total variance, and the model fit was acceptable (Saint Arnault et al., 2017).

Literature Review Related to Key Variables

Stigma: Early Research on Stigma (1984–2012)

Although literature in the field of mental health stigma and mental health treatment has grown in the last decade, there is little to no information in recent years about stigma, cultural barriers, and mental health seeking of college students. The stigma of mental illness dates back to the middle ages when the mentally ill were believed to be possessed or in need of religious intervention. There are various pathways in which stigma is known to develop. Jones et al. (1984) identified six dimensions of stigma: concealability, course, disruptiveness, peril, origin, and aesthesis. Corrigan et al. (2000) identified dimensions of stability, controllability, and pity. These particular dimensions have been known to present independently or simultaneously to create stigma (Ahmedani, 2011).

According to Dudley (2000), stigma is defined as stereotypes or negative views attributed to individuals when their physical characteristics or behaviors are viewed as different from the societal norm. Lauber (2008) described stigma as a severe social disapproval due to a believed or actual individual characteristics, beliefs, or behaviors that are against the normal perception economically, politically, socially and culturally. According to the WHO (2001), an estimated 25 percent of the worldwide population is affected by a mental illness disorder during some time of their lives. It is projected this number will increase to 15 percent by the year 2020 (Hugo et al., 2003). Individuals do

not always seek treatment for their illness. It is estimated that less than 40 percent of individuals with mental illness are consistent with their treatment throughout the year (Kessler et al., 2001).

According to Corrigan and Watson (2002), fear leads to avoidance and discrimination. Employers do not want to hire individuals with mental illness. Research suggests that self-stigma may result in individuals suffering with a mental illness disorder to not pursue life opportunities for themselves (Corrigan & Watson, 2002). There are a variety of stigmas that relate to mental illness (Corrigan, 2004). In a qualitative study conducted by Matthews et al. (2006), it was suggested that African Americans were likely to feel embarrassed about mental health problems and seeking treatment due to stigma in their community. These stigmas include self-stigma (when one internalizes negative attitudes that come from others), help-seeking stigma (the stigma that one experiences when seeking help for mental illness and associative stigma), and associative stigma (when family members or friends of those who are suffering with mental illness feel stigmatized by others) (Matthews et al., 2006). Social stigma is the most frequently discussed level of stigma and it can create barriers for individuals with mental disorders. It can also cause disparities in access to basic services and needs, such as apartment rentals or employment (Ahmendani, 2011). Self-stigma is a level of stigma that is internalized by individuals with a mental illness and may influence shame or inadequacies.

Studies have shown that individuals with a mental disorder are perceived as dangerous (Angermeyer & Matshinger, 2005). Stigma towards people with mental health

disorders may affect their housing, employment, education, and health care insurance. This may ultimately deny them from experiencing important life opportunities that may be vital to achieving life goals and living independently in a safe environment and community (Everett, 2006). Individuals diagnosed with a mental illness are subject to discriminative and stigmatizing behaviors amongst communities and their friends and families (Hinshaw, 2010). Unfortunately, these constant behaviors lead to negative effects, such as lower quality of life, self-blame, a lack of motivation to seek professional help, treatment discontinuity, higher drop-out rates a sense of hopelessness and helplessness (Hinshaw, 2010). In 2012, there were an estimated 43.7 million adults living in the United States with a mental illness (Substance Abuse and Mental Health Services Administration, 2014). Mental health treatment may decrease symptoms associated with mental illness. However, the stigma of having a mental illness may prevent individuals from seeking necessary treatment to help manage their illness (Government of Western Australia Mental Health Commission, 2014).

Current Research on Stigma (2016–Present)

Crowe et al (2016) have substantiated that stigma associated with mental illness and treatment seeking has a significant bearing on people. This includes professionals who work in the mental health system who decide not to pursue counseling or other mental health services. Crowe et al. (2016) surveyed 333 professional school counselors and found that self-stigma of mental health concerns was a contributing factor for lack of help-seeking behaviors which contributed to stress and burn out. Although, there have been efforts made to reduce the stigma associated with mental health illness, mental

health stigma remains a major concern due to perceptions and communication about mental health issues (Kosyluk et al., 2016). Part of the inconsistencies stem from a lack of knowledge about mental health issues. This can include cause symptoms, and limit treatment options (Busby et al., 2016). This is key for college students who are unable to differentiate between depression or feeling "blue," generalized anxiety, or typical anxiety from tests or homework.

Stigma is understood to be the beliefs that an individual has about mental illness. Stigma include stereotypes, prejudices and discrimination and is viewed as a major barrier to mental health help-seeking. Those who view mental help-seeking as stigmatizing may have fear that they will be looked upon differently and may internalize those stigmatizing beliefs to the extent that may affect their self-esteem and identity (Pace et al., 2018). Understanding the impact of mental health stigma on ethnic minority college students is important due to the tremendous amount of college age students who exhibit mental illness (DeFreitas et al., 2018).

In a study conducted by DeFreitas et al. (2018) examining perceived and personal mental health stigma in African American and Latino college students, African American students were found to have a higher rate of mental health stigma than Latino students. In addition to the higher rate of stigma, anxiety about those with mental illness were related to greater mental health stigma for both groups. In addition, research has suggested that incorrect information about mental illness has been passed down incorrectly through the generations in African American families (DeFreitas et al., 2018). DeFreitas et al. (2018) suggested that interventions to reduce mental health stigma in college students should

begin within ethnic minority groups and focus on issues that pertain to those communities. It is important to understand the impact of mental health stigma on ethnic minority college students because almost half of college aged students struggle with mental health issues (DeFreitas et al., 2018).

According to DeFreitas et al. (2018), lack of knowledge is one of the most well-researched factors relating to understanding mental health stigma for ethnic minorities. Research has suggested that ethnic minorities may have been misinformed about mental illness. Particularly, African Americans are less likely to believe genetic components causes for psychological disorders. Furthermore, Non-European American college students are more likely to believe that an individual's psychological disorder is a result of his or her own fault. In addition, research has suggested that incorrect information has been passed down from generation to generation in African American families (DeFreitas, 2018). Currently, stigma towards individuals with mental illness continues to be a severe issue (Oexle et al., 2018). Because of this, those suffering with the disease of mental illness often do not receive the adequate and appropriate social support (Ratti et al., 2017).

Several empirical types of research have investigated the way stigma related to mental illness is linked to help-seeking behaviors and attitudes. In general, studies focusing on individuals' stigmatizing behaviors and attitudes have disclosed that high levels of personal stigma are directly correlated to low help-seeking behaviors among adolescents and adults (Hirsch et al., 2019). Additional researches have disclosed that the study participants who reported feeling embarrassed with regard to their mental health

treatment were less liable to see the need for them to seek help and utilize psychological health services, even though the study failed to differentiate between public stigma and personal stigma (Vidourek & Burbage, 2019). On the contrary, mixed results have been observed with regards to studies focusing on public stigma. Thus, clinical studies have disclosed the existence of an association between the perceived stigma and premature termination, as well as low adherence to treatment (Topkaya et al., 2017). Community-based research disclosed that one out of every four individuals who acknowledged the need for mental health help failed to seek apt services, and this was partly attributed to concerns related to how other individuals may perceive them (Hirsch et al., 2019). Another research disclosed that both the perceived public stigma were negative predictors of the help-seeking attitudes of individuals (Kamimura et al., 2018). Consequently, the findings of longitudinal community-based research conducted in Australia disclosed that no correlation existed between the use of mental health services and the perceived public stigma (Vidourek & Burbage, 2019). Still, recent research that focused on college students disclosed that there were no correlations between perceived public stigma and the previous year's use of mental health services. In this regard, several variables have been observed to impact the help-seeking behavior of college students with regards to mental disorders.

Among the notable variables that have been investigated with regards to mental health use is stigma. The World Mental Health Survey disclosed that the perceived stigma related to mental health problems was a global phenomenon, particularly among persons with widespread mental conditions, such as anxiety and depression. The findings

of the survey, therefore, proposed that mental illness stigma was not restricted to a certain culture and chronic mental illness only (Tummala-Narra et al., 2018). According to Currier et al. (2017), mental health stigma refers to the cognitive-behavioral processes that are manifested in three distinctive ways, namely: label avoidance, personal stigma, and public stigma. Thus, public stigma has been described as the adverse stereotypes regarding individuals suffering from mental illnesses, and this includes their perception as weak and dangerous, as well as blaming them for the problems they experience, and even perceiving that as being childlike and requiring other to care for them. Consequently, self-stigma has been described as the individual internalization of stigma from the public (Topkaya et al., 2017).

Cultural Barriers: Early Research on Cultural Barriers (1997–2006)

According to Bayer and Peay (1997), mental health services have identified barriers, such as lack of perceived need, perceived ineffectiveness of treatment, inconvenience, and problems with access to treatment. There are a variety of traditional beliefs the Vietnamese have concerning mental health issues. Many of their beliefs are focused on spiritual elements. According to Wagner et al. (2006), most Vietnamese people traditionally believed that mental illness originated from evil spirits. They believed that a person with a mental disorder was either possessed by was being punished for a sin or fault. In addition, it was believed that individuals with a mental illness were cursed or had a lack of religious blessings.

According to Cheng et al. (2001), there are a variety of reasons Asian American culture, including the Chinese, discourage mental health treatment. Many Asian

Americans' emotional distresses are viewed as the result of lingering bad thoughts, a lack of will power, and weakness. Therefore, self-control and the decision to solve one's own issues are cultural values that supersede seeking mental health treatment. Asian Americans tend to put more emphasis on their physical state of being and may have strong cultural beliefs about their mind, body, and spirit relationship. They are more likely to seek assistance or treatment from physicians, herbalists, fortune tellers, ministers and acupuncturist verses mental health professionals (Kung, 2003).

Credibility and mental health professionals' behavior may also impede Asian Americans choice to seek mental health treatment (Leong & Lau, 2001). A clash between Chinese cultural values and mental health professional treatment approaches may undermine their credibility. Many psychological treatments involve examining thoughts and feelings associated with mental health symptoms and Asian Americans tend to avoid these types of interventions (Leong & Lau, 2001). There are few studies examining stigma and cultural barriers with participants seeking mental health treatment. In a qualitative study conducted by Matthews et al. (2006) using a structural equation modeling (SEM) with a total of 260 African American participants, 166 Asian American participants and 183 Latino American participants. The findings of the study indicated African American participants were likely to feel embarrassed due to mental health problems and seeking treatment. It was stated mental health stigma was a significant problem in their community.

Current Research on Cultural Barriers (2009–Present)

In the study conducted by Luu et al. (2009), 210 Vietnamese American participants were assessed for cultural beliefs about mental health treatment seeking. A 10-item instrument was used to measure level of difficulty, with cultural barriers regarding mental health treatment seeking. Each item was coded on a 4-point Likert type scale ranging from 0 (disagree) to 3 (agree) with higher scores on the range denoting increased cultural barriers. The results indicated cultural barriers had a significant negative impact on mental health treatment seeking. Although, these studies have provided an overview of an association with mental illness and treatment seeking, what was missing from the literature was any indication of whether there is a relationship among mental health stigma, cultural barriers and mental health treatment for African American, Asian American and European American college students who experience anxiety symptoms. The proposed study will sample a geographically dispersed group of college students experiencing anxiety symptoms to help determine whether or not there is a relationship among the variables.

According to Eisenberg et al. (2011), skepticism about treatment efficacy is another barrier to seeking treatment for mental health services. Several barriers reported by college students are: preferring to deal with mental health symptoms on their own, not having the time to seek mental health services, concerns whether mental health treatment is effective in remediating problems, a belief that stress is normal and the mental issues would heal themselves, a lack of finances, and the stigma associated with seeking mental health treatment.

Anxiety: Early Research on Anxiety (2011–2015)

Worry and fear is an appropriate reaction for many circumstances. According to Torpy et al. (2011), when worry and fear becomes excessive and difficult for an individual to control for at least 6 months, this condition is called generalized anxiety disorder. Obsessive-compulsive disorder, panic disorder, social anxiety disorder, post traumatic disorder, and phobias are other types of anxiety disorders. There are an estimated 40 million adults in the United States living with an anxiety disorder. This is an estimated 18% of the population. Worldwide, an estimated 20% of individuals with primary health care have anxiety disorders (Torpy et.al., 2011).

The prevalence of a psychiatric disorder is high amongst female students in the first year of their college program compared to males attending their first year in college. According to Credé and Niehorster (2012), research examining the functioning between the transition to college, before college, and at the end of college found that emerging adults experience levels of decline in functioning. Young people experience lower level of overall psychological wellbeing. Although having a parent with a mental illness during transitioning into college may increase the risk of individuals developing difficulties during their college experience (Field et al., 2012).

Anxiety disorders can have a significant impact on student's ability to complete their college education. A total of 62% of college students who dropped out of college attributed leaving with challenges from mental health issues (Gruttadaro & Crudo, 2012). According to the Anxiety and Depression Association of America (n.d.), anxiety disorders are a widely prevalent form of mental health illness amongst college students.

Research has indicated the first onset of symptoms generally occur at age 22. Symptoms of anxiety was found to be 15.6% among undergraduates and 13% among graduate students. A study was conducted by Ibrahimet al., (2013) to determine the prevalence and predictors of anxiety and depression among female medical students in King Abdulaziz University Jeddah, Saudi Arabia. The findings showed that the prevalence of anxiety was 34.9% associated with the condensed academic courses, academic issues, and other emotional factors during the 6 months preceding the study. The major conclusion of the study was that anxiety can lead to other concerns such as suicidal ideation, risky sexual behaviors, and substance abuse among university students.

Anxiety is the most common mental health concern in college students according to the Center for Collegiate Mental Health (CCMH, 2012). According to Kitzrow (2003), 12.4% of college students were diagnosed or received treatment for an anxiety related disorder. A number of college students reported concerns related to academic performance, pressure to succeed, and post graduate plans. Adjusting to college is a major transition for young people and may bring major challenges with their living environment, friends, and an increase of responsibilities and independence. These challenges may also bring upon symptoms of anxiety. According to the WHO (2014), over 450 million people live with a mental health disorder. Additionally, the WHO (2014), indicated certain factors, such as a rapid social change, stressful work conditions, gender discrimination, and social exclusions, may contribute to developing a mental health disorder.

Current Research on Anxiety (2016–Present)

College students reported a desire to set themselves apart from peers by excelling academically. Competition for a limited number of jobs is a stressor that may bring on anxiety symptoms (Jones et al., 2016). According to Carmack, Nelson, Mocke-Mirzashvilli, and Fife (2018), attending college can be daunting and filled with uncertainties. Experiences like dealing with roommates, lacking financial resources, and gaining independence can bring on major depression and anxiety symptoms (Carmack et al., 2018).

Mental Health Seeking: Early Research on Mental Health Seeking (1998–2008)

Research has indicated that in the Asian-American culture, there is a lack of motivation to seek mental health treatment. Asian Americans were less likely than white Americans to visit mental health centers, including reservations, to disclose any mental health problems (Zhang et al., 1998). A number of factors may influence the decision to seek mental health treatment. Socio-economic barriers are factors that have been explored in understanding mental health seeking. Other factors that are barriers to individuals seeking treatment are: lack of trust to conceal personal information, a fear of the process, fear of hospitalization or institutionalized emotional vulnerability, and fear of being viewed in a negative manner by friends and family (Barksdale & Molock, 2009). The African American population is significantly less likely to seek mental health services from professional mental health providers than the Caucasian population. Research also indicates African Americans generally seek guidance and concerns from pastors or non-mental health resources (Barksdale & Molock, 2009). Barksdale and Molock (2009)

further indicated that, in general, minority students tend to underutilize professional mental health services.

Barksdale and Molock (2009) conducted a study that used 219 participants from a private and public university of African descent 18 years and older. Using a 20-item measure, participants were assessed on their current levels of self-reported issues. Their intention to seek help from a profession mental health provider was also measured. This was done on a scale from 0-4 (0=not at all a problem and 4= severe problem, and 0=not willing and 4= willing). Cronbach's alpha was 0.91. The results indicated family influence is a unique predictor of help-seeking intentions for the African American population used.

Current Research on Mental Health Seeking (2013–Present)

Quantitative research of stigma and mental health illness have indicated there is a potential barrier to seeking help for mental health disorders (Corrigan et al., 2014; Jennings et al., 2015; Vidourek et al., 2014). Researchers have examined the impact of stigma and help-seeking with university students (Crowe et al., 2016; Henderson, Evans-Lacko, & Thorincroft, 2013; Lally et al., 2013). In a study conducted by Lally et al. (2013), overall levels of self-stigma and perceived self-stigma were assessed as they related to help-seeking treatment. The results of the study showed self-stigma had a significant association with a low likelihood of help-seeking treatment.

Han and Pong (2015) conducted a study to determine factors that hinder Asian American community college students from seeking professional mental health services. Sixty-six Asian American participants used for the study. To measure one's willingness

to seek mental health treatment, a single item was used inquiring whether the participant would be willing to seek professional help for their psychological and mental health illness. This was followed by an open-ended question asking participants to elaborate on their answers. Results revealed that 43 (65.2%) of the participants mentioned they would be open to seeking help to maintain their mental health, and 23 (34.8%) revealed that they would not seek help to maintain their mental health. After review of the participants' elaborated responses, the reason for initially not seeking help was due to beliefs that having mental illness was shameful and represented a negative reflection on the individual, their immediate family, and their ancestors.

In a study conducted by Pace et al. (2018), a series of seven focus groups were conducted using both freshmen and sophomore students. Six of the focus groups had both female and male participants while one of the sophomore group were composed of all male participants. 68.9% of the participants were Caucasian and the other 31.1% of participants were of other origin. The results of the study indicated 31.1% of participants would not go to the campus counseling center if they needed counseling services, while 50% indicated that going to the campus counseling center would be a last resort.

In a qualitative study conducted by DeFreitas et al. (2018), African Americans were likely to feel embarrassed related to mental health problems and seeking treatment due to the mental health stigma associated with mental illness in their community. In another qualitative study conducted by Thompson et al. (2002), it was also suggested that embarrassment was a significant factor that kept participants from seeking treatment. A study conducted amongst Latin American college student participants demonstrated that

those with high levels of stigma were less likely to seek mental health treatment. Other studies showed that Latin American participants caring for relatives with mental illness were less likely to discuss their situation with others or obtain social support, thus believing that mental health issues should not be discussed with anyone outside of the family. A study that sampled African American and Latin American young women found that stigma was related to a lower desire to seek treatment among immigrant women (DeFreitas et al., 2018). Overall, African Americans and Latina Americans are less likely to seek treatment, maintain treatment, and delay treatment until symptoms exacerbate. Stigma plays an important role with these negative outcomes for minority women. As the relationship between ethnicity and mental health stigma is complex, further research is recommended (DeFreitas et al., 2018).

Self-stigma, or negative public attitudes towards people with mental illness, may impede self-seeking behavior. College students are more likely to seek help, which is important because the first onset mental disorders occur during the college years (Chen et al., 2016). Jennings et al. (2015) proposed that a help-seeking decision involves a process of becoming aware of one's symptoms, considering their resources, and then disclosing the issue and seeking help. According to Pace et al. (2018), there are a number of barriers associated with mental-health seeking. Mental health stigma is a barrier that may affect a student's desire to seek help. Students who feel stigmatized may feel they will be discriminated or treated differently due to the negative views that society places on individuals with mental health issues (Karabenick & Newman, 2006). Another barrier that may interfere with mental health seeking is a lack of knowledge and awareness. The

lack of awareness makes it difficult for students to seek help (Karabenick & Newman, 2006). In order for students to receive the support necessary for mental health treatment, it is essential that they are aware of resources available to them for mental health treatment.

Limitations of Current Research

Despite the growing number of mental health research, including stigma and treatment seeking, there is no known research on the relationship among mental health stigma, mental health treatment, cultural barriers, and treatment seeking for African American, Asian and Caucasian college student with anxiety symptoms. Jennings et al. (2015) recommended future research to include a larger and more diverse sample of participants. Masuda et al. (2012) recommended that future research include investigating the role of mental health stigma along with other contributing factors such as socio-economic status and cultural values. Han and Pong (2015) recommended future research to include a more representative sample of Asian Americans to include psychosocial factors such as family and social support.

Variables That Impact the Help-Seeking Behavior of College Students

Self-Stigma

Self-stigma has been observed to have negative impacts on the individual's self-efficacy, self-esteem, and might subsequently result in bin underachievement, as well as the avoidance of independence and growth (Wu et al., 2017). Still, label avoidance has been defined as an occurrence in which an individual suffering from a mental illness fails to seek treatment as a means of avoiding being labeled as a person who is mentally ill

(Xing et al., 2020). As a result, the individual can escape the discrimination and prejudice that is linked to self and public stigma (Xing et al., 2020).

Personal Stigma and Self-Stigma

Personal stigma is the other notable type of stigma and entails individual attitudes in relation to mental illnesses. According to Topkaya et al. (2017), personal stigma applies to individuals who might not have mental illness and are also not aware of the conditions and is dissimilar from self-stigma. In this regard, Martinez et al. (2020) have described personal stigma as every individual's prejudice and stereotypes. In their study, Ibrahim et al. (2013) disclosed that the perceived stigma among college students was significantly higher compared to their stigma. Such findings are vital given that they tend to recognize the existing misperceptions of the college students, with regard to the assumptions of the colleagues' actual and personal stigma levels. Several types of research have also indicated that the adverse effects on mental health concerns resulting from the perceived public stigma and public stigma (Rayan & Fawaz, 2018).

The initial step with regard to the stigma cycle entails public stigma awareness that is followed by personal stigma formation, and the self-evaluation of one's mental illness status. To this end, Martinez et al. (2020) assert that personal stigma is negatively associated with the indicators of help-seeking, as well as non-professional support. Nevertheless, Wu et al. (2017) maintain that a study conducted by Eisenberg et al. (2011) disclosed that there were no significant correlations between help-seeking and public stigma. Further, increased degrees of self-stigma were observed in students who were young, male, Asian, religious, international, and from low socioeconomic backgrounds.

Still, the study conducted by Hirsch et al. (2019) disclosed considerable and negative correlations between help-seeking behaviors and public stigma, as well as between help-seeking behaviors and self-stigma. Additionally, study participants who had endorsed great levels of self-stigma in relation to seeking professional help were less prone to look for healthcare services upon being followed up over two months, even as the study participants who looked for help observed that they had considerably low levels of self-stigma before seeking help (Topkaya at al., 2017), an indication that stigma often has predictive values with regard to the actual utilization of professional healthcare services. Further, several types of research have also disclosed the existence of empirical support with regard to the correlations between the various treatment aspects and stigma. Also, within the clinical samples, increased degrees of public stigma have been observed to be linked to lower levels of adherence to treatment along with premature termination of treatment (Ibrahim et al., 2013).

Additionally, persons who experience mental illness stigma have been noted to be less liable to use and seek mental health help or services (Currier et al., 2017). Additionally, the available studies on stigma have disclosed that the correlations between personal stigma, self-stigma, and personal stigma require additional elucidation (Kroshus, 2017). Moreover, the clarification of such relations may inform the stigma reduction intervention strategies developed as a means of increasing the use of mental health treatment (Xing, 2020).

A report by the Office of Surgeon General disclosed that minority groups are represented disproportionately in incarcerated and homeless populations, and this shows

more systemic issues that are unique to such groups (Cha et al., 2019). Even though the non-Hispanic Blacks and Hispanics have been observed to have a lower risk of lifetime mental disorders than the Non-Hispanic whites, the two groups have increased persistence with regard to disorders, especially anxiety and mood-related disorders for the Non-Hispanic blacks, and mood disorders for the Hispanics (Tummala-Narra et al., 2018). Amongst the notable probable reasons underlying such disparities include stress, perceived prejudice and discrimination, and socioeconomic status. The factor related to the disparity may include the observation that persons from ethnic minorities tend to have a divergent perception of the severity of the symptoms (Rayan & Fawaz, 2018). The other notable variable in the disorders' persistence includes the low treatment rates among the racial-ethnic minority groups (Kamimura et al., 2018). Additionally, the ethnic minorities have been noted to delay the seeking of help until the mental condition becomes severe, reluctance to the use of mental health services, as well as poor services access (Currier et al., 2017). In research that sought to evaluate stigma within a population sample of the urban community college student sample, Asians and African American students were noted to have higher levels of stigma in relation to mental illnesses compared to their Caucasian counterparts (Qi et al., 2020). The study also disclosed that Latinos experienced less amount of stigma compared to Caucasian counterparts (Qi et al., 2020). According to Tummala-Narra et al. (2018), such disparities can be attributed to the observation that African Americans have increasingly adverse perceptions of mental illnesses than other racial groups, and this is due to various

stressors, including social inequalities and racism, even though there were no speculations on the findings for the Latino and Asian students.

Public Stigma

Further, another qualitative study disclosed that aspects like challenges in accessing services, stigma, and acculturation played significant roles with regards to being hindrances to the help-seeking behaviors in Chinese immigrant students in New York (Rayan & Fawaz, 2018). Within the clinical populace comprising of depressed African American college students, higher degrees of self-stigma and public stigma was linked to the failure to seek treatment, as well as the dearth of positive attitudes and perception of treatment (Tummala-Narra et al., 2018). With regard to public stigma, Tsen (2020) concluded that college students perceived stigma level by colleagues was higher compared to the personal stigma levels. The implication of such observations entails the observation that a misperception of stigma occurrence exists. In instances where the personal stigma levels combine in a bid to represent the public stigma, then the possibility of the perceived public stigma becomes overestimated with regard to the actual level of the public stigma (Hirsch et al., 2019). Such over-estimations of public stigma are vital, given that the perceived public stigma may impact an individual's decision to seek mental illness help negatively (Kamimura et al., 2018).

Also, an assessment of stigma as the mediating factor was conducted in research that sought to evaluate students' attitudes in relation to psychological counseling in White and South Asian college students (Tsen, 2020). The outcomes of the study disclosed that Caucasian students had increasingly positive attitudes with regard to psychological

counseling compared to their South Asian counterparts. Still, another study focusing on the stigma in American Asian students, disclosed that stigma was responsible for the partial mediation and also accounted for the observed 32 percent divergence in attitudes towards mental health and psychological counseling services (Kamimura et al., 2019). The researchers have, therefore, highlighted the need for further studies on the different cultural variables, including acculturation, and their correlations to mental illness stigma and the help-seeking attitudes among college students (Kroshus, 2017).

Further, a qualitative study evaluating the treatment of panic disorder in low-income African Americans disclosed concerns with regard to social stigma, as well as concerns related to disclosing to others within the community, alongside the lack of information regarding panic disorder (Dopmeijer et al., 2020). The study disclosed that these were the main personal reasons for not seeking mental health treatment. Likewise, at the level of the community, the study participants indicated restricted information concerning mental illness, as well as the stigma against individuals seeking treatment and portray mental illness symptoms as either spiritually flawed or weak, and such perceptions were found to be the main deterrents to the pursuit of treatment (Rayan & Fawaz, 2018). Comparably, among the low-income depressed female college students, Caucasian participants were highly prone to acknowledge the requirement for care compared to their Latino and African American counterparts, and this was additionally observed to reduce the probability of articulating the need for mental help throughout all ethnic groups (Ibrahim et al., 2013). An analysis of the dataset disclosed that in comparison to the U.S.-born Caucasian college students, Latino and African American

female student, either U.S.-born or immigrants were increasingly liable to report concerns regarding stigma, in addition to being less prone to seek treatment, except for the immigrant Latinos observed to be highly liable to seek help than their US-born counterparts.

Acculturation

Regarding acculturation, Tummala-Narra et al. (2018) maintain that the study of acculturation in psychology often occurs at the individual levels. Thus, acculturation takes place in instances where individual groups from diverse cultures come into contact, with various changes resulting in either or both cultures (Jennings et al., 2015). A common context used in the organization of such changes includes the bilinear model the Berry et al. (1989) proposed, in which a person's relationship with the culture of origin and the mainstream culture is taken into consideration. The model is, however, contradictory to the unilinear models that assert that the individual relations with her heritage are often reliant on the relationship with the mainstream or dominant culture (Currier et al., 2017). For instance, in case a student has indicated sturdy identification with her heritage cultures, the unilinear model will have a low identification implication in relation to the dominant culture. Thus, the unilinear perspective assumes that the loss of conventional values at the price of accumulating dominant values, and the decision to preserve conventional values, as well as not take on the dominant values (Rayan & Fawaz, 2018). Criticism has been labeled against the unilinear perspective for its failure to precisely allow for the acculturation possibilities, precisely biculturalism (Tsen, 2020). On the contrary, Cha et al., (2019) have classified acculturation into a total of four

dissimilar types, namely; separation (low mainstream and high heritage), integration (high heritage and mainstream), assimilation (high mainstream and low heritage), and marginalization (low mainstream and low heritage). The integration has also been linked to lower psychopathology, even as marginalization has been linked to higher psychopathology (Jennings et al., 2017).

Acculturation and Mental Illness Stigma

With regard to mental disorders, Kamimura et al. (2018) opine that acculturation has substantial correlations with research areas that include eating disorders, personality factors, adjustment, suicidality, achievement, and risky behaviors. Most studies on acculturation have focused on the immigrant populations based on the racial and ethnic contexts; nonetheless, acculturation has additionally been assessed in relation to US-born ethnic and racial minorities, including African Americans (Jennings et al., 2015). Additionally, the available literature on acculturation has disclosed that acculturation has considerable correlations with several diverse factors related to the process of therapy. A study conducted by Currier et al. (2017) on Asian American female college students indicated that there was a considerable positive correlation between the learner's counseling process rating and acculturation. In the Chinese American college students' population, culture, in addition to other key cultural factors, was noted to be an important indicator of attitudes of the learners toward the pursuit of mental help (Chen et al., 2018). Still, the study disclosed that acculturation was directly linked to the willingness to pursue psychological counseling in Asian American students, as well as the Italian and Greek immigrant students (Chen et al., 2018). In the above-stated researches, increased

acculturation to the United States culture was noted to be positively linked to attitudes the psychological counseling services and counselors.

Stigma, Acculturation, and Reduction in Help-Seeking

In recent times, stigma and acculturation have been studied to assist in the elucidation of the existing relationship with the reduced use of mental health services and treatment. In this regard, Fortney et al. (2017) evaluated stigma tolerance, acculturation, and help-seeking attitudes. Fortney et al. (2017) defined stigma tolerance as the individual awareness of the stigma attached to a cultural group. The low tolerance to stigma has shown through awareness and increased worrying about the stigma of the cultural groups with regard to mental illness help-seeking. On the contrary, higher stigma tolerance entails awareness of the group stigma devoid of worries, when seeking mental illness help (Kroshus, 2017). The outcomes have indicated that the original culture might impact an individual's stigma in relation to mental illness help-seeking. The researchers disclosed that acculturation, which is evaluated bilinearly, does not have any considerable correlations with regard to the mental illness help-seeking attitudes (Cha et al., 2019). Nevertheless, stigma tolerance was indicative of the mental illness help-seeking attitudes. However, the researchers observed that the female college sample used in the study failed to mirror the lower acculturation levels even as there was no varied acculturation distribution in Whites. Owing to the correlation between stigma and acculturation, the present research will take in the cultural stigma measure, describe as an evaluation of the extent stigma items, from the participant's perspective on the way she sees her community's point of view in relation to the stigma associated with mental health.

Stress

Further, with regard to stress, it can be noted that the perceived prejudice alongside stress has been observed in the mental illness help-seeking by ethnic and racial minorities (Tummala-Narra et al., 2018). Also, the perceived prejudice has been directly linked to both psychological and physical health challenges (Jennings et al., 2015). In particular, the perceived racism was a considerable predictor of the overall number of poor physical and mental health days. Still, Kamimura et al. (2018) maintain that the perceived stressors and prejudice linked to race, along with the stigma linked to mental health treatment added to the decrement in mental illness help-seeking among ethnic minorities.

Also, direct correlations between gender and mental illness help-seeking behaviors have been observed, and men have been seen as less likely to pursue help compared to women. The other notable factors that have to be considered include the mental health treatment history, distress levels, and reduction in the willingness to pursue treatment at moderate distress levels along with various cultural factors (Cha et al., 2019). The attitudes and intentions towards mental illness help-seeking are other key factors that need consideration (Currier et al., 2017). The mental help-seeking attitudes have, therefore, been linked to the actual use of mental health treatment and the existence of mood disorders, in addition to being positively correlated to the distress level (Tummala-Narra et al., 2018).

Summary

There is a wealth of research studying mental health stigma, however, studies specific to the relationship of mental health stigma, mental health treatment cultural barriers and treatment seeking for African American, Asian, and Caucasian students experiencing anxiety symptoms are lacking. With this in mind, Chapter Two provided literature on the two variables and background information on help-seeking theory as it relates to mental health treatment. Chapter Three describes the research design and methodology that will be used in this study to examine the research questions.

Chapter 3: Research Method

Introduction

The purpose of the study was to review the relationship between mental health stigma, cultural barriers to mental health treatment, and treatment seeking amongst African American, Asian American, and Caucasian female college students with anxiety symptom. This study addressed the gap in the literature outlined by Han and Pong (2015), Jennings et al. (2015), and Masuda et al. (2012) by evaluating the relationship between mental health stigma, cultural barriers, and seeking treatment amongst a sample of African American, Asian American, and Caucasian women pursuing secondary education with anxiety symptoms. Research studies examining mental health stigma and cultural barriers to mental health treatment seeking are abundant. However, studies specific to stigma and cultural barriers to mental health treatment seeking amongst African American, Asian American, and Caucasian female college students are lacking. Attending college can be the most rewarding experience in regard to gaining a sense of independence, social engagement, and an opportunity to achieve academic success. For some, the decision to seek treatment for a mental illness diagnosis is a critical decision based on culture and beliefs, as discussed in the discussion of Mechanic's (1978) theory of help-seeking. Awareness is an important step to facilitating the persuasion to seek help (Pace et al., 2018). Chapter 2 presented the literature on this theory and the early historical literature that related to stigma and mental health treatment seeking. Chapter Three will describe the research design and methodology that will be used in this study to examine the research questions.

Mental illness affects approximately 32% of university students. Although there are a number of effective mental health interventions, many people choose not to seek out the care necessary to treat their illnesses (Corrigan et al., 2014). According to SAMSHA (2014), individuals suffering with a mental illness are more apt to discontinue care. Although various racial and ethnic groups experience mental health disorders, there are differences among those who utilize mental health services. For example, 16.6% of Caucasian adults, 7.6% of African American adults, and only 6.5% of Asian American adults receive mental health services. According to SAMSHA (2014), there are an estimated 9.8 million people ages 18 and older diagnosed by a healthcare provider with a mental disorder, representing 4.0% of adults in the United States.

Research Design and Rationale

The intent of this study was to better understand whether the decisions of African American, Asian American, and Caucasian female college students with mental health symptoms to seek treatment are impacted by mental health stigma or cultural barriers. Research designs are important, as they help researchers provide an accurate assessment, eliminate bias, and account for marginal errors. According to Jang (2018), the general purpose of research designs is to help researchers provide an accurate assessment of the variables used in a study. For this study, a cross-sectional survey design was used and administered via web-based service. This research analysis was relatively inexpensive and allowed data collection from individuals suffering with a mental illness of various ethnic backgrounds, ages, incomes, and geographical locations.

Sampling and Sampling Procedures

Using the 95% confidence level technique on the sample size calculator, a target population of 100 college women was determined to be appropriate for this study. The population consisted of African American, Asian American, and Caucasian women ages 18–35 years suffering with mental illness and currently enrolled in college.

Instrumentation

In the following subsections, I describe the instrumentation used for the variables addressed in this study.

Mental Health Stigma

The instruments included a closed-ended, six-item questionnaire on the prediction of stigma. Han and Pong (2015) conducted a study to measure perceived mental health stigma.

1. "My parents would not let me marry someone with mental illness or who has a family member with mental illness because they are not considered to be suitable for marriage."
2. "Mental illness is frowned upon as a poor reflection of my family and ancestors."
3. "People with mental illness are possessed by demonic spirits."
4. "People who have mental illness considered to be 'crazy.'"
5. "It is considered shameful to speak to someone outside of my family about my situation."

6. "I am afraid what my family or friends will say or think of me if I received treatment for mental illness."

The questionnaire assigned numerical values from participants on questions relating to their mental health stigma. Responses were coded on a 5-point Likert-type scale, ranging from 1 (*strongly disagree/not at all*) to 5 (*strongly agree/very much*), for a total possible score ranging from 6–30. Higher scores indicate mental health stigma. It has a fair internal reliability, with Cronbach's alpha of .69. According to Nunnally (1978), reliability scores of 0.70 or better are recommended. However, lower reliability scores are often found when the number of items in a survey is less than 10, as in this case.

Cultural Barriers

A 10-item scale developed by Luu et al. (2009), the Cultural Barriers Scale, was used to measure cultural barriers. Each item is coded on a 4-point Likert type scale ranging from 1 (*strongly disagree/not at all*) to 4 (*strongly agree/very much*), with 3 indicating *neutral/somewhat.*

1. "I would be comfortable discussing my illness to someone of the same origin/nationality as me."
2. "I would not seek therapy with a therapist who is not the same origin/nationality as me * because they would not understand my problems."
3. "I would not seek therapy with a therapist who is not the same origin/nationality as me * because there would be no common interests."
4. "I would only see a therapist who spoke my same language."

5. “I would only see a therapist if he/she had the same traditions, values and beliefs.”
6. “I would be best supported if I was treated by a therapist who is the same origin/nationality as me. *”
7. “It is easier for me to communicate with a therapist with the same origin/nationality as me. *”
8. “I feel a therapist with the same traditions, values and beliefs * have experienced some of my same issues.”
9. “I would not be consistent with my treatments if I am treated by a therapist who is not the same origin/nationality as me. *”
10. “I would feel judged or criticized if treated by a therapist who is not the same origin/nationality as me. *”

Words marked with an asterisk were changed to neutralize race/ethnicity.

Upon summing the 10 items using a sample of 210 Vietnamese Americans, the items were answered using a 4-point Likert scale ranging from 0 (*disagree*) to 3 (*agree*), with the higher scores on the range denoting the item as more of a cultural barrier. The ethnicity and cultural barrier instrument had a relatively high internal consistency with a Cronbach’s alpha of .85 (Luu et al., 2009). The goal in conducting this study was to provide findings to promote positive social change at local college conferences, behavioral health seminars, local clinics, and support groups. The study of this research could also be helpful in providing essential and necessary information to clinicians,

college staff, and families to further the support and guidance for first-time and returning students seeking mental health treatment.

Treatment Seeking

To measure help-seeking treatment for mental illness, a three-item conducted by Han and Pong (2015), was used. The response category was changed to make the response more consistent with the question asked.

1. "Will you seek mental health treatment for your symptoms from a mental health professional?" Response options were 1 = Yes or 0 = No.
2. "Did you seek mental health treatment before COVID for your symptoms from a mental health professional?" Response options were 1 = Yes or 0 = No.
3. "Did you seek mental health treatment since COVID for your symptoms from a mental health professional?" Response options were 1 = Yes or 0 = No.

Data Collection

The study was administered through social media using an online survey. The goal was to recruit 100 college women 18 years and older. In addition, advertisement flyers for the study were shared on various social media sites, including support groups and college community sites, to help increase the possibility of recruiting participants who met the criteria. Every participant was informed of the voluntary nature of participation and the potential risks and benefits of the study. Contact information was provided for participants who wanted to contact the researcher with questions or concerns or additional information about the study.

Data Analysis Plan

The research questions for this study were as follows:

RQ1: Does mental health stigma predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women?

$H_0$1: Mental health stigma does not predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

H_a1: Mental health stigma significantly predicts mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

RQ2: Does age predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women?

$H_0$2: Age does not predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

H_a2: Age significantly predicts mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

RQ3: Do cultural barriers predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women?

$H_0$3: Cultural barriers do not predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

H_a3: Cultural barriers significantly predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

RQ4. Does ethnic group predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women?

$H_0$4: Ethnic group does not predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

H_a4: Ethnic group significantly predicts mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

RQ5: Does age mediate the relationship between ethnic group and mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women?

$H_0$5: Age does not mediate relationship between ethnic group and mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

H_a5: Age significantly mediates the relationship between ethnic group and mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

The statistical test for this quantitative research study was logistic regression using seeking mental health treatment as the dependent variable and perceived stigma of mental health illness, gender, age, cultural barriers, and ethnic group as the independent variables. Logistic regression is often used in various fields, including medical fields and social sciences. A regression model is used when the dependent variable is categorical. Logistic regression can be binomial, ordinal, or multinomial (Freedman, 2009). It was determined that logistic regression was the most appropriate statistical test to use for this study, as it measured the relationship between the categorical dependent variable and the independent variables.

Threats to Validity

There were several potential threats to the validity of the study. The number of participants was limited to represent 100 female participants pursuing secondary education. This limitation was made to eliminate the male perspective on stigma and treatment-seeking for mental health illness. Future studies should include a representation of both male and female participants, along with other contributing factors such as socioeconomics and religious preferences, as they may be relevant to treatment seeking. The study was a quantitative study with a structured survey that restricted participants from elaborating on their responses. This is in contrast with a qualitative study, which would involve focus groups and a smaller sample population and would accommodate

more in-depth questioning and closer observation to provide insights into participants' stigma and treatment seeking for mental health illness.

Summary

The purpose of Chapter 3 was to describe the research design and rationale used in the study and explain the sampling and sample procedures. The instrumentation for the variables was mentioned, as well as its credibility, dependability, and reliability. In Chapter 4, I will outline the purpose, research questions, and hypotheses of the study.

Chapter 4: Results

The overall purpose of this study was to address the gap in determining the prediction of stigma and cultural barriers with seeking treatment for mental health illness amongst Caucasian, African American and Asian American women who are pursuing secondary education. In this chapter, I describe the results of the variables used in the study: prediction of stigma, cultural barriers and willingness to seek treatment for anxiety symptoms. The data analysis plan and findings of the logistic regression were organized according to the following research questions:

RQ1: Does mental health stigma predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women?

$H_0$1: Mental health stigma does not predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

H_a1: Mental health stigma significantly predicts mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

RQ2: Does age predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women?

$H_0$2: Age does not predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

H_a2: Age significantly predicts mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

RQ3: Do cultural barriers predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women?

$H_0 3$: Cultural barriers do not predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

$H_a 3$: Cultural barriers significantly predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

RQ4. Does ethnic group predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women?

$H_0 4$: Ethnic group does not predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

$H_a 4$: Ethnic group significantly predicts mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

RQ5: Does age mediate the relationship between ethnic group and mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women?

$H_0$5: Age does not mediate relationship between ethnic group and mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

H_a5: Age significantly mediates the relationship between ethnic group and mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

Chapter 4 presents the results of the data collection process, the analysis and the interpretation of African American, Caucasian and Asian American female college students' responses to the survey posted in Survey Monkey.

Descriptive Statistics

The researcher initially collected data from a total of 155 female college students. However, a screening of these data revealed that 30 participants did not provide complete responses to the survey items that were used to measure the study variables. All these respondents were excluded from the analysis, resulting in a sample of 125 female college students. The statistical analyses in this study were conducted based on this reduced sample.

Table 1 displays the frequency table for the categorical variables of this study. Among the respondents, 26.4% reported their ethnic group as African American, 30.4% as Asian-American, 31.2% as Caucasian, and 12.0% as other. In addition, 84.8% of the

respondents stated that they would seek mental health treatment for their symptoms from a mental health professional, 47.2% said that they had sought mental health treatment before COVID for their symptoms from a mental health professional, and 50.4% indicated that they had sought mental health treatment since COVID for their symptoms from a mental health professional.

Table 1

Frequency Table for Categorical Variables

Variable		Frequency	Percent
Ethnic group	African American	33	26.4
	Asian American	38	30.4
	Caucasian	39	31.2
	Other	15	12.0
Will you seek mental health treatment for your symptoms from a mental health professional?	No	19	15.2
	Yes	106	84.8
Did you seek mental health treatment before COVID for your symptoms from a mental health professional?	No	66	52.8
	Yes	59	47.2
Did you seek mental health treatment since COVID for your symptoms from a mental health professional?	No	62	49.6
	Yes	63	50.4

Table 2 displays the descriptive statistics for the continuous study variables. Mental health stigma was measured using the following six items: “My parents would not let me marry someone with mental illness or who has a family member with mental illness because they are not considered to be suitable for marriage,” “Mental illness is frowned upon as a poor reflection of my family and ancestors,” “People with mental

illness are possessed by demonic spirits," "People who have mental illness is considered to be crazy," "It is considered shameful to speak to someone outside of my family about my situation," and "I am afraid what my family or friends will say or think of me if I received treatment for mental illness." Cultural barriers were measured using the following nine items: "I did not think Western health care could have helped with my problem," "Western health care would have cost too much money," :I did not know where to go for help or help is too hard a find," "It's too hard to arrange transportation to and from the office," "My family member(s) did not want me to get Western health care," "I was afraid of what others would think or did not want anyone else to know," "I thought I would experience language problems," "I felt that I would be discriminated against because of my race or ethnicity," and "Asian (non-Western) health care would provide a better treatment." All 15 items were rated on a 5-point Likert scale with 1 indicating *strongly disagree/not at all* and 5 indicating *strongly agree/very much*. The overall scores for mental health stigma and cultural barriers were calculated by summing up the scores for their respective items. As shown in Figure 2, the scores on mental health stigma ranged from 6 to 28 and had a mean of 14.17 (*SD* = 5.01), and the scores on cultural barriers ranged from 10 to 35 and had a mean of 23.83 (*SD* = 5.52).

Table 2

Descriptive Statistics for Continuous Variables (N = 125)

Variable	Min	Max	Mean	*SD*	Skewness	Kurtosis
Mental health stigma	6	28	14.17	5.01	.37	-.31
Cultural barriers	10	35	23.83	5.52	-.11	-.58

Evaluations of the Research Questions

This study was originally guided by five research questions and their associated null and alternative hypotheses. However, provided that no data were collected on the respondents' age, the researcher failed to address the second and fifth questions. Each of the other research questions was addressed using three logistic regression analyses. Given that three models were performed to evaluate each research question, a Bonferroni correction method was applied to avoid increasing type I error. Using this method, the original significance level of .05 was divided by 3 (the number of models being conducted) and set as the significance levels to identify statistically significant results for each of the three logistic regression analyses. Hence, the significance level was determined at $\alpha = .017$.

The following survey items were included the dependent variables in these analyses: "Will you seek mental health treatment for your symptoms from a mental health professional?" (Model 1), "Did you seek mental health treatment before COVID for your symptoms from a mental health professional?" (Model 2), and "Did you seek mental health treatment since COVID for your symptoms from a mental health professional?" (Model 3). The predictor variables included in each of these models were ethnic group, mental health stigma, and cultural barriers. Before reporting the results of these models, an assessment of the assumptions underlying these analyses was done. The assumptions of binary logistic regression analysis that were examined were as follows (Lund, 2021):

- no substantial multicollinearity among the predictor variables

- linearity of the relationship between each predictor variable and the outcome variable
- no significant outliers in the data

The first assumption was evaluated using the variance inflation factor (VIF) and tolerance values for the predictor variables included in these models. As suggested by Hair et al. (1995), VIF values greater than 10 or tolerance values less than 0.1 are indicative of substantial multicollinearity in the data. These threshold values were used to detect multicollinearity issues in the data. Dummy variables were created for each category of ethnic group. Table 3 reports the VIF and tolerance values for the predictor variables. It can be seen that all VIF and tolerance values were in their acceptable ranges, indicating that there were no multicollinearity issues in the data. Hence, the first assumption of all three binary logistic regression models was deemed reasonable.

Table 3

Examining the Multicollinearity Assumption Among the Predictor Variables

Predictor variable	Tolerance	VIF
Mental health stigma	.569	1.757
Cultural barriers	.517	1.933
African American	.423	2.365
Asian American	.392	2.549
Caucasian	.381	2.628

Note. Other ethnic groups was used as the reference category.

The second assumption was addressed using the Box-Tidwell test. Following this procedure, the interaction term between each continuous variable and its natural log transformation is included in the model. The linearity assumption is assumed to be valid

if all interaction terms are nonsignificant (Zeng, 2022). The third assumption was examined by checking the standardized residuals from the logistic regression models. To consider this assumption valid, all standardized residuals should be less than 3.29 and greater than -3.29. A respondent with a *z*-score falling outside this range is considered a significant outlier (Tabachnick & Fidell, 2013). The results of evaluating each model as well as tests of its assumptions are provided as follows.

Model 1

The dependent variable in the first binary logistic regression model was measured using the survey item "Will you seek mental health treatment for your symptoms from a mental health professional?" For this dependent variable, "yes" was coded as 1 and "no" as 0. The predictor variables in this model were mental health stigma, cultural barriers, and ethnic group. Before discussing the results obtained based on this model, its underlying assumptions were evaluated.

The Box-Tidwell test was utilized to address the linearity assumption of this model. It was found that the interaction between mental health stigma and its natural log transformation was non-significant, $exp(B) = 0.719$, $p = .206$, 95% *CI* [.432, 1.198]. The interaction between cultural barriers and its natural log transformation was also non-significant, $Exp(B) = 1.989$, $p = .244$, 95% *CI* [.626, 6.321]. Hence, the linearity assumption of the binary logistic regression model was reasonable. In addition, the absence of significant outliers in the observations was evaluated using the standardized residuals from the regression equation. It was found that only one standardized residual value exceeded the range of -3.29 to 3.29, indicating the presence of one significant

outlier in the data. Thus, there was a slight deviation from the third assumption of the binary logistic regression model. Overall, no evidence was identified indicating substantial departures from the assumptions of this model.

Based on the results of the omnibus tests of model coefficients, the model provided a significantly better fit to the data than the null model with no predictors, $\chi^2(5) = 14.315$, $p = .014$. The Cox and Snell *R* square value for this model was calculated to be .108, and the Nagelkerke *R* square value was calculated to be .189. The results of the Hosmer and Lemeshow goodness-of-fit test provided further support for the fit of the model, showing that the model did fit poorly, $\chi^2(7) = 9.253$, $p = .235$.

On the other hand, an examination of the classification table for this logistic regression model revealed that the model predicted that all responses to the question "Will you seek mental health treatment for your symptoms from a mental health professional?" would be "yes," even though there were actually 19 "no" responses (see Table 4). Hence, the model predictions were unreliable.

Table 4

Classification Table for the First Binary Logistic Regression Model

		Predicted		
		Will you seek mental health treatment for your symptoms from a mental health professional?		Percentage
Observed		No	Yes	correct
Will you seek mental health treatment for your symptoms from a mental health professional?	No	0	19	0.0
	Yes	0	106	100.0
Overall percentage				84.8

Considering that the classification table provided strong evidence for the poor predictive ability of the model, it was deemed that the model was not a good fit to the data and therefore conclusions made based on this model were unreliable. For this reason, the parameter estimates for the predictor variables were not examined.

Model 2

The dependent variable in the second binary logistic regression model was measured using the survey item "Did you seek mental health treatment before COVID for your symptoms from a mental health professional?" For this dependent variable, "yes" was coded as 1 and "no" as 0. The predictor variables in this model were mental health stigma, cultural barriers, and ethnic group. Before discussing the results obtained based on this model, its underlying assumptions were evaluated.

The Box-Tidwell test was employed to assess the linearity assumption of the regression equation. It was found that the interaction between mental health stigma and its natural log transformation was nonsignificant, $Exp(B) = 1.224$, $p = .282$, 95% CI [.846, 1.771]. The interaction between cultural barriers and its natural log transformation was also non-significant, $Exp(B) = 1.017$, $p = .952$, 95% CI [.588, 1.759]. Hence, the linearity assumption of the binary logistic regression model was satisfied. Moreover, the assumption of a lack of significant outliers was examined using the standardized residuals from the regression equation. It was found that all standardized residuals fell into the range of -3.29 to 3.29, indicating that there were no significant outliers in the observations. Therefore, the third assumption of the binary logistic regression model was

assumed to be met. Overall, the researcher found no evidence indicating substantial departures from the assumptions underlying this model.

Based on the results of the omnibus tests of model coefficients, the model provided a significantly better fit to the data than the null model with no predictors, $\chi^2(5) = 17.444$, $p = .004$. The Cox & Snell R square value for this model was .130 and the Nagelkerke R square value was .174. The results of the Hosmer and Lemeshow goodness of fit test provided further support for the fit of the model indicating that the model was not a bad fit, $\chi^2(8) = 10.520$, $p = .230$. The classification table for this model is provided in Table 5 and the parameter estimates for the predictor variables are reported in Table 6.

An examination of the classification table for this logistic regression model revealed that the model correctly predicted the 'no and 'yes responses to the question 'Did you seek mental health treatment before COVID for your symptoms from a mental health professional?' 68.2% and 61.0% of the time, respectively (see Table 5). Overall, the predictions made by the model were correct 64.8% of the time.

Table 5

Classification Table for the Second Binary Logistic Regression Model

		Predicted		
		Did you seek mental health treatment before COVID for your symptoms from a mental health professional?		Percentage correct
Observed		No	Yes	
Did you seek mental health treatment before COVID for your symptoms from a mental health professional?	No	45	21	68.2
	Yes	23	36	61.0
Overall percentage				64.8

Table 6

Parameter Estimates for the Second Binary Logistic Regression Model

Variable	*p*-value	*Exp*(*B*)	95% *CI* for *Exp*(*B*)	
			Lower	Upper
Ethnic group	.358			
Ethnic group: African American	.379	0.558	0.152	2.051
Ethnic group: Asian American	.118	0.352	0.095	1.305
Ethnic group: Caucasian	.714	0.783	0.211	2.898
Mental health stigma	.318	1.052	0.952	1.163
Cultural barriers	.009	0.876	0.793	0.967

Model 3

The dependent variable in the third binary logistic regression model was measured using the survey item 'Did you seek mental health treatment since COVID for your symptoms from a mental health professional?'. For this dependent variable, 'yes' was coded as 1 and 'no' as 0. The predictor variables in this model were mental health stigma, cultural barriers, and ethnic group. Before discussing the results obtained based on this model, its underlying assumptions were evaluated.

The Box-Tidwell test was utilized to examine the second assumption of this model. It was found that the interaction between mental health stigma and its natural log transformation was non-significant, *Exp*(*B*) = .948, *p* = .768, 95% *CI* [.662, 1.355]. The interaction between cultural barriers and its natural log transformation was also non-significant, *Exp*(*B*) = 1.283, *p* = .748, 95% *CI* [.331, 4.669]. Hence, there was no evidence indicating departures from the linearity assumption of the binary logistic regression equation. The third assumption of the regression equation was examined using

the standardized residuals from this model. It was found that all standardized were less than ±3.29, indicating that there were no significant outliers in the. observations Hence, the lack of outliers' assumption of the binary logistic regression model was assumed to be met. Overall, no evidence was identified indicating substantial violations of assumptions underlying this model.

Based on the results of the omnibus tests of model coefficients, the model failed to provide a significantly better fit to the data than the null model with no predictors, $\chi^2(5) = 6.446$, $p = .265$. The Cox & Snell R square value for this model was calculated to be .050 and the Nagelkerke R square value was calculated to be .067. The results of the Hosmer and Lemeshow goodness of fit test suggested that the model was not a bad fit, $\chi^2(8) = 4.715$, $p = .788$. The classification table for this model is provided in Table 7 and the parameter estimates for the predictor variables are reported in Table 8.

An examination of the classification table for this logistic regression model revealed that the model correctly predicted the 'no and 'yes responses to the question 'Did you seek mental health treatment since COVID for your symptoms from a mental health professional?' 62.9% and 60.3% of the time, respectively (see Table 7). Overall, the predictions made by the model were correct 61.6% of the time.

Table 7

Classification Table for the Third Binary Logistic Regression Model

Observed		Predicted		
		Did you seek mental health treatment since COVID for your symptoms from a mental health professional?		Percentage
		No	Yes	correct
Did you seek mental health treatment since COVID for your symptoms from a mental health professional?	No	39	23	62.9
	Yes	25	38	60.3
Overall percentage				61.6

Table 8

Parameter Estimates for the Third Binary Logistic Regression Model

Variable	*p*-value	*Exp*(*B*)	95% *CI* for *Exp*(*B*)	
			Lower	Upper
Ethnic group	.667			
Ethnic group: African American	.692	1.292	.364	4.585
Ethnic group: Asian American	.407	1.709	.482	6.061
Ethnic group: Caucasian	.283	1.997	.565	7.059
Mental health stigma	.657	1.022	.929	1.124
Cultural barriers	.091	.923	.841	1.013

Based on the results obtained from these binary logistic regression analyses, the research hypotheses corresponding to each research question were evaluated.

Research Question 1

The first research question asked whether mental health stigma predicted mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women. The null hypothesis developed based on this question is that

mental health stigma does not predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women. This hypothesis was evaluated based on the results obtained from the three binary logistic regression analyses.

The results from the first logistic regression analysis indicated that the model was a poor fit to the data. Thus, it was concluded that mental health stigma did not have a significant effect on the participants' responses to the survey items 'Will you seek mental health treatment for your symptoms from a mental health professional?'. The results from the second logistic regression analysis revealed that mental health stigma was not a significant predictor of the participants' responses to the survey item 'Did you seek mental health treatment before COVID for your symptoms from a mental health professional?', $Exp(B) = 1.052$, $p = .318$, 95% CI [0.952, 1.163]. Similarly, the results from the third logistic regression analysis indicated that mental health stigma did not significantly predict the participants' responses to the survey item 'Did you seek mental health treatment since COVID for your symptoms from a mental health professional?' $Exp(B) = 1.022$, $p = .657$, 95% CI [0.929, 1.124]. Overall, these results indicated that mental health stigma was not a significant predictor of mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women. Hence, the researcher failed to reject Null Hypothesis 1.

Research Question 3

The third research question asked whether cultural barriers predicted mental health treatment seeking among self-identified African American, Asian American, and

Caucasian college women. The null hypothesis developed based on this question is that cultural barriers does not predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women. This hypothesis was evaluated based on the results obtained from the three binary logistic regression analyses.

Provided that the first model was a poor fit to the data, it was concluded that cultural barriers did not have a significant effect on the participants' responses to the survey items 'Will you seek mental health treatment for your symptoms from a mental health professional?'. On the other hand, the results from the second logistic regression analysis revealed that cultural barriers was a significant predictor of the participants' responses to the survey item 'Did you seek mental health treatment before COVID for your symptoms from a mental health professional?', $Exp(B) = 0.876$, $p = .009$, 95% CI [0.793, 1.967]. It can be concluded from these results that a unit increase in cultural barriers was associated with a 12.4% decrease in the likelihood that a participant would select 'yes' in response to this survey question. However, the results from the third logistic regression analysis indicated that cultural barriers did not significantly predict the participants' responses to the survey item 'Did you seek mental health treatment since COVID for your symptoms from a mental health professional?' $Exp(B) = 0.923$, $p = .091$, 95% CI [0.841, 1.013]. Overall, these results provided partial support to reject Null Hypothesis 3.

Research Question 4

The fourth research question asked whether ethnic group predicted mental health treatment seeking among self-identified African American, Asian American, and

Caucasian college women. The null hypothesis developed based on this question is that ethnic group does not predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women. This hypothesis was evaluated based on the results obtained from the three binary logistic regression analyses.

Provided that the first model was a poor fit to the data, it was concluded that ethnic group did not have a significant effect on the participants' responses to the survey items 'Will you seek mental health treatment for your symptoms from a mental health professional?'. The results from the second logistic regression analysis revealed that ethnic group stigma was not a significant predictor of the participants' responses to the survey item 'Did you seek mental health treatment before COVID for your symptoms from a mental health professional?', $p = .358$ (see Table 6). Similarly, the results from the third binary logistic regression analysis indicated that ethnic group did not significantly predict the participants' responses to the survey item 'Did you seek mental health treatment since COVID for your symptoms from a mental health professional?', $p = .667$ (see Table 8). Overall, these results indicated that ethnic group did not significantly predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women. Thus, the researcher failed to reject Null Hypothesis 4.

Summary

This study aimed to address the gap in determining the prediction of stigma and cultural barriers with seeking treatment for mental health illness amongst Caucasian, African American, and Asian American women who are pursuing secondary education.

This study was originally guided by five research questions and their respective null and alternative hypotheses. However, given that no data was collected on the participants' age, the researcher failed to address the second and fifth questions. Binary logistic regression analysis was utilized to address the other questions and their hypotheses. The following survey questions were included as the dependent variables of the study: 'Will you seek mental health treatment for your symptoms from a mental health professional?', 'Did you seek mental health treatment before COVID for your symptoms from a mental health professional?', and 'Did you seek mental health treatment since COVID for your symptoms from a mental health professional?'. These items were used to measure mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women. After a data cleaning process, a sample of 125 female college students was selected for the statistical analyses. The results from these logistic regression analyses indicated that mental health stigma was not a significant predictor of mental health treatment seeking. Thus, Null Hypothesis 1 was not rejected. On the other hand, cultural barriers was found to be a significant predictor of the participants' responses to the survey item 'Did you seek mental health treatment before COVID for your symptoms from a mental health professional?'. Cultural barriers did not significantly predict the responses to the other survey items used as the dependent variables. Thus, partial support was provided to reject Null Hypothesis 3. Moreover, ethnic group did not significantly predict mental health treatment seeking. Thus, the researcher failed to reject Null Hypothesis 4.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this quantitative cross-sectional survey study was to investigate the relationship between mental health stigma, cultural barriers to mental health treatment, and treatment seeking among African American, Asian American, and Caucasian female college students. The independent variables in the study were mental health stigma and cultural barriers to mental health. The variables were measured as individually held beliefs. The dependent variable was the student's willingness to seek treatment. Other variables that were included in the study were age, ethnicity, and gender. The sample for the study consisted of 125 female college students. The results that were collected from the surveys were analyzed to determine the existence and extent of the relationship between stigma, cultural barriers, and a participant's willingness to seek mental illness treatment. The regression model was applied in the analysis of the data to provide insight into the factors that affect the independent variable the most. It was hypothesized from the data collected that mental health stigma was closely associated with a patient's unwillingness to seek medical help. The researcher also purported that factors such as gender, age, and ethnic group affect a person's willingness to seek help.

This study was significant to conduct for numerous reasons. College students across the globe are at risk for mental health disorders due to several stressors experienced in school. The consequences of failure to seek mental help for college students include risk of dropout as well as alcohol and drug abuse, along with increases in the number of cases of psychosocial problems in society. The insights gained from the

study can assist individuals who work with college women by offering education and support to those who are suffering with a mental illness who may be reluctant to seek treatment. The study also addressed a gap in research in determining the prediction of stigma and cultural barriers and treatment seeking among Caucasian, African American, and Asian American college women. Previous research has proposed that the help-seeking process entails identifying the symptoms, considering the available resources, and disclosing the issue to mental health professionals. The results of the study could encourage the population targeted in this study to seek treatment when needed without a feeling of stigmatization. The findings can also address some of the factors that hinder women from seeking mental health services when needed.

The logistic regression analysis that was conducted indicated that mental health stigma was not a significant predictor of mental health treatment seeking. Cultural barriers were also found to be a significant predictor of the participants' responses to the survey item "Did you seek mental health treatment before COVID for your symptoms from a mental health professional?" It was also concluded that cultural barriers did not significantly predict the responses to the other survey items used as the dependent variables. The last significant finding from the study was that the ethnic group did not significantly predict mental health treatment seeking.

Summary of Findings

This section will provide a summary of the findings according to the research questions addressed in the study. The first research question posed in the study was the following: Does mental health stigma predict mental health treatment seeking among

self-identified African American, Asian American, and Caucasian college women? Mental health treatment seeking was measured in three different ways. The dependent variable in the first binary logistic regression model was measured using the survey item "Will you seek mental health treatment for your symptoms from a mental health professional?" The dependent variable in the second binary logistic regression model was measured using the survey item "Did you seek mental health treatment before COVID for your symptoms from a mental health professional?" The dependent variable in the third binary logistic regression model was measured using the survey item "Did you seek mental health treatment since COVID for your symptoms from a mental health professional?" The results indicated that mental health stigma did not predict any of the three measures of mental health treatment seeking. For the second research question—Does age predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women?—data was not collected.

The third research question asked the following: Do cultural barriers predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women? Mental health treatment seeking was measured in three different ways to address the third research question. The dependent variable in the first binary logistic regression model was measured using the survey item, "Will you seek mental health treatment for your symptoms from a mental health professional?" The dependent variable in the second binary logistic regression model was measured using the survey item "Did you seek mental health treatment before COVID for your symptoms from a mental health professional?" The dependent variable in the third

binary logistic regression model was measured using the survey item "Did you seek mental health treatment since COVID for your symptoms from a mental health professional?" The results indicated that mental health stigma did not predict any of the three measures of mental health treatment seeking. The results indicated that cultural barriers did and did not predict which of the three measures of mental health treatment seeking were significant. The results revealed that cultural barriers were a significant predictor of mental health treatment seeking. The results only provided partial support that cultural barriers significantly predicted mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women. However, the results from the third logistic regression analysis indicated that cultural barriers did not significantly predict the participants' responses to the survey item.

The fourth research question asked the following: Does ethnic group predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women? Mental health treatment seeking was measured in three different ways to address the fourth research question. The dependent variable in the first binary logistic regression model was measured using the survey item, "Will you seek mental health treatment for your symptoms from a mental health professional?" The dependent variable in the second binary logistic regression model was measured using the survey item "Did you seek mental health treatment before COVID for your symptoms from a mental health professional?" The dependent variable in the third binary logistic regression model was measured using the survey item "Did you seek mental health treatment since COVID for your symptoms from a mental health

professional?" The findings of the fourth question concluded that ethnic group did not significantly predict mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women.

Interpretation of the Findings

Prior research has concluded that self-stigma may result in individuals suffering with a mental illness disorder not pursuing life opportunities for themselves (Corrigan & Watson, 2002). Research has also suggested that African Americans were likely to feel embarrassed about mental health problems and seeking treatment due to stigma in their community (Matthews et al., 2006). Some of the stigmas that African Americans experience as a result of mental health problems are self-stigma (when one internalizes negative attitudes that come from others), help-seeking stigma (the stigma that one experiences when seeking help for mental illness and associative stigma), and associative stigma (when family members or friends of those who are suffering with mental illness feel stigmatized by others; Matthews et al., 2006).

Mental Health Stigma

The logistic regression analysis indicated that mental health stigma was not a significant predictor of mental health treatment seeking among self-identified African American, Asian American, and Caucasian college women. Researchers such as Eylem et al. (2020) have cited that there are stigmas related to mental disorders that prevent individuals from seeking help. The mental and physical consequences of stigma have been found to be more detrimental for racial and ethnic minorities than White groups (Eylem et al., 2020). The theory explains how people's beliefs, attitudes, and intentions

lead to help-seeking behaviors (Mechanic, 1978). The results of the first research question could be explained by using this theory. According to the theory, the participants in this study may have had positive beliefs and attitudes about help-seeking behaviors for their mental health challenges. Because stigma was not found to be associated with help-seeking behaviors, the participants may have been more aware of their symptoms, identified them as an issue, and sought out help to address those issues.

There were several studies that had contradictory results to what was found in my study. Studies such as the one conducted by Vidourek and Burbage (2019) have disclosed that individuals who reported feeling embarrassed about their mental health treatment were less likely to see the need for them to seek help and utilize psychological health services. Hirsch et al. (2019) conducted community-based research and suggested that one out of every four individuals who acknowledged the need for mental health help failed to seek treatment services, and this was partly attributed to public stigma. From the literature review that was conducted in a previous chapter, there were no studies that supported the findings of my study. All the studies examined that explored the relationship between mental health stigma and treatment seeking supported the fact that stigma influences whether an individual seeks mental health treatment.

Cultural Barriers to Mental Health Treatment

Cultural barriers in this study had varying results. The results from the second logistic regression analysis revealed that cultural barriers were a significant predictor of the participants' responses to the survey item "Did you seek mental health treatment before COVID for your symptoms from a mental health professional?" The results from

the third logistic regression analysis indicated that cultural barriers did not significantly predict the participants' responses to the survey item "Did you seek mental health treatment since COVID for your symptoms from a mental health professional?" These differing results can be tied back to prior research studies that have been conducted on cultural barriers and mental health treatment. Cheng et al. (2001) indicated that there are a variety of reasons why Asian Americans discourage mental health treatment and self-control and the decision to solve one's own issues are cultural values that supersede seeking mental health treatment. One of the few studies conducted that examined stigma and cultural barriers was one conducted by Matthews et al. (2006) that indicated that African American participants were likely to feel embarrassed due to mental health problems and seeking treatment. One study by Misra et al. (2021) identified various cultural aspects of mental health stigmas among Asian, Black, and Latinx Americans. Byrow et al. (2020) concluded from a literature review that was conducted that cultural barriers were a factor in mental health help-seeking.

The varying results for the third research question could be better understood by using help-seeking theory. Some of the participants in the study may not have had help-seeking behaviors for their mental health problems because of cultural attitudes and beliefs. As indicated in a study by Luu et al. (2009), cultural barriers had a significant negative impact on mental health treatment seeking. The impact of cultural barriers on help-seeking behaviors can be seen as both positive and negative. Some cultural beliefs and attitudes may encourage individuals who have mental health challenges to seek treatment while others may discourage them from doing so. It is up to the individual how

they want to honor those cultural beliefs and determine whether they want to seek mental health treatment.

Ethnic Group

The results of the logistic regression analysis indicated that ethnic group was not a significant predictor of the participants' responses to the survey item "Did you seek mental health treatment before COVID for your symptoms from a mental health professional?" The fourth research question is very similar to the previous one in that ethnic group stigma was not a significant predictor of mental health treatment. Although studies such as the one by DeFreitas et al. (2018) indicated that African American and Latino college students perceive personal mental health stigmas, the results of my study did not indicate the same thing and found that it was not a significant predictor of mental health treatment. Bracke et al. (2019) suggested from the results that in countries where stigmatizing beliefs were dominant, the likelihood of people seeking help from specialized mental health services was reduced and they were also less likely to contact general practitioners when support is needed.

In summary, the results of the study did not indicate that mental health stigma was a significant predictor of mental health treatment seeking, and cultural barriers were found to be a significant predictor of the participants' responses to the survey item "Did you seek mental health treatment before COVID for your symptoms from a mental health professional?" However, cultural barriers did not significantly predict the responses to the other survey items that were used as the dependent variable. The results also indicated that ethnic group did not significantly predict mental health treatment seeking. The help-

seeking theory was used to better understand the results of the study by understanding the beliefs, attitudes, and intentions of female college students in help-seeking behaviors. When utilizing the theory to interpret the results of the study, it can be assumed that the female college students in the study were increasingly aware of their symptoms, identified them as an issue, and took the necessary steps to address those issues.

Limitations of the Study

One limitation of this study was that the research questions and survey items did not distinguish between formal and informal help-seeking. Participants in the study may have believed that help-seeking only included formal routes such as assistance from professionals who are specialists and general health care providers. Another limitation of this study was that it only collected data from female college students, which eliminated data from males. There could be a difference between the perspectives of males and females regarding stigmas associated to mental health that can influence help-seeking behaviors. Only including female participants also limited the construction of resources and support to assist in mental health treatment because data were only collected from one gender. The generalizability of the results to a wider population is limited to only female college students because all genders were not included. Because age was not collected in the study, the results can affect validity. The last limitation of this study was the restriction of the participants' answers because it involved a structured survey. The participants were only allowed to answer the questions provided, but they may have had information to add to their responses. This restriction limited the breadth and depth of the data obtained.

Recommendations

There are several recommendations for future research that can be made due to the limitations that were discovered in the study. This study utilized a cross-sectional survey to collect data, which limited the participants' responses to the questions. Future research could be conducted utilizing a qualitative method with semistructured interviews to understand the experiences of the sample population in regard to help-seeking behaviors. The interviews could be conducted using an interview protocol as a guide but also allow the research participants to expand on the questions and offer any additional insights, experiences, or feelings on the questions asked. Future research, whether it is qualitative or quantitative, should also be sure to collect demographic data such as age, race, gender, economic, and marital status or gain a better understanding of the help-seeking behaviors of college students without generalizing about the population. Having demographic data will allow for results of the study to be more specific and provide a deeper understanding of the characteristics of different populations in their mental health treatment seeking behavior. Research should also be conducted to explore both formal and informal mental health treatment and the relationship with culture and ethnicity. Some cultures may seek mental health treatment from informal sources such as friends, family, and religious figures. Understanding what factors influence individuals to seek help from various sources could provide valuable information for colleges to build support services that best meet the needs of the students.

As noted as a limitation in this study, only female participants were included as the sample. Future research should include both male and female participants so that the

information gathered could be more applicable to a wider population. Utilizing samples of both males and females can provide valuable information concerning the beliefs and attitudes of both genders. Both genders may share the same beliefs and attitudes about mental health seeking behaviors or differences that could have implications for support services provided by colleges.

Implications

This study has the potential to impact positive social change on college campuses. By understanding the barriers that limit help-seeking behavior for female college students who are African American, Asian American, and Caucasian can assist college campuses in providing effective support services to their students. Because the results of this study indicated that mental health stigma was not a significant predictor of mental health treatment seeking, colleges can formulate better strategies to encourage students to seek treatment when needed. Cultural barriers and ethnic group identification were also not significant predictors of mental health treatment seeking so those factors should not influence how colleges influence students to seek treatment. By using data from this study regarding African American, Asian American, and Caucasian female college students, campus life for many students could be improved with the support services provided by the college. The results can improve not only campus life for students but can also help in academic achievement by seeking mental health treatment without any stigmas of experiencing these challenges.

The study also has theoretical implications for the help-seeking theory. The theory addresses how an individual's beliefs, attitudes, and intentions lead to help-seeking

behaviors, but this study adds to the theory by also addressing cultural and ethnic factors that may impact seeking mental health treatment. Because the results of this study concluded that ethnic group affiliation and cultural barriers do not have a significant impact on seeking mental health treatment, the help-seeking theory does not explain what other factors can influence treatment. This current study did not address that either, but additional research should be conducted to determine exactly what factors influence college students to seek mental health treatment. The results of the study could also help clinicians and counselors at colleges when interacting with African American, Asian American, and Caucasian students by understanding that their reluctance to seek treatment is not rooted in their cultural beliefs or their ethnic identity. College counselors and clinicians can also use the information from this study to encourage more people to initiate mental health treatment when its needed.

Conclusion

Although living with a mental health condition can be difficult and frustrating, seeking treatment for the illness is beneficial in handling the stress, frustration, and stigma associated with it. Attending college can be a very rewarding experience in gaining a sense of independence, social engagement, and opportunities to achieve academic success but for some the experience can be stressful. Although there are numerous studies that have explored the stigma of mental health and the relationship between mental health stigma, mental health treatment, and cultural barriers and treatment, there is a gap in research on treatment seeking for African American, Asian, and Caucasian students experiencing mental health issues. The purpose of this

quantitative research was to investigate Caucasian, Asian and African American female college students who suffer with mental illness and whether stigma and cultural barriers predict seeking treatment for their mental health. This study served as one of a few that have investigated this population and provided data on how cultural and ethnic group identity influence their desire to seek mental health treatment. It is hoped through conducting this study that colleges and universities can create support services and programs that better meet the needs of female college students who are African American, Asian, and Caucasian and reduce the stigma that is sometimes associated with mental health challenges.

References

Ahmedani, B. K. (2011). Mental health stigma: Society, individuals, and the profession. *Journal of Social Work Values and Ethics, 8*(2), 4-1–4-16. https://doi.org/10.1016/j.genhosppsych.2020

Aldiabat, K. M., Matani, N. A., & Navenec, C. L. (2014). Mental health among undergraduate university students: A background paper for administrators, educators and healthcare providers. *Universal Journal of Public Health*, *2*(8), 209–214. https://doi.org/10.13189/ujph.2014.020801

American College Health Association. (2009). American College Health Association—National College Health Assessment Spring 2009 reference group data report (abridged). (2009). *Journal of American College Health, 56,* 5, 469–480. https://www.acha.org/documents/ncha/JACH_March_2009_SP08_Ref_Grp.pdf

American College Health Association. (2016). *Fall 2016 reference group data report*. https://www.acha.org/documents/ncha/NCHA-II_FALL_2016_REFERENCE_GROUP_DATA_REPORT.pdf

Angermeyer, M. C., & Matschinger, H. (2005). The stigma of mental illness in Germany: A trend analysis. *The International Journal of Social Psychiatry*, *51*(3), 276–284. https://doi.org/10.1177/0020764005057390

Anxiety and Depression Association of America. (n.d.). *Home page*. https://adaa.org/

Atkinson, D. R., & Gim, R. H. (1989). Asian-American cultural identity and attitudes toward mental health services. *Journal of Counseling Psychology, 36*(2), 209–212. https://doi.org/10.1037/0022-0167.36.2.209

Atkinson, D. R., Ponterotto, J. G., & Sanchez, A. R. (1984). Attitudes of Vietnamese and Anglo-American students toward counseling. *Journal of College Student Personnel, 25,* 448–452. https://doi.org/10.1007/BF01407736

Barksdale, C. L., & Molock, S. D. (2009). Perceived norms and mental health help seeking among African American college students. *The Journal of Behavioral Health Services & Research, 36*(3), 285–299. https://doi.org/10.1007/s11414-008-9138-y

Bayer, J. K., & Peay, M. Y. (1997). Predicting intentions to seek help from professional mental health services. *Australian and New Zealand Journal of Psychiatry, 31*(4), 504–513. https://doi.org/10.3109/00048679709065072

Berry, J. W., Kim, U., Power, S., Young, M., & Bujaki, M. (1989). Acculturation attitudes in plural societies. *Applied Psychology: An International Review, 38*(2), 185–206. https://doi.org/10.1111/j.1464-0597.1989.tb01208.x

Bracke, P., Delaruelle, K., & Verhaeghe, M. (2019). Dominant cultural and personal stigma beliefs and the utilization of mental health services: A cross-national comparison. *Frontiers in Sociology*, *4*, Article 40. https://doi.org/10.3390/ijerph16152634

Budhwani, H., Hearld, K. R., & Chavez-Yenter, D. (2012). Depression in racial and ethnic minorities: The impact of nativity and discrimination. *Journal of Racial and Ethnic Health Disparities, 2,* 34–42. https://doi.org/10.1007/s40615-014-0045-z

Bui, K. V., & Takeuchi, D. T. (1992). Ethnic minority adolescents and the use of community mental health care services. *American Journal of Community Psychology*, *20*(4), 403–417. https://doi.org/10.1007/BF00937752

Busby, G. J., Bruce, C. P., & Batterham, P. J. (2016). Predictors of personal, perceived and self-stigma towards anxiety and depression. *Epidemiology and Psychiatric Sciences, 25*(3), 247–254. https://doi.org/10.1017/S2045796015000220

Byrow, Y., Pajak, R., McMahon, T., Rajouria, A., & Nickerson, A. (2019). Barriers to mental health help-seeking amongst refugee men. *International Journal of Environmental Research and Public Health*, *16*(15), Article 2634.

Carmack, H. J., Nelson, C. L., Hocke-Mirzashvili, T. M., & Fife, E. M. (2018). Depression and anxiety stigma, shame, and communication about mental health among college students: Implications for communication with students. *College Student Affairs Journal, 36*(1), 68–79. https://projectinnovation.com/college-student-journal

Center for Collegiate Mental Health. (2012). *Center for Collegiate Mental Health (CCMH) 2011 annual report* (Publication No. STA 12-59). https://ccmh.psu.edu

Cha, B. S., Enriquez, L. E., & Ro, A. (2019). Beyond access: Psychosocial barriers to undocumented students' use of mental health services. *Social Science Medicine, 233*, 193–200. https://doi.org/10.1016/j.socscimed.2019.06.003

Chandra, A., & Minkovitz, C. S. (2007). Factors that influence mental health stigma among 8th grade adolescents. *Journal of Youth and Adolescence: A*

Multidisciplinary Research Publication, 36(6), 763–774. https://doi.org/10.1007/s10964-006-9091-0

Chen, S. P., Sargent, E., & Stuart, H. (2018). Effectiveness of school-based interventions on mental health stigmatization. *Handbook of School-Based Mental Health Promotion*. Springer, Cham. https://doi.org/10.1007/978-3-319-89842-1_12

Cheng, H., & Furnham, A. (2001). Attributional style and personality as predictors of happiness and mental health. *Journal of Happiness Studies, 2*(3), 307-327. https://doi.org/10.1023/A:1011824616061

Chung, R. C. Y., & Lin, K. M. (1994). Help-seeking behavior among Southeast Asian refugees. *Journal of Community Psychology*, *22*(2), 109–120. https://doi.org/10.1002/1520-6629

Corrigan, P. W., Druss, B. G., & Perlick, D. A. (2014). *The Impact of Mental Illness Stigma on Seeking and Participating in Mental Health Care*. (Psychological science in the public interest). *Psychology Science Public Interest, 15*(2), 37-70. https://doi.org/10.1177/1529100614531398

Corrigan, P. W., & Watson, A. C. (2002). Understanding the impact of stigma on people with mental illness. *World Psychiatry: Official journal of the World Psychiatric Association (WPA)*, *1*(1), 16–20. https://onlinelibrary.wiley.com/journal/20515545

Credé, M., & Niehorster, S. (2012). Adjustment to college as measured by the student adaptation to college questionnaire: A quantitative review of its structure and

relationships with correlates and consequences. *Educational Psychology Review, 24*(1), 133-165. https://doi.org/10.1007/s10648-011-9184-5

Crowe, A., Averett, P., & Glass, J. S. (2016). Mental illness stigma, psychological resilience, and help seeking: What are the relationships?. *Mental Health & Prevention, 4*(2), 63-68. https://doi.org/10.1016/j.mhp.2015.12.001

Currier, J. M., Isaak, S. L., & McDermott, R. C. (2017). Validation of the expressions of moral injury Scale-Military version-Short Form. *Clinical Psychology Psychotherapy, 27*(1):61-68. https://doi.org/10.1002/cpp.2407

DeFreitas, S. C., Crone, T., DeLeon, M., & Ajayi, A. (2018). Perceived and personal mental health stigma in Latino and African American college students. *Frontiers in Public Health, 6*, 49. https://doi.org/10.3389/fpubh.2018.00049

Dobalian, A., & Rivers, P. A. (2008). Racial and ethnic disparities in the use of mental health services. *The Journal of Behavioral Health Services & Research, 35*(2), 128–141. https://doi.org/10.1007/s11414-007-9097-8

Dopmeijer, J. M., de Jonge, J. M., Visscher, T. L. S., Bovens, R. H. L. M., & Wiers, R. W. (2020). Predicting disclosure and help-seeking in university students with psychosocial problems based on stigma and attitudes towards disclosure and help-seeking. *Mental Health and Addiction Research, 5*(2). https://doi.org/10.15761/MHAR.1000193

Dudley, J. R. (2000). Confronting stigma within the services system. *Social Work, 45*, 449–455. https://doi.org/10.1093/sw/45.5.449

Eisenberg, D., Hunt, J., Speer, N., & Zivin, K. (2011). Mental health service utilization among college students in the United States. *The Journal of Nervous and Mental Disease, 199*(5), 301-308. https://doi.org/10.1097/NMD.0b013e3182175123

Everett, B. (2006). Stigma the hidden killer. Mood disorders society of Canada. https://www.mooddisorderscanada.ca/documents/Publications/Stigma_and_discrimination_as_expressed_by_MH_Professionals.pdf

Eylem, O., De Wit, L., Van Straten, A., Steubl, L., Melissourgaki, Z., Danışman, G. T., de Vries, R., Kerkhof, A.J.F.M., Bhui, K. & Cuijpers, P. (2020). Stigma for common mental disorders in racial minorities and majorities a systematic review and meta-analysis. *BMC Public Health*, *20*(1), 1-20. https://doi.org/10.1186/s12889-020-08964-3

Field, T., Diego, M., Pelaez, M., Deeds, O., & Delgado, J. (2012). Depression and related problems in university students. *College Student Journal, 46*(1), 193–202. https://projectinnovation.com/college-student-journal

Fischer, E. H., & Turner, J. I. (1970). Orientations to seeking professional help: Development and research utility of an attitude scale. *Journal of Consulting and Clinical Psychology*, *35*(1, Pt.1), 79–90. https://doi.org/10.1037/h0029636

Freedman, D. (2009). *Statistical models: Theory and practice*. New York: Cambridge University Press.

Fokuo, J. K., Goldrick, V., Rossetti, J., Wahlstrom, C., Kocurek, C., Larson, J., & Corrigan, P. (2017). Decreasing the stigma of mental illness through a student-

nurse mentoring program: A qualitative study. *Community Mental Health Journal, 53*(3), 257-265. https://doi.org/10.1007/s10597-016-0016-4

Fortney, J. C., Unützer, J., Wrenn, G., Pyne, J. M., Smith, G. R., Schoenbaum, M., & Harbin, H. T. (2017). A tipping point for measurement-based care. *Psychiatric Services, 68*(2), 179–188. https://doi.org/10.1176/appi.ps.20150043

Government of Western Australia Mental Health Commission. (2014). The Western Australian mental health, alcohol and other drug services plan. https://consultation.health.wa.gov.au/strategy/theplan-consultation/supporting_documents/Plan%2027%2011%202014%20for%20consultation.pdf

Gruttadaro. A., & Crudo, J. (2012). College students speak: A survey report on mental health. https://www.nami.org/Support-Education/Publications-Reports/Survey-Reports/College-Students-Speak_A-Survey-Report-on-Mental-H

Hair Jr, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1995). *Multivariate data analysis, 3rd eds.* Englewood Cliffs, NJ: Prentice-Hall.

Han, M., & Pong, H. (2015). Mental health help-seeking behaviors among Asian American community college students: The effect of stigma, cultural barriers, and acculturation. *Journal of College Student Development, 56*(1), 1-14. https://doi.org/10.1353/csd.2015.0001

Henderson, C., Evans-Lacko, S., & Thornicroft, G. (2013). Mental illness stigma, help seeking, and public health programs. *American Journal of Public Health, 103*(5), 777–780. https://doi.org/10.2105/AJPH.2012.301056

Hinshaw, S. P. (2010). *The mark of shame: Stigma of mental illness and an agenda for change*. Oxford University Press.

Hirsch, J. K., Hall, B. B., Wise, H. A., Brooks, B. D., Chang, E. C., & Sirois, F. M. (2019). Negative life events and suicide risk in college students: Conditional indirect effects of hopelessness and self-compassion. *Journal of American College Health*, 1-8. https://doi.org/10.1080/07448481.2019.1692023

Holzer, C. E., Thomas, C., & Cruser, A., Diamond, P. M., & Wang, E. W. (January 01, 2001). The prevalence of mental illness in prison. *Administration and Policy in Mental Health, 29*, 21-40. https://doi.org/10.1023/A:1013164814732

Hugo, C. J., Boshoff, D. E. L., Traut, A., Zungu-Dirwayi, N., & Stein, D. J. (December 01, 2003). Community attitudes toward and knowledge of mental illness in South Africa. *Social Psychiatry and Psychiatric Epidemiology, 38*(12), 715-719. https://doi.org/10.1007/s00127-003-0695-3

Ibrahim, N., Al-Kharboush, D., El-Khatib, L., Al-Habib, A., & Asali, D. (2013). Prevalence and predictors of anxiety and depression among female medical students in King Abdulaziz University, Jeddah, Saudi Arabia. *Iranian Journal of Public Health*, *42*(7), 726–736. https://ijph.tums.ac.ir/index.php/ijph

Jang, J., Lee, S.A., Kim, W., Young, C., & Eun-Cheol, P. (2018). Factors associated with mental health consultation in South Korea. *BMC Psychiatry, 18*(1), 17. https://doi.org/10.1186/s12888-018-1592-3

Jennings, K. S., Cheung, J. H., Britt, T. W., Goguen, K. N., Jeffirs, S. M., Peasley, A. L., & Lee, A. C. (2015). How are perceived stigma, self-stigma, and self-reliance

related to treatment-seeking? A three-path model. *Psychiatric Rehabilitation Journal, 38*, 2, 109-116. https://doi.org/10.1037/prj0000138

Jones, E. E, Farina, A., Hastorf, A. H., Markus, H., Miller, D. T., & Scott, R. A. (1984). *Social stigma: The psychology of marked relationships.* W. H. Freeman.

Jones, M. K., Latreille, P. L., & Sloane, P. J. (2016). Job anxiety, work-related psychological illness and workplace performance. *British Journal of Employment Relations, 54*(4), 742–767. https://doi.org/10.1111/bjir.12159

Kamimura A., Trinh H. N., Johansen, M., Hurley, J., Pye, M., Sin, K., & Nguyen, H. (2018). Perceptions of mental health and mental health services among college students in Vietnam and the United States. *Asian Journal of Psychiatry. 37*, 15-19. https://doi.org/10.1016/j.ajp.2018.07.012

Karabenick, S. A., & Newman, R. S. (2006). *Help seeking in academic settings: Goals, groups, and contexts*. Routledge.

Kearns, M., Muldoon, O., Msetfi, R., & Surgenor, P. (2015). Understanding help seeking in university students: The role of group identity, stigma and exposure to suicide and help seeking. *Frontiers in Psychology,* 6. https://doi.org/10.3389/fpsyg.2015.01462

Kessler, R. C., Berglund, P. A., Bruce, M. L., Koch, J. R., Laska, E. M., Leaf, P. J., Manderscheid, R. W., ... Wang, P. S. (2001). The prevalence and correlates of untreated serious mental illness. *Health Services Research*, *36*(6 Pt 1), 987–1007. https://www.hsr.org/

Kibble, A. (2015). American Psychiatric Association—168th Annual Meeting (May 16–20, 2015—Toronto, Canada). *Drugs of Today, 51*(6), 375-382. https://doi.org/10.1358/dot.2015.51.6.2339112

Kitzrow, M. A. (2003). The mental health needs of today's college students: Challenges and recommendations. *Naspa Journal, 41*, 1. https://doi.org/10.2202/1949-6605.1310

Kramer, E. J., Kwong, K., Lee, E., & Chung, H. (2002). Cultural factors influencing the mental health of Asian Americans. *The Western Journal of Medicine, 176*(4), 227–231. https://doi.org/10.1111/j.1939-0025.2011.01118.x

Kosyluk, K. A., Al-Khouja, M., Bink, A., Buchholz, B., Ellefson, S., Fokuo, K., Goldberg, D., ... Schmidt, A. (2016). Challenging the stigma of mental illness among xollege students. *Journal of Adolescent Health, 59I*(3), 325-331. https://doi.org/10.1016/j.jadohealth.2016.05.005

Kroshus, E. (2017). Stigma, coping skills, and psychological help seeking among collegiate athletes. *Athletic Training & Sports Health Care, 9*, 254-262. https://doi.org/10.3928/19425864-20171010-02

Kung, W. W. (2003). Chinese Americans' help seeking for emotional distress. *Social Service Review, 77*(1), 110-134. https://doi.org/10.1086/345707

Lally, J., ó Conghaile, A., Quigley, S., Bainbridge, E., & McDonald, C. (2013). Stigma of mental illness and help-seeking intention in university students. *The Psychiatrist, 37*(8), 253-260. https://doi.org/10.1192/pb.bp.112.041483

Lauber, C. (2008). Stigma and discrimination against people with mental illness: A critical appraisal. *Epidemiologia E Psichiatria Sociale*, *17*, 1, 10-13. https://www.medscape.com/viewpublication/10540_13

Lazar, M., & Davenport, L. (2018). Barriers to health care access for low income families: a review of literature. *Journal of Community Health Nursing*, *35*(1), 28-37. https://doi.org/10.1080/07370016.2018.1404832

Leong, F. T., & Lau, A. S. (2001). Barriers to providing effective mental health services to Asian Americans. *Mental Health Services Research*, *3*(4), 201–214. https://doi.org/10.1023/a:1013177014788

Lund, A. (2021). The ultimate IBM SPSS Statistics guide. Retrieved from https://statistics.laerd.com/features-overview.php

Luu, T. D., Leung, P., & Nash, S. G. (2009). Help-seeking attitudes among Vietnamese Americans: The impact of acculturation, cultural barriers, and spiritual beliefs. *Social Work in Mental Health*, *7*(5), 476–493. https://doi.org/10.1080/15332980802467456

Martinez, A., Lau, J. & Brown, J. (2020). Filipino help-seeking for mental health problems and associated barriers and facilitators: a systematic review. *Social Psychiatry and Psychiatric Epidemiology*, *55*. https://doi.org/10.1007/s00127-020-01937-2

Masuda, A., Price, M., Anderson, P. L., Schmertz, S. K., & Calamaras, M. R. (December 01, 2009). The role of psychological flexibility in mental health stigma and

psychological distress for the stigmatizer. *Journal of Social and Clinical Psychology, 28*(10), 1244-1262. https://doi.org/10.1521/jscp.2009.28.10.1244

Matthews, A. K., Corrigan, P. W., Smith, B. M., & Aranda, F. (2006). A qualitative exploration of African Americans' attitudes toward mental illness and mental illness treatment seeking. *Rehabilitation Education, 20*(4):253–268. https://doi.org/10.1891/088970106805065331

Mechanic, D. (1978). *Students under stress: A study in the social psychology of adaption*. University of Wisconsin Pr.

Misra, S., Jackson, V. W., Chong, J., Choe, K., Tay, C., Wong, J., & Yang, L. H. (2021). Systematic review of cultural aspects of stigma and mental illness among racial and ethnic minority groups in the United States: implications for interventions. *American Journal of Community Psychology, 68*(3-4), 486-512. https://doi.org/10.1002/ajcp.12516

Neighbors, H. W., Bashshur, R., Price, R., Selig, S., Donabedian, A., & Shannon, G. Ethnic minority mental health service delivery: A review of the literature. *Research in Community and Mental Health, 7*(1), 55-71. https://doi.org/10.1017/S0033291704003514

Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). McGraw-Hill.Oexle, N., Waldmann, T., Staiger, T., Xu, Z., & Rüsch, N. (January 01, 2018). Mental illness stigma and suicidality: the role of public and individual stigma. *Epidemiology and Psychiatric Sciences, 27*, 2, 169-175. https://doi.org/10.1017/S2045796016000949

Pace, K., Silk, K., Nazione, S., Fournier, L., & Collins-Eaglin, J. (2018). Promoting mental health help-seeking behavior among first-year college students. *Health Communication*, *33*(2), 102–110. https://doi.org/10.1080/10410236.2016.1250065

Phan, T. (2000). Investigating the use of services for Vietnamese with mental illness. *Journal of Community Health, 25*,(5), 411-25. https://doi.org/10.1023/a:1005184002101

Pedrelli, P., Nyer, M., Yeung, A., Zulauf, C., & Wilens, T. (2015). College students: Mental health problems and treatment considerations. *Academic Psychiatry, 39*(5), 503-511. https://doi.org/10.1007/s40596-014-0205-9

Qi, L., Zhou, Y., Wang, R., Wang, Y., Liu, Y., & Zeng, L. (2020). Perceived quality of primary healthcare services and its association with institutional trust among caregivers of persons diagnosed with a severe mental illness in China. *Journal of Psychiatric Mental Health Nursing, 2*. https://doi.org/10.1111/jpm.12687

Ranganathan, P. Pranesh, C.S., & Aggarwal R. (2017). "Common Pitfalls in Statistical Analysis. Logistic Regression" *Perspectives in Clinical Research, 8*(3) 148-151 https://doi.org/10.4103/picr.PICR_87_17

Ratti, M. M., Rossi A., Delli Zotti G. B., Sarno L., & Spotti D. (2017). Social support, psychological distress and depression in hemodialysis patients. *Psicologia della Salute, 1,* 112–122. https://doi.org/10.3280/PDS2017-001006

Rayan, A., & Fawaz, M. (2017). Cultural misconceptions and public stigma against mental illness among Lebanese university students. *Perspectives in Psychiatric Care, 54*. https://doi.org/10.1111/ppc.12232

Roots, M. P. P. (1985). Guidelines for facilitating therapy with Asian-American clients. *Psychotherapy: Theory, Research, Practice, Training, 22*(2S), 349–356. https://doi.org/10.1037/h0085514

Saint Arnault, D. M., Gang, M., & Woo, S. (2018). Factors influencing on mental health help-seeking behavior among Korean women: A path analysis. *Archives of Psychiatric Nursing, 32*(1), 120–126. https://doi.org/10.1016/j.apnu.2017.10.003

Substance Abuse and Mental Health Services Administration. (2014). Results from the 2014 National Survey of Drug Use and Health. https://www.samhsa.gov/data/sites/default/files/NSDUH-DetTabs2014/NSDUH-DetTabs2014.pdf

Sue, S., & Morishima, J. K. (1982). *The mental health of Asian Americans.* Jossey.

Suinn, R. M., Rickard-Figueroa, K., Lew, S., & Vigil, P. (1987). The Suinn-Lew Asian Self-Identity Acculturation Scale: An initial report. *Educational and Psychological Measurement, 47*(2), 401–407. https://doi.org/10.1177/0013164487472012

Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics*. New York, NY: Pearson Education, Inc.

Thompson, V. L. S., Bazile, A., & Akbar, M. (2004). African Americans' perceptions of psychotherapy and psychotherapists. *Professional Psychology: Research and Practice, 35*(1), 19–26. https://doi.org/10.1037/0735-7028.35.1.19

Topkaya, N., Vogel, D. L., & Brenner, R. E. (2017). Examination of the stigmas toward help seeking among Turkish college students. *Journal of Counseling & Development, 95*(2), 213–225. https://doi.org/10.1002/jcad.12133

Torpy, J. M., Burke, A. E., & Golub, R. M. (2011). Health literacy. *Journal of American Medical Association, 306*(10),1158. https://doi.org/10.1001/jama.306.10.1158

Tummala-Narra, P., Li, Z., Chang, J., Yang, E. J., Jiang, J., Sagherian, M., Phan, J., & Alfonso, A. (2018). Developmental and contextual correlates of mental health and help-seeking among Asian American college students. *American Journal of Orthopsychiatry, 88*(6), 636-649. https://doi.org/10.1037/ort0000317

U.S. Department of Health and Human Services. (2001). Mental health: Culture, race, and ethnicity—A supplement to Mental health: A report of the surgeon general. https://www.ncbi.nlm.nih.gov/books/NBK44243/

Vidourek, R.A., & Burbage, M. (2019). Positive mental health and mental health stigma: A qualitative study assessing student attitudes. *Mental Health & Prevention, 13*, 1-6. https://doi.org/10.1016/j.mhp.2018.11.006

Vidourek, R. A., King, K. A., Nabors, L. A., & Merianos, A. L. (2014). Students' benefits and barriers to mental health help-seeking. *Health Psychology and Behavioral Medicine, 2*(1), 1009-1022. https://doi.org/10.1080/21642850.2014.963586

Wagner, R., Manicavasagar, V., Silove, D., Marnane, C., & Tran, V. T. (2006). Characteristics of Vietnamese patients attending an anxiety clinic in Australia and perceptions of the wider Vietnamese community about anxiety. *Transcultural Psychiatry, 43*(2), 259–274. https://doi.org/10.1177/1363461506064863

World Health Organization. (2001). The world health report 2001—Mental health: New understanding, new hope. https://www.who.int/whr/2001/en/whr01_en.pdf?ua=1

Wu, I. H. C., Bathje, G. J., Kalibatseva, Z., Sung, D. H., Leong, F. T. L., & Collins-Eaglin, J. (2017). Stigma, mental health, and counseling service use: A person-centered approach to mental health stigma profiles. *Psychological Services, 14,* 490-501. https://doi.org/10.1037/ser0000165

Xing, J., Sun, N., Xu, J., Geng, S., & Li, Y. (2020). Study of the mental health status of medical personnel dealing with new coronavirus pneumonia. *PloS one, 15*(5), e0233145. https://doi.org/10.1371/journal.pone.0233145

Zeng, G. (2022). A graphic and tabular variable deduction method in logistic regression. *Communications in Statistics-Theory and Methods,* 51(16), 5412-5427.

Zhang, A. Y., Snowden, L. R., & Sue, S. (1998). Differences between Asian and White Americans' help seeking and utilization patterns in the Los Angeles area. *Journal of Community Psychology, 26*(4), 317–326. https://doi.org/10.1002/(SICI)1520-6629(199807)26:4<317::AID-JCOP2>3.0.CO;2-Q