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A Systematic Review and Analysis of Racial Differences in Treatment for Depression

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ABSTRACT Mental health affects a large proportion of the population across the world. Though many mental health studies exist, they are inconsistent in methodology, conceptualization of terms, and populations studied; as a result, many studies are not comparable. Further, there are arguably too few studies that focus on marginalized or underrepresented populations. The current study aims to address some of the gaps in knowledge. The differences in the way depression is diagnosed and treated in various racial and ethnic groups were identified, and the findings of previous studies were analyzed to help improve the way mental health, and specifically depression, is understood for these groups. A systematic review using three databases was conducted and an analysis of 27 studies was ultimately performed. Differences among races and ethnicities regarding treatment, stigma, and variables affecting diagnoses of depression were found. However, more consistent research is needed on this topic to be able to draw stronger conclusions on racial and ethnic differences in depression and treatment.

INTRODUCTION

The World Health Organization (WHO) states that depression is the leading cause of disability worldwide with more than 300 million people diagnosed with depression (WHO, 2018). Depending on the severity, symptoms and other associated disorders can vary. Suicide is the most severe outcome of depression with roughly 800,000 annual suicide deaths worldwide (WHO, 2018). In the U.S., depression is the tenth leading cause of death for all ages and the second leading cause of death among individuals aged 15-29

years old (WHO, 2018). Despite its prevalence, depression remains misunderstood, particularly among various racial and cultural groups. Many cultures still stigmatize depression, resulting in inadequate treatment and diagnosis. Our general lack of knowledge may be due in part to the disparity in total NIH budget compared to how much is allocated for mental health research. The National Institutes of Health's (NIH) annual budget is \$31 billion; however, the National

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Research Completed in Summer 2018

Institute of Mental Health's (NIMH) annual budget is only \$1.4 billion (Borenstein, 2016).

Some misconceptions around depression include the belief that depression is just feeling sad or a phase as well as strong stereotypes and negative stigmas about mental health. For example, people typically think women are more prone to depression than men; however, men are four times more likely to die by suicide than women (Community Reach Center, 2016). This makes it difficult for people with depression to be properly diagnosed and receive treatment. Though around 676 million people suffer from depression globally, only 10% of those diagnosed receive proper treatment in least developed countries (Fedasiuk, 2017). Treatments include counseling, cognitive behavioral therapy, and medication including anti-depressants (Mental Health Foundation, 2018).

Depression comes with a long list of symptoms, including constantly feeling sad or anxious; not wanting to do activities that were once fun; feeling irritable, easily frustrated, or restless; having trouble falling asleep or staying asleep; waking up too early or sleeping too much; eating too much or too little, or not at all; and aches and pains (CDC, 2018). Further, many people who have depression also have other mental health conditions. For example, depression is usually present with some type of anxiety disorder (CDC, 201), which has its own separate list of symptoms. According to the WHO, depression causes greater damage on one's health than chronic angina, arthritis, asthma, or diabetes (Kotz, 2007). Research also suggests that depression can trigger heart disease, osteoporosis, diabetes, and cancer (Kotz, 2007). Depression can affect anyone, but some people may be more susceptible than others. A study done by Goodwin showed that certain physical illnesses increase the risk of developing severe depressive illnesses (Goodwin, 2006).

Though depression is common, it can go undiagnosed and untreated due to a variety of reasons, such as genetics, societal views on mental health or disparities. Depression does not affect everyone the same way, which is similar for physical health as well. Data shows that

disparities can cause certain health conditions or diseases that present themselves differently among various races and ethnicities. For example, a study looking at cardiovascular health (CVH) found that non-Hispanic black women have much worse CVH than non-Hispanic white women, while Mexican-American women have worse CVH than non-Hispanic white women (Pool, 2017). If physical health looks different among various races and ethnicities, the same can be said for mental health. Though the exact cause of depression is still unknown, a combination of genetic, biological, environmental, and physiological factors may be the reason (CDC, 2018). Evidence does suggest a trend among certain races, but limitations arise due to the stigmas and the ways that depression are understood by different cultures.

Being a major contributor to the overall global burden of disease (WHO, 2018), depression needs to be understood more than it is right now, especially among various racial and ethnic groups. As a society changes and evolves, so does its culture and racial composition. In the United States, 40% of the population is comprised of people from non-Latino white racial and ethnic groups (Kaiser Family Foundation, 2017). According to the National Institutes of Mental Health's Minority Health and Mental Health Disparities Program, "health care quality and access are suboptimal, especially for minority and low-income groups [and while] overall quality is improving, access is getting worse, and disparities are not changing" (National Institute of Mental Health, 2019). Understanding the mental health of people from various racial and ethnic groups is important in addressing mental health needs of our population. While research has been conducted on mental health among racial and ethnic populations, it is unclear the extent, understanding, and implications of these findings particularly in the diagnosis and treatment for these groups. Because mental health research is inconsistent in methodologies and findings, it is difficult to gather all the data and come to a sound conclusion on how specific treatments affect diagnoses among specific races and ethnicities. Additionally, research should focus on factors that affect said treatment and diagnosis, like socioeconomic status (SES), other

health conditions, or the presence of stigmas. Thus, the main objective of this research is to systematically review the literature and research on depression and treatment among various racial and ethnic groups in order to understand the extent and potential dearth in knowledge on this important topic.

METHODS

The three databases used for the systematic review were PubMed, PsycINFO, and ScienceDirect. Searches were conducted with the keywords *depression, treatment, diagnosis, mental health, race, ethnicity, stigma, and stereotype*. All studies resulting from that search and that included research on various races and ethnicities and all age groups were included in the pool of studies to review.

The first step of this research included a thorough literature search for studies that fit the selection criteria (see Table 1). Studies had to be correlational, cross-sectional, case-control, or cohort. They had to result from the aforementioned keywords. They also had to examine at least one of the following measures: mental health status, quality of diagnosis, quality

and type of treatment, stigmas, or stereotypes present in a particular race or ethnicity.

The second step of this research consisted of systematically reviewing studies and excluding any that did not fit the criteria. Out of the 72 studies originally found, 37 were excluded for not being cohort, cross-sectional, correlation, or case-control; not being done between June 2008 and June 2018; or not having access to the study. Further reassessment of the studies revealed that more needed to be excluded. Of the remaining 35 studies, eight more were excluded because they did not look at depression or depressive symptoms among the various races and ethnicities. The remaining studies were analyzed, and results were categorized into four main themes.

For each of the remaining 27 studies, data was extracted on article title, authors, publication year, type of study, and the measures and outcomes pertaining to mental health status, quality of diagnosis, quality and type of treatment, stigmas, and stereotypes. See Figure 1 for the full exclusion process.

Keywords	Pub Med	Psyc INFO	Science Direct
<i>Depression+race+ethnicity</i>	5,245	1,002	17,870
<i>Mental health+race+ ethnicity</i>	6,868	2,157	20,780
<i>Mental health+African American</i>	4,553	5,878	30,895
<i>Mental health+Asian</i>	4,424	5,379	29,768
<i>Mental health+Latino</i>	2,734	3,909	7,058
<i>Depression+ Latino</i>	2,383	1,987	6,125
<i>Depression+ White</i>	9,179	8,360	131,884
<i>Mental health+stigmas</i>	5,527	6,566	12,570
<i>Mental health+stereotype</i>	462	1,108	12,391
<i>Mental health+treatment+ race/ethnicity</i>	195	613	14,513
<i>Mental health+diagnosis+ race/ethnicity</i>	137	193	9,467

Table 1. Results from Keyword Searched by Databases

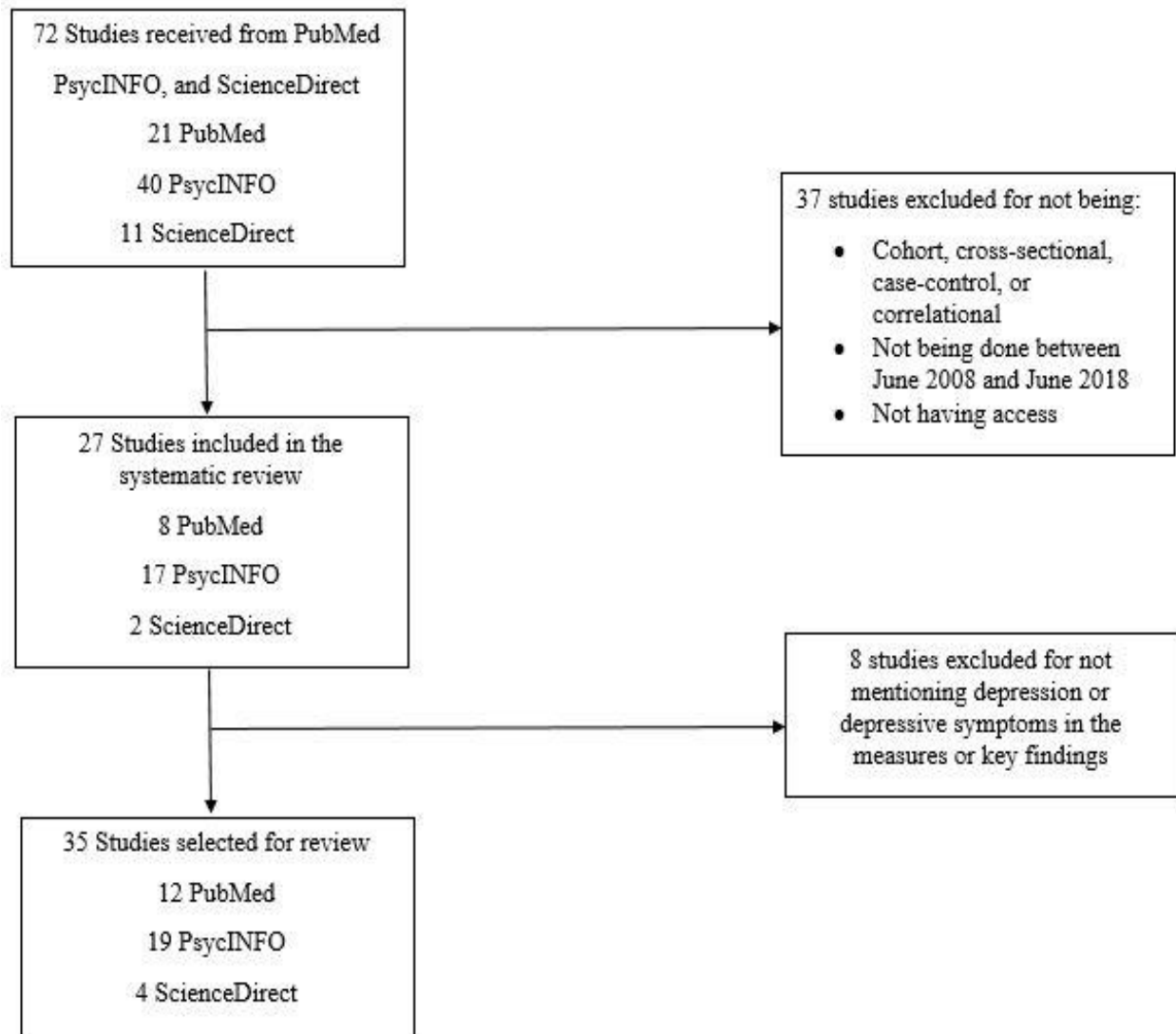


Figure 1. Flowchart of Literature Search and Exclusion Process

RESULTS

Each study looked at race and ethnicity, diagnoses, treatment, and possible stigmas present in certain races or ethnicities. They all identified basic demographic information like age, gender, education, and income. We categorized the most consistent findings into the following themes: Health behaviors and mental and physical health; Stigmas of mental health; Sociodemographic variables and depression; and Differences in treatment or variables associated with treatment and diagnosis. See Table 2 for the key findings in the main themes.

Theme	Key Findings
Health behaviors and mental and physical health (n=12)	<ul style="list-style-type: none"> All studies reported unhealthy behaviors to negatively affect health Variances among races and ethnicities
Stigma of mental health (n=6)	<ul style="list-style-type: none"> Overall, the presence of stigmas or stereotypes increased depression or depressive symptoms
Sociodemographic variables and depression (n=3)	<ul style="list-style-type: none"> No definitive correlation between socioeconomic status and depression in a particular race or ethnicity was found
Differences in treatment or variables associated with treatment and diagnosis (n=28)	<ul style="list-style-type: none"> All studies identified some sort of difference between variables associated with treatment or diagnosis

Table 2. Key Findings in Main Themes

Health Behaviors and Mental and Physical Health

We found that 12 out of the 27 studies associated unhealthy behaviors or something negatively affecting health with depression or depressive symptoms. Examples of unhealthy behaviors are drinking, poor self-esteem, chronic stress, being overweight, not exercising, poor diet, etc. Examples of external negative health effects would be discrimination or racism, traumatic experiences or PTSD, etc. As expected, all

studies reported unhealthy behaviors to negatively affect health, with some variances among race and ethnicity. One study had slightly unexpected results looking at the relationship between obesity and depression; they found that African Americans were more likely than Caribbean Blacks and non-Hispanic Whites to be overweight or obese without depression (Lincoln et al., 2014). This finding is consistent with previous epidemiological studies on health among this population. Some of the studies looked at just one race, for example, one that was observing the relationship between perceived body weight and depression (Kim et al., 2018). Those that were overweight, but underperceived their weight status had lower depressive symptoms than those who were of normal weight and overperceived their weight status (Kim et al., 2018). Most of the studies were looking at multiple races or ethnicities, for example, in a study observing the relationship between traumatic events and PTSD (Lipsky et al., 2016), researchers found that traumatic experiences increased the risk for PTSD, but less for women with major depressive disorder (MDD) (Lipsky et al., 2016). They concluded that the presence of MDD “absorbed” some of the risk of receiving PTSD after the event (Lipsky et al., 2016). They also found that social support was a protective factor against PTSD more so for White woman than Black women, but not Hispanic women (Lipsky et al., 2016). A majority of the studies suggested that more research needs to be performed to further analyze their results. More studies should be performed to break down the comparative studies and analyze the differences that arose from each race or ethnicity. For example, one study examined the relationship between chronic stress, measured by allostatic load (AL) and depression (Bey et al., 2018). They found that high AL was strongly associated with depression among White women and Black men than among Black women or White men (Bey et al., 2018). With gender as a measure, similarities between races, but not genders, were found; more research needs to be done to explain this nuance. The studies that observed just one race or ethnicity generally had expected results because they were comparing findings among one group.

Like in the body weight perception study, those that were perceiving themselves as heavier than they actually were had higher depressive symptoms. However, when multiple races or ethnicities were being compared, differences arose because no two groups are the same. For example, the study about chronic stress showed similarities between White women and Black men.

Stigma of Mental Health

Six out of the 27 studies identified stigmas, towards seeking treatment or mental health in general, or a general lack of knowledge in self-care as a variable that negatively affects depressive symptoms or mental health. This analysis shows a similarity among races and ethnicities. Overall, the presence of stigmas or stereotypes did increase depression or depressive symptoms, and an increase in knowledge led to a decrease in stigmas or stereotypes. The results of one study generalized the results of most studies about stigmas. They found that the more a participant anticipated stigma about mental illness from their friends or family, the more they thought that receiving treatment would make them feel weak (Fox et al., 2018). Consequently, the more they internalized that stigma, the less likely they were to seek out mental health treatment (Fox et al., 2018). One study found that the presence of a disparity among one race or ethnicity led to the prevalence of a stigma. A disparity was found among Black and White women who receive screening for post-partum depression (Bodnar-Deren et al., 2017). Black women were less likely than White women to accept prescription medication and mental health counseling, and more likely to accept spiritual counseling (Bodnar-Deren et al., 2017). The authors stated that treatment stigma is associated with lower depression treatment, but the stigma itself cannot explain the reason for this difference, and that more research needs to be done to explain this, especially among black women (Bodnar-Deren et al., 2017).

Sociodemographic Variables and Depression

Three out of the 27 studies used socioeconomic status (SES) as a measure, whereas the rest of the studies reported SES (used socioeconomic status

as an additional variable. The results of the three studies were mixed. One study, looking both at race and obesity with depression, found that African Americans were more likely to be obese, but not depressed compared to Caribbean Blacks and Non-Hispanic Whites (Lincoln et al., 2014). The authors concluded that this was because of a combination of their SES and obesogenic environment. When confronted with stress, they turn to eating poorly and no physical activity, which helps protect their mental health, but not their physical health (Lincoln et al., 2014). Overall, they found that Blacks engage in more unhealthy behaviors than Whites, leading to “better” mental health, but worse physical health (Lincoln et al., 2014). Differences among different races and ethnicities were found when analyzing obesity and depression in accordance with SES. The second study was looking at why Black men are at a higher risk of having a major depressive episode (MDE), and if it was linked to discrimination (Assari et al., 2018). Though the researchers failed to associate perceived depression (PD) with MDE, they discuss how research shows that education, income, and employment have smaller protective effects on the mental and physical health of Whites than Blacks (Assari et al., 2018). The third study examines SES and depression among Black youth (Assari et al., 2018). One of the major findings was the higher levels of average depressive symptoms among Black youth from those living in mainly White areas or from high income families (Assari et al., 2018). Though this finding is unexpected, it does, like the previous study, show differences in depression or depressive symptoms among races and ethnicities.

Differences in Treatment or Variables Associated with Treatment and Diagnosis

Differences in treatment or variables associated with treatment and diagnosis were present in a majority of the studies; however, the differences can be derived from multiple reasons. For example, races or ethnicities that endorse stigmas will be less likely to seek out mental health treatment, leading to an increase in depression or depressive symptoms. One study found that college students with a high perceived need for

mental health services were less likely to seek out those services (Wu et al., 2017). Students in this group included males, Asians, or those who thought highly of themselves and strongly endorsed stigmas (Wu et al., 2017). Differences also arose from socioeconomic disparities, like not having access to proper health care. According to one study, minority women were less likely than non-minority women to have access to care (Hahm et al., 2015). They also found that Blacks and Asians, particularly females, were less likely to be recognized as having depression, in addition to not having access to care (Hahm et al., 2015). Many differences between races and ethnicities were found in this study, but the authors do suggest that more research should be done to target certain groups in specific stages of care (Hahm et al., 2015).

One study looking at the racial and ethnic differences in mental health diagnoses among Iraq and Afghanistan veterans found that Asian/Pacific Islanders (A/PIs) were diagnosed with all disorders at lower rates than Whites (Koo et al., 2015). They also found that American Indian/Alaska Native (AI/AN) males were diagnosed with most disorders at higher rates than White males (Koo et al., 2015). Again, the authors suggest that more research should be done to dissect the differential rates of diagnoses. Because everyone is different, no study is going to find the same results between two races or ethnicities or two genders; therefore, more research needs to be done to try and explain these differences.

Additional Findings

A couple of the studies did not fit the previous analyses, but the results are still important and require further research to explain the results. Due to cultural differences or beliefs, minorities are less likely to accept medical approaches to health issues or utilize mental health care (Hines et al., 2017). The authors found that Asians and African Americans were less likely to utilize health care than Whites (Hines et al., 2017).

Whether this be about trust in the doctor or preference to spiritual care, there is still a

difference between racial and ethnic groups. This study is considered an outlier because they are choosing to not utilize health care. Their choice to not access treatment leads to the same results as someone who cannot access treatment.

Similarly, a study observed the relationship between being able to walk around their neighborhood and depression (James et al., 2017). They found that higher walkability in the most deprived neighborhoods was associated with higher odds of depressive symptoms, whereas walkability was associated with lower odds of depressive symptoms in the least deprived neighborhoods (James et al., 2017). Like the measures from the aforementioned study, participants were not choosing to be able to walk around their neighborhoods. Research is lacking in the mental health field, and more needs to be done to explain studies like these.

DISCUSSION

We found that the results could be split up into four main categories regarding health behaviors, socioeconomic factors, stigmas and stereotypes, and differences in treatment or diagnosis. All categories showed differences that affect the way depression or depressive symptoms is shown in particular races or ethnicities. No two groups had the same results, though some studies revealed similarities among races and ethnicities or genders; however, all of the studies in this systematic review reported ways in which depression is experienced, diagnosed, or treated among various races and ethnicities.

Analysis of these studies show that more research needs to be done that focuses on specific methodologies or conditions among various races and ethnicities. Depression and mental health are becoming increasingly prevalent, now more than ever. Many differences between various races and ethnicities were found, but not enough comparable data was present to come to a sound conclusion. Some significant studies fit the inclusion criteria but were not looking at the typical measures. For example, one study observed the relationship between depression and being able to walk around in their neighborhood (James et al., 2017). It analyzed a barrier to

healthy behavior, rather than choosing to make healthy decisions. On the contrary, one study evaluated the differences in utilization of mental health care among different races and ethnicities (Chu et al., 2018). Instead of looking at access to proper mental health care, this study looked at which races and ethnicities choose to go to the doctor about their mental health. Results showed that Asians and African Americans utilized health care less than Whites (Chu et al., 2018), but further research should question why that is and how it affects them. These studies suggest implications for further research on atypical topics that all lead to similar conclusions, which show there are differences in the way depression is diagnosed and treated in various racial and ethnic groups.

One of the main limitations of this study came from the lack of homogenous studies to compare and analyze due to the need of focus on mental health research. Further, this study could have expanded on various aspects of mental health diagnosis and stigma to potentially include more studies. However, it was not within the scope of this study to do so. Future work building off this research should focus on examining how each of the four aforementioned categories affect specific races and ethnicities. This can be done by taking each category and analyzing its effects on each race and ethnicity separately. This will require a lot of work due to the multiple factors that can affect one's depression, including behavioral, environmental, biological, and genetic factors. However, it is necessary to understand how each of those factors affect various races and ethnicities differently before we can move

forward in this field. Additionally, research on stigmas and stereotypes should be expanded upon because they are the main cause of misconceptions about depression. Because mental health is understood differently in every culture, each group has different stigmas or stereotypes. Each race and ethnicity should be examined separately to observe how specific stigmas and stereotypes in their culture affect them. By doing so, marginalized groups can start to be better educated about depression. This will be the first step in the elimination of stigmas and stereotypes surrounding depression, which cannot be properly diagnosed and treated unless people understand it is as much of a disorder as physical health disorders are.

The more mental health is understood, the more can be done to help people; however, this cannot be done until consistent methodologies and mental health concepts are utilized in research. The more data that exists on specific diagnosis, treatment, and experiences of mental health in general and depression specifically, the more information clinicians, families, and individuals will have for addressing depression. The goal of public health is to prevent diseases and promote the health of communities, but this goal cannot be achieved with such little or inconsistent findings on depression, particularly among various racial and ethnic groups. Though just as important as physical health, it is still not seen as significant due to stigmas or just general lack of knowledge. To understand the mental health of everyone is to understand the diverse mental health of each race and ethnicity.

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