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# Racial Differences in Depression Indicators Before and After 2008 Financial Crisis in a Sample of Older Adults

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RACIAL DIFFERENCES IN DEPRESSION INDICATORS BEFORE AND AFTER 2008  
FINANCIAL CRISIS IN A SAMPLE OF OLDER ADULTS

by

ANGELINA E. JACKSON

(Under the Direction of Rebecca Ryan)

ABSTRACT

The present study was designed to examine patterns of mental health outcomes in older Black and White adults after the national 2008 financial crisis. The data was acquired from the *University of Michigan Health and Retirement Study*, a publicly available dataset. This longitudinal study has obtained data from a representative sample of approximately 20,000 older adults in America, aged 55 and older. The hypotheses were (1) rates of mental health indicators related to symptoms of depression will increase after the 2008 financial crisis and (2) that increase will be significantly higher in Black respondents compared to White respondents. The analysis revealed that Black participants displayed higher levels of the indicators of depression. However, the financial crisis had no significant influence on indicators of depression in this sample of older adults. Implications of the findings are discussed in terms of highlighting discrepancies in mental health for Black individuals.

INDEX WORDS: Mental health, Racial disparities, Financial crisis, Gerontology

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by

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## CHAPTER 1

### INTRODUCTION

#### Purpose of the Study

This study sought to examine the patterns of the 2008 financial crisis on mental health outcomes in older Black and White adults. Mental health outcomes, specifically symptoms related to depression, have been shown to increase after national crises such as an economic recession (Frasquilho et al., 2016). Meta-analyses have examined the patterns of moderators such as unemployment, income decline, and unmanageable debts as they were significantly associated with poor mental wellbeing and increased rates of mental disorders. Based on the body of research in this area, we hypothesized that: (1) levels of mental health outcomes related to symptoms of depression will increase after the 2008 financial crisis and (2) the increase in symptoms will be significantly higher in Black compared to White respondents.

#### *How This Study Is Original*

The present study examined a particular age group of U.S. citizens over the age of 65. Furthermore, mental health outcomes were compared in Black and White participants only in hopes to generalize these findings to other communities of Black, Indigenous, and People of Color (BIPOC). The present study utilized data from the national and longitudinal research panel known as *Michigan University: Health and Retirement Study (HRS)* that collects data from a specific population of older, retired adults biennially. This publicly available dataset has advantages in covering the older adult population. In particular, the HRS collects demographic information such as age, race, education level and house income as well as psychological information pertaining to rates of depression and anxiety. Likewise, the HRS utilizes a *Psychological Lifestyle Questionnaire* that assesses feelings of motivation, depression, and

loneliness across time. The following literature review focused on racial differences in mental healthcare, mental health outcomes, and the patterns of shared crises. The current study adds to our understanding of how these issues pertain specifically to an older adult population; a factor that is less commonly considered in the literature for these areas.

## CHAPTER 2

### LITERATURE REVIEW

Racial and ethnic disparities in mental health status and treatment have received increasing attention (Chow et al., 2003). As research in this area continues, researchers must also consider how findings apply to older Black adults specifically. It is imperative that these disparities are analyzed in this specific population. Racial minorities are generally at a larger disadvantage to seek and receive adequate mental health care, thus leading to poorer mental health outcomes (Jiménez, 2022). The current study evaluated patterns of mental health after a shared crisis in Black older adults compared to White older adults.

#### *Aging and Mental Health*

Studies have shown that negative affect decreases from age 18 to 60 (Woodhead & Yochim, 2022). Additionally, Black older adult mental health is disproportionately affected during national crises such as the COVID-19 pandemic (McDuffie, 2021). However, this pattern of negative affect among older adults has been proven to vary across specific emotions. More specifically, Woodhead and Yochim (2022) found that older adults tend to report less frequent feelings of anger but more frequent feelings of sadness. These differences in mental health can also be attributed to cultural differences as examined in this study.

Researchers have identified a process known as situation selection as a mechanism that older adults utilize to have better emotion regulation (Woodhead & Yochim, 2022). This practice is developed with more accumulated experiences that older adults have developed across their lifespan and influences which situations they may choose to avoid. The financial crisis can be used as an example of a situation that older adults may actively choose to avoid by protecting their assets and engaging in good financial choices.

Overall, researchers have shown that some emotional experiences may improve with age such as affective experience and emotional regulation whereas, other emotional experiences such as emotion perception has been shown to decline (Woodhead & Yochim, 2022). As it relates to racial disparities, national crises contribute to the overall stress in Black older adults' lives, specifically with factors such as increased mortality and healthcare inequalities (McDuffie, 2021). A better understanding of emotions across lifespans is helpful when considering the best way to assist older adults after a national crisis.

### *Racial Differences in Mental Health Care*

Individuals who identify as Black are more likely to experience a variety of barriers that limit their access to proper mental health care compared to individuals who identify as White (Jiménez et al., 2022). Specifically, Jiménez et al. (2022) identified a lack of trust in health care providers, prior negative health experiences, and potential language barriers as reasons why the Black community is less likely to receive adequate services. Mental health care has also been so stigmatized in the Black community that these individuals are more likely to only seek mental health services during a crisis situation or as a last resort (Delphin-Rittmon et al., 2013).

Chow et al. (2003) also concluded that neighborhood poverty is a key to understanding racial disparities in access to mental health care. According to the latest census data, Black individuals have the highest poverty rate of 23.8% (Creamer, 2021) and therefore this community is more exposed to the disadvantages of poverty more often than White individuals. Researchers have identified that living in poverty moderates the relationship between race and mental healthcare access and use (Chow et al., 2013).

Overall, inequalities in access to mental healthcare have been long-standing and well documented among individuals from diverse racial, ethnic, and cultural backgrounds

(Delphin-Rittmon et al., 2013). Black individuals are ultimately at a greater disadvantage for accessing mental health care because of barriers, poverty, and negative stigmatization within the community. The current study examined racial disparities in mental health care following a major financial crisis to observe any moderating effects.

### *Racial Differences in Mental Health Outcomes*

The lack of reliable access to adequate mental health care also contributes to the onset of psychological disorders or negative outcomes in Black individuals (Chow et al., 2003). One of the largest racial disparities regarding treatment outcomes in the Black community is the persistent diagnosis of schizophrenia and occasional diagnosis of affective disorders (Chow et al., 2003). Paradis et al. (1995) further supports this claim that affective disorders are often under diagnosed in the Black community whereas schizophrenic disorders are over diagnosed.

Furthermore, Zahodne et al. (2019) identified race and ethnicity as social constructs that are proxies to systematic racism, where certain populations are categorized, and superior groups receive the better resources. Additional research acknowledges both interpersonal discrimination and institutional discrimination as ways that racism contributes to disparities regarding mental health outcomes (Lincoln et al., 2021). For example, when the Black community continuously experiences systematic discrimination, it discourages and even decreases the amount of mental health care that they seek out in the future.

Purtle (2012) noted that “structural inequities such as systemic poverty, residential segregation, poor education, and political marginalization have all been found to increase risk for adverse mental health outcomes in, and beyond, disaster contexts” (Purtle, 2012, p. 32). The factors that Purtle (2012) identified are those that are often seen in Black communities due to higher levels of poverty. Therefore, it can be concluded that with continuous exposure to such

systemic inequalities, mental healthcare is more likely to be neglected and mental health outcomes will continue to decline for this population.

Additionally, Paradis et al. (1995) notes that Black individuals are generally less likely than White individuals to seek needed psychiatric treatment. Of those who do seek mental health care, Black patients are often misdiagnosed due to cultural differences in symptom descriptions and/or barriers in the patient to therapist relationship. However, these researchers did find that there were no significant differences in mental health outcomes between Black and White patients when anxiety disorders are quickly and accurately diagnosed. In conclusion, Black people are less likely than White people to seek mental health care and when they do, their mental health outcomes are often misdiagnosed.

#### *Racial Differences in the Patterns of a Shared Crisis*

Over the years, a history of disasters and public health emergencies in the United States have resulted in racial and ethnic minorities being at a larger disadvantage in terms of mental health care (Purtle, 2012). Hofmann (2021) examined patterns of a shared crisis by studying the Covid-19 pandemic. This study analyzed racial disparities in anxiety by utilizing the *Generalized Anxiety Disorder* measure and self-report questionnaires to assess adversity in daily functioning and occupational risks. Overall, Hofmann (2021) found that Black individuals compared to White individuals were significantly more anxious and at a greater risk for impairment of daily functioning including housing, food, health care, transportation, and parenting as a result of the Covid-19 pandemic.

Hofmann (2021) also noted that organizations working closely with BIPOC communities after a crisis should be more aware of the need for timely, relevant support and provide effective resources to improve mental health outcomes. This contributes to the idea that more adequate

and prepared mental health care services should be in place after a shared crisis to improve the mental health outcomes of disadvantaged populations. However, this study was limited in the fact that the sample was mostly White participants, with only 38% of the participants identifying as Black.

Volkos et al. (2001) evaluated the extent to which the financial crisis in 2008 influenced mental health issues in the following decade (2009-2019). A systematic review of studies that were conducted in European and Western countries such as Spain, Greece, and Italy were used to evaluate financial hardships in diverse areas. More specifically, studies conducted in the 28 European Union countries are compared to studies conducted in Western countries outside of those. Researchers analyzed declines in unemployment rates after the financial crisis and the subsequent changes in depression, anxiety, stress, psychotropic drug consumption, mental health care demand, and suicide/suicide attempts. Overall, the researchers found that the mental health outcomes of specific social groups such as those who are unemployed or unskilled were more vulnerable during periods of economic crisis (Volkos, 2001).

Furthermore, Hurd and Rohwedder (2010) studied the overall effects of the 2007-2009 recession in a population of individuals aged 55 and older. Through their longitudinal study, they found that households *in* retirement and *near* retirement suffered sizable losses in stocks and housing over the course of 3 years. The researchers also found that those at the lower end of the income distribution are more vulnerable to unemployment, a factor previously linked to poorer psychological health. However, this study was limited in that they did not address factors associated with race. Therefore, the current study builds on these findings by examining racial differences.

### *The Current Study*

Hurd and Rohwedder (2010) concluded that an economic crisis caused older adults to reduce spending and increase saving, plan to work longer, and anticipate bequeathing less. Likewise, Frاسquilho et al. (2016) analyzed a variety of studies regarding the patterns of economic recessions on mental health outcomes; however, they found that many of the studies included in the meta-analysis were based on a cross sectional design which limits causality inferences. Ultimately, much of the research that is published regarding the relationship between crisis and mental health lacks a more longitudinal approach.

The purpose of the current study was to focus on racial differences in mental health outcomes before and after the 2008 financial crisis in a sample of older adults. This study adds a needed longitudinal examination to the literature and furthers our understanding of how crises and depressive affect specifically apply to older adults. Based on previous literature, it is expected that participants will report higher levels of symptoms related to depression in 2010 (after the 2008 financial crisis) compared to 2006 (before the crisis).

Affect variables related to happiness, loneliness, sadness, restlessness, effort, energy, motivation, enjoyment, and depression were assessed and it was expected that the negative consequences of an economic crisis would be directly related to overall mental health. More specifically, it was expected that the increase in depressive affect after the 2008 crisis would be significantly higher for Black participants compared to White participants.

## CHAPTER 3

### METHOD

#### *Participants*

Participants were derived from The Health and Retirement Study (HRS). The HRS is a national longitudinal study that surveys a representative sample of older adults (50 and older) in the United States. Participants are categorized based on the range of years in which they were born. Those categories include *Aging and Health Dynamics* (AHEAD) for those born before 1924, *Children of Depression* (CODA) for those born 1924-1930, *Original Sample* (HRS) for those born 1931-1941, *War Babies* (WB) for those born 1942-1947, *Early Baby Boomers* (EBB) for those born 1948-1953, *Mid Baby Boomers* (MBB) for those born 1954-1959, and *Late Baby Boomers* (LBB) for those born 1960-1965.

For the purpose of the current study, we only included those who were 65 and older. Including participants aged 65 and older adheres to the common standard for defining older adults as identified by the National Institute of Aging (National Institute of Health, 2022). Likewise, only individuals who identified as Black/African American and White/Caucasian were included. Those who identified as Mexican American/Chicano, Puerto Rican, Cuban American, American Indian, Alaska Native, Asian, Native Hawaiian, Pacific Islander, and those who responded Don't Know or who Refused were excluded. Furthermore, only the participants who successfully responded in all three waves of data collection (2006, 2008, 2010) were included in this study. Participants were excluded from the study if a proxy respondent (spouse, child of age, etc.) was required. Participants were also excluded if there was any missing data across all three years of data collection.

Based on these inclusion criteria, there were 857 Black and 5,943 White participants in the initial sample. According to Cohen (1988), statistical reliability is always dependent upon the size of the sample. The sample proportion in the data set was produced by the HRS where respondents were primarily White. The group sizes in this study were made equal since it is noted that the equal N condition is ideal (Cohen, 1988, p. 207). Additionally, Cohen (1988) states the equal N condition is better for further power analyses.

In order to address the issue of unequal sample sizes, we used the random sample of cases function in SPSS. The function was set to randomly select 857 White participants out of the original total of 5,943. The final sample used for the current analysis consisted of 1,714 participants; 857 Black participants and 857 randomly selected White participants. Additionally, the sample included those who identified as Men (686, 40%) and those who identified as Women (1028, 60%). Only those who were 65 and older in 2006 ( $M = 72.4$ ,  $SD = 5.9$ ,  $Range = 65 - 95$ ) were included in the sample.

The decision to create a subsample based on specific inclusion criteria was due to the size of the original data file. It is noted that the larger the sample size the smaller the chance of error and the greater reliability (Cohen, 1988, p. 7). In other words, there is a direct relationship between sample size and power. However, the current study was limited regarding time and working with a larger data set was impractical. A subsample of equal groups was created to make the data set more manageable and balanced between races, but this decision may negatively influence the power of the study.

### *Measures*

The data that was used in the current study is from the *Michigan University Health and Retirement Study* (HRS) RAND Longitudinal File 2018 (V1). The HRS data set includes 14

waves of Core Interviews across 16 survey years (1992, 1993, 1994, 1995, and then biennially from 1996 to 2018). Each wave includes demographic characteristics, including race, age, gender, marital status, level of education and home income. Data from the 2006, 2008 and 2010 Core Interviews were analyzed in the current study.

The specific variables that were examined included Yes, No, Don't Know, and Refused responses to the following items: "Much of the time during the past week you: *Felt Depressed* (D110), *Felt Everything You Did Was an Effort* (D111), *Felt Sleep was Restlessness* (D112), *Felt Happy* (D113), *Felt Lonely* (D114), *Enjoyed Life* (D115), *Felt Sad* (D116), *Could Not Get Going* (D117), and *Had A Lot of Energy* (D118). Only response items Yes and No were calculated for a composite score, Don't Know and Refused responses were excluded.

These variables connect with the body of existing literature on issues related to overall mental health. According to Kroenke et al. (2009), feelings of depression, low energy, and restlessness can all be indicators of depression and poor mental health. These indicators are based on the findings of previous literature such as the depression scales supported by the American Psychological Association and National Institute of Health. For example, the *Patient Health Questionnaire Depression Scale* (PHQ-8) has been proven to be a valid and reliable tool to screen depression in several populations (Shin et al., 2019). The items in the PHQ-8 analyze feelings of depression, sleep disturbances, and energy similar to those of HRS questionnaire.

### *Procedure*

In the HRS data set used for the current study, the participants and their spouse were interviewed initially with a Core Interview (or baseline interview) which took place face-to face between 1992 to 2002. Follow-up interviews were then conducted again every two years primarily by phone. Face-to-Face follow-up interviews were offered to respondents aged 80

and older. To address mortality, Exit Interviews were obtained on behalf of the participant by a spouse or a child who met age requirements. Attrition Bias was addressed through Proxy Respondents (usually a spouse or family member) in cases where participants are unwilling or unable to respond.

## CHAPTER 4

### RESULTS

#### *Analytics Plan*

Ideally, researchers using similar data would run an Exploratory Factor Analysis (EFA) because the present items are not an established measure. Due to the limitations of running an EFA with a low number of binary (Yes/No) response items, this analysis was disregarded as an option for assessing the validity of the HRS items. Reverse scoring of item responses was utilized for positively skewed items in order to calculate an overall depressive affect score that broadly assessed indicators of depression. An overall composite score was produced where all “No” responses were totaled and ranged from 0 to 9. Overall, higher scores indicated higher rates of depressive affect.

It would have also been ideal to run a Time Series Analysis because this would allow us to observe time-ordered changes surrounding a specific occurrence. The barrier to running a time series analysis in this study was the size of the original data sets. The HRS data files were substantial, including approximately 25,000 diverse participants. The data files are separate for each wave of data collection, so time constraints prohibited combining additional years. Data sets were combined for 2006, 2008, and 2010 followed by the aforementioned inclusion criteria being used to create the current sample of participants.

#### *Primary Analysis*

A 2 (race) x 3 (years) Mixed Factorial ANOVA was used to analyze the data. Mauchly's Test of Sphericity indicated that the assumption of sphericity was not violated  $X^2(2) = .231, p = .891$ . There was a significant main effect of race  $F(1, 1712) = 8.63, p = .003, \eta_p^2 = .005$  such that Black participants ( $M = 2.02, SEM = .063$ ) reported higher levels of depressive affect compared

to White participants ( $M = 1.76$ ,  $SEM = .063$ ). There was a non-significant main effect for years  $F(2, 3424) = 2.76$ ,  $p = .064$ ,  $\eta_p^2 = .002$  such that depressive affect scores in 2010 ( $M = 1.95$ ,  $SEM = .052$ ) were not significantly greater than affect scores in 2006 ( $M = 1.89$ ,  $SEM = .052$ ) and 2008 ( $M = 1.84$ ,  $SEM = .051$ ). There was also a non-significant interaction effect  $F(2, 3424) = .148$ ,  $p = .862$ ,  $\eta_p^2 = .000$  of race and years.

It is important to note that the means reported in the statistical analysis are based on a range from 0 to 9. A floor effect may be present where there is an overall low range for questionnaire items and all respondents scored relatively low, potentially skewing the results of the study. This floor effect could be prevented with a more sensitive measure. According to Cohen (1988) the effect size reported for the significant main effect, non-significant main effect and interaction were too small to acknowledge any type of effect. This indicates that race and years had relatively no effect on depressive affect. There was also no effect for the interaction between race and years.

## CHAPTER 5

### DISCUSSION

The purpose of this study was to observe the patterns of the 2008 financial crisis among older adults, while also accounting for pre-existing racial differences. The hypotheses for the current study included (1) rates of mental health indicators related to symptoms of depression will increase after the 2008 financial crisis and (2) the increase in symptoms will be significantly higher in Black compared to White respondents. The analysis revealed a main effect of race, where older adult Black participants reported higher depressive affect scores across all three years. There was a non-significant effect for years and a non-significant interaction between years and race such that depressive affect scores remained similar across all three of the examined years for each race.

Previous literature supports the idea that national crises, such as a recession are negatively associated with fluctuations in mental health of older adults. For example, Frasquilho et al. (2016) identifies that quality evidence supporting the association between negative mental health outcomes and economic recessions are growing. Likewise, McInerney et al. (2013) notes that subjective measures of mental health such as feelings of depression worsened after the 2008 financial crisis. Researchers analyzed their findings through a meta-analysis and in a sample of older adults similar to the current study but lacked a focus on racial disparities. However, the current study with a comparison of Black and White participants did not find the same patterns.

A possible reason why we did not see a change between pre, and post crisis rates of depression indicators is because of the limited number of years analyzed. The current study only observed depression indicators in 2006, 2008, and 2010 when additional years such as 2007 and 2009 could have been more informative. Additionally, analyzing "don't know" and "refused"

responses as well as participants with missing data could have provided more information. It is possible that there was no significant effect of the year because those who truly experienced indicators of depression may have been more inclined not to respond at all.

Another potential reason for these findings is the lack of more demographic information such as socioeconomic status, financial background, education, and mental health history. Despite the best interest to isolate race and age, including more participants who were younger and more ethnically diverse could have been valuable. Analyzing a more mixed sample may have included people higher in socioeconomic status, healthier and more urban. These demographic decisions may contribute to the reason why an interaction was not found in the current study as these results do not align with prior research.

The pattern of these results is consistent with the findings of Vyas et al. (2020) where compared to Non-Hispanic White participants, Black participants had higher experiences of anhedonia, sadness, and psychomotor symptoms. This study utilized the PHQ 8 scale to analyze depressive symptoms, a measure that relies on items similar to those of the HRS questionnaire. Specific items of the PHQ 8 such as “feeling down, depressed, or hopeless”, “trouble falling or staying asleep, or sleeping too much” and “feeling tired or having little energy” all correspond with the HRS items “Much of the time during the past week you: felt depressed, felt sad, felt everything you did was an effort, felt sleep was restless.”

However, Vyas et al. (2020) did not look at a sample of adults 65 and older, instead they included women aged 50 years and older and men aged 55 years and older. Furthermore, the researchers evaluated depressive characteristics in multiple races including Hispanic and Asian individuals. Nonetheless, researchers found that compared to White participants, minorities had higher PHQ 8 scores and endorsed core features of depression. This correlates with our results

regarding overall depressive affect scores/higher indicators of depression for Black respondents. An interpretation of these findings concludes that minorities, including Black individuals, experience more indicators of depression regardless of age.

Researchers have identified lack of access to mental health care, persistent misdiagnoses, and disadvantages of poverty as factors resulting in overall mental health discrepancies. It is noted that even before the turmoil of a national crisis, Black people are generally less likely to seek mental health treatment. Therefore, this population is predisposed to depression indicators and poor mental health care before catastrophes such as the 2008 recession. Although researchers have previously highlighted the discrepancies in mental health care, little is known about the racial differences in mental health outcomes directly after a shared crisis, this is what the current study aimed to evaluate.

It has been identified that there are no significant racial differences in mental health outcomes when anxiety disorders are efficiently diagnosed (Paradis et al., 1995). However, proper depression diagnoses are limited in the Black community. Research in this field can contribute to improved mental health assessments and treatments tailored to the needs of specific racial populations. The current study should be used as a guide for clinicians to improve mental health outreach programs and interventions after a national crisis with a goal to refine mental health care for older adults, specifically those who are inherently disadvantaged such as Black individuals.

Overall, the findings of this study support evidence that Black people generally experience more depressive affect across multiple contexts. The primary aim for this study was to build upon the limitations regarding mental health during a national crisis in a specific population of older adults. Furthermore, the current study adds to supporting literature that

argues mental health care and mental health outcomes should be better examined in a population of Black people. Future studies should address the clinical interventions that could be put in place to assist this specific population.

Likewise, the current study contributes to existing literature regarding the patterns of depression indicators over time. Specifically, we focused on the influence of a shared crisis between both Black and White races, and although our findings were insignificant it is important to note how each race experiences these crises differently. Although we expected an increase in depressive affect scores after the 2008 recession, our findings were not consistent with the literature. The current study was limited in the exploration of additional timepoints, and future studies may benefit from taking a broader approach.

#### *Limitations and Future Directions*

Pickett et al. (2012) notes that the population of older Black adults is expected to triple by 2050. As the number of Black older adults continues to increase, it is important to bridge the gap in the literature regarding the mental health needs of this population. The findings of the current study capture the context of aforementioned racial disparities in mental health care, mental health outcomes, and the variations of experiences during a shared crisis. Future studies should address mental health care in disadvantaged communities and the conditions necessary for effective treatment in Black older adults.

The current study contributes to the existing literature acknowledging higher rates of depression indicators among Black people despite the persistent racial disparities in rates of diagnosis/treatment. Specifically, “Black individuals with clinical diagnoses of depression were 55% less likely to be treated for depression compared to non-Hispanic White individuals” (Vyas et al., 2010, p. 10). Existing literature continues to highlight misdiagnoses and poor depression

treatment among Black individuals. Researchers should expand on these findings by focusing on mental health treatment in Black older adults before and after a shared crisis. More research regarding clinician training and performance across cultures can be beneficial. Future studies should also address clinician biases and patterns of misdiagnoses where schizophrenic disorders are often diagnosed in Black individuals instead of affective disorders. These misdiagnoses are the first oversight in the treatment of Black individuals and contribute to the lack of trust in mental health care providers.

Additionally, future research should study the effectiveness of existing interventions and resources in place to address mental health. Furthermore, outreach programs should be more frequently placed in communities of color where generational stigmas can be acknowledged and reduced. These outreach programs would be most beneficial if they were welcoming, cost efficient, and consistently reliable as these are common conditions of mental health care that are not met for Black individuals. Future research should aim to improve mental health treatments and have them in place prior to a national crisis, making access to treatment after the crisis less perplexing.

There were many limitations associated with this study. One limitation of the current study was the inclusion criteria that was established for sampling purposes. More specifically, the exclusion of other races may have influenced our findings. Likewise, we excluded responses such as Don't Know and Refused to eliminate any cognitive functioning issues that may be seen in a sample of older adults. However, these inclusion criteria prevented more responses from being considered and therefore limiting the data that was analyzed. This may have prevented a true interaction between time and race from being observed.

Another limitation to the current study was the HRS variables as they were rated as Yes or No. The use of this dichotomous scale does not correspond with existing measures of depression/anxiety such as the Beck Depression Inventory, where a continuous scale is utilized. Therefore, to address the current hypotheses regarding mental health we had to focus on indicators of depressive affect more broadly. Researchers utilizing the HRS data sets should be mindful of these limited responses and plan to implement existing measures that have established psychometrics.

The lack of an EFA was also a limitation to the current study. More specifically, the EFA would evaluate the correlation between items and analyze the effectiveness of measuring depression. In future studies, researchers should use items similar to those utilized by the HRS but with a continuous rating scale, such as the PHQ 8 and BDI. Likewise, a more established measure would be useful to prevent a floor effect. Due to a pattern of low means reported in the results, a floor effect could be implied. This potential floor effect is also a limitation to the current study. Moving forward, researchers should address this limitation by testing hypotheses of this nature in a clinical population or with a more sensitive measure.

The time frame assessed in the current study was also a limitation for this study. A time series analysis would be an excellent addition to the study because it would isolate the patterns of depression to a specific window surrounding the observed event. This isolation of time would allow for better casualty implications, such that a time series would eliminate potential confounding factors. A time series analysis in this study would provide a better idea of the ramifications the 2008 financial crisis had on indicators of depression by observing the consistency of these changes across additional years. In future studies, including a time series

analysis would provide a better idea of causality by observing the specific event through consistent intervals of time.

Due to time constraints and the demands of combining multiple HRS data sets, the study is limited in comparing only three years. Ideally, the analysis would have consisted of additional data sets associated with multiple waves of HRS data collection. Furthermore, more years would be examined to expand the longitudinal perspectives of this study. Including responses to HRS items in 2012 and 2014 would be beneficial to the external validity of this study, generalizing the patterns of a financial crisis on indicators of depression.

These limitations have been noted in additional HRS studies. For example, Latham-Mintus et al. (2017) notes that using dichotomous indicators were useful both conceptually and analytically, however patterns would have been better explored more in depth. Similarly, Wilkinson (2016) acknowledges the limitation of a longer time observation “with more frequent measurement occasions” being ideal. Therefore, these limitations should be addressed in future studies with the inclusion of existing, well supported continuous scales and a time series analysis expanding the years of observation.

### *Conclusions*

The key finding of the current study supports previous literature in the claim that Black people generally have more negative mental health outcomes compared to White people. However, the financial crisis had no significant influence on depressive affect and mental health remained the same for Black and White respondents. Unsurprisingly, Black people continue to experience more indicators of depression, however we expected to see a greater influence of the 2008 recession. The patterns of this recession may be limited as the current study lacked a time series analysis and could benefit from more expansion of years.

A sample of individuals 65 and older was used strategically to address the relationship between depression and aging as we continue to see an increase in older adults. The literature continues to note an increase in Black older adults specifically and the field of gerontology can benefit from more research regarding this population specifically. This study sets the stage for future research to consider the clinical applications of depression in Black participants, while evaluating the effectiveness of these interventions in older adults. To my knowledge, this study is one of few that analyzes mental health from both a race and age perspective, immediately following a shared crisis.

After considering racial disparities in mental health care, mental health outcomes, and among a shared crisis, mental health treatments can be improved. Clinicians should first aim to bridge the gap between their knowledge of existing interventions and the limitations this may have on Black populations. For example, language barriers are persistently noted as a roadblock for effective treatment, such that more ethnic diversity and representation is needed in the field of Psychology.

Clinicians can work to tailor depression interventions to the needs of older Black adults by addressing language and cultural barriers. This can be done through reliable outreach programs in the Black community that promote diversity and inclusivity. These outreach programs should work to address the mental stigmas inbound in the Black community and encourage healthier coping mechanisms. The literature is limited on best practices for mental health treatments in older adult BIPOC communities versus non-BIPOC communities where more research could be used to focus on these differences. Furthermore, clinicians should aim to become more knowledgeable on more targeted interventions that work best for older adult, race specific populations.

Overall, mental health care is generally limited and could benefit from race driven adjustments. This study provides supporting literature to the field of gerontology regarding depressive affect amongst older adults while identifying a need for more research on mental health among Black populations. Future research should acknowledge the findings of this study by assessing depression in this population with more well supported, existing measures and time series analysis. In conclusion, this study should be reviewed as a contribution to the field of mental health in an overlooked population such as Black older adults.

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