

## ABSTRACT

Title of Thesis: AMERICA HAS A PROBLEM: THE ASSOCIATION BETWEEN RACIAL MICROAGGRESSIONS, COPING, AND HEALTH AMONG BLACK COLLEGE STUDENTS

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Black college students endure racial microaggressions in higher education, and current research highlights how racial microaggressions can negatively impact the health of Black college students. The purpose of this study was to investigate the associations between racial microaggressions in higher education, coping strategies (education/advocacy, resistance, detachment, drug/alcohol use, and internalization), and health quality in Black college students. Participants included 155 Black college students that took an online survey as a part of a larger study conducted at a large Southeastern historically white university. Results from the hierarchical linear regression analyses indicated that racial microaggressions were significantly and negatively associated with mental and physical health quality in Black college students. Additionally, results from the mediation analyses found that detachment coping significantly mediated the association between racial microaggressions and mental health in Black college

students. This study provides further evidence of the negative impact of racial microaggressions on the health and well-being of Black college students.

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MICROAGGRESSIONS, COPING, AND HEALTH AMONG BLACK COLLEGE  
STUDENTS

by

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## Introduction

The extensive history of racism against Black, Indigenous, and People of Color (BIPOC) has firmly entrenched itself in American society, causing immeasurable harm for generations. During the rise of the COVID-19 pandemic, residents within majority-Black communities endured COVID-19 infection rates three times higher than those that live within majority-white communities; they also experienced death rates that were six times higher than majority-white communities (Quinn et al., 2023). Additionally, the COVID-19 pandemic heightened anxiety among Black communities due to feelings of hopelessness exacerbated by systemic challenges of racism, police violence that led to civil unrest, and limited resources to navigate the health crisis. The roots of racism have spread to many facets of United States' (U.S.) culture, including higher education, which has historically excluded Black students from full participation and access (Boatright-Horowitz et al., 2013). Racist incidents have occurred on college campuses for decades (Farrell & Jones, 1988); however, there has been an increase in acts of racism on college campuses in recent years (Briscoe, 2022). For example, in August 2017 white supremacists rallied together in the city of Charlottesville, Virginia and on the campus of University of Virginia for the "Unite the Right" rally (Blout & Burkart, 2020). It was reported that there were at least 12 violent hate groups and militias on the college campus, in addition to many firearms (Blout & Burkart, 2020). During this horrifying event, a Black man was beaten by members of these hate groups, city and Virginia state police seemed to only observe the violence, and neo-Nazi James Alex Fields plowed his car into a group of counter protesters which killed Heather Heyer (Blout & Burkart, 2020). Additionally, during the 2016 presidential election season and during the presidency of Donald J. Trump, there was a 258% increase in racist events on college campuses (Lewis et al., 2021). Experiences of racism can negatively impact the academic

environment and sense of belonging for students of color, which can affect their perseverance in higher education (Johnson et al., 2013; Lewis et al., 2021). These experiences may contribute to the educational disparities of Black students compared to their White counterparts, with only 48% of Black students graduating within six years compared to 71% of white students (Horn et al., 2023). It is possible that these educational disparities can be explained by the differential racism experiences of Black students compared to their white counterparts. Thus, the purpose of this study was to explore associations between racial microaggressions, coping responses, and health outcomes among Black college students attending a historically white university.

### **Theoretical Models of Racism**

Clark et al. (1999) developed a biopsychosocial model to explain the physiological and psychological effects of racism on African Americans. This model displays how moderating variables (e.g., sociodemographic factors such as skin tone, age, etc.) can affect the impact of environmental stimuli (e.g., racism) on African Americans, specifically regarding their health outcomes. In addition, psychological and behavioral factors can influence responses to racism, such as self-esteem, Type A behavior (hostility, aggression, etc.), and obsessive-compulsive disorder (Clark et al., 1999). The biopsychosocial model also points to mediating variables that may explain the association between experiences of racism and African Americans' health outcomes, such as coping responses. The theory postulates that if one's coping response is maladaptive and fails to mitigate the impact of a stress response, it may cause negative effects to one's health. Alternatively, if one's coping response is adaptive, it is expected to reduce the impact of a stress response (Clark et al., 1999).

Harrell (2000) designed a model that theorized the relationship between racism-related stress and well-being. The multidimensional model of racism-related stress includes multiple

variables that were incorporated within the association between racism and well-being. The antecedent variables, such as person factors and socio-environmental factors, were used to offer context to the role of racism-related stress on psychological well-being. Internal and external mediators are also identified within the model, and these variables explain the impact of racism on psychological, behavioral, and physical health outcomes. The internal mediators are important to recognize due to their ability to support the well-being of the individual and their potential to serve as protective factors. External mediators, such as external resources, are important to consider given the impact of social and community support on an individual experiencing racism-related stress. Overall, this model highlights the importance of understanding racism as an additional stressor for people of color and how it can affect an individual on multiple levels.

The biopsychosocial model of racism (Clark et al., 1999) provides us with the ability to understand how racism can be a chronic stressor for Black people. Clark et al. (1999) posits that racism can lead to negative mental and physical health outcomes for Black people. On the other hand, Harrell (2000) highlights how BIPOC individuals' experiences of racism are a constant stimulus, leading to frequent experiences of daily racial microstressors. Furthermore, racial microstressors, also known as racial microaggressions, can produce added stress to BIPOC individuals. The multidimensional model of racism-related stress differs from the biopsychosocial model of racism as it provides a foundation for understanding racial microaggressions. While Clark et al. (1999) sheds light on racism's ability to impact the health of Black people, Harrell (2000) illuminates how racial microaggressions impact the well-being of people of color. Therefore, this study integrates the biopsychosocial model of racism (Clark et al., 1999) and the multidimensional model of racism-related stress (Harrell, 2000) to investigate

the association between racial microaggressions and mental and physical health outcomes of Black college students.

### **Racial Microaggressions and Health**

There are various forms of racial microaggressions, such as microassaults, microinsults, and microinvalidations (Sue et al., 2007). Microassaults can be a verbal or nonverbal attack that explicitly degrades someone based on their racial identity, such as calling a Black person “colored.” Microinsults can be defined as communication that unconsciously conveys a demeaning message about the racial heritage of a person of color, such as being shocked and asking a Black doctoral student how they were admitted into their program. Lastly, microinvalidations are used to reject the feelings, thoughts, and reality of a person of color. Specifically, this can occur when a Black student shares how their white professor expressed racially biased actions, and the white professor responds with a statement such as “I don’t see color” or “I have Black friends.” Racial microaggressions can negatively impact the mental health and well-being of Black college students (Miles et al., 2020; Marks et al., 2023; Sue et al., 2007; Sue, 2010).

There is a growing body of empirical research that has highlighted the impact of racial microaggressions on health outcomes, including stress, anxiety, and depression (Miles et al., 2020; Huynh, 2012). Specifically, Miles et al. (2020) found that Black college students’ experiences with racial microaggressions are associated with a lack of sense of belonging. Other studies investigated the link between racial microaggressions and negative mental health outcomes among Black, Asian, Latinx, and European immigrant college students, such that higher reports of racial microaggressions were associated with an increase in depressive symptoms and suicidal ideation (Anglin & Lui, 2023). Additionally, Williams et al. (2017) found

that Black college students experienced an increase in clinically measurable anxiety, stress, and trauma symptoms due to racial microaggressions. In addition, in their study, Williams et al. (2017) controlled for negative affectivity, which debunked the theory that negative affectivity plays a role in the relationship between microaggressions and psychological distress. In other words, one's tendency to experience negative emotions does not play a significant role in the association between racial microaggressions and mental health for Black individuals. In addition, researchers have found that racial microaggressions can lead individuals to question whether they are being treated negatively due to their race or other reasons (Anglin & Lui, 2023). This uncertainty may contribute to increased stress and mental health challenges among Black individuals, potentially affecting their well-being and sense of self-trust (Varghese et al., 2011; Anglin et al., 2014). While previous literature examined racial microaggressions and Black college students, the current study adds a unique contribution to the literature by specifically analyzing the association between racial microaggressions within higher education and Black college students' health.

Racial microaggressions also have the capacity to impact one's physical health. In a qualitative study, Hall and Fields (2015) interviewed Black adult men and women and found that they experienced microaggressions such as assumptions of criminality, stereotyping, exoticism, job loss, denial of racism's existence, color blindness, invisibility, expressing surprise over intelligence, conformity, infantilizing, and underestimating one's abilities, among others. Some of the physical health effects that participants attributed to racial microaggression experiences were insomnia, hypertension, weight loss, neck and shoulder pain, and gastrointestinal problems (Hall & Fields, 2015). In addition, DeCuir-Gunby et al. (2023) conducted a qualitative study and found that Black college students reported their experiences of racial microaggressions were

negatively associated with sense of belonging to the campus community and self-reported negative health outcomes. This study provides further support that racial microaggressions can be detrimental to the emotional, psychological, mental, and physical health of Black college students. In addition, Nadal et al. (2016) illustrated that experiencing frequent racial microaggressions was negatively correlated with pain levels and linked to more difficulty fulfilling one's responsibilities due to physical and emotional challenges. In other words, someone who suffers from racial microaggressions may experience lower energy levels and higher levels of pain. Last, racial microaggressions were negatively associated with overall health, signifying that one's experience with frequent racial microaggressions can lead to the deterioration of their physical health (Nadal et al., 2016). Nonetheless, there is a considerable dearth of quantitative research focused on racial microaggressions and physical health among Black college students. Moreover, there is a limited body of research that explores potential factors that may mediate the association between racial microaggressions and health outcomes, such as coping responses.

### **Coping as a Mediator**

Based on previous research, we know that coping responses can impact the relationship between racial discrimination and health outcomes (Clark et al., 1999). Specifically, passive coping strategies that are used in response to racial discrimination have been found to lead to higher probability of physical health outcomes such as hypertension (Clark et al., 1999). Lazarus and Folkman (1984) posit that the effectiveness of the coping strategies used in stressful situations can modify both physical and mental outcomes of the stressor. Harrell (2000) found that the type of coping response to racial discrimination can determine the outcome and strength of the stressor. Consequently, it is important to study coping strategies as a mediator for racial

microaggressions within Black college students, as it may modify the relationship between the stressor and its physical and mental outcomes. The current literature highlights how coping is a necessary variable when analyzing the association between racial microaggressions and health, but there is a dearth of research as it pertains to Black college students.

Generally, there has been a variety of conceptualizations of the effect of different types of coping styles on health-related outcomes. For example, according to Utsey et al. (2000), problem-focused coping is directly associated with heightened levels of self-esteem when Black people are enduring racial discrimination. Conversely, avoidance coping is associated with decreased hope and life satisfaction when Black individuals are experiencing racial discrimination (Barnes & Lightsey, 2005; Danoff-Burg et al., 2004). West et al. (2010) found that coping styles impact the way perceived racial discriminatory experiences influence psychological well-being. The study also found that Black college women who reported lower levels of problem-focused coping experienced more depressive symptoms when confronted with racial discrimination. Additionally, for Black college women that utilized higher levels of problem-focused coping, their perceived racist discrimination experiences were negatively related to depressive symptoms (West et al., 2010). In other words, using healthy coping styles can be essential for Black students' mental health when they endure discriminatory actions.

There have also been some studies that found that the use of avoidant coping strategies can negatively influence the relationship between racial discrimination and mental health (West et al., 2010; Barnes & Lightsey, 2005; Danoff-Burg et al., 2004). Specifically, in one study about Black college women, the researchers found a positive relationship between racial discriminatory experiences and depressive symptoms among those who utilized higher levels of avoidant coping styles (West et al., 2010). Similarly, for Black women who used lower levels of avoidance

coping styles, there was a negative relationship between perceived racial discrimination experiences and depressive symptoms (West et al., 2010). Overall, using unhealthy coping styles can be detrimental to Black students' mental health when they experience racial discrimination. These findings are consistent among other studies that focused on Black populations (Barnes & Lightsey, 2005; Danoff-Burg et al., 2004). While there is research on coping with racism, discrimination, and other racism-related stress as it pertains to Black populations, there is a lack of research including Black college student populations. The current study seeks to fill that gap by examining racial microaggressions, coping strategies, and Black college students' health.

The more recent literature on coping strategies refers to engagement and disengagement coping strategies in the context of coping with discrimination (Szymanski & Lewis, 2016; Sanchez et al., 2018; Moody et al., 2023). According to Sanchez et al. (2018), engagement coping refers to strategies used to actively address stressful situations or events, including problem-solving actions, positive cognitive reframing, and emotional support seeking. In contrast, disengagement coping involves efforts to distance oneself mentally, emotionally, or physically from stressors, often through methods like problem avoidance, self-criticism, wishful thinking, and social withdrawal (Sanchez et al., 2018). Some engagement coping strategies, which are being assessed in the current study, are Education/Advocacy and Resistance (Wei et al., 2010; Moody et al., 2023). Education/Advocacy refers to individuals responding to discrimination with educational or advocacy strategies on individual and societal levels (Wei et al., 2010). Resistance is defined as facing and challenging those who display discriminatory actions (Wei et al., 2010). Conversely, some disengagement coping strategies, which are also being examined in the current study, are Drug/Alcohol Use, Internalization, and Detachment (Wei et al., 2010; Moody et al., 2023). Drug/Alcohol Use is a form of coping that refers to

individuals utilizing substances as a response to discrimination (Wei et al., 2010). Internalization reflects one's inclination to think the reason for experiencing discrimination is due to oneself (Wei et al., 2010). Detachment is defined as an individual removing themselves from all forms of social support and not understanding how to handle discriminatory experiences (Wei et al., 2010). These strategies are being investigated in the current study to detect their association with Black college students' responses to racial microaggressions.

Furthermore, research indicates that coping is an essential factor when concerning events centering race-based stress (Hoggard et al., 2012; Harrell, 2000; Utsey et al., 2007; Gaylord-Harden & Cunningham, 2009; Noh et al., 1999). Coping also plays a significant role in the ways race-based stress can impact the psychological and emotional health of individuals (Harrell, 2000); however, the various types of coping strategies used may alleviate physiological and mental effects related to racism differently (Utsey et al., 2000; Hoggard et al., 2012). Utsey et al. (2007) found that coping strategies that are oriented to one's race are associated with positive mental health symptoms. On the contrary, Barrita et al. (2023) found that racism presents imminent danger to the mental health of BIPOC individuals and that it is related to the use of coping mechanisms that involve the misuse of drugs and alcohol (Farahmand et al., 2020). Barrita et al. (2023) found that racial microaggressions are associated with an increase in substance use to cope in BIPOC individuals. They also found that the psychological stress from racial microaggressions mediates the use of drugs and alcohol as a coping mechanism (Barrita et al., 2023). Types of coping styles may therefore serve as influential mediators on associations between racial microaggressions and health outcomes for Black college students.

### **Rationale and Purpose of the Study**

It is important to examine the racial microaggression experiences of Black college students at a Historically White Institution (HWI), given the prevalence of systemic racism and racial microaggressions in higher education (Briscoe, 2022; Williams et al., 2020; Lewis et al., 2021). In addition, the recent Supreme Court decision in *Students for Fair Admission v. Harvard College* and *Students for Fair Admission v. University of North Carolina*, which has ended affirmative action, is a reminder about the structural barriers to higher education for all students of color, but particularly for Black students. This study's importance lies within the increase in racist events on college campuses (Briscoe, 2022; Lewis et al., 2021). While previous studies have examined the influence of racial microaggressions on health outcomes experienced by Black college students, the current study's unique contribution is marked by the inclusion of coping strategies, making a distinctive contribution to the current racial microaggression literature. Research has shown that coping can mediate the association between racial microaggressions and mental health in Black populations (Barnes & Lightsey, 2005; Danoff-Burg et al., 2004); however, previous research has not examined how coping can mediate the association between racial microaggressions and overall health in Black college students. The current study offers a unique contribution to the literature by assessing the overall health of Black college students in a quantitative study. While the previous research examined racial microaggressions and the mental health of Black college students, there are few studies that examine racial microaggressions and Black college students' mental and physical health in a quantitative study. This study aims to address the research gap in understanding racial microaggressions, coping strategies, and their impact on the health of Black college students.

The purpose of this study was to explore the association between racial microaggressions in higher education and overall health outcomes among Black college students. In addition, this study investigated whether coping strategies were a possible mediator in the association between racial microaggressions and mental and physical health outcomes. The main research hypotheses were as follows:

**Hypothesis 1:** Higher levels of racial microaggressions will be significantly and positively associated with lower mental health quality in Black college students.

**Hypothesis 2:** Higher levels of racial microaggressions will be significantly and positively associated with lower physical health quality in Black college students.

**Hypothesis 3:** (a) Coping strategies will mediate the positive association between racial microaggressions and mental health outcomes in Black college students, such that racial microaggressions will significantly and positively relate to higher levels of disengagement coping strategies (Internalization, Detachment, and Drug/Alcohol Use), which will relate to lower scores on mental health quality. (b) Additionally, racial microaggressions will significantly and positively relate to higher levels of engagement coping strategies (Education/Advocacy and Resistance), which will relate to higher scores on mental health quality.

**Hypothesis 4:** (a) Coping strategies will mediate the positive association between racial microaggressions and physical health outcomes in Black college students, such that racial microaggressions would significantly and positively relate to higher levels of disengagement coping strategies (Internalization, Detachment, and Drug/Alcohol Use), which will relate to lower scores on physical health quality. (b) Additionally racial microaggressions will significantly and positively relate to higher levels of engagement coping strategies

(Engagement/Advocacy and Resistance), which will relate to higher scores on physical health quality.

## **Method**

### **Participants**

This study was a part of a larger study on Racial Microaggressions and Campus Climate conducted from a large Southeastern Historically White University. The larger study consisted of a total of 431 participants and the racial/ethnic breakdown was as follows: 155 African American/Black participants, 94 Hispanic/Latinx participants, 94 Asian/American participants, 63 Biracial/Multiracial participants, 11 Native American/American Indian participants, and 11 Native Hawaiian/Pacific Islander participants. For this study, all students who identified as African American/Black were included in the final analyses. The participants include both undergraduate and graduate students and ranged in age from 18 – 34 years old ( $M = 24.91$ ;  $SD = 8.52$ ).

### **Procedure**

After obtaining Institutional Review Board approval, participants were recruited through a partnership with the university's multicultural student affairs office. Principal Investigators worked with the Director to obtain an email list of all students of color (e.g., African American/Black, Asian American, Latinx/Hispanic, Multiracial/Biracial, and Native American/Indigenous/American Indian) who were then sent an email invitation requesting their participation in the study. In addition, recruitment emails were sent on various email listservs, fliers were posted throughout the campus and were also handed out at social events. As a token of appreciation for participating in the study, students were given an opportunity to enter a raffle to receive one of ten cash prizes.

## Measures

### *Racial Microaggressions in Higher Education Scale*

The Racial Microaggressions in Higher Education Scale (Lewis et al., 2017) was utilized to measure the racial microaggressions experienced by Black college students. This scale was developed as a part of the Racial Microaggressions at Illinois Project to assess the racial microaggression experiences of students of color in higher education settings (Lewis et al., 2021). The scale has three subscales and a total of fourteen items that are used to analyze the frequency of the different types of racial microaggressions that are described in the literature (Lewis et al., 2021). The Invisibility Microaggressions subscale has four items, the Microinsults subscale has five items, and the Intellectual Inferiority Microaggressions subscale has five items. Some sample items include, “I have felt excluded by others on this campus because of my race” (Invisibility Microaggressions), “I have experienced someone making offensive jokes to me on this campus because of my race” (Microinsults), and “I have had my contributions minimized in the classroom because of my race” (Intellectual Inferiority Microaggressions). Participants respond to items based on how frequently they experience the various types of microaggressions within the past year on a 6-point Likert scale, ranging from 0 (*never*) to 5 (*once a week or more*). Items are summed and divided by the total number of items to compute a total mean score. Higher scores indicate a greater frequency of that specific microaggression. Previous studies have used the total score and reported a Cronbach’s alpha of .92 (Lewis et al., 2021). The Cronbach’s alpha for the current study was .94.

### *Coping with Discrimination Scale*

The Coping with Discrimination Scale (CDS; Wei et al., 2010) was used to analyze the coping strategies participants use to deal with discrimination. This scale has 25 items and five

subscales. The subscales include: Education/Advocacy (e.g., “I help people to be better prepared to deal with discrimination”), Resistance (e.g., “I directly challenge the person who offended me”), Internalization (e.g., “I wonder if I did something to provoke this incident”), Alcohol/Drugs (e.g., “I use drugs or alcohol to help me deal with it”), and Detachment (e.g., “It’s hard for me to seek emotional support from other people”). This scale uses a 6-point Likert scale ranging from 1 (*never like me*) to 6 (*always like me*) and participants are asked to respond based on how they typically cope with discrimination.

Wei et al. (2010) showcased their findings that supported internal consistencies with reliability scores ranging from .72 to .90. The test-retest reliability over a span of two weeks ranged from .48 to .85. They also used exploratory and confirmatory factor analyses to show the content, structural, and construct validity of the measure. Wei et al. (2010) also found the Cronbach's alpha coefficients for the CDS subscales to be .72 for detachment, .83 for internalization, .70 for drug and alcohol use, .71 for resistance, and .87 for education/advocacy. In a recent study with a sample of Black women, Moody et al. (2023) found the Cronbach’s alpha for each subscale to be as follows: .73 for detachment, .88 for internalization, .85 for drug and alcohol use, .74 for resistance, and .85 for education/advocacy. For the current study, the Cronbach’s alpha coefficients for the CDS subscales were .68 for detachment, .86 for internalization, .80 for drug and alcohol use, .76 for resistance, and .89 for education/advocacy.

### ***The Medical Outcomes Study Health Survey Short-Form-12***

The Medical Outcomes Study Health Survey Short-Form-12 (SF-12v2; Ware et al., 1996) was used to analyze participants’ mental and physical health. This scale consists of two subscales –mental health and physical health – which contain six items each. Sample items are “How much of the time during the last 4 weeks have you felt calm and peaceful?” and “During the past 4

weeks, how much did pain interfere with your normal work?”, for mental and physical health items, respectively. A total score for both subscales was calculated, where higher scores on the mental health subscale indicated greater mental health quality. Conversely, lower scores on this subscale indicated lower mental health quality. Similarly, higher scores for the physical health subscale indicated greater physical health quality, while lower scores indicated lower physical health quality. Other literature that used this scale and focused on Black populations had a .76 reliability coefficient for the mental health subscale and .81 reliability coefficient for the physical health subscale (Lewis et al., 2017). The current study’s Cronbach’s alpha coefficients were .86 for the mental health subscale and .74 for the physical health subscale.

## **Results**

### **Preliminary Analyses**

For this study, the final sample of Black college students was 155 participants. Before beginning with the analyses, the data was cleaned and checked for accuracy. Among the 155 participants, a minor portion of data was missing. Analysis of missing data patterns for the 155 participants indicated that the missing data for the items related to the specific scales of interest ranged from .65% to 1.94% missing. Due to the very small amount of missing data, available case analyses procedures were used, where mean scale scores were calculated without substitution or imputation of values, which generates similar results to multiple imputation methods (Parent, 2013; Szymanski & Lewis, 2016).

The data also met the assumptions for normality (skewness  $< 3$ , kurtosis  $< 10$ ; Weston & Gore, 2006). Moreover, the calculation of Cook’s distance was used to verify if the regression analysis was affected by outliers. Since no case displayed a Cook’s distance surpassing 1, a typical threshold suggesting notable outliers, the analysis was not significantly impacted by

outliers. According to an a priori power analysis using G\*Power version 3.1.9.7 (Faul et al., 2007), the 155 participants yielded a power of at least .80 to detect any direct effects. To determine an adequate sample size to detect the planned tests of indirect effects, a Monte Carlo power analysis was conducted using the online tool developed by Schoemann and colleagues (2017), which indicated approximately 230 participants would be needed for a power of .80. According to the analysis, the current sample size of 155 participants yielded a power of .60. Thus, while there was enough power for the direct effects, this study was underpowered for the indirect effects.

At the bivariate level, racial microaggressions were significantly and negatively correlated with mental health ( $r = -.37, p < .001$ ) and physical health ( $r = -.21, p < .01$ ). In addition, racial microaggressions were significantly and positively correlated with all coping strategies, including Education/Advocacy ( $r = .22, p < .01$ ), Resistance ( $r = .20, p < .05$ ), Detachment ( $r = .29, p < .001$ ), and Internalization ( $r = .20, p < .05$ ). In addition, the possible associations between age, gender, and socioeconomic status on mental and physical health were explored. These demographic variables were explored because these variables have been significantly associated with the primary variables of interest in other studies examining racial microaggressions (Nadal et al., 2014; Dickerson et al., 2019). For this study, family income was used as a proxy for socioeconomic status. The family income variable was a one-item Likert-type scale format item representing the income distribution as follows: 1 = \$0-\$50,000; 2 = \$51,000-\$100,000; 3 = \$101,000-\$150,000; 4 = \$151,000-\$200,000; 5 = \$201,000-\$250,000; 6 = Above \$250,000. Family income was not significantly correlated with mental health ( $r = .03, p = .69$ ) or physical health ( $r = .10, p = .25$ ). Additionally, age was not significantly correlated with mental health ( $r = .07, p = .43$ ) or physical health ( $r = -.04, p = .66$ ). To explore the possible

differences in health outcomes across gender, a dichotomous variable was created to be inclusive of cisgender and transgender participants, such that, women were coded as 1 ( $n = 102$  cisgender women and  $n = 1$  transgender woman) and men were coded as 0 ( $n = 49$  cisgender and  $n = 0$  transgender). The transgender woman participant was included in an effort to be gender inclusive, but not to conflate the experiences of cisgender women and transgender women. Gender was negatively correlated with mental health ( $r = -.18, p < .05$ ), such that women reported lower mental health quality.

### **Regression Analyses**

Simple linear and multiple regression analyses were used to test if racial microaggressions significantly predicted mental and physical health, respectively. It was hypothesized that higher levels of racial microaggressions would be associated with negative mental health outcomes in Black college students (Hypothesis 1). Since gender was significantly correlated with the mental health outcome, gender was entered as a covariate in the first step of the regression analysis and racial microaggressions was entered in the second step of the analysis as the predictor variable. The mental health outcome was entered as the dependent variable in the model. Racial microaggressions significantly predicted mental health scores ( $\beta = -.35$ ),  $t(148) = -4.48, p < .001$ , and also explained a significant proportion of the variance in mental health scores ( $R^2 = .14$ ),  $F(2, 148) = 12.71$ .

It was also hypothesized that higher levels of racial microaggressions would be associated with negative physical health outcomes in Black college students (Hypothesis 2). Gender was not significantly correlated with physical health; therefore, it was not entered as a covariate in the regression model. Thus, racial microaggressions was entered as the predictor variable and the physical health outcome was entered as the dependent variable for the model.

Racial microaggressions significantly predicted physical health scores ( $\beta = -.21$ ),  $t(152) = -2.70$ ,  $p < .01$ , and also explained a significant proportion of the variance in physical health scores ( $R^2 = .05$ ),  $F(1, 152) = 7.29$ .

### **Mediation Analyses**

For the current study, the Hayes PROCESS Macro (Hayes, 2013) was used to test Hypothesis 3 and Hypothesis 4 (Hayes, 2013; Model 4). Bootstrapping analyses were used with 1,000 bootstrapping resamples to produce 95% bias-corrected confidence intervals for the indirect effect. It was hypothesized that coping strategies would mediate the association between racial microaggressions in higher education and mental health (Hypothesis 3). It was also hypothesized that coping strategies would mediate the association between racial microaggressions in higher education and physical health (Hypothesis 4). Within this model, gender was entered as a covariate only for the association between racial microaggressions, coping strategies, and mental health outcomes. Additionally, a significant finding is reflected by a confidence interval that does not include 0. Racial microaggressions in higher education had a significant indirect effect on mental health through Detachment ( $B = -1.66$ ,  $SE = .42$ , 95% CI [-2.49, -.84]). The direction of the paths from racial microaggressions to the Detachment coping mediator and from the Detachment coping mediator to mental health indicate that experiencing a greater frequency of racial microaggressions is associated with increased use of detachment coping strategies, which in turn, was associated with lower mental health scores. Education/Advocacy ( $B = .36$ ,  $SE = .33$ , 95% CI [-0.30, 1.02]), Resistance ( $B = -.41$ ,  $SE = .43$ , 95% CI [-1.25, .43]), Drugs/Alcohol Use ( $B = -.01$ ,  $SE = .42$ , 95% CI [-0.84, .82]), and Internalization ( $B = -.46$ ,  $SE = .33$ , 95% CI [-1.11, .20]) did not significantly mediate the association between racial microaggressions and mental health in Black college students. Thus,

the results do not indicate that racial microaggressions influenced mental health through Education/Advocacy, Resistance, Drugs/Alcohol Use, or Internalization.

To test Hypothesis 4, another mediation analysis was run to assess the association between racial microaggressions, coping strategies, and physical health. Education/Advocacy ( $B = .31$ ,  $SE = .26$ , 95% CI  $[-.20, .82]$ ), Resistance ( $B = -.33$ ,  $SE = .32$ , 95% CI  $[-.96, .31]$ ), Drugs/Alcohol Use ( $B = .04$ ,  $SE = .32$ , 95% CI  $[-.60, .68]$ ), Internalization ( $B = -.36$ ,  $SE = .25$ , 95% CI  $[-.85, .13]$ ), and Detachment ( $B = -.02$ ,  $SE = .32$ , 95% CI  $[-.65, .61]$ ) did not significantly mediate the association between racial microaggressions and physical health in Black college students. Thus, there was no evidence highlighting an indirect effect between racial microaggressions and physical health through any of the coping strategies.

### **Discussion**

The purpose of this study was to assess the relation between racial microaggressions in higher education, coping strategies, and health outcomes among Black college students attending a historically white university. This study is one of the first quantitative studies to investigate the link between racial microaggressions in higher education, coping strategies, and health outcomes among Black college students.

Findings from a multiple regression analysis indicated that racial microaggressions were significantly and negatively associated with mental health, affirming study hypothesis one. In other words, experiencing a greater frequency of racial microaggressions was directly associated with lower mental health quality among Black college students. This result is supported by previous literature that highlights the association between racial microaggressions and mental health outcomes among students of color (Mazzula & Campón, 2018; O'Keefe et al., 2015; Nadal et al., 2014). The current study adds to the existing literature that highlights the negative

association between racial microaggressions and mental health. Given the harmful nature of racial microaggressions, it is reasonable to infer that racial microaggressions would be harmful to Black college students' mental health. Although there is a large body of research on the qualitative racial microaggression experiences of Black college students, the current study contributes to the body of quantitative research on the association between racial microaggressions and mental health quality for Black college students, specifically Black students at a historically white university.

The second hypothesis investigated whether higher levels of racial microaggressions were associated with lower physical health quality in Black college students. Findings from a linear regression analysis indicated that racial microaggressions significantly predicted physical health. Specifically, experiencing a greater frequency of racial microaggressions was associated with lower physical health quality among Black college students. There is limited research highlighting the association between racial microaggressions and Black college students' physical health. However, the current study elucidates this association between racial microaggressions and Black college students' physical health. It is reasonable to posit that racial microaggressions are connected to the physical health quality of Black college students given that Sue et al. (2019) acknowledged that people of color who endure racial microaggressions may endure negative physical health impacts. Considering that people who experience racial microaggressions daily may experience increased levels of stress, it is plausible that the increased levels of stress may translate to negative physical health quality. While these findings are supported by prior research that highlights the association between racial microaggressions and physical health outcomes among BIPOC individuals (Chae & Walters, 2009; Anderson & Finch, 2017), there is a gap in empirical research focused on racial microaggressions and

physical health outcomes among Black college students. Therefore, this study serves as an early step in disseminating knowledge about the link between racial microaggressions and Black college students' physical health.

Another integral part of this study was assessing the potential mediating role of coping strategies in the association between racial microaggressions and health outcomes in Black college students. Our third hypothesis stated that coping strategies would mediate the positive association between racial microaggressions and mental health quality in Black college students, such that racial microaggressions would significantly and positively relate to higher levels of disengagement coping strategies (Internalization, Detachment, and Drug/Alcohol Use), which would relate to lower mental health scores. Additionally, it was hypothesized that racial microaggressions would significantly and positively relate to higher levels of engagement coping strategies (Education/Advocacy and Resistance), which would relate to greater mental health quality. This hypothesis was partially supported, as the results revealed that racial microaggressions had an indirect effect on mental health through Detachment coping. Racial microaggressions was significantly associated with all coping strategies; however, only Detachment coping was in turn, significantly associated with lower mental health quality, which highlights the negative impact of this specific disengagement coping strategy. This finding aligns with prior research that has found disengagement coping strategies to mediate the link between gendered racial microaggressions and mental health for Black women (Lewis et al., 2017) and between racism and distress for Black populations more broadly (Utsey et al., 2000). Specifically, the significant finding that detachment coping served as a significant mediator in the association between racial microaggressions and Black college students' mental health was expected, as the current research that draws the connection between Black populations, avoidant

coping strategies, and mental health outcomes, affirms this finding (Szymanski & Obri, 2011; Utsey et al., 2000). One possible reason for these findings can be explained through the concept of self-protective coping, which refers to the way that Black women make intentional decisions to disengage from stressors, such as gendered racial microaggressions (Lewis et al., 2013; Moody et al., 2023), as a form of coping. Although previous research has categorized detachment coping as passive, previous research has stated that Black women report making intentional decisions to disengage from situations that may put them in harm's way of microaggressions. It is possible that the detachment coping style was significant in this study because Black college students might be intentionally choosing to disengage from these daily life stressors. While it is encouraged to utilize engagement coping strategies when enduring racial microaggressions, dealing with the effects of racial microaggressions requires energy from the target of racial microaggressions (Sanchez et al., 2018). Therefore, it is possible that Black college students might resort to detachment coping because of the extra energy that is required to face the impact of the microaggressions. Although Black college students may possibly use detachment coping to conserve their energy, this study informs us of the harmful results associated with using this form of disengagement coping.

Contrary to the third research hypothesis, this study did not find support for the potential mediating role of other disengagement coping strategies (Internalization, Drugs/Alcohol Use) or engagement coping strategies (Education/Advocacy and Resistance). There are limited empirical studies that highlight the link between racial microaggressions, drugs and alcohol use, and mental health outcomes. However, there is research that has found a connection between increased experiences with racial discrimination and increased substance use among Black individuals (e.g., Gibbons et al., 2010; Landrine et al., 2006). Given that coping through

Drugs/Alcohol Use had the lowest mean ( $M = 1.61$ ) compared to the other coping strategies, it is possible that a link between racial microaggressions and mental health via Drugs/Alcohol Use was not established due to minimal use of this coping response in the current sample.

Contrary to our hypothesis, Internalization coping did not significantly mediate the association between racial microaggressions and mental health in Black college students. However, this finding was consistent with findings from another study that assessed Internalization coping as a potential mediator between heterosexist discrimination and PTSD symptoms (Bandermann & Szymanski, 2014). Specifically, results from Bandermann and Szymanski (2014) did not find that Internalization coping significantly mediated the heterosexist discrimination-PTSD symptoms link. However, given that other research explores how Internalization coping might mediate the link between racial microaggressions and the mental health of Black individuals, it warrants additional exploration (Jacob et al., 2023).

The fourth research hypothesis stated that coping strategies would mediate the positive association between racial microaggressions and physical health outcomes in Black college students, such that racial microaggressions would significantly and positively relate to higher levels of disengagement coping strategies (Internalization, Detachment, and Drug/Alcohol Use), which would relate to lower physical health scores. Additionally, it stated that racial microaggressions would significantly and positively relate to higher levels of engagement coping strategies (Engagement/Advocacy and Resistance), which would relate to higher physical health scores. Unfortunately, this hypothesis was not supported. However, it is worth noting that no coping strategy (disengagement or engagement), perfectly mediates the mental and physical effects of racism-related stress (Brondolo et al., 2009). The differing findings for mental and physical health can possibly be due to the complexity of using self-reported physical health

measures in research. When using self-reported physical health, recall and response-bias are additional variables that can impact the analysis of racial microaggressions and physical health quality (Prince et al., 2008). For this particular study, it is possible that there were no significant findings for all coping strategies when observing the association between racial microaggressions in higher education and Black college students' physical health because there were additional factors, such as culturally-specific coping strategies like Africultural coping, that could be considered. Given that coping responses may vary based on ethnic and racial groups, Black individuals might use Africultural coping and John Henryism (McDermott et al., 2022). Africultural coping behaviors encompass actions that resonate with the principles, beliefs, and traditions of an African-centered philosophy. These behaviors acknowledge spirituality, harmony, balance, collective group values, and the significance of rituals as fundamental elements within the personality structure of individuals of African heritage (Lewis-Coles & Constantine, 2006). Additionally, John Henryism, which is based on determinism and work ethic, is a coping strategy that is specific to African Americans (Blackmon et al., 2016; Hill & Hoggard, 2018). Previous research also indicates that students who report a lower usage of Africultural and cognitive/emotional debriefing coping strategies experience more race-based stress than those who report a higher usage of these coping strategies (Shahid et al., 2018). Although existing research confirms the significant role of engagement and disengagement coping strategies in mediating the association between various forms of microaggressions and health outcomes, this particular study did not provide support for these findings (Lewis et al., 2017; Szymanski & Lewis, 2016; Moody et al., 2023; Jacob et al., 2023).

### **Limitations and Future Directions**

While the current research proves to be impactful due to being one of the initial studies to examine racial microaggressions in higher education, coping strategies, and health outcomes for Black students, the study had some limitations. First, while the study's sample size of 155 participants had adequate power for the regression analyses conducted for this study, it did not have enough power for the mediation analyses. Additionally, the sample was only collected from one southeastern university, which raises concerns regarding its generalizability of the findings. Future research should try to collect a larger sample to ensure adequate power for the analyses. Also, it would be beneficial for future research to consider recruiting Black college students from various geographic regions to ensure generalizability and external validity. In addition, future research that focuses on racial microaggressions in higher education, coping strategies, and health outcomes in Black college students should consider recruiting at least 250 participants, as suggested by Schoemann et al. (2017) to have adequate power to detect significant mediation effects.

Another limitation of this study pertains to certain measures used to assess its variables. As the data was derived from a cross-sectional study, causation between racial microaggressions and health outcomes cannot be determined. Specifically, given the cross-sectional nature of the study, we are unable to conclude that racial microaggressions caused poor health outcomes. Furthermore, the Coping with Discrimination Scale is not without criticism (Wei et al., 2010). While this measure proved to be useful, it is a measure that focuses on how individuals cope with discrimination broadly. In other words, the scale does not specifically focus on coping with racial microaggressions. Future research may consider a measure that specifically focuses on coping with racial microaggressions. Another measure employed that posed a limitation for the study was the SF-12v12 (Ware et al., 1996). This scale is utilized to measure the general population's

overall quality of life. The scale does not measure specific types of mental health issues, such as depression and anxiety. Since the SF-12v2 is not designed to measure college student populations and specific types of mental health and physical health issues, the outcome measure may be limited in adequately assessing the mental and physical health of Black college students.

A final, yet important limitation of this study was the design of this study. In order to obtain adequate statistical power for the analysis involving five mediators, this study required more than 200 participants. If this study had more power, it is possible that it would have detected more significant results within the mediation analysis (Goulet & Cousineau, 2019). Future research might consider having more participants and/or using a smaller number of mediators to detect more significant results.

### **Clinical Implications**

Given the rise in racism on historically white university campuses, it is increasingly important to identify the ways in which racial microaggressions are associated with Black college students' health (Briscoe, 2022; Williams et al., 2020; Lewis et al., 2021). Based on these findings, the current study has important implications for Black college students, counseling psychologists, and other mental health professionals working with Black college students. For Black college students attending Historically White Institutions, it may be helpful for them to receive adequate support from higher education as they matriculate through these predominantly white spaces. While Historically White Institutions may be unable to completely eradicate racism from their campuses, they may be able to train their faculty and staff, and provide antiracist instruction to their students to mitigate racial microaggressions on college campuses. As practitioners working with Black college students, it can be beneficial to become aware of the various racial microaggressions that exist within higher education— such as invisibility

microaggressions, microinsults, and intellectual inferiority microaggressions— to effectively support and empower Black college students in addressing these experiences (Lewis et al., 2021). Additionally, it may be useful for non-Black clinicians to unlearn their conscious and unconscious biases when working with Black college students, as this can negatively impact the therapeutic alliance (Sue et al., 2007).

It may also be important for clinicians to be more aware of the various engagement coping and disengagement coping strategies Black college students may use. Research has found that Detachment coping may be used to explain the link between microaggressions and mental health for Black women broadly (Szymanski & Lewis, 2016). Similarly, detachment coping may be utilized as a protective strategy but does not yield positive results among Black college students. This study's findings established that Black college students who used a Detachment coping strategy experienced lower mental health quality. Therefore, it can be advantageous for clinicians to increase their knowledge of racial microaggressions and coping styles so they can be proactive in their work with Black students. It might be helpful for clinicians to thoroughly discuss the racial microaggression experiences Black college students endure. Discussing these experiences, such as the event and the thoughts, feelings, and behaviors associated with the event can be advantageous. This can be useful for clinicians, as it provides them with a clearer understanding of how some Black college students cope with racial microaggressions. In turn, this knowledge can assist clinicians with helping Black college students recognize when they are utilizing detachment to cope with racial microaggressions. Prior research has found that Black individuals that utilize less Africultural coping styles experienced more race-based stress (Shahid et al., 2018). Hence, it may be beneficial for clinicians to also become aware of the Africultural coping styles (e.g., cognitive/emotional debriefing, spiritual-centered coping) that Black college

student populations might utilize so they can promote them in their clinical work with Black college students.

Finally, considering that coping strategies did not mediate the link between racial microaggressions and health outcomes, it is worth noting that Watts (2004) has encouraged the field of counseling psychology to reconsider coping and move toward a healing perspective (French et al., 2020). While coping promotes the idea of surviving in an oppressive society, healing promotes resistance, well-being, and a goal to thrive in society (French et al., 2020). According to the psychological framework for radical healing, healing begins when critical consciousness is developed among BIPOC individuals to resist racial trauma (French et al., 2020). Additionally, while coping centers an individualistic perspective on working with one's race-based stress, radical healing promotes a collectivistic understanding of one's oppression and healing (French et al., 2020). With that in mind, clinicians can consider promoting the *Keeping Radical Healing in Mind* therapeutic approach by creating a space for them and their clients to view the clients' concerns through a critical consciousness lens (Adames et al., 2023). Additionally, clinicians might consider utilizing empathic listening when tending to their clients' concerns and validate the anti-Blackness that may be affecting their personal issues. It is important for clinicians to assist their Black clients in cultivating techniques to recognize and resist self-blame when experiencing oppression, facilitate the imagination of better realities, and move toward psychological and sociopolitical liberation (Adames et al., 2023). These steps can be extremely useful in helping Black college students thrive in an oppressive society, including historically white universities (Briscoe, 2022; Williams et al., 2020; Lewis et al., 2021).

Given the frequency of racism-related experiences that occur on college campuses, it is unsurprising that racial microaggressions in higher education are significantly associated with

Black college students' overall health (Eschmann et al., 2021). Therefore, it is critical for future research to center the experiences of Black students and their health outcomes. Additionally, counseling psychologists and other mental health practitioners are encouraged to consider tangible steps they can take to curate potential interventions aimed at assisting Black students. Ultimately, adopting a more multicultural and racially conscious approach may significantly enhance the overall well-being of Black college students.

## **Appendix A**

### **Literature Review**

This literature review is presented in five sections: (1) theoretical models of racism, (2) empirical research on racism and mental health, (3) empirical research on racism and physical health, (4) racial microaggressions, and (5) coping with racism-related stress. The review discusses the biopsychosocial model of racism (Clark et al., 1999) and the multidimensional model of racism-related stress (Harrell, 2000) to a rationale for why it is important to study racial microaggressions and their impact on Black college students, along with the necessity for testing coping as a mediator in this association. The following section points to the current literature's stance on racism and racial microaggressions and their health outcomes, such as mental and physical well-being. The final section of the literature review examines the approaches used in assessing coping mechanisms within the literature and their application in racially motivated situations.

#### **Theoretical Models of Racism**

Clark et al. (1999) developed a biopsychosocial model to explain the physiological and psychological effects of racism. This model highlights how moderating variables can affect the impact of environmental stimuli on African Americans, specifically in regard to their health outcomes. These moderators include constitutional factors, sociodemographic factors, and psychological and behavioral factors. A constitutional factor, such as skin tone, can influence negative health outcomes in African Americans due to racial discrimination associated with darker skin tones (Clark et al., 1999). A sociodemographic factor, however, can be socioeconomic status. African Americans with a lower socioeconomic status tend to be exposed to greater negative health outcomes in comparison to African Americans with a higher

socioeconomic status and other ethnic groups. Additionally, in comparison to their white counterparts, African Americans engage in more coping strategies in response to their exposures to racism. Due to the lack of resources available to African Americans with lower socioeconomic status, this can lead to serious negative health outcomes for this group. Lastly, psychological and behavioral factors that can influence African Americans' response to environmental stimuli may include self-esteem, Type A behavior, and obsessive-compulsive disorder (Clark et al., 1999).

The biopsychosocial model also points to mediating variables that may explain the relationship between environmental stimuli and African Americans' health outcomes. The mediating variables outlined in this model include racism as a perceived stressor and coping responses. Racism as a perceived stressor include racist incidents that are objectively and subjectively viewed as racist. Specifically, if a white person has a set of beliefs that a Black person considers to be racist, the perceived racism may be used to account for the relationship between environmental stimuli, and physiological and psychological responses to racism. Additionally, coping responses can be seen as a mediating variable within the biopsychosocial model. It is understood that African Americans' responses to any stressful stimuli will vary based on the individual's coping responses (Clark et al., 1999). Furthermore, if one's coping response is maladaptive and does not lessen the effect of a stress response, it may cause negative effects to one's health. Alternatively, if one's coping response is adaptive it is expected to reduce the impact of a stress response. This theoretical model contributes to the rationale of the current study as it provides an in-depth understanding of racism being a chronic stressor. It helps elucidate the connection between coping mechanisms employed by African Americans and their association with adverse physiological and psychological outcomes. The current study sought to

establish a link between racial microaggressions, coping strategies, and health outcomes in Black college students.

Harrell (2000) designed a model that highlighted the association between racism-related stress and well-being. This model includes multiple variables that were incorporated within the association between racism and well-being. The antecedent variables were used to offer context to an individual's personal development. An antecedent variable can be person factors, such as race/ethnicity, age, gender, physical characteristics, etc. Socio-environmental factors also serve as an antecedent variable. These factors can include socioeconomic status, regional location, current sociopolitical context, etc. The model also highlights sources of stress that include identity-based stressors, such as racism-related stress, sexism, and classism. Additionally, the model includes generic stressors, such as major life transitions.

Internal and external mediators are also identified within the model, and these variables explain the impact of racism on psychological, behavioral, and physical outcomes. The internal mediators are important to recognize due to their ability to support the well-being of the individual and serve as protective factors. External mediators, such as external resources, are important to consider given the impact social and community support can have on an individual experiencing racism-related stress. These mediators have the potential to affect the outcomes of racism-related stress, which include physical, psychological, social, functional, and spiritual outcomes. Overall, this model highlights the importance of understanding racism as an additional stressor for people of color and how it can affect an individual on multiple levels. The multidimensional model served as a foundation for the current study as it highlights the impact of daily racial microstressors, or racial microaggressions, on psychological well-being. The model explains how these subtle forms of racism can produce additional stress to Black

individuals, which supports the primary aim of this study, which is to explore the association between racial microaggressions and physical and mental health outcomes of Black college students.

The biopsychosocial model of racism (Clark et al., 1999) and the multidimensional conceptualization of racism-related stress (Harrell, 2000) provides the current study with a strong foundation and a need to apply these theories to Black college students and their experiences with racial microaggressions. Harrell (2000) posits that there is an association between racism-related stress and the well-being of people of color. Her model accounts for the variety of variables that can contribute to the impact of racism on a person of color's overall well-being. Furthermore, Clark et al. (1999) provides a theoretical rationale for the current study on how coping can mediate the association between experiences of racial microaggressions on the mental and physical health of Black college students. This theory highlights how positive or negative coping responses can mediate the effects of racism on Black people. Therefore, the aim of this study is to employ the biopsychosocial model of racism and the multidimensional model of racism-related stress by investigating the association between racial microaggressions and mental and physical health among Black college students. In addition, this study will analyze the mediating role of coping strategies within this association.

### **Empirical Research on Racism and Mental Health**

There are a number of studies that have found an association between experiences of racism and mental health. Pascoe and Smart Richman (2009) conducted a meta-analysis that found perceived discrimination was related to mental health outcomes, including depressive symptoms, stress, and general well-being. Furthermore, Lee and Ahn (2011) established an association between racial discrimination and increased levels of anxiety and depression among

Asian populations. Williams and Mohammed (2009) also found an established association between discrimination and negative mental health outcomes, along with an association between perceived discrimination and changes in mental health symptoms over time.

Most of the empirical research on racism and health has found that although racism is significantly associated with poorer physical health, the association has been strongest with mental health status (Williams et al., 2003). For example, Pieterse et al. (2012) noted that Black individuals living in the United States report having experienced more racist incidents than other communities of color. This meta-analysis found Black Americans exposed to racism experience negative mental health outcomes. Specifically, greater exposure to racism and the higher stressfulness of the racist incident was associated with increased psychological distress. Pieterse et al. (2012) also found that the effects of general distress and psychiatric symptoms were stronger than the effects of self-esteem and life satisfaction. The results of this meta-analysis provide further support for the impact of racism on mental health for Black Americans. While the aforementioned studies focused on the mental health impact of racism, the current study extends the research by focusing on the mental health impact of subtle forms of racism.

Lambert et al. (2013) posits that racial discrimination experienced by younger Black populations may trigger internalized racist messages and maladaptive beliefs that are rooted in perfectionism. The researchers sought to explain the link between racial discrimination and depressive symptoms for Black adolescents, which may be perfectionism. They found that Black youth's experiences with racial discrimination were connected to the perfectionist beliefs that were birthed a year later. The literature is pointing to the unique experiences that Black adolescents and emerging Black adult populations face, and how their experiences can be tainted with harsh occurrences of racial discrimination. Current research also supports that these

experiences can lead to depressive symptoms within these populations (Lambert et al., 2013). For example, Pachter et al. (2017) found that discrimination is consistently experienced by African American and Afro-Caribbean youth. Unsurprisingly, the study also found that discriminatory incidences were linked with high levels of major depression and anxiety. Recent literature alludes to younger populations of color, including Black emerging adults, facing high levels of racial discrimination while also enduring the negative health outcomes associated with the discrimination. Henceforth, discrimination should be evaluated as a stressor for studies assessing health outcomes for communities of color. Given the current literature finding a connection between racism and mental health, the current study expands upon the existing body of literature by focusing on racial microaggressions and mental health of Black college students.

### **Empirical Research on Racism and Physical Health**

There have been a myriad of studies establishing the association between racism and health. Pascoe and Smart Richman's (2009) meta-analytic review highlighted the relationship between perceived discrimination and poor physical and mental health. Williams and Mohammed (2009) also discuss the connection between discrimination and cardiovascular disease, along with discrimination and blood pressure. Similarly, Ryan et al. (2006) found a relationship between discrimination and systolic blood pressure within the African American, Black immigrant, and Latinx immigrant adult populations in New Hampshire. Davis et al. (2005) also found a relationship between increased hypertension risk and heightened levels of stress because of discrimination. While these studies contributed to the literature by highlighting the connection between racism and physical health for people of color, including Black and Brown adult populations, the current study extends the research by solely focusing on Black college

students and their experiences with racial microaggressions and their associations with physical health outcomes.

Barajas and colleagues (2019) found that African American men within their sample were positively influenced by John Henryism and negatively influenced by racist and discriminatory experiences. John Henryism was related to decreased systolic blood pressure. It is important to note that consistent decreases in systolic blood pressure can cause dizziness, pale skin, blurred vision, fatigue, and depression (Barajas et al., 2019).

In 2020, the American Heart Association recognized that structural racism serves as a major underlying factor for racial health disparities, specifically as it pertains to cardiovascular disease (Mujahid et al., 2021). It is important to note that cardiovascular disease is the “leading cause” of death, and it serves as a major “source” of racial and ethnic health inequities in the United States (Mujahid et al., 2021). Mujahid et al. (2021) posits that structural racism significantly contributes to the risk of cardiovascular disease within communities of color. Specifically, they proposed redlining, which includes labeling an area with high populations of Black, economically disadvantaged, and immigrant residents as dangerous. Mujahid et al. (2021) found that there is a relationship between the Black individuals who resided in areas that have been consistently redlined and cardiovascular disease. Also, the researchers only found a link between redlining and cardiovascular health within their Black participants. This is especially noteworthy, considering Black individuals in the United States have the slowest recovery for cardiovascular disease and the highest mortality rate for cardiovascular disease when compared to other racial and ethnic groups. Mujahid et al. (2021) also highlighted that “HOLC risk grades” have a relationship with income inequality, residential segregation, and poverty. These outcomes are also risk factors for cardiovascular disease. Additionally, there is an association between

redlining and hospitalizations related to asthma and preterm birth. In other words, structural racism is negatively impacting the physical health and livelihood of its targeted population. While this study is valuable as it contributes to the literature on the connection between racism and physical health, its emphasis lies in exploring racial differences in experiences of racism rather than concentrating on a specific racial population. This study's findings provide more reasoning for the current study to focus on Black college students' experiences with racial microaggressions and physical health outcomes.

### **Racial Microaggressions**

Microaggressions are the day-to-day invalidations, insults, putdowns, slights, and offensive actions that are experienced by people of color (Sue et al., 2007). According to Sue et al. (2007), individuals who perpetuate these behaviors are generally "well-intentioned" and unaware of how their actions are racially offensive to racially minoritized groups.

Microaggression theory posits that these acts of discrimination can be categorized into various forms such as microinsults, microinvalidations, and microassaults (Sue et al., 2007). These forms of discrimination can occur on a spectrum that ranges from overt, intentional, and explicit to subtle, unintentional, and implicit. Microinsults can be defined as the way one's communication causes disrespect while degrading one's racial identity. While the perpetrator may be unaware of this form of discrimination, the target can receive the demeaning message tied to their racial background. Microinsults can also occur nonverbally. Furthermore, microinvalidations are defined forms of communication that dismiss and disregard the psychological thoughts, feelings, and lived experiences of people of color. Last, microassaults are a direct form of racial derogation classified by verbal and nonverbal acts with the goal of causing harm to the recipient. This can occur through name-calling, avoidant behavior, or deliberate discriminatory acts.

Racial microaggressions mirror the roots of cultural oppression communities of color have endured throughout the United States. Sue et al. (2019) provides more detail regarding microaggressions by explaining that they typically represent the historical injustices of people of color that were pushed by the government, accumulate over time while causing chronic stress that lasts throughout a lifetime, are never-ending for people of color, and serve as persistent reminders of people of color's place in society. Consequently, BIPOC individuals who endure daily racial microaggressions typically experience increased levels of stress in their lives (Sue et al., 2019).

Sue et al. (2019) also acknowledges that people of color who deal with microaggressions may experience decreased emotional well-being, deny their racialized experiences, endure negative feelings and depression, and suffer from physical impacts associated with the microaggressions. They also recognize that microaggressions may negatively affect the mental well-being of people of color, produce an unsafe work and campus environment for people of color, negatively impact work performance, and derail one's learning abilities.

### ***Impact on Mental Health***

Microaggressions have been found to affect the physical and mental health of people of color (Sue, 2010). In addition, research indicates that microaggressions also negatively impact the mental health and well-being of students of color (Mazzula & Campón, 2018). One study found a significant association between racial microaggressions and self-esteem among undergraduate students of color; specifically, more experiences of microaggressions were associated with lower levels of self-esteem (Nadal et al., 2014). In addition, O'Keefe et al. (2015) found a relationship between racial microaggressions and depressive symptoms for undergraduate students of color, which was also related to increased suicidal ideation. Blume et

al. (2012) also found an association between racial microaggressions and underage binge drinking and anxiety among undergraduate students of color. While racial microaggressions negatively impact all people of color, it is important to highlight that students of color, in particular, endure the effects of these demeaning acts, as highlighted by a substantial body of literature that identifies the repercussions of racial microaggressions on students of color. These studies provide data that elucidates the association between racial microaggressions and mental health for college students of color. However, this body of literature does not distinctly focus on the mental health impacts of racial microaggressions for Black college students. The current study seeks to extend the present literature by examining the association between racial microaggressions and health among Black college students.

Racial microaggressions have a significant impact on racial and ethnic groups in different ways. Eschmann et al. (2021) explored the contrasting effects of racial discrimination on depression among students of color. This study highlighted that there are five types of subtle experiences with racial discrimination/microaggressions: (1) classroom-based, or perceived discrimination or discomfort in the classroom; (2) microassaults, or verbal assaults; (3) discomfort, or perceived discomfort on campus because of race, (4) criminality, which refers to both being stopped by university police, and (5) refusal to acknowledge intra-racial differences. Black students experienced more classroom-based microaggressions and perceived discomfort on campus in comparison to Asian and Latinx students (Eschmann et al., 2021). This finding supports the current study's focus on Black college students, as the impacts of racial microaggressions may differ for Black college students.

The literature also highlights how racial microaggressions can cause a shift in the racial climate of a college campus. Solorzano et al. (2000) sought out to describe the ways racial

microaggressions impact campus racial climate, and how Black students respond to the racial microaggressions they experience on their campus. The participants of the study described their experiences with racial microaggressions within a classroom setting. Black students reported feeling invisible within their classrooms. Or, when they do feel visible their experiences as Black students tend to be distorted or stereotyped. Other students described knowing faculty members maintained low expectations of Black students, even if evidence proves otherwise (e.g., high exam scores). Some students noted the daily dose of racial microaggressions caused them to feel “drained” (Solorzano et al., 2000). In addition to experiencing racial microaggressions from faculty members, some of the participants recalled experiencing racial microaggressions from some of their peers. When having class conversations about affirmative action, some of the Black students learned that their white peers believed Black students were being admitted into their universities because of affirmative action. Additionally, the participants noted feeling unwanted when occupying some of the spaces on their campus, such as the library. Some students also noted the lenient rules applied to their white peers by campus police versus the strict rules endured by the Black students. Solorzano et al. (2000) also pointed out the effects of racial microaggressions. They highlighted how microaggressions can create a negative racial campus climate along with Black students experiencing feelings of frustration, isolation, and self-doubt. There was also a feeling of despondency felt among Black students, leading them to believe they could not exceed academically. In addition, Black students also reported feeling helpless, leading some students to make drastic decisions regarding their education, such as considering leaving the university (Solorzano et al., 2000). The current study seeks to extend this study by highlighting how racial microaggressions can impact the mental and physical health of Black college students.

### ***Impact on Physical Health***

We also know that racial microaggressions can negatively impact the health of people of color (Lewis et al., 2021). Williams et al. (2020) acknowledged how multiple studies established a relationship between racial microaggressions and negative physical health outcomes; specifically coronary heart disease, hypertension, higher body mass index, and hypothalamic-pituitary-adrenal axis dysfunction. While Greenfield et al. (2021) emphasized that discrimination is known to lead to high blood pressure, systemic inflammation, and early substance use, their study found that racial microaggressions was connected to the misuse of substances along with early substance use, physical impairment, pain, and diabetes-related stress among American Indian and Alaskan Native college students. Greenfield et al. (2021) found that the link between racial microaggressions, substance use, and lifetime drug use illustrates that racial microaggressions are connected to substance abuse. Walls et al. (2015) also found that racial microaggressions were related to self-reported history of heart attacks and hospitalization among American Indian adults diagnosed with Type II diabetes. Anderson and Finch (2017) found that racial microaggressions can also negatively impact the Latinx population. In this study, they found that individuals who identified as English-preference Latinos were more likely to endure physical stress symptoms due to perceived racism and racial microaggressions. Overall, the current literature highlights the ways racial microaggressions impact people of color mentally and physically. However, there is a dearth of quantitative research that assesses the association between racial microaggressions experienced by Black college students and their physical health outcomes. The current study aims to fill this gap by examining the association between racial microaggressions and physical health among Black college students.

## **Coping with Racism-related Stress**

Racism-related stress can be defined as an enduring race-related threat that negatively impacts the well-being of people of color (Harrell, 2000). More specifically, racism-related stress is “race-related transactions between individuals or groups and their environment that emerge from the dynamics of racism, and that are perceived to tax or exceed existing individual and collective resources or threaten well-being” (Harrell, 2000, p. 44). Harrell (2000) developed a model of racism-related stress to describe the varying types of racism-related stress. The first type is racism-related life events, which refers to particular life experiences. The second type is vicarious racism experiences, which may include witnessing and documenting racist experiences endured by other people of color. The third type of racism-related stress is daily microstressors—subtle insults and experiences with marginalization, such as microaggressions. The fourth type is chronic contextual stress, which is racism that permeates society on a social, systemic, and institutional level. The fifth type is collective experiences, which represents racism that is exhibited through cultural symbols and socio-political contexts. The last type of racism-related stress is transgenerational transmission. This type of racism-related stress refers to discussing and exploring important events throughout history.

While many communities of color endure racism-related stress, Black individuals experience persistent racism-related stress. This stress typically affects their long-term and short-term health (Williams & Mohammed, 2013; Williams et al., 2019). It is important to note that the current literature highlights the significance of examining how people of color cope with racism when analyzing their coping process (Clark et al., 1999; Harrell, 2000). Unfortunately, most coping measures were developed from a Eurocentric perspective and do not account for the fact

that communities of color value communal coping strategies (Hobfoll et al., 1994; Heppner et al., 2006).

On the other hand, general life stress refers to the adverse incidents that lead to significant levels of fatigue (López-Matos et al., 2021). Examples of general life stress include, but are not limited to, interpersonal conflicts at work, school, or with one's family and friends, death in the family, loss of a job, financial struggle, or a break-up (López-Matos et al., 2021). While general life stress is important and can negatively impact one's mental health, it is important to acknowledge the differences between general life stress and racism-related stress (López-Matos et al., 2021). The Minority Stress Model is a conceptual framework that provides knowledge regarding how various stress-related mechanisms related to a person of color's minority status may negatively impact their behavioral and mental health (Meyer, 1995). Specifically, adverse mental health outcomes are connected to high levels of minority stress – which is a form of stress distinctly endured by members of a minority group (Meyer, 2003). Buckner et al. (2022) hypothesized that Black individuals may participate in hazardous drinking to assuage the mental distress and psychological discomfort that result from discriminatory experiences. General life stress can negatively affect one's well-being. However, communities of color are at risk of enduring racism-related stress in addition to general life stress; and both of these forms of stress are known to negatively affect the overall health of a person of color (Meyer, 2003; López-Matos et al., 2022).

Lazarus (1966) provided an in-depth analysis of the facets associated with stress and coping. According to Lazarus, stress is made up of three processes- primary appraisal, secondary appraisal, and coping. The first process is primary appraisal, which is recognizing something as a possible danger to oneself. Secondary appraisal is when someone thinks of a prospective reaction

to the possible danger. Lastly, coping is the way someone carries out this prospective reaction. Lazarus & Folkman (1984) also provided a construct regarding stress and the coping process. The transactional model of stress and coping proposes that one's ability to deal with stress and cope with difficulties is determined by transactions that occur within their environment (Si et al., 2023).

Racism can be classified as a stressor that requires coping (Brondolo et al., 2009). However, there are various effects in which the targeted individual must cope with. The individual has to deal with the practical (thwarted possibilities, interpersonal problems, and social exclusion based on race) and the emotional repercussions (feelings associated with nervousness, sadness, anger, and hopelessness; Brondolo et al., 2009). People who deal with racism may also have to cope with indirect forms of racism, such as poverty and exposure to harmful environmental substances, along with direct and indirect racism that may affect other people within their racial group. Mellor's (2004) coping with racism model emphasizes the function of the coping strategy instead of the content. This model emphasizes the difference between coping strategies that are targeted toward the prevention of personal harm, such as acceptance and denial, and other strategies that are supposed to rectify, preempt, or penalize racism, (e.g., aggressive retaliation, assertiveness).

We know that Black people may utilize coping strategies that vary from the coping strategies that are typically associated with general life stress, such as the transactional model of stress and coping (Brown et al., 2011; Hoggard et al., 2012). As previously mentioned, coping is used as a response to stress, but the various strategies may evolve throughout time and change depending on the context of the stress (Jacob et al., 2023). According to Jacob et al. (2023), every Western nation holds an anti-Black belief system, which means that those who endure this

bias may require different forms of coping strategies than the ones used for general life stress. Lewis-Coles and Constantine (2006) conducted a study that focused on Africultural and religious coping in Black men and women. Their study found that greater levels of racism-related stress was associated with greater use of collective coping, higher levels of cognitive and emotional debriefing, and greater use of spiritual-centered coping (Jacob et al., 2023; Lewis-Coles & Constantine, 2006). While Black individuals may utilize the transactional model of stress and coping for some situations of racism-related stress, they may also utilize other forms of coping that are specific to anti-Black racism and their culture.

Overall, the current literature strongly suggests a correlation between racism, including racial microaggressions, and health outcomes. While studies have established the impact of coping strategies on altering this association, there remains an unexplored area: understanding how racial microaggressions affect the health outcomes of Black college students, particularly in relation to their coping mechanisms. Grounded in established models like The Biopsychosocial Model of Racism (Clark et al., 1999) and the Multidimensional Model of Racism-related Stress (Harrell, 2000), coping can serve as a mediator between racism and health outcomes in Black individuals and racial microaggressions can be a chronic stressor for people of color. Moreover, based on the racial microaggressions literature it is known that racial microaggressions can impact the mental and physical health of people of color. This includes diminished self-esteem, depressive symptoms, suicidal ideation, and heightened anxiety (Nadal et al., 2014; O'Keefe et al., 2015; Blume et al., 2012). Additionally, recent findings (Williams et al., 2020) associate racial microaggressions with significant health issues such as coronary heart disease, hypertension, increased body mass index, and disruptions in the hypothalamic-pituitary-adrenal axis. Furthermore, the literature highlights how coping with racism-related stress can be related

to the resulting outcomes experienced by people of color. Despite this, there's a dearth of literature linking Black college students' experiences with racial microaggressions, coping strategies, and resultant health outcomes. Hence, this study aims to fill this gap by establishing a link between experiences of racial microaggressions in higher education, coping strategies, and health outcomes among Black college students.

## Appendix B

### Abbreviated List of Measures

#### Coping with Discrimination Scale (Wei & Alvarez, 2010)

Directions: This is a list of strategies that some people use to deal with their experiences of discrimination. Please respond to the following items as honestly as possible to reflect how much each strategy best describes the ways you cope with discrimination. There are no right or wrong answers. Please respond to these items using six response options:

1 = Never like me

2 = A little like me

3 = Sometimes like me

4 = Often like me

5 = Usually like me

6 = Always like me

1. I try to educate people so that they are aware of discrimination.
2. I do not talk with others about my feelings.
3. I try to stop thinking about it by taking alcohol or drugs.
4. I respond by attacking others' ignorant beliefs.
5. I wonder if I did something to provoke this incident.
6. I educate myself to be better prepared to deal with discrimination.
7. I've stopped trying to do anything.
8. I use drugs or alcohol to take my mind off things.
9. I get into an argument with the person.
10. I wonder if I did something to offend others.

11. I try to stop discrimination at the societal level.
12. It's hard for me to seek emotional support from other people.
13. I do not use drugs or alcohol to help me forget about discrimination.
14. I do not directly challenge the person.
15. I wonder if I did something wrong.
16. I help people to be better prepared to deal with discrimination.
17. I do not have anyone to turn to for support.
18. I do not use alcohol or drugs to help me deal with it.
19. I try not to fight with the person who offended me.
20. I believe I may have triggered the incident.
21. I educate others about the negative impact of discrimination.
22. I have no idea what to do.
23. I use drugs or alcohol to numb my feelings.
24. I directly challenge the person who offended me.
25. I do not think that I caused this event to happen.

### **Demographics Form**

Directions: Please tell us about yourself by filling in or choosing the following information as completely as possible.

1. The high school I attended was:
  - Private
  - Public
2. What is your gender?

- Woman
  - Man
  - Transgender Woman
  - Transgender Man
  - Gender Non-Conforming
  - Other Please specify:
3. What is your age?
4. What was the first year of attendance at the University of Tennessee?
5. What is your academic status?
- Freshman
  - Sophomore
  - Junior
  - Senior
  - Masters
  - Doctoral
  - Professional Student (e.g. Law, medicine)
6. Which college are you in?
- Agricultural Sciences and Natural Resources
  - Architecture and Design
  - Arts and Sciences
  - Haslam College of Business
  - Communication and Information
  - Education, Health, and Human Sciences

- Engineering
- Law
- Nursing
- Social Work

7. What is your major?

8. Did/do you live in a Living and Learning Community?

- Yes
- No

Please specify:

9. Which dorm did you live in during your first year at the University of Tennessee?

- Hess Hall
- Massey Hall
- White Hall
- Orange Hall
- Laurel Hall
- Humes Hall
- Morrill Hall
- Reese Hall
- South Carrick Hall
- North Carrick
- Clement Hall
- Brown Hall
- Stokely Hall

- Andy Holt Hall
- Apartment Residence Hall
- Shelbourne Towers
- Other (e.g. graduate student)

10. Where do you currently live?

- Fraternity or sorority certified housing
- Residence hall/dorm
- Other campus approved/certified housing
- Off-campus housing
- With relatives

11. What is your family's combined income?

- \$0-\$50,000
- \$51,000-\$100,000
- \$101,000-\$150,000
- \$151,000-\$200,000
- \$201,000-\$250,000
- Above \$250,000

12. What is your family's current class background?

- Poor (For example, you receive welfare/TANF/relief or are employed without benefits, etc.)
- Working Class (For example, manual labor or clerical/administrative jobs, etc.)
- Middle Class (For example, a professional or technical job such as teacher, manager, accountant, social worker, small business owner, etc.)

- Upper Middle Class (For example, a high paying profession such as doctor, lawyer, engineer, etc.)
- Wealthy (For example, a CEO, manager/owner of a major financial institution or corporation, etc.)

**Think of this ladder as representing where people stand in the United States.**

At the **top** of the ladder are the people who are the best off – those who have the most money, the most education and the most respected jobs. At the **bottom** are the people who are the worst off – who have the least money, least education, and the least respected jobs or no job. The higher up you are on this ladder, the closer you are to the people at the very top; the lower you are, the closer you are to the people at the very bottom.

**Where would you place yourself on this ladder?**

Please place a large "X" on the rung where you think you stand at this time in your life, relative to other people in the United States.



13. Referencing the above image, please select the answer choice that best represents where you think you stand at this time in your life, relative to other people in the United States.
- 1st rung (top)
  - 2nd rung
  - 3rd rung
  - 4th rung
  - 5th rung
  - 6th rung

- 7th rung
- 8th rung
- 9th rung
- 10th rung (bottom)

**Think of this ladder as representing where people stand in their communities.**

People define community in different ways; please define it in whatever way is most meaningful to you. At the **top** of the ladder are the people who have the highest standing in their community. At the **bottom** are the people who have the lowest standing in their community.

**Where would you place yourself on this ladder?**

Please place a large "X" on the rung where you think you stand at this time in your life, relative to other people in your community.



14. Referencing the above image, please select the answer choice that best represents where you think you stand at this time in your life, relative to other people in your community.

- 1st rung (top)
- 2nd rung
- 3rd rung
- 4th rung
- 5th rung
- 6th rung

- 7th rung
- 8th rung
- 9th rung
- 10th rung (bottom)

15. Are you a first generation college student?

- Yes
- No

16. Please indicate Parent/Guardian 1's education level:

- Advanced/Professional Degree (e.g Ph.D., MD, JD)
- Master's Degree
- Bachelor's Degree
- Associate's/Technical Degree
- High school or less than high school

17. Please indicate Parent/Guardian 2's education level:

- Advanced/Professional Degree (e.g. Ph.D., MD, JD)
- Master's Degree
- Bachelor's Degree
- Associate's/Technical Degree
- High school or less than high school
- I don't know

18. Do your parents/guardians currently own their own home?

- Yes
- No

19. Which best describes your political orientation?

- Very conservative
- Conservative
- Moderate
- Liberal
- Very liberal
- Undecided
- Other Please specify:

20. What political party do you most strongly identify with?

- Democrat
- Republican
- Green
- Independent
- Undecided
- Other Please specify:

21. Currently, how spiritual are you?

- Not at all spiritual
- A little spiritual
- Somewhat spiritual
- Very spiritual

22. Do you identify as agnostic?

- Yes
- No

23. Which religion or spiritual beliefs do you identify with?

- Christian/Catholic
- Protestant
- Muslim
- Hindu
- Jewish
- Buddhist
- Atheist
- None/I don't know

**Table 1***Linear Regression Analyses Examining RMHE as a Predictor of Mental Health*

Predictor Variable	Outcome Variable	<i>B</i>	$\beta$	<i>t</i>	<i>R</i> <sup>2</sup>	<i>F</i>	<i>Df</i>
RMHE	Mental Health	-.10	-.35	-4.48	.15	12.71***	(2, 148)

*Note.* *B* and *t* values reflect values from the final regression equation. RMHE = racial microaggressions in higher education. \*\*  $p < .01$ . \*\*\*  $p < .001$ .

**Table 2***Linear Regression Analyses Examining RMHE as a Predictor of Physical Health*

Predictor Variable	Outcome Variable	<i>B</i>	<i>B</i>	<i>t</i>	<i>R</i> <sup>2</sup>	<i>F</i>	<i>df</i>
RMHE	Physical Health	-.04	-.21	-2.7	.05	7.29**	(1, 152)

*Note.* *B* and *t* values reflect values from the final regression equation. RMHE = racial microaggressions in higher education. \*\*  $p < .01$ . \*\*\*  $p < .001$ .

**Table 3***Direct and Indirect Effects of RMHE on Mental Health Through Coping Strategies*

Variable	Coefficient		95% CI	
	B	SE	Lower	Upper
<b>Mental Health</b>				
RMHE	-.07	.02	-.12	-.02
Education/Advocacy	.01	.01	-.01	.02
Resistance	-.01	.01	-.03	.01
Detachment	-.03	.01	-.05	-.01
Drugs/Alcohol Use	-.00	.01	-.01	.01
Internalization	-.01	.01	-.02	.00

*Note.* B and t values reflect values from the final regression equation. RMHE = racial microaggressions in higher education. \*\*  $p < .01$ . \*\*\*  $p < .001$ .

**Table 4***Direct and Indirect Effects of RMHE on Physical Health Through Coping Strategies*

Variable	Coefficient		95% CI	
	B	SE	Lower	Upper
Physical Health				
RMHE	-.04	.02	-.08	-.00
Education/Advocacy	.01	.00	-.00	.02
Resistance	-.00	.01	-.02	.01
Detachment	-.00	.01	-.01	.01
Drugs/Alcohol Use	.00	.00	-.01	.01
Internalization	-.01	.01	-.02	.00

*Note.* B and t values reflect values from the final regression equation. RMHE = racial microaggressions in higher education. \*\*  $p < .01$ . \*\*\*  $p < .001$ .

**Table 5***Demographic Characteristics of Sample*

Characteristics	n	%	M	SD
<b>Gender</b>				
Cisgender Woman	102	65.8		
Cisgender Man	49	31.6		
Transgender Woman	1	.6		
Other	1	.6		
<b>Class year</b>				
Freshman	20	12.9		
Sophomore	22	14.2		
Junior	23	14.8		
Senior	36	14.2		
Masters	24	15.5		
Doctoral	23	14.8		
Professional	4	2.6		
<b>Age range</b>				
18 – 24	107	69	24.91	8.52
25 – 49	40	25.5	24.91	8.52
50 or older	4	2.4	24.91	8.52
<b>Household income</b>				
\$0 – \$50,000	49	31.6		
\$51,000 – \$100,000	53	34.2		
\$101,000 – \$150,000	22	14.2		
\$151,000 – \$200,000	14	9		
\$201,000 – \$250,000	3	1.9		
Above \$251,000	4	2.6		

*Note.*  $N = 155$

**Table 6***Intercorrelations, Means, Standard Deviations, and Cronbach  $\alpha$ 's for Study Variables*

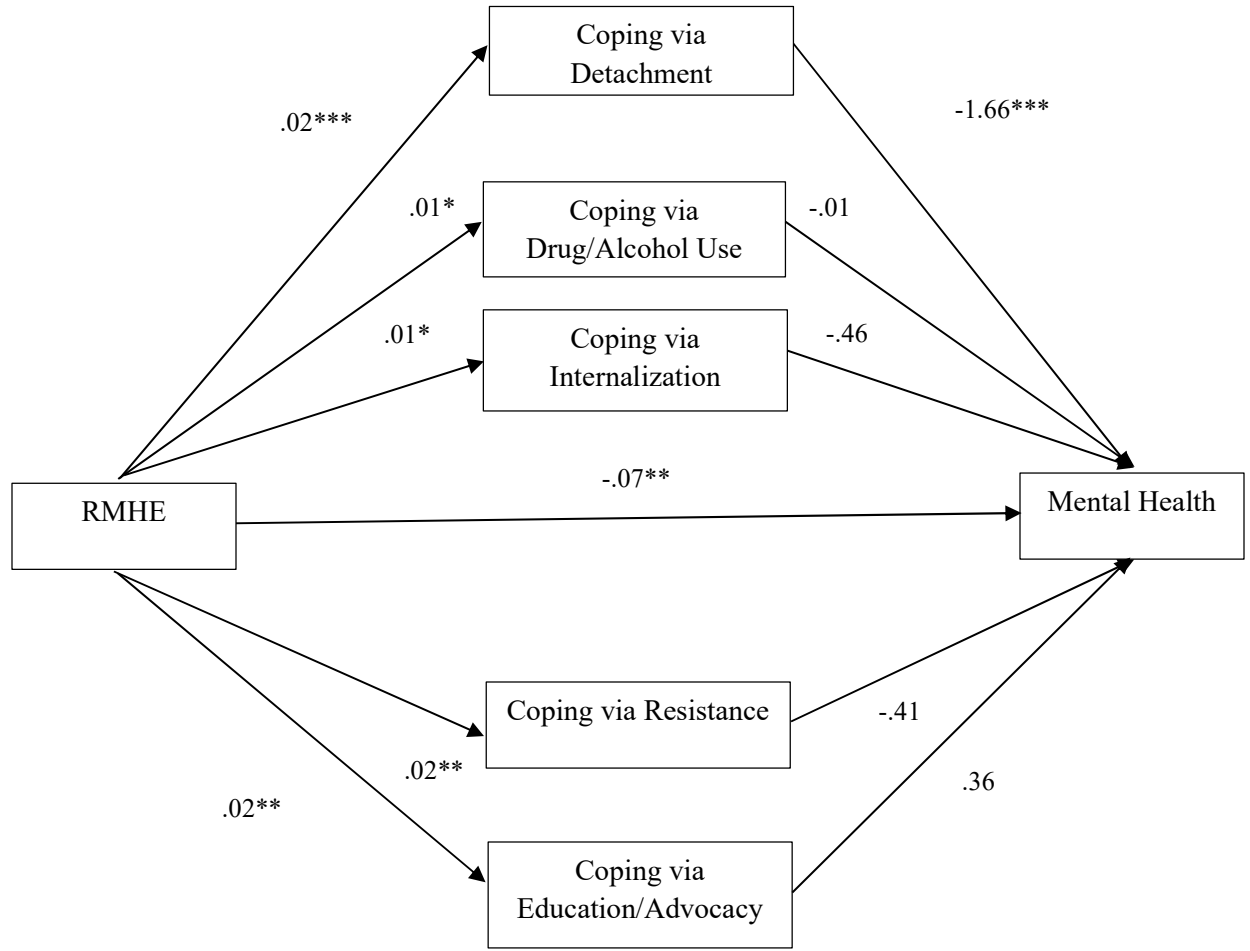
Variable	1	2	3	4	5	6	7	M	SD	Cronbach's $\alpha$
1. RMHE	—							22.68	16.71	.94
2. Mental Health Quality	-.371***	—						21.59	4.83	.85
3. Physical Health Quality	-.214**	.520***	—					22.35	3.31	.73
4. Education/Advocacy	.223**	.086	.025	—				3.69	1.24	.88
5. Resistance	.200*	-.012	-.080	.438***	—			2.65	1.00	.76
6. Detachment	.292***	-.441***	-.101	-.275***	-.201*	—		2.44	.97	.68
7. Drugs/Alcohol	.149	-.105	-.057	-.041	.250**	.121	—	1.61	.90	.80
8. Internalization	.202	-.212**	-.153	.032	-.041	.232**	.112	2.14	1.14	.86

*Note.* RMHE = Racial Microaggressions in Higher Education.

Education/Advocacy, Drug/Alcohol Use, Internalization, Resistance, and Detachment are subscales of the Coping with Discrimination Scale (CDS).

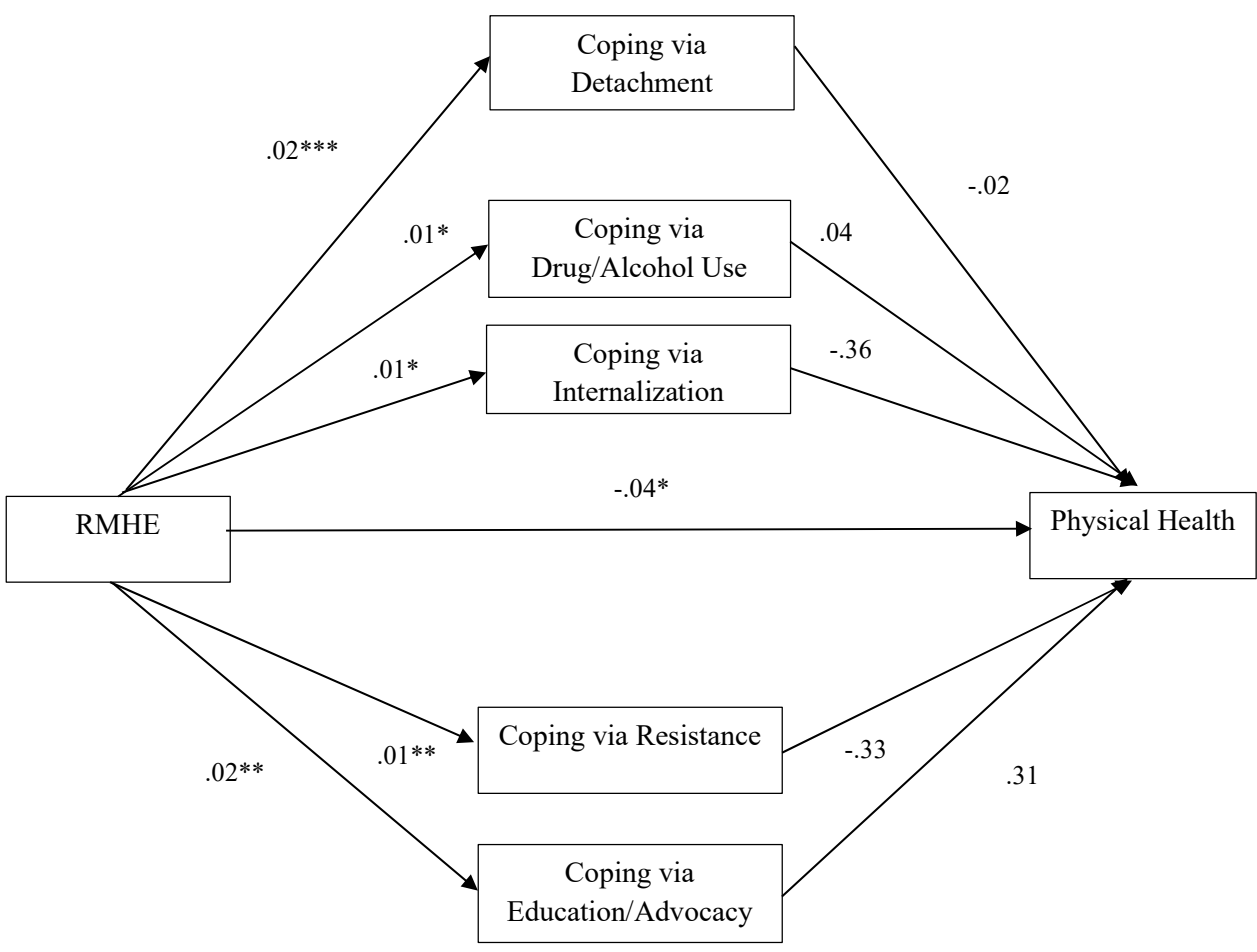
\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$

**Figure 1.** Results of the Mediation Analyses Highlighting Direct and Indirect Effects of RMHE and Mental Health.



*Note.*  $*p < .05$ .  $**p < .01$ .  $***p < .001$ . Coefficients represent standardized values. RMHE = racial microaggressions in higher education

**Figure 2.** Results of the Mediation Analyses Highlighting Direct and Indirect Effects of RMHE and Physical Health.



*Note.*  $*p < .05$ .  $**p < .01$ .  $***p < .001$ . Coefficients represent standardized values. RMHE = racial microaggressions in higher education

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