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Racial Microaggressions and Health Status: The Moderating Effect of Emotion Regulation

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RACIAL MICROAGGRESSIONS AND HEALTH STATUS: THE MODERATING EFFECT

OF EMOTION REGULATION

by

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Abstract

RACIAL MICROAGGRESSIONS AND HEALTH STATUS: THE MODERATING ROLE OF

EMOTION REGULATION

By

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The current study seeks to explore the relationship between racial microaggressions and physical and mental health. Significant racial disparities in health status persist in the United States (U.S. Department of Health and Human Services, 2013). Previous research asserts that racial discrimination negatively impacts physical health (Williams, Neighbors, & Jackson, 2003), and studies of subtle discrimination support an inverse relationship with mental health (Borrell et al., 2006). The immediate process following the commission of a microaggression and the target's internal response may have significant consequences for physical and mental health. The purpose of the current study is twofold: (1) to examine the initial internal process of experiencing a microaggression immediately following its commission, and (2) to examine emotion regulation as a potential moderator of the relationship between racial microaggressions and physical and mental health outcomes. Study 1 ($N = 207$) involved a qualitative and quantitative exploration of the immediate reaction to an ambiguous microaggressive scenario, finding that certain cognitive, emotional, and behavioral responses were correlated with previous experience with microaggressions (e.g., anger, normalization, and disengagement were positively correlated with reporting higher rates of prior experience with microaggressions). Study 2 ($N = 248$) utilized a path analysis to examine different emotion regulation strategies and their relationship to racial microaggressions and health status. Racial microaggressions were found to be negatively

associated with 7 of 8 health outcomes assessed, and path analysis indicated that suppression was

associated poorer health outcomes. Implications for microaggression theory, education,

intergroup relations, and clinical work are discussed.

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Dedication

This dissertation is dedicated to my nephews Carmelo, Winferd, and Patrick, and the better, safer world I hope to help build for them.

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CHAPTER 1: INTRODUCTION

There is a long and complicated history of racial inequality and discrimination in the United States. Though the Civil Rights Act passed in 1964 established equal rights amongst individuals from diverse racial and ethnic backgrounds and made some forms of discrimination illegal on federal, state, and local levels, significant disparities still persist today (Foster, 2005). Inequalities in a number of arenas, including but not limited to wealth and socioeconomic status, education, healthcare, the criminal justice system, and number of people in positions of power highlight the need for improvement and continued attention.

Potentially one of the most pervasive and damaging areas in which disparities exist is racial differences in health. The Centers for Disease Control and Prevention (U.S. Department of Health and Human Services, 2013) recently released a report on health disparities and inequalities in the United States, ultimately concluding that racial disparities in the 29 areas of health covered in the report had persisted over the past 10 years. CDC (U.S. Department of Health and Human Services, 2013) findings include the following:

- The percentage of adults who self-reported their health as "poor" was significantly higher for Black (23.3%), Hispanic (28.1%), and American Indian/Alaska Native (30.8%) populations when compared to White non-Hispanic populations (13.3%).
- The average number of *physically* unhealthy days was statistically significantly higher for people of Black, Hispanic, and American Indian/Alaska Native heritage when compared to Whites, while Asian/Pacific Islanders reported significantly less physically unhealthy days. The average number of *mentally* unhealthy days followed the same pattern.

- On average, people in the United States population are expected to not have limitations on their activity due to a chronic health condition (i.e., be able-bodied) for 66.2 years of their entire life. The racial gap has decreased by approximately one year in the last 10 years, but significant disparities persist between those who are White (67.0 years) and those who are Black (61.1 years).

- Age-standardized prevalence rates of diabetes indicate higher rates in mixed race (14.0%), Hispanic (11.5%) and Black (11.3%) adults when compared with White non-Hispanic (6.8%) and Asian (7.9%) adults.

- Black non-Hispanic adults (41.3%) have significantly higher rates of hypertension when compared to White (28.6%) and Hispanic (27.7%) adults.

- After adjustments for age, the death rate per 100,000 people from stroke and coronary heart disease was higher in non-Hispanic Black adults (141.3) than any other race or ethnicity.

Further, Black and Hispanic adults are significantly more likely to not have health insurance than White or Asian/Pacific Islander adults (U.S. Department of Health and Human Services, 2013). A study on the economic burden of health disparities in the United States estimated that from 2003-2006, 30.6% of direct medical expenses for racial minority individuals were surplus costs associated with health disparities, and that eliminating health disparities altogether would have reduced medical expenditures in the United States by $229.4 billion (LaVeist, Gaskin, & Richard, 2009).

Socioeconomic status (SES) has long been cited as a significant contributor to racial health disparities (Winkleby et al., 1992). Further, SES and social status more broadly defined are known to have complex relationships to health – low income has a relationship to health, but

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other factors such as relative income/economic deprivation, lack of integration into society or poor social support, and cultural beliefs around money are involved as well (Marmot, 2004). The overlap between race and low SES as it relates to health status raised questions regarding whether racial differences are largely attributable to underlying SES differences (Farmer & Ferraro, 2005; LaVeist, 2005). While race and SES have been found to be highly correlated, they have each been found to independently contribute to health disparities – which persist even after SES is controlled for (LaVeist, 2005).

These health disparities are evidence of a larger systemic and cultural problem. While there are a number of factors relevant to health disparities, it has been suggested that racial discrimination is likely a largely overlooked factor in racial disparities in health (Williams, Neighbors, and Jackson, 2003). Racism is posited to impede access to the services and good necessary to support a healthful life, provoke psychological and physiological stress responses in targets of discrimination, and arouse the need to utilize potentially unhealthy coping strategies that may also have implications for health (Pascoe & Richman, 2009; Williams & Mohammed, 2009; Williams, Neighbors, & Jackson, 2003). One problem that these studies fail to address is the changing dynamics within the United States – the decline of "old fashioned" racism and the rise of more understated, modern racial discrimination.

The traditional vision of discrimination evoked by the word "racism" is less common in contemporary society, and the majority of legalized discrimination has been abolished. The "Little Rock Nine" and Emmett Till may be names that are relegated to the past, but they do have their modern day counterparts. Though some may believe that the election of President Barack Obama is proof of a post-racial United States, researchers have suggested that a more

subtle and covert style of discrimination still exists and maintains these disparities (Dovidio &

Gaertner, 2000; Foster, 2005; Nadal, 2011; Solórzano, Ceja, & Yosso, 2000; Sue et al., 2007).

Events from recent history illustrate the capacity for these more subtle forms of

discrimination to result in catastrophic harm. In 1999, Amadou Diallo, a Black immigrant, was

shot and killed by four New York City police officers after reaching into his pocket to get his

wallet, which was mistaken for a firearm. Research has since shown a racial bias in the

misperception of weapons in split-second decisions (Payne, 2001). Trayvon Martin, a 17 year old

Black student, was followed, shot and killed by a neighborhood watch coordinator who wrongly

suspected the teenager was involved in criminal activity while walking home in a gated Florida

community in 2012. The perpetrators of the crimes against Amadou Diallo, Trayvon Martin, and

in fact, Emmett Till, were acquitted by jury trial – this is the modern form of racism. Further,

when people of color are on trial, their perceived criminality has life-threatening consequences:

Black defendants who have more stereotypically Black features are more likely to be sentenced

to the death penalty, even when aggravating and mitigating circumstances, severity of the crime,

defendant and victim's socioeconomic status, and the defendant's attractiveness are controlled

for (Eberhardt et al., 2006). The tragedy depicted in each of these examples begins with an

assumption about the criminal status of persons of color.

Assumptions of Criminality is one theme described by Sue and colleagues (2007) in a

seminal article that reintroduced the concept of racial microaggressions. Racial microaggressions

are defined as "brief and commonplace daily verbal, behavioral, or environmental indignities,

whether intentional or unintentional, that communicate hostile, derogatory, or negative racial

slights and insults toward people of color" (Sue et al., 2007, p. 271). Researchers have suggested

that in response to the shift in American societal values and the socially detrimental impact of

being viewed as racist, the more subtle form of discrimination known as racial microaggressions dominates existing race relations in the United States (Foster, 2005; Nadal, 2011; Sue et al., 2007). The examples of racial microaggressions described above capture the extreme costs associated with the consequences subtle discrimination, but most microaggressions involve a more insidious threat to the wellbeing of people of color. These subtle slights and putdowns are fleeting, everyday occurrences that are part of the fabric of cross-race interactions – as such, they serve as a chronic stressor in the lives of people of color.

Racial microaggressions are argued to have a damaging effect on members of marginalized groups. Qualitative research highlights the psychological distress and myriad emotional reactions that occur in response to the experience of a microaggression, including anger, sadness, frustration and isolation (Nadal, 2011; Sue et al., 2007). Recent findings suggest that as the amount of racial microaggression experiences increases, participants report lower levels of mental health and wellbeing (Nadal et al., 2014). Previous research has suggested a link between overt racial discrimination and physical health (Borrell et al., 2006), but less is known about the relationship between subtle discrimination and physical health. Further, the mechanisms by which racial microaggressions may impact general health status have yet to be explored.

Emotion regulation is cited as an important component of the stress response (Folkman & Lazarus, 1984; Slavin et al., 1991). Different types of emotion regulation strategies have been associated with different levels of physiological arousal in response to stressful situations (Gross, 1998), potentially changing the impact of the stressor on physical and mental health outcomes. Additionally, previous research has found that emotion regulation mediates the relationship between stigma-related stress and psychological distress (Hatzenbuehler, Nolen-Hoeksema, &

Dovidio, 2009). Therefore, there is some potential for emotion regulation to serve as a mechanism that moderates the relationship between racial microaggressions and physical and mental health.

The purpose of the current study is twofold: (1) to examine the initial internal process of experiencing a microaggression immediately following its commission, and (2) to examine emotion regulation as a potential moderator of the relationship between racial microaggressions and physical and mental health outcomes.

CHAPTER 2: LITERATURE REVIEW

Microaggressions

Pierce, Carew, Pierce-Gonzalez, and Willis (1977) first devised the construct of microaggressions while studying racial dynamics and behaviors of Black and White individuals on television commercials. Microaggressions were described as:

"… subtle, stunning, often automatic, and non-verbal exchanges which are 'put downs' of blacks by offenders. The offensive mechanisms used against blacks often are innocuous. The cumulative weight of their never-ending burden is the major ingredient in black-white interactions" (Pierce, et al., 1977, p. 65).

The researchers provided examples of microaggressions, stating that Black individuals are depicted on television as "[having] less involvement in family life," "never [teaching] whites," "more often work for wages," and "not [living] in the suburbs" (Pierce et al., 1977, p. 66). The difference in the way in which Black and White individuals are portrayed on television was suggested to be both a consequence of existing racism and a mechanism for the continued transmission of racist beliefs and ideas.

The construct was revisited by Derald Wing Sue and colleagues (2007) nearly three decades later, in which racial microaggressions were introduced as a construct within the context of psychology and clinical practice. The most inclusive definition of microaggressions describes them as "brief and commonplace daily verbal, behavioral, or environmental indignities, whether intentional or unintentional, that communicate hostile, derogatory, or negative slights and insults toward members of oppressed groups" (Nadal, 2008, p. 23). This approach to the construct of microaggressions acknowledges Pierce and colleagues' (1977) view of the subtly and variable

intention of this form of discrimination, while also communicating how common it is and the variety of mechanisms through which bias is transmitted to the target person or group.

Sue and colleagues (2007) described three different forms of microaggressions: microassaults, microinsults, and microinvalidations. Microassaults are described as the closest to more overt, traditional forms of discrimination, and involve explicitly attacking, verbally or otherwise, the target individual or group through unambiguously discriminatory action (Sue et al., 2007). *Microassaults* are thought to be the form of microaggression most likely to be intentional, though they are often used in more private settings. *Microinsults* involve actions or words that communicate insensitivity or put down an individual's identity (Sue et al., 2007). Microinsults are more often the product of implicit bias and are generally more unintentional on the part of the individual communicating the subtle slight. An example of a microinsult might be assuming students of color in a university setting were the product of affirmative action policies, thus suggesting that the student was unqualified to attend the university otherwise. *Microinvalidations* are communications in which individuals' thoughts, feelings, and experiential reality are negated or denied. The colorblind mentality, in which people espouse that they do not acknowledge race, is an example of microinvalidation. This approach to race relations denies the racial reality of people of color.

Initially, Sue and colleagues (2007) devised a taxonomy of racial microaggressions from previous literature on overt racism and other descriptions of everyday racism, in addition to personal narratives of counselors who had an understanding of how the dynamics of race had played out in therapeutic relationships. Nine themes were organized under the three aforementioned categories of racial microaggressions. *Environmental Microaggressions* were the only theme categorized as microassaults, due to their more overt nature – the lack of people of

color represented in a positive way in the media and on television shows, for example. The remaining eight themes were organized under microinsults and microinvalidations, and represent the bulk of the more subtle discrimination thought of as microaggressions.

Microinsults included: *Ascription of Intelligence*, *Second-Class Citizen*, *Pathologizing cultural values/communication styles*, and *Criminality/Assumption of Criminal Status* (Sue et al., 2007). The majority of these microinsults are related to stereotypic assumptions made by Whites. *Ascription of Intelligence* involves making the assumption that a person is either intelligent or unintelligent based on their race. For example, assuming a student who is Black to be less intelligent than White students, or assuming an Asian student to be more competent in math than other students. Microaggressions under the theme of *Second-Class Citizen* are characterized by people of color being treated less favorably, or White individuals being given preferential treatment over people of color. This implies that White people are more valued or inherently have a higher status than people of color. *Pathologizing cultural values/communication* styles entails situations in which perpetrators desire the victim to conform to dominant societal values. For example, suggesting that people who identify as Black or Latino/a are "too loud" and should communicate differently in a professional setting. *Criminality/Assumption of Criminal Status* involves the assumption that people of color are inherently deviant, apt toward committing crime, and generally dangerous based on their race. These microinsults range from a person of color being followed around a store based on the suspicion that they will steal, to more egregious events such as the assumption that Amadou Diallo was pulling a firearm from his pocket when he was reaching for his wallet or Trayvon Martin was inherently suspicious and "up to no good" when he was returning home from a convenience store with a drink and candy.

Microinvalidations more often involve the denial of others' experiential reality, and include: *Alien in Own Land*, *Color Blindness*, *Myth of Meritocracy*, and *Denial of Individual Racism* (Sue et al., 2007). Microaggressions under *Alien in Own Land* imply that to be American is to be White, and that all other racial groups are foreign. For Americans who do not meet the perpetrator's idea of what appears American, their nationality is called into question. *Color Blindness* involves not acknowledging racial differences and denying the existence of anything but a homogenous society. This denies the racial reality of people of color, for whom racial or ethnic heritage may be an important part of their identity and daily lives. Microaggressions categorized as the *Myth of Meritocracy* are characterized by statements that suggest that race does not play a role in life success and that, in turn, people of color are less qualified or incompetent if they are not as successful as White individuals. Finally, *Denial of Individual Racism* entails microinvalidations espoused by individuals who claim to be impartial or immune to socialized racism, sometimes because they are also members of marginalized groups (i.e., women and LGBT-identified people), or because they have friends who are racial minorities. For instance, when a woman says that she cannot be racist because she experiences sexism in her life, she is trying to communicate that she does not have any racial biases; however, the recipient of the microaggression may feel offended and perceive that the woman is using her gender as a way of denying her racial prejudice. This category also involves Whites who deny their role in historical oppression and fail to acknowledge the benefits they have accrued as a result of it.

More recently, researchers expanded the concept of microaggressions to other marginalized populations, including gender (Capodilupo et al., 2010), sexual orientation (Nadal, Issa et al., 2011; Nadal, Rivera, & Corpus, 2010; Shelton & Delgado-Romero, 2011), gender identity (Nadal, Rivera, & Corpus, 2010; Nadal, Skolnik, Wong & 2012), religious minorities

(Nadal et al., 2012), and ability status (Keller & Galgay, 2010). Others have focused on intersectional identities (Nadal, Davidoff et al., under review) and the stress of having multiple oppressed identities (Greene, 2000; Purdie-Vaughns & Eibach, 2008). Common experiences across different reference groups included themes that involved denial of individual prejudice ("I'm not racist/heterosexist/transphobic, I have a friend who is [a member of that identity group]!"), and invalidation or dismissal ("You're being too sensitive!"), among others.

The theoretical taxonomy of racial microaggressions published by Sue and colleagues (2007) was the impetus for multiple lines of investigation. Previous research has focused largely on defining microaggressions and assessing the extent to which Sue and colleagues' (2007) taxonomy extends and applies to different racial and ethnic groups, and was conducted using qualitative methodology. Qualitative research is often used as the first method of inquiry when constructs are complex and multifaceted (Maxwell, 2005). Researchers have confirmed the appropriateness of the racial microaggressions categories, and on occasion have elucidated new themes, for various racial/ethnic minority groups, including persons who identify as Black or African American (Sue et al., 2008), Asian American (Ong et al., 2013; Sue et al., 2009), Filipino (Nadal et al., 2012), Alaskan Natives (Hill et al., 2010), Latino/a (Rivera, Forquer, & Rangel, 2010), American Indians (Clark et al., 2011), and multiracial people (Nadal et al., 2011). Studies on White participants have focused on fears related to engaging in a dialogue about race, Similarly, microaggressions have been explored in several contexts. The original article was conceptualized within a counseling psychology framework, but the work has been extended to therapy and clinical supervision dyads (Constantine & Sue, 2007; Constantine, 2007), and within university settings with both students (Sue et al., 2009) and faculty of color (Cartwright et al., 2009; Constantine et al., 2008).

More recently, researchers have developed various measures for assessing microaggressions quantitatively, such as the Racial and Ethnic Microaggressions Scale (REMS; Nadal, 2011), the LGBT People of Color Microaggressions Scale (Balsam et al., 2011), the Inventory of Microaggressions Against Black Individuals (IMABI; Mercer, Zeigler-Hill, Wallace, & Hayes, 2011), the Ethnic Microaggressions Scale (Huynh, 2012), and the Racial Microaggressions Scale (Torres-Harding et al., 2012). This has enabled a more empirical inquiry into the mental and physical consequences of experiencing microaggressions over the course of a lifetime.

The main methodological concern with the measurement of microaggressions has been concern over perception. Inherently, microaggressions are ambiguous interactions or situations that require people of color to make a determination about whether or not the negative slight or putdown was racially motivated – and the intention of the perpetrator is unknown, often to both the target and the perpetrator themselves. In response to criticism of the construct, Sue, Capodilupo and colleagues (2008) highlighted three components of making an attribution regarding whether an experience qualifies as a microaggression: (1) high consistency of experience, (2) across multiple settings, (3) corroborated by others' experiences. Further, it is the members of marginalized groups who make these attributions and for whom the consequences of experiencing microaggressions, regardless of the intentions of the perpetrator, may have negative effects on mental and physical health.

Mental and Physical Health Impact of Racial Discrimination

There is a dearth of research that examines mental and physical health outcomes as they relate to microaggressions. However, there is a significant amount of research on the impact of racial discrimination, which more generally supports the need for further inquiry. A review of

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research examining the relationship between racial discrimination and health concluded that racism is likely an overlooked factor that contributes to racial disparities in health outcomes (Williams, Neighbors, & Jackson, 2003). A large-scale longitudinal study ($n = 1722$) revealed that self-reported discrimination was associated with poorer physical and mental health after controlling for income, education, age, and skin color in both African American men and women (Borrell, Kiefe, Williams, Diez-Roux, & Gordon-Larsen, 2006). While the factors mediating the pathways between racial microaggressions and physical and mental health are less clear, the evidence for that connection is accumulating.

A review of 138 quantitative, empirical studies on self-reported racism and health outcomes revealed that the most consistent finding was for a negative relationship between mental health outcomes and self-reported racism, while self-reported health outcomes were less consistent (Paradies, 2006). Approximately 72% of studies examining mental health outcomes and 62% of outcomes examining health-related behaviors showed significant association with self-reported racism, while only 36% of outcomes related to physical health were significantly associated with self-reported racism. Paradies (2006) stated that research in this area has suffered from limitations related to measures of discrimination, difficulties with defining the relevant time period for collecting information about discriminatory events, and measures of self-reported versus physiological measures of physical health (Paradies, 2006). It is also possible that the impact of racism on mental health is more immediate, while there is a delayed effect of racism on physical health outcomes that is more difficult to examine.

There are several ways in which racial discrimination is theorized to impact physical and mental health outcomes: (1) social and economic inequality created by discrimination may impede access to healthcare, employment, safe housing, and other factors necessary to

supporting a healthy lifestyle, (2) racial discrimination is a psychosocial stressor and therefore

may impact physical and mental health through a chronic, sustained stress reaction (Clark,

Anderson, Clark, & Williams, 1999; Pascoe & Richman, 2009; Williams & Mohammed, 2009;

Williams, Neighbors, & Jackson, 2003), and (3) the stress associated with racial discrimination

may lead to unhealthy coping behaviors that negatively impact physical and mental health

(Pascoe & Richman, 2009; Williams & Mohammed, 2009).

Okazaki (2009) cited the question of how subtle forms of racism impact the mental health

of racial/ethnic minorities as one of the most important questions going forward within the field

of ethnic minority research. In a review of the emotional effects of racism, Carter (2007) noted

that while the political, economic, and social impacts of racism are well-researched, the

mechanisms by which racism leads to psychological disorders is less clear. Within the literature

on subtle racism, there is also the area of perceived discrimination – a term that is inherently

microaggressive in nature, but speaks to a similar construct. Several studies have supported the

relationship between perceived discrimination and mental health, operationalizing mental health

outcomes by studying different arrays of mental health symptoms that include depression and

anxiety (Cokley, Hall-Clark, & Hicks, 2011; Greer, Laseter, & Asiamah, 2009), depressive

symptoms alone (Wei, Heppner, Ku, & Liao, 2010), and general psychological distress (Hwang

& Goto, 2008; Tran, Lee, & Burgess, 2010).

Cokley, Hall-Clark, and Hicks (2011) looked at perceived discrimination as a mediator

between racial minority versus majority status and mental health outcomes. The measure utilized

to assess perceived discrimination focuses largely on instances of more subtle, daily experiences

of being treated unfairly – which reflect some characteristics of microaggressions. Participants

($N = 413$) completed a survey instrument measuring rates of perceived discrimination, mental

health, and a demographics questionnaire. Results indicated that ethnic minorities reported lower mental health scores than European American majority group members (Cokley, Hall-Clark, & Hicks, 2011). As expected, racial minorities also reported more instances of perceived discrimination than their majority group counterparts. Results also indicated that perceived discrimination did mediate the relationship between racial/ethnic group status and mental health, though it only accounted for 2% of the variance (Cokley, Hall-Clark, & Hicks, 2011).

Hwang and Goto (2008) explored the relationship between perceived discrimination and mental health particularly for Asian- ($N = 107$) and Latino/a American ($N = 79$) individuals in a college student population. They also focused on whether emic or etic differences between types of discrimination were observed across the two racial groups. The measure of perceived discrimination utilized was the General Ethnic Discrimination scale (GED; Landrine et al., 2006) which incorporates ratings of both frequency and stress appraisal by the participant, addressing both how often discriminatory events occur and their perceived impact on the individual. Results indicated that the combined effect of perceived discrimination and subjective appraisals of stress is associated with higher risk of distress, suicidal ideation, both state and trait anxiety, and clinical depression. Effect sizes for most mental health outcomes were small, aside from clinical depression, for which participants who experienced discrimination were found to be at 1.62 times greater risk for developing depressive symptoms (Hwang & Goto, 2008).

Other studies have looked at gender differences in response to perceived discrimination. Greer, Laseter, and Asiamah (2009) investigated gender as a moderating variable of the relationship between race-related stress and mental health, hypothesizing that because women of color experience stress related to both race and gender that they would incur more severe mental health symptoms as a function of having multiple oppressed identities. This study utilized a

college student population ($N = 183$), the majority of whom identified as female (66%) and all of whom identified as African American. The study utilized a measure that assessed race-related stress via three subscales: individual racism, cultural racism, and institutional racism. Results indicated significant differences between women and men with respect to mental health symptoms, with women reporting higher levels of somatization, interpersonal sensitivity, depression, anxiety, and OCD symptoms. As levels of individual racism increased, both men and women demonstrated higher levels of mental health symptoms – however, women showed more dramatic increases in mental health symptoms in comparison to men, for whom the increase was not statistically significant (Greer, Laseter, & Asiamah, 2009). In a study with Asian Americans, the relationship between racism and racism-related stress was mediated by coping strategies associated with seeking social support for men, whereas for women, the relationship was partially mediated by active coping strategies (Liang, Alvarez, Juang, & Liang, 2007). It was hypothesized that increased perceptions of racism led to more active coping, which in turn resulted in higher levels of race-related stress.

There is a paucity of research describing the relationship between microaggressions and physical health outcomes, but previous research on racism and discrimination more generally and associations with health outcomes warrant further discussion. Research in this area has been conducted through two methodologies: self-reported discrimination and experimental designs. Studies employing self-reported discrimination measures compare the participants' reported experiences of discrimination with their self-reported health, physiological health indicators, and self-reported health behaviors in order to explore the relationship. Experimental designs are better able to capture cause-and-effect relationships, though the number of studies is limited.

Self-reported discrimination experiences have been correlated with self-reported health and physiological measures of health (Paradies, 2006; Williams & Mohammed, 2009; Williams, Neighbors, & Jackson, 2003). Concerns with correlational and cross-sectional designs have been raised regarding the direction of the relationship between discrimination and health, though more recently longitudinal studies have supported the contention that discrimination precedes poor health (Borrell et al., 2006; Gee & Walsemann, 2009). Borrell and colleagues (2006) used a longitudinal design, and asked participants to answer twelve standard medical questions to assess for self-reported health. Results indicated a directional link between discrimination and self-report of physical health. Gee (2002) found that the inverse relationship between discrimination and self-reported health remained after controlling for a variety of variables, including but not limited to sex, age, income, health insurance, employment, and neighborhood poverty level. In a cross-sectional design conducted in New Zealand, experiences of racial discrimination were associated with various measures of health, including poor self-rated health, lower physical functioning, smoking behavior and cardiovascular disease (Harris et al., 2006). Furthermore, evidence emerged for a dose-response relationship, indicating an effect of accumulated race-related stress over time (Harris et al., 2006).

In terms of physiological correlates of health, perceived racial discrimination as measured by self-report has also been found to be a predictor of ambulatory blood pressure (Smart Richman, Pek, Pascoe, & Bauer, 2010), systolic blood pressure (Clarke, 2006), and sleep problems (Beatty, et al., 2011). Guyll, Matthew, and Bromberger (2001) revealed that Black female participants had higher reactivity in their diastolic blood pressure (DBP) in response to subtle mistreatment than White women participants, and the discrepancy in DBP was greater for those who attributed the mistreatment to racism. Another study reported a relationship between

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mothers' self-reported experiences of racial discrimination during pregnancy and low infant birth weight (Collins et al., 2000).

As cited in Paradies' (2006) review, health behaviors were more consistently significantly associated with self-reported discrimination, with some of the research utilizing measures of perceived discrimination. Landrine and Klonoff (1996) established a relationship between cigarette smoking and higher reported rates of discrimination. Ng and Jeffery (2003) found that high levels of perceived racial stress were associated with a diet higher in fat intake, less exercise, and cigarette smoking, supporting the relationship between stress and unhealthy compensatory behaviors. In a study of Hispanic/Latino, African-born Black, and Southeast Asian immigrants, perceived discrimination was found to be significantly correlated with cigarette smoking and alcohol-related drinking behaviors (Tran, Lee, & Burgess, 2010). Another study utilized perceived racial discrimination in youth to predict health behaviors in young adulthood, ultimately finding that results for men in the sample were consistent with previous research on discrimination being associated with less healthy eating behavior and increased substance use (Brodish et al., 2011). However, cumulative perceived racial discrimination for the women in their sample was predictive of more exercise, suggesting that this may be a valuable coping mechanism for women (Brodish et al., 2011). These findings have yet to be replicated, but raise concerns about research in this area that does not look at gender differences.

Penner and colleagues (2009) employed a longitudinal design to investigate perceptions of discrimination and their relationship to treatment adherence within the context of a primary care health clinic. Participants ($N = 156$) completed information about current health status, past adherence behavior, and perceived discrimination, and were asked to rate their experience with a physician immediately following the visit. Four and 16 weeks later they were asked to report

their health status and adherence to the physician's medical recommendations. Results indicated that past experiences of perceived discrimination was associated with poorer health, experience with the physician, and future adherence (Penner et al., 2009). This study raised significant issues related to health behaviors, as adherence to medical recommendations mediated the relationship between perceived discrimination and future health status, and may represent an additional way in which discrimination impacts physical health for people of color.

Mental and Physical Health Implications of Racial Microaggressions

Within the microaggressions literature, there are several studies that assert the connection between microaggressions and poorer mental health outcomes (Nadal, 2011; Sue et al., 2007). The advent of quantitative measures has enabled researchers to expand upon the assertions of a connection made based upon qualitative studies and explore the link between racial microaggressions and mental health with more empirical methods.

A recent study utilizing a combined university and community sample ($N = 506$) examined the relationship between racial microaggressions and mental health (Nadal, Griffin, Wong, Hamit, & Rasmus, 2014). Nadal and colleagues (2014) used the Racial and Ethnic Microaggressions Scale (REMS; Nadal, 2011) to assess the amount of microaggressions experienced by participants. The Mental Health Inventory (MHI; Veit & Ware, 1983) used for this study included four subscales: anxiety, depression, behavioral control, and positive affect. Correlational analysis revealed a significant negative relationship between the variables, indicating that higher amounts of microaggressions experienced by participants were associated with lower levels of mental health (Nadal et al., 2014). Further, regression analyses indicated that experiences of racial microaggressions were predictive of mental health symptoms (Nadal et al., 2014). One significant limitation of this study is the age of participants, which ranged from 18 to

66 but had an overall average of approximately 25 years old. With an older sample, the strength of the correlation between mental health and microaggressions may increase.

Blume, Lovato, Thyken, and Denny (2012) investigated the relationship between racial microaggressions, alcohol use and anxiety in racial and ethnic minority students who were attending a historically white institution. Out of the total sample ($N = 178$), the majority identified as female and approximately half identified as African American. The authors devised a scale of 51 different types of microaggressions derived from the Sue and colleagues (2007) article, and asked participants to report how many times over the past month they had encountered each of the microaggressions. Students of color reported experiencing an average of approximately 290 microaggressions each during the course of one month, supporting and underlining the daily occurrence of this type of discrimination. The findings indicated that students of color who experience higher levels of microaggressions are at greater risk for both high anxiety and binge drinking (Blume et al., 2012).

One study focused on assessing the differential impact and contribution of overt, hostile racist events and microaggressions on symptoms of both anxiety and depression in a sample of self-identified Black female undergraduate students ($N = 187$; Donovan, Galban, Grace, Bennett, & Felicie, 2013). The undergraduate sample was collected from a university in the Southeast, which the authors note could have impacted the results as racism may be higher in this region of the United States. High percentages of both overt racism and microaggressions were reported to have occurred at least one time in the past year (63% and 96%, respectively; Donovan et al., 2013). Both overt racism and microaggressions were found to be significantly associated with depressive symptoms, though overt racism was more strongly related to depression. Overt racism, and not microaggressions, was associated with anxiety symptoms (Donovan et al., 2013).

The authors speculated that anxiety was not related to microaggressions as these slights and invalidations may be viewed as less of a threat to physical safety than blatant prejudicial behavior (Donovan et al., 2013). Another limitation of this study is the age of the participants – previous research has suggested that the cumulative nature of everyday discrimination is a key component in the association between microaggressions and physical and mental health outcomes. It is possible that a sample with older women of color may produce different results or show a stronger relationship between microaggressions and mental health symptoms.

A recent study by Nadal, Griffin, Wong, Davidoff, and Davis (2017) investigated the relationship between racial microaggressions and physical health outcomes ($N = 277$). Increased frequency of racial microaggressions was found to be negatively correlated with role limitations due to both physical and emotional problems, as well as social functioning, meaning that the experience of racial microaggressions was associated with participants reported being less able to function in their daily lives (Nadal et al., 2017). Racial microaggressions were also associated with higher levels of fatigue and pain, poorer emotional wellbeing, and poorer self-reported general health (Nadal et al., 2017). This study was limited by the age of the sample and its inclusion of college students, as well as small sample sizes. However, this is the only known study demonstrating the relationship between microaggressions and physical health outcomes.

Everyday Stress and Health Outcomes

Health psychology asserts that everyday stressors, in addition to major life events, are capable of causing stress that interferes with mental and physical functioning. Early research demonstrated that the repeated hassles of everyday life were more strongly associated with somatic complaints than major life events (Delongis, Coyne, Dakof, Folkman, & Lazarus, 1982; Delongis, Folkman, & Lazarus, 1988). Delongis and colleagues (1982) utilized a probability

sample of 100 individuals in one county and asked them to complete measures that inquired about daily hassles, administered once a month for nine months, and major life events and physical health, which were each administered twice. The sample was limited to participants who identified as White, between the ages of 45 and 65 years old, with an above-marginal income; the sample was primarily Protestant or Catholic. Results indicated that both major life events and daily hassles were positively associated with somatic illness, and the strength of the correlation was greater for daily hassles than for major life events, which only demonstrated a weak association (Delongis et al., 1982). Further, both the frequency and intensity of daily life hassles had a strong relationship to overall health (Delongis et al., 1982).

Criticisms of the accuracy of general self-reported health outcomes have also been addressed. Delongis and colleagues (1988) utilized a daily health record to collect more accurate self-report information about health outcomes, including headaches, pain, flu symptoms, and digestive complaints. The study followed 75 married heterosexual couples and collected the daily health record, daily hassles, and daily uplifts information during 20 four-day periods over the course of a six month period. Random digit dialing was used to obtain the sample, which was limited to heterosexual married couples in which both partners were white and either Protestant or Catholic. Results indicated that periods of increased daily hassles were associated with decreased health and mood, though the results were mediated by social support. Individuals with lower levels of spousal social support were more likely to have a strong association between daily hassles and declines in health and mood (Delongis, et al., 1988).

More recent studies have expanded upon this foundation, exploring the contribution of daily stress processes to physical and mental health problems (Almeida, Wethington, & Kessler, 2002; Costanzo, Stawski, Ryff, Coe, & Almeida, 2012; Neupert, Almeida, & Charles, 2007).

One study examined gender differences in the response to everyday stressors by comparing individual partners in heterosexual married dyads using a daily diary method over 42 days (Almeida & Kessler, 1998). Results indicated that women reported distress more often and on a greater number of days than men, which was hypothesized to be related to increased role demands (e.g., acting as primary caretaker for children and being employed; Almeida & Kessler, 1998).

Studies have also looked specifically at interpersonal daily stressors as a unique source of stress. Almeida and colleagues (2002) found that interpersonal tensions uniquely predicted health symptoms and mood. One large-scale study ($N = 1031$) found that older adults were less psychologically reactive to interpersonal stressors and less physically reactive to work stressors than younger adults (Neupert et al., 2007). Further analysis of this data also revealed that older adults tend to use more passive coping strategies such as avoidance during interpersonally stressful encounters, and that decreased reactivity was only reported when an argument was avoided (Charles, Piazza, Luong, & Almeida, 2009). There appear to be different health implications for coping and emotion regulation strategies utilized in interpersonal conflicts.

The theory of stress and coping devised by Folkman and Lazarus (1984) describes the interaction between the person and the environment during a stressful encounter as a process – the emotions fluctuate according to the meaning attributed or coping strategies used at a given point in time (Folkman, Lazarus, Dunkel-Schetter, Delongis, & Gruen, 1986; Park & Folkman, 1997). This model of coping describes five stages of the stress process: the stressful event, primary appraisal (interpretation of the event), secondary appraisal (decisions regarding how to proceed), coping efforts (problem-focused versus emotion-focused), and ultimate mental and physical health outcomes (Folkman & Lazarus, 1984).

Folkman and Lazarus (1985) utilized a midterm examination as a model for stressful interactions, outlining the different stages of a stressful encounter and the dynamic appraisal and coping processes at each stage. The results indicated significant fluctuation of emotions at different points in the examination (anticipation before exam, waiting period post-exam but prior to receiving grade, and post-exam when grades were announced), with threat and challenge related emotions elevated pre-exam and during the waiting period, and harm and benefit-related emotions decreasing between the waiting period and post-grade announcement (Folkman & Lazarus, 1985). This indicates that as information is obtained and appraisal of the situations changes, so do the emotional responses experienced by individuals – suggesting that the experience and reaction to a stressful event is an ongoing process.

Research has also investigated the relationship of individuals' appraisal and coping strategies in general and how that relates to health status. Folkman, Lazarus, Gruen, and Delongis (1986) found that coping styles were relative stable, though the least stable of the coping strategies involved problem-focused coping (confrontation, seeking social support, problem-solving), suggesting the use of these coping strategies is largely related to contextual factors. Positive reappraisal had the highest degree of stability, indicating that use of this coping strategy is largely related to internal factors related to the individual (Folkman et al., 1986). The relationship of coping style to somatic health symptoms was confounded by stress, as individuals who experienced more stress and used more coping strategies were found to be in poorer health. Planful problem solving strategies were negatively correlated with psychological symptoms, whereas confrontation-oriented coping was positively related to psychological symptoms (Folkman et al., 1986). However, it is unclear if contextual factors might influence how adaptive each of these coping strategies is in different situations.

This line of research suggests that everyday encounters with seemingly innocuous stressful situations can be problematic, supporting the contention that the accumulation of racial microaggression experiences over time may have an adverse impact on the physical and mental health of people of color. Each of these incidents involves a complex stress response, appraisal of the stressful situation, and engagement of coping resources that becomes activated as a result of encountering stressful stimuli. While the majority of research conducted with racial microaggressions seeks to describe the nature of events for different marginalized groups, or examine the physical and mental health outcomes associated with the experience of microaggressions, the immediate appraisal process and stress response associated with experiencing a microaggression is an important area to explore further.

Discrimination and the Stress Response

There is a consensus within previous literature that experiences of racism and discrimination are both perceived as stressful and engender a physiological stress response for racial and ethnic minority group members. Several researchers have attempted to integrate the research on stress-related coping and emotion regulation with discrimination. Harrell (2000) developed a model of racism-related stress to organize future research on the wellbeing of people of color. Slavin, Rainer, McCreary, and Gowda (1991) adapted the model of stress and coping developed by Folkman and Lazarus (1984) to address a multicultural population. One major criticism of the microaggressions literature is that a gap in the research exists in terms of the internal process experienced by individuals when confronted with a microaggression (Wong et al., 2013). Research on the neural correlates of discrimination utilizing functional magnetic resonance imaging (fMRI) technology may also broaden our understanding of the immediate cognitive and emotional processes involved in responding to race-related stress (Masten, Telzer,

& Eisenberger, 2011). Understanding the factors that may influence the stress process and how the stress process may unfold in an ambiguous situation may reveal areas for further exploration of mediating and moderating influences and areas for intervention to attenuate the negative impact of microaggressions for people of color.

Racism-Related Stress. Harrell (2000) described a model of racism-related stress and well-being. The construct of racism-related stress defined as "the 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). The model specifies six different types of racism-related stress: racism-related life events, vicarious racism experiences, daily racism microstressors, chronic contextual stress, collective experiences, and transgenerational transmission (Harrell, 2000). Racism-related life events and racism microstressors encompass the individual-level racism, both overt and covert, that occurs to people of color. Vicarious racism experiences and collective experiences of racism capture the impact that being witness to racist events – regardless of whether one is physically present at the time or exposed through media – may have on people of color. Chronic contextual stress involves institutional-level discrimination and the role of the larger societal structure on power dynamics and distribution of resources. The final category, transgenerational transmission, involves the communicating of historical oppression and personal history to future generations, conveying the history of racial trauma within families and marginalized groups (Harrell, 2000).

The full model of racism-related stress and well-being emphasizes the multidimensional nature of the construct and thus, incorporates and considers both the individual-level variables and broader societal context. The model includes five domains, each with sub-variables that may

play a role in the stress process: antecedent variables, familial and socialization influences, sources of stress, internal and external mediators, and outcomes (Harrell, 2000). *Antecedent variables* include the person-level factors, such as race, gender, age, language, and physical characteristics of an individual, as well as the environmental factors in which they exist (e.g., socioeconomic status). The next level of the model includes *familial and socialization influences*, which often include racial socialization and how individuals are taught to think about themselves as members of a group and how others view that group, as well as family dynamics. The third domain involves *sources of stress*, under which race-related stress, other status-related stress, and generic stress fall. *Internal and external mediators* of stress include internal characteristics (attributional style, self-efficacy), sociocultural variables (worldview, acculturation, coping specific to race-related events), behavioral and affective responses (emotional reactions, specific coping styles), and external resources such as support networks. Finally, *outcomes* are organized into different areas of wellbeing: physical, psychological, social, functional, and spiritual (Harrell, 2000).

The clear strength of the model devised by Harrell (2000) is the multidimensional conceptualization of racism-related stress and the multitude of factors that can influence, be influenced by, or change the strength of the relationship between this construct and various outcomes. Racism-related stress is conceived as one of many sources of stress for the individual, which is an important distinction as clinicians have been criticized in the past for assuming greater salience of a marginalized identity than is felt by the client (Harrell, 2000). The model also acknowledges the many factors that may be related to the relationship between racism-related stress and wellbeing, which provides multiple avenues for research to be conducted and relationships between various factors to be explored.

Two of these factors, physical and psychological, are directly related to broader health disparities for women of color. As the model of racism-based stress and wellbeing suggests, there are a multitude of factors that influence the relationship between race and health outcomes.

Multicultural model of the stress process. While the model of stress and coping developed by Folkman and Lazarus (1984) is one of the most widely used and accepted within the literature, it has been criticized for its lack of multicultural generalizability. Slavin and colleagues (1991) adapted the model to reflect multicultural concerns at each of the five points in the process: the stressful event, primary appraisal, secondary appraisal, coping, and mental and physical health consequences. The authors suggest that being a member of a racial or ethnic minority group alters each stage of this process. Within the area of stressful events, both major and minor life experiences, the potential for stressful experiences expands for members of marginalized groups – the types of stressful events and how often these events occur (e.g., daily experiences of subtle discrimination) must be taken into consideration. During primary appraisal, not only do members of a minority cultural group need to assess the degree and manner in which the event impacts them, but they also have to determine if the stressful event was a product of their group membership. Further, racial or ethnic group membership may influence how the event is interpreted initially. Secondary appraisal, the stage at which an individual determines how to respond or cope with the event, is influenced about cultural expectations regarding how the response will be interpreted by others and may determine what coping options are available to the individual. The fourth stage, coping, may be influenced by what cultural norms exist or how group membership impacts the choices that people have in terms of methods of coping. Mental and physical health consequences were adapted to include an understanding of how ethnic or racial group membership affects the outcomes that result from the stress response,

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including presentation of symptoms (Slavin et al., 1991). Given that culture may influence or change interpretation of events, it may have important implications for the stress process.

       Microaggressions and the stress response. While microaggressions may appear to be brief and innocuous, the accretion of these experiences over the course of a lifetime – what Pierce and colleagues (1977) refer to as "cumulative weight" – may have significant psychological and physical consequences. Furthermore, the ambiguous nature of microaggressions may cause confusion or frustration on the part of the person experiencing the microaggression, especially in those cases in which the perpetrator does not intend to make a statement that conveys prejudice. It may not be clear whether or not the communication was discriminatory in nature. Sue and colleagues (2007) provided an example of the internal dialogue that a person of color may engage in following the experience of a microaggression:

> Did what I think happened, really happen? Was this a deliberate act or an unintentional slight? How should I respond? Sit and stew on it or confront the person? If I bring the topic up, how do I prove it? Is it really worth the effort? Should I just drop the matter? (p. 279).

The automatic, unconscious nature of microaggressions on the part of the perpetrator only serves to make addressing or confronting the behavior more difficult. When those on the receiving end of the microaggression choose to address the perceived discrimination, they risk the possibility of the perpetrator dismiss or act with resistance toward their response – which effectively subjects the victim to further invalidation. The decision of when to confront, when to allow the microaggression to go unaddressed, and how to regulate the emotional reaction and express appropriate anger involves significant cognitive and emotional demand (Pierce, 1995). In addition to the difficulty of addressing the microaggression with the perpetrator on an individual

level, there is no legal recourse for those people who experience microaggressions to pursue –

which serves as an additional invalidation by the legal system at large (DeJesus-Torres, 2000;

Foster, 2005). The decision of whether to attribute the comment or behavior to prejudice is one

concern, but deciding whether and how to confront and cope with the microaggression is another

issue entirely.

Previous research on women's reactions to sexual harassment has employed Folkman and

Lazarus' (1984) model of stress and coping to discuss implications for gender-based

discrimination, suggesting that internally-based coping strategies such as endurance or denial of

the harassment are more common than externally-based coping strategies that vary in their

degree of assertiveness (Fitzgerald, Swan, & Fischer, 1995). This research has indicated similar

processes – the difficulty of determining intention, deciding if and how to respond, and the risks

involved in an active coping approach are all factors that characterize the internal process of

deciding how to react (Fitzgerald et al., 1995). Racial and gender-based discrimination and

microaggressions may have similar processes at work during the initial appraisal and response

phase.

Neural correlates of the stress response to discrimination. Despite the knowledge that

discrimination is related to significant mental and physical health problems in individuals on the

receiving end of discrimination, the majority of research on the neural correlates of prejudice and

discriminatory behavior is conducted on conflict experienced by White perpetrators of

discrimination. There is only one known study of the neural correlates of perceived racism on the

individual being discriminated against to date (Masten et al., 2011). The authors utilized a social

exclusion paradigm as it was suggested that it may be qualitatively similar to the effect of being

discriminated against, due to the theme of exclusion – regardless of the reason, the implication is that the target is different and/or unwelcome.

Masten and colleagues (2011) employed a subtle race prime by introducing each Black participant to two White confederates with whom they believed they would be playing an online game of Cyberball before separating them. During the game of Cyberball, the Black participant was excluded by the computer, though they were led to believe it was two White participants. Following the experiment, post-scan measures of self-reported distress and attributions of discrimination were completed. Additionally, the experimenters utilized a measure of observer-rated distress to combat the potential of self-report bias. Results indicated that, as predicted, individuals who showed more distress in response to being socially excluded also showed increased social pain-related neural activity in the dorsal ACC and anterior insula, and decreased activation of areas associated with emotion regulation such as the prefrontal cortex and rostral ACC (Masten, et al., 2011). In contrast, individuals who reported that they attributed the social exclusion to discrimination showed the opposite pattern: less activation in the dorsal ACC and greater activity in areas associated with self-regulation of emotion (Masten et al., 2011). This implies that for individuals who were able to distance themselves from the social exclusion by asserting that the other players' actions were discriminatory were better able to regulate their emotional response to the event.

The pathways involved in responding to emotions associated with social pain are thought to be involved in the physiological stress response. The literature suggests that the amygdala, insula, and anterior cingulate cortex play an important role in triggering a physiological stress response, as they are the areas involved in processing negative affect, perceiving threats, and potentially regulating emotions in distressing situations (Eisenberger, Taylor, Gable, Hilmert, &

Lieberman, 2007). An fMRI investigation of the protective effects of social support on stress aimed to look at the relationship between neural activity in response to a social stressor, levels of social support, and cortisol responses to said social stressor (Eisenberger et al., 2007). The results demonstrated that activation in the hypothalamus mediated the relationship between the dorsal ACC and cortisol levels in response to the stressor, which the authors concluded suggests a link between activity in the dorsal ACC and activation of the HPA axis (Eisenberger et al., 2007). Given the situations in which the dorsal ACC shows increased activation, the implications for this research extend beyond the realm of social support. Prolonged activation of the HPA axis in response to chronic stressors, such as discrimination, has been hypothesized to be a contributing factor in racial health disparities (Clark et al., 1999; Pascoe & Richman, 2009; Williams & Mohammed, 2009; Williams et al., 2003). Understanding the neural correlates of experiences of discrimination is a vital component of elucidating the relationship between physical health disparities and discrimination.

Research on the neural correlates of discrimination and social pain provide insight into the experience of someone decoding the meaning behind a microaggression – similar to the dialogue that is hypothesized to occur in response to an ambiguous situation, described by Sue and colleagues (2007). The use of event-related functional magnetic resonance imaging (fMRI) research helps to clarify the internal process of disambiguating the microaggression and what happens in the aftermath of subtle discrimination. Further, it provides information about potential mediators of the relationship between physical health and microaggressions, as emotion regulation appears to be an important process that is linked to physiological response processes associated with stress.

Emotion Regulation

Environments are constantly changing, and as such, human beings have ample opportunity to adapt to different situations and self-regulate their behavior, cognitions, and affect in a way that is consistent with their goals. The area of emotion regulation is subsumed under the broader domain of self-regulation (for a review see Carver & Scheier, 2001). The ability to successfully regulate emotion has been linked to reduced stress (Ciarrochi, Deane, & Anderson, 2002), and has important implications for mental and physical health. Emotion regulation refers specifically to the regulation of emotional experience and expression, which may result in upregulation, downregulation, or maintenance of an emotion (Gross & Thompson, 2007). Further, emotion regulation strategies may be conceptualized as falling on a number of continuums, ranging from automatic to controlled, conscious to unconscious, and occurring at various times within the larger process of unfolding emotional reaction (Gross & Thompson, 2007). Two ways of conceptualizing emotion regulation from a personality processes or individual differences perspective are the clinical-empirical model of emotion regulation (Westen & Blagov, 2007) and the consensual process model of emotion regulation (Gross, 1998, 2001).

The Clinical-Empirical Model of Emotion Regulation (Westen, 1994; Westen & Blagov, 2007) discusses the process by which behavioral and mental events are reinforced or extinguished based on the degree to which they successfully regulate emotional states that are aversive and maximize emotional states that are pleasurable. The theoretical model borrows from evolutionary, behavioral, psychoanalytic, and cognitive theories to support the conceptualization of emotion regulation as a motivated process. Westen and Blagov (2007) purport that the mechanisms of approach and avoidance with respect to threatening and pleasurable situations that developed as a result of evolution and the species' ability to survive are applicable to

threatening and pleasurable beliefs about the self, the world, and others. If a defense mechanism helps an individual to avoid upsetting beliefs about him- or herself, the likelihood of utilizing that defense mechanism in the future increases. The model attempts to incorporate an individual's tendencies towards specific emotion regulation strategies as emotional constraints, which are processed parallel to cognitive constraints imposed on a decision due to the available data and logic. This suggests a parallel processing of goal-driven decision making, which is adaptive in nature, and emotion-driven cognitive distortions (Westen & Blagov, 2007). The authors describe preliminary findings that suggest emotional constraints are more predictive of judgments than cognitive constraints (Westen & Blagov, 2007), though the explanation of the methodology does not permit adequate evaluation. The authors describe the theory as a work in progress, and there is yet to be research to determine the fit of this model to situations in which individuals are confronted with a stressor, or evaluate the emotional wellbeing of individuals engaging in emotion regulation.

The consensual process model of emotion proposed by Gross (1998, 2001) is described as a basic representation of the construct that suggests there are two major types of emotion regulation strategies. In this model, emotion regulation is defined as a tool used to cope adaptively with events, effectively maximizing response to positive situations and attenuating or minimizing emotional response to negative situations (Gross, 1998). Gross (1998) purports that the process of emotional experience can be attenuated at two points, resulting in two divergent classes of emotion regulation: antecedent-focused strategies and response-focused strategies.

Antecedent-focused emotion regulation involves intervention before the emotion is triggered and an individual's behavioral tendencies toward response are activated. Strategies under the umbrella of antecedent-focused emotion regulation include situation selection,

situation modification, attentional deployment, and cognitive change. Situation selection involves actively choosing to engage in a behavior that is less emotionally arousing – for example, spending time with a friend instead of a partner who you are in a disagreement with. Situation modification includes efforts to change a situation to modify the emotional content; you might ask your partner to engage in a pleasant activity and agree to discuss the disagreement at a later time. Attentional deployment involves focusing selectively on a part of the situation that is less emotionally arousing, such as using a household chore to distract yourself from what your partner is saying during the disagreement. Cognitive change is addressing your cognitions around the meaning of the situation – an example of which would be assessing your partner's behavior as a function of a bad day at work, not an evaluation of the quality of your relationship (Gross, 1998).

Response-focused emotion regulation occurs after the emotional response is underway, and involves efforts to decrease, increase, or modify the existing affective, behavioral, or physiological reaction to a situation (Gross, 1998, 2001). The example provided by Gross (1998) was keeping a "poker face" after getting a good hand in a competitive card game. Another example might be actively trying to pretend your partner's statements are not upsetting to you. Research has compared antecedent-focused with response-focused emotion regulation strategies in terms of physiological arousal, expression of emotion, subjective distress ratings, and neural activity.

The majority of research regarding antecedent- and response-focused emotion regulation has been conducting using two specific strategies as representatives for each approach: reappraisal and suppression. Reappraisal is a type of cognitive change that involves appraising a situation in a way that lessens the emotional component and happens early in the emotion

generating process, where suppression involves decreasing the expressive aspects of a response and occurs later. As such, it was hypothesized that reappraisal should be associated with lower reported levels of emotional arousal, less behavioral indicators of emotional arousal, and less of a physiological response when individuals using this strategy were confronted with emotionally provocative stimuli (1998). Gross (1998) tested this theory by having participants view a disgust-eliciting video and assigning them to one of three conditions: think about the film in a way that they felt nothing (reappraisal), watch the film and act in a way such that others would not know they were experiencing any emotion (suppression), or simply watch the film (control). Results confirmed that while both reappraisal and suppression were associated with less expression of emotion, only reappraisal resulted in decreased subjective report of emotional experience and decreased physiological response (Gross, 1998). Suppression, on the other hand, was found to be associated with increased physiological response and reported levels of emotional experience similar to the control condition (Gross, 1998). This suggests that when emotions are regulated using less adaptive strategies (i.e., suppression), that the physiological response may contribute to poorer health outcomes.

Research into the neural bases of emotion regulation provides convergent evidence for the model proposed by Gross (1998), and add credence to the argument that reappraisal is a healthier form of emotion regulation than suppression (Goldin, McRae, Ramel, & Gross, 2008; Kim & Hamann, 2007; Ochsner & Gross, 2008). A pattern of increased activity in the prefrontal cortex and anterior cingulate cortex, which are respectively involved in cognitive control and monitoring of ongoing activity, combined with reduced activity in the emotional response centers of the amygdala and insula is associated with successful emotion regulation (Kim & Hamann, 2007). Masten and colleagues (2011) also describe the insula as part of the neural

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circuitry involved in social pain. The majority of studies have utilized event-related fMRI to record neural activity during the voluntary emotion regulation paradigm described by Gross (1998).

Goldin and colleagues (2008) conducted a study wherein they utilized a within-subjects design to compare reappraisal and suppression with respect to subjectively reported emotional experience, emotional expression, and neural activity. Consistent with previous research, when participants were instructed to use reappraisal they reported a less subjectively emotional experience than when they were instructed to use suppression, while suppression resulted in less facial behavior conveying disgust (Goldin et al., 2008). The results of event-related fMRI demonstrated temporal differences in reappraisal and suppression, as earlier activity in the prefrontal cortex was associated with later reduction in amygdala and insula activation – suggesting that reappraisal occurring earlier in the process of emotion regulation does influence later neural activity (Goldin et al., 2008). Results on the regions of interest indicated a reduction of activity in the bilateral dorsal amygdala and anterior insula for reappraisal, while the BOLD signal in these areas was increased or maintained in the suppression condition (Goldin et al., 2008). Reappraisal was associated with increased activity in the medial, dorsolateral, and ventrolateral prefrontal cortex regions, which are associated with cognitive control and regulation (Goldin et al., 2008). Goldin and colleagues (2008) stated that the regulation of emotional reactivity in the limbic system may be an avenue through which reappraisal influences the stress response in the neuroendocrine system. Reappraisal appears to modulate this reaction, while suppression does not impact the stress response – in fact, Gross (1998) suggests that it may increase physiological reactivity – which may contribute to differential health outcomes for individuals who have a tendency to use certain emotion regulation strategies.

Emotion regulation and discrimination. Some researchers have addressed the area of emotion regulation and discrimination. Gill and Matheson (2006) primed women for different emotions and confronted them with a mock situation involving gender discrimination. Women primed to feel sadness and instructed to suppress their emotional response reported less discrimination than women who were not instructed to regulate their emotional response in any particular way. Women primed to feel anger reported more discrimination overall. Emotional primes were also associated with differences in behavioral responses, with women primed for anger endorsing more collectivist action-oriented strategies for correcting the situation. However, women in these two emotion conditions did not differ in their attributions of the stimuli (Gill & Matheson, 2006).

Hatzenbuehler, Nolen-Hoeksema, and Dovidio (2009) discussed emotion regulation as a mediator of the relationship between stigma and psychological distress. Study 1 involved an experience-sampling method, and the emotion regulation strategies of rumination and suppression were reported more often on days that stigma-related events occurred, with rumination mediating the relationship between stress and psychological distress. Social support was also found to be a positive emotion regulation strategy, though it seemed to vary as a function of the concealability of the stigmatized identity. Study 2 found that rumination following the experience of recalling a personally relevant event in which discrimination occurred was associated with higher levels of distress than those individuals who engaged in distraction (Hatzenbuehler et al., 2009). The authors discuss rumination as an important factor in the relationship between stigma-relevant stress and psychological distress, but it is unclear if rumination occurs as a function of emotion regulation failure, or is conceptualized as a strategy for coping with stigma-related stress.

Miller and Kaiser (2001) organized and integrated the literature on coping and stress to address stigma as a unique psychosocial stressor in the lives of people with marginalized identities. The authors assert that an investigation of coping and cognitive appraisals of stigma-related events is the key to understanding individual differences in mental health outcomes for stigmatized groups, and provide a framework for conceptualizing the work in this area that combines various dimensions of coping (e.g., voluntary vs. involuntary, engagement vs. disengagement, primary control vs. secondary control).

There is still significant work to be done in the area of emotion regulation and discrimination/stigma. However, the literature on coping and stress suggests that the response to discrimination is multifaceted and should be studied as a dynamic process (Miller & Kaiser, 2001) – emotion regulation is an integral part of the response, but needs to be studied in relation to other coping mechanisms utilized by individuals with marginalized identities.

OVERVIEW OF THE CURRENT STUDY

To review, previous literature has described racial discrimination as a stressor that is related to physical and mental health outcomes, while the more subtle and pervasive form of discrimination (also known as racial microaggressions) have been found to be related to poorer mental health. There are few known published studies to date that have explored the relationship between physical health and racial microaggressions. Studies in health psychology assert that chronic, daily hassles can have a negative impact on physical health, which suggests that microaggressions may be negatively impacting physical health as well. Research on physical health outcomes and racial discrimination in general support the need for further inquiry, and more explicit investigation into the mechanisms by which discrimination has an effect on physical health.

Emotion regulation has been discussed as a component of the stress response, a mediator of stigma-related stress and mental health, and a process highlighted in studies examining the neural correlates of discrimination. As such, there is evidence to suggest that emotion regulation may serve as an important factor in modulating the immediate reaction to microaggressions and acting as a mechanism that moderates the relationship between microaggressions and both mental and physical health outcomes.

Two major limitations in the microaggressions literature include the overuse of university samples and the lack of information about the appraisal process involved immediately after a microaggression. Sue and colleagues (2007) suggest that the cumulative weight of microaggressions over a lifetime can have serious implications for wellbeing, and thus the use of college students and inevitable positive skew in age is potentially problematic, especially in research that involves health outcomes. The process by which racial microaggressions impact general health status is unclear; which may be related to a lack of information about the appraisal and coping processes that occur immediately following a microaggression. The existing gaps in the research call attention to the need for an investigation into the reaction process to microaggressions, and mechanisms that interact with the experience of microaggressions to impact physical and mental health.

CHAPTER 3: METHODOLOGY

The current study aims to address current gaps in the literature in a variety of ways. The purpose of the study is twofold: (1) to conduct an exploratory examination of both the internal process and immediate reaction to a microaggression, and (2) to investigate emotion regulation as a moderator of the relationship between experiences of microaggressions and physical and mental health outcomes. Study 1 involves an exploratory mixed methods design to investigate the conscious experience of being microaggressed against immediately following the commission of a microaggression, for the purpose of better understanding the emotional, cognitive, and behavioral processes experienced by the target of a microaggression. Study 2 employs a quantitative design to examine different emotion regulation strategies and their relationship to racial microaggressions and health status

Research questions

1) What is the initial process and/or reaction(s) (emotional, cognitive, and behavioral) associated with experiencing a racial/ethnic microaggression?

2) What is the relationship between past experiences of microaggressions and immediate reactions to microaggressions?

3) Does emotion regulation moderate the relationship between incidents of racial microaggressions and physical and mental health?

Study 1

Research design

Study 1 addresses Research Questions 1 and 2 by using both qualitative and quantitative measures. Participants were presented with four ambiguous scenarios that contain racial microaggressions, in random order. They were asked to respond to these scenarios by imagining

what they would feel, think, and do in response to the vignettes. Participants were also given a

quantitative measure that examines the frequency of microaggressions experienced by the

individual.

Participant characteristics and recruitment

Participants were recruited through the undergraduate research experience program of a

large metropolitan college in the Northeast. Undergraduate students enrolled in introductory

psychology are required to participate in research as a component of their course; they were

awarded credit regardless of their completion of the study or the quality of their responses. To be

eligible for participation in the study, participants had to be at least 18 years of age and identify

as either a person of color or racial/ethnic minority.

Two hundred and seven participants completed this study, though not all participants

completed all of the measures. Participants' age ranged from 18 to 32, with an average of 20.40

(SD = 2.49). One participant did not report their age. Approximately sixty-six percent of the

sample identified as female (n = 136), 33.3 percent as male (n = 69), and 1 participant identified

as genderfluid. One participant declined to report their gender. 94 participants identified as

Latinx or Hispanic (45.4%), 29 as Black or African American (14.0%), 24 as Asian or Pacific

Islander (11.6%), 41 as multiracial (19.8%), and 17 participants reported their race to be White

or Caucasian (8.2%). Two participants declined to report their race. 137 participants reported that

they were born in the United States (66.2%), while 68 participants were born elsewhere (32.9%).

Two participants declined to report their place of birth. The majority of participants identified as

Christian (n = 135, 65.2%), while others reported their religious affiliation as non-religious (n =

18, 8.7%), atheist/agnostic (n = 14, 6.8%), Muslim (n = 13, 6.3%), Hindu (n = 7, 3.4%), and

Jewish (n = 5, 2.4%). Seven participants identified as Deist or believing in God but not

identifying with a particular religion, one participant identified as Sikh, and one participant

identified as Jehovah's Witness. Six participants declined to report religious affiliation.

Researchers

The team of qualitative data analysts was comprised of five individuals: one Latina

doctoral student, two White female doctoral students, one Asian female Masters student, and one

Black male Masters student. The independent auditor for this research study was an Asian male

professor with two decades of experience in qualitative research approaches. All researchers

have been trained in Directed Content Analysis (DCA; Hsieh & Shannon, 2005) and Consensual

Qualitative Research (CQR; Hill, et al., 1997; Hill et al., 2005), and had prior experience in

qualitative research.

Measures

Demographics questionnaire. Participants completed an open-ended demographics

questionnaire that allows them to self-identify their race, ethnicity, gender, age, religion,

highest educational level completed, place of birth, and number of years spent in the

United States. This method of collecting demographic information has been used in

previous research and is suggested to be a more culturally sensitive approach, as asking

participants to choose from predetermined categories is considered microaggressive

(Nadal, 2011).

Racial and Ethnic Microaggressions Scale (REMS). The REMS (Nadal, 2011) is a 45-

item measure of experiences with racial/ethnic microaggressions. Participants are asked

to read short statements that are representative of microaggressions, and indicate whether

they have experienced the described event within the last six months. The REMS has

shown high internal consistency ($\alpha = 0.91$), and is comprised of six subscales: (1)

Assumptions of Inferiority, (2) Second-Class Citizen and Assumptions of Criminality, (3) Microinvalidations, (4) Exoticization and Assumptions of Similarity, (5) Environmental Microaggressions, and (6) Workplace/School Microaggressions. Cronbach's alpha values for the subscales range from .78 to .87. The REMS is also positively correlated with related measures, including the Racism and Life Experiences Scale – Brief Edition ($r =$ .46; Utsey, 1998) and the Daily Life Experiences – Frequency Scale ($r = .70$; Harrell, 2000). Example items include: "Someone told me that they do not see race" and "Someone assumed that I spoke a language other than English."

Ambiguous scenarios. The task stimuli are four gender-neutral vignettes that involve racial microaggressions, all of which are ambiguous with respect to the intentions of the characters therein. The four vignettes are written in second-person present tense (e.g., "Imagine you are traveling on a crowded sidewalk. When you pause to wait for the crosswalk signal to change, a woman approaches you and politely asks for directions to the nearest post office," See Appendix A), and include microaggressions that involve social exclusion, assumptions of criminal status, and assumption of foreign-born status. Additionally, the racial/ethnic presentation of characters involved in the vignettes is depicted in photographs that accompany each scenario. Photographs were previously rated and balanced for perceived age, level of attractiveness, and perceived racial ambiguity. To avoid stimulus bias, three pictures of a face to represent each character were chosen and presentation was randomized for each participant. Participants were asked to respond to a series of questions about their reactions to the ambiguous scenarios, including emotional reactions, initial thoughts upon reading the vignettes, the attributions they made about the behavior of the characters in the vignette, and what factors they

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would consider before deciding what to do. See Appendix A for the description of each scenario.

Procedures

The measures in this study were administered online through the Qualtrics platform. Participants were presented with an informed consent document, which gave an overview of the study and associated risks and benefits. Participants indicated that they read, understood, and consented to participate in the research by answering a question at the end of the page. If they answered "yes" to the question regarding consent, they proceeded to the next page and were able to complete the study measures. Participants first completed the demographics questionnaire, followed by the four ambiguous task stimuli presented in a randomized order, and the REMS. Upon completion of the survey measures, participants were presented with an educational debriefing statement and were asked to follow a second link to provide their name in a separate survey to be awarded research credit. By providing a link to the second survey, researchers ensured that participants' responses to survey measures are in no way linked to identifying information.

All procedures were carried out in accordance with approval from the Institutional Review Board. Online survey responses will be stored on Qualtrics. Upon completion of the study and publication of the results, all data will be destroyed.

Study 2

Research design

Study 2 addressed Research Question 3 by employing a quantitative design to understand the relationships between racial microaggressions, physical and mental health, and emotion regulation.

Participant characteristics and recruitment

Participants were recruited through convenience sampling and university-based recruitment (see description in Study 1). Inclusion criteria stated that participants must be at least 18 years old, and identify as a racial/ethnic minority and/or a person of color. Convenience sampling targeted an older demographic of individuals, as previous research studying the effects of discrimination and microaggressions has largely relied on university samples (Wong et al., 2013). Recruitment resulted in approximately 30% of the current sample being comprised of individuals from the community. A higher proportion of incomplete data in the community sample resulted in the need to use listwise deletion for the purpose of managing missing data in key variables.

After incomplete responses were removed, the final sample was comprised of 248 participants. Participant ages ranged from 18 to 59, with an average of 24.73 ($SD = 8.45$). Mean age differed between samples, with the community sample having a higher mean age of 34.16 ($SD = 7.71$; see Table 4). The vast majority of participants identified as female (77.8%) and reported being born in the United States and/or living their entire life in the United States (81.5%). The combined sample resulted in a racially diverse sample, with the majority of participants identifying as Hispanic/Latinx (42.3%%), followed by Asian/Pacific Islander (19.8%), Black/African American (17.3%), White (10.1%), Multiracial (9.7%), and American Indian/Alaska Native (0.4%). More than half of the participants identified as Christian (52%), and reported their highest level of education as a high school diploma or GED (55.2%). Detailed participant characteristics are reported in Table 4 for the full sample, and both community ($n = 81$) and student samples ($n = 167$).

Measures

Demographics questionnaire. The same demographics questionnaire will be used to collect information on participants' self-identified race, ethnicity, gender, age, religion, highest educational level completed, place of birth, and years spent in the United States.

Racial and Ethnic Microaggressions Scale (REMS). See Study 1 for a description of the REMS (Nadal, 2011).

Emotion Regulation Questionnaire (ERQ). The ERQ (Gross & John, 2003) is a 10-item questionnaire that measures individual differences in the use of two strategies of emotion regulation, with two corresponding scales: Reappraisal ($\alpha = .80$) and Suppression ($\alpha = .73$). Participants are asked to indicate on a 7 point Likert scale the degree to which they agree with each statement. Convergent validity was determined by investigating relationships between reappraisal and suppression with different constructs, including the Reinterpretation and Venting scales of the COPE (Carver et al., 1989). As predicted, Reappraisal was found to be positively related to Reinterpretation, while Suppression was negatively related to Venting (Gross & John, 2003). Divergent validity was determined by examining the relationship between the ERQ scales and various measures, ultimately finding that neither Reappraisal nor Suppression were associated with social desirability, cognitive ability, or ego control (Gross & John, 2003). Example items include: "When I want to feel less negative emotion, I change the way I'm thinking about the situation" and "I control my emotions by not expressing them."

RAND 36-Item Short Form Health Survey—Version 1.0 (SF-36). The SF-36 (Brazier et al., 1992) is a 36-item measure of general health status that addresses both physical and mental health outcomes. Participants are asked to indicate their answers to the prompts or questions on Likert-type scales, which vary in point numbers depending on the set of

questions (e.g., for a question asking about how much time during the past month a participant has experienced a symptom, the Likert scale ranges from 1 to 6 with qualitative anchors from "all of the time" to "none of the time"). The SF-36 results in eight scales: physical functioning ($\alpha = .92$), social functioning ($\alpha = .71$), role limitations due to physical problems ($\alpha = .90$), role limitations due to emotional problems ($\alpha = .86$), mental health ($\alpha = .85$), vitality ($\alpha = .82$), pain ($\alpha = .88$), and general health ($\alpha = .81$; VanderZee et al., 1996). The SF-36 showed evidence of convergent validity with related health measures (Brazier et al., 1992; VanderZee et al., 1996), and was found to have good discriminatory power and be sensitive enough to detect variability in participants who were found to be in good health based on a related health measure (Brazier et al., 1992). Example items include: "How much time during the past month: … Has your health limited your social activities (like visiting friends or close relatives?" and "Does your health limit you in these activities? If so, how much? … Climbing several flights of stairs."

Event Related Rumination Inventory (ERRI). The ERRI (Cann et al., 2011) is a 20-item measure designed to assess cognitive style associated with rumination after experiencing a stressful life event. Participants are asked to report how often they have had the experiences described in the prompts on a Likert scale ranging from 0 (not at all) to 3 (often). The ERRI has two scales, each with high internal consistency: intrusive rumination ($\alpha = .94$) and deliberate rumination ($\alpha = .88$). Intrusive rumination is thought to be associated with negative coping, while more problem-solving focused deliberate rumination is associated with posttraumatic growth (Cann et al., 2011). Example items

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include: "Thoughts about the event distracted me or kept me from being able to concentrate" and "I thought about the event and tried to understand what happened."

Rosenberg Self-Esteem Scale (RSES). The RSES (Rosenberg, 1965) is a 10-item measure of global self-esteem. Participants are asked to respond using a 4-point Likert scale the degree to which they agree with each statement. The RSES is highly internally consistent (overall $\alpha = .91$), with good internal consistency across different demographic groups (ranging from .84 to .95) and adequate convergent and discriminant validity (Sinclair et al., 2010). Example items include: "I feel that I have a number of good qualities" and "All in all, I am inclined to feel that I am a failure."

Selected items from the Posttraumatic Growth Inventory (PTGI). Six items from the Personal Strength ($\alpha = .72$) and Spiritual Change ($\alpha = .85$) factors of the PTGI (Tedeschi & Calhoun, 1996) will be used to assess positive changes in response to trauma. Example items include: "I have a greater feeling of self-reliance" and "I have a stronger religious faith."

Primary Care PTSD Screen (PC-PTSD). The PC-PTSD (Prins et al., 2003) is a 4-item screening tool for posttraumatic stress disorder designed for use in primary care settings that asks about intrusive thoughts, avoidance, hypervigilance, and dissociative symptoms in the previous month related to a traumatic experience. A cutoff of 3 endorsed items was highly correlated ($r = .83$, $p < .001$) with a diagnosis based on the Clinician Administered PTSD Scale (CAPS, Blake et al., 1995).

Procedure

All participants completed the survey online through the Qualtrics platform. Participants were presented with an informed consent document that provided an overview of the study and

associated risks and benefits. Participants indicated their consent to participate by answering a question at the end of the page. If they indicated "yes" to the question regarding their consent, they were directed to the survey measures to complete the questionnaire. Participants could choose to discontinue their participation at any time, without penalty. Participants completed the survey measures in the following order: Demographics questionnaire, Racial and Ethnic Microaggressions (REMS) Questionnaire, Event Related Rumination Inventory (ERRI), select scales from the Posttraumatic Growth Inventory (PTGI), Emotion Regulation Questionnaire (ERQ), RAND 36-Item Short Form Health Survey 1.0 (SF-36), Rosenberg Self-Esteem Scale (RSES), and the Primary Care PTSD Screen (PC-PTSD). Upon completion of the survey measures, participants were presented with a debriefing statement.

All procedures were carried out in accordance with approved Institutional Review Board protocol. Online survey responses were stored on Qualtrics.com. Upon completion of the study and publication of the results, all data will be destroyed.

CHAPTER 4: RESULTS

Research Question 1: What is the Initial Process and/or Reactions Associated With

Experiencing a Racial/Ethnic Microaggression?

The exploration of initial reactions and the process of experiencing a racial microaggression (Study 1) were addressed using a direct content analysis approach (Hsieh & Shannon, 2005), categorizing participants' responses into three domains: emotional, cognitive, and behavioral reactions. Within these domains, researchers independently categorized responses into themes, and convened to discuss the themes to consensus. An independent auditor reviewed the themes and provided feedback, which the coding team then used to finalize the themes. Following the qualitative analysis, a coding scheme was developed. Researchers then reviewed all responses and applied appropriate codes; two coders rated 20% of the sample of responses to establish interrater reliability. Each coder rated half of the remaining responses.

The research team derived themes within each of three domains: cognitive, emotional, and behavioral responses to the microaggression scenarios. Table 1 provides a summary of the themes derived within each domain and their frequency, as well as the interrater reliability achieved in coding that theme.

Cognitive responses. Analysis within the cognitive domain revealed five overarching themes: Confusion; Identifying the microaggression; Internalizing the microaggression; Externalizing the microaggression; and Normalization of the microaggression. The theme of externalizing the microaggression was divided into two subthemes: assuming innocuous intent and assuming malicious intent.

Confusion. A number of participants described the cognitive experience of confusion, or their responses indicated they were engaged in the process of trying to discern the motivations of

others. Examples include: "I feel confused as to why she's curious," "I would feel confused and [surprised]. Confused because what would cause her to even ask me that question…" and "confused, because I don't know why I would give off that vibe." Participants who did not explicitly state that they felt confused expressed this confusion often in the form of questions, such as "Why is he following me? What did I do?" and "What did I do for them to act that way?"

Identifying the microaggression. Some participants identified the microaggressive behavior of the characters in the scenario, explicitly attributing their behavior to underlying racism. These responses varied based on the scenario, and ranged in the specificity with which the microaggression was discussed. Some examples include: "She feels that I don't [look] American," "That I was probably hired [because of] affirmative action," and "He thinks I'm stealing because I'm Hispanic." Other participants stated: "They are racist," "because I'm a minority," and "He's stereotyping."

Internalizing the microaggression. Participants also provided internalizing explanations for the behavior of the characters in the scenarios, reasoning that it must have been something about them personally that elicited the reaction of the character(s). Some participants internalizing responses were more positive, for example: "I am very respectful," "she wants to get to know me," and "I am well-spoken, and thank you." However, the majority of internalizing responses were more negative: "I made a bad impression on Ben," "I probably look like an on-the-low criminal," and "They do not find me interesting enough and do not accept me as part of the group." Many participants stated that they believed the character did not like them.

Externalizing the microaggression. A number of participants also provided externalizing explanations for the microaggression that were unrelated to race. These responses were organized under two subthemes: assuming innocuous intent and assuming malicious intent.

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Assuming innocuous intent. Participants provided a number of responses that attributed the perpetrator's behavior to reasons external to themselves, or specific to the perpetrator, that were largely innocuous. This involved a variety of rationalizations, including assuming a romantic relationship between co-workers, stating that the security guard was "just doing his job," or a student being bored in class, among others. Examples include: "She was just trying to make a new friend," "They must have a high rate of theft at this store," "She could be in a career that has to do with public speaking that's why she complimented me."

Assuming malicious intent. These participants attributions about the behavior of the character were also externalizing explanations, but assumed malicious intent on the part of the character that did not mention the microaggression explicitly. Some participants described the character's behavior as intentionally "to make [them] feel uncomfortable," or described the characters unfavorably ("Mean people, rude" and "I feel the security guard is a potential stalker").

Normalization of the microaggression. An underdeveloped but still significant theme that emerged was normalization of the microaggression, wherein participants remarked on how often they have experiences similar to the ones presented in the vignette scenarios. To this effect, participants remarked: "Happens to me often," "Normal, it happens all the time, I'm already used to it," and "This is a pretty normal question at [college], because it's such a diverse school so I expect this question a lot."

Emotional responses. Participants described a broad range of emotional reactions in response to the microaggression scenarios. Seven themes emerged within the this domain: Angry, Annoyed/Irritated, Happy/Proud, Offended, Sad, General Distress, and Neutral/No Reaction.

Angry. Some participants described feeling angry or mad in response to the microaggressive scenarios. Examples include: "Mad and temper starting to rise," "I feel angry about this because in reality things like this do happen." One participant stated: "I think I would become angry but never address the situation."

Annoyed/irritated. Other participants described a lower level of agitation, such as feeling annoyed or irritated. Examples of these responses include: "Irritated; there are multiple reasons as to why Jessica would want to ask me those questions, but the classroom is neither the time nor place for them, "I feel bothered and annoyed," and "Frustrated."

Happy/proud. Participants also expressed happiness or feeling proud of themselves in response to the microaggression scenarios. Examples include: "Happy, fulfilled," "I feel proud for helping her the best I could," "Happy. Who doesn't like to be appreciated every once in a while?" 73.5 percent of this theme's endorsements were in response to one scenario.

Offended. A number of participants endorsed feeling offended, disrespected, or slighted by the actions of the characters in the scenarios. One participant stated that they felt "very offended, besides it's not legal for him to think that way. The Constitution states that I can't be suspected for a crime that did not occur." Other examples include: "Pleased that I'm very well spoken, but a little offended that she mentioned it in such surprise" and "Am I invisible? Wow how disrespectful," and "… This is a very offensive way to begin a conversation."

Sad. Some participants reported feeling sadness, often in conjunction with other emotions. One participant remarked: "I would feel little sad because it makes me feel like they don't like me because they never include me in their conversations. It feels like they ignoring me and that would make me a little sad because I'm new and I'm being left out." Another reported

their emotional response as "sad, confused, makes me feel like there is something wrong with me, unworthy."

General Distress. The theme of general distress includes a broad array of negative feelings in which participants described feeling unsettled, uncomfortable, isolated, "weird," or excluded in response to the microaggressions. Participants made statements such as "I feel excluded and marginalized," "I feel extremely uncomfortable and want to leave the store, and "I would feel embarrassed and uncomfortable." One participant stated: "The first thing that comes to mind is how much it hurts to be left out."

Neutral/No Reaction. Participants also reported emotional neutrality, indifference, or no emotional response to the scenarios as well. Examples of this theme include: "No emotion," "I feel no type of way," and "neutral." Some expressed that they were specifically not upset in response to the scenario: "I do not feel bothered by the scenario," "I wouldn't feel anything. The question was a casual conversation starter and not at all offensive."

Behavioral responses. Six themes were derived within the behavioral domain: Passive responses; Seeking clarification; Disengaging from the situation or person; Extending politeness/courtesy; Increasing social engagement; and Confrontation. Within the theme of confrontation, a subtheme of directly addressing the microaggression emerged.

Passive responses. Participants engaged in a variety of passive responses, or responses that were neutral in tenor. These participants responded to the scenario or character in a way that implied their behavior was "business as usual" or flowing from their everyday behavior, and involved engaging with the character(s) in the scenario in a typical manner that suggested nothing was wrong or unusual about the encounter. Examples of responses that fall under this

theme include: "I would just answer her question," "Just do my work," and "Continue shopping normally."

Seeking clarification. Another theme that emerged was seeking clarification. For the most part, participants asked or verbally sought clarification of the character's actions, but this theme also included nonverbal responses. These responses may have also been a way of confronting the other individual about their behavior in a more neutral manner, or a way that assumed neutrality while seeking to rule out negative intention, though this was not always specified. One participant gave this response: "I would look at her puzzled and say, 'What do you mean what am I? And where as in ethnicity, race, or where I live?'" Others reported other approaches: "I would say thank you and perhaps [ask] her what made her say that" and "I would ask is there any specific reason he is following me."

Disengaging from the situation or person. Participants reported that they would disengage from the situation or person, describing responses that specified that the participant would ignore the event, remove themselves from the situation if possible, or act in a way to avoid confrontation or further interaction. These responses occurred across scenarios, but in different ways – more participants left a situation when this was practical (e.g., "just leave" while shopping in a store), while other situations, such as sitting in class or being at work, involved disengagement actions like ignoring or acting to avoid confrontation. For example, one participant stated, "Make sure I don't look suspicious in any way. Not making eye contact." Another participant in a less fluid situation said, "I would either ignore her or answer her question and end the conversation there."

Extending politeness/courtesy. Participants also responded to the character or scenario by extending courtesy or politeness to the individual in the scenario. Responses specified that

they would behave politely, and often included a remark about smiling or thanking the individual. Examples of responses that fit this theme included: "Thank her and wish a great day," "I respond politely," and "smile and say thank you."

Increasing social engagement. This theme included efforts to increase social engagement or interaction with the characters in the scenario, though participants' reasons for doing so were varied. Some participants sought to make a new friend or potentially forge a romantic connection, stating: "I would try to join in the conversations," "try to befriend [the characters]," and "talk to her, flirt and get her number." Alternatively, some increased interaction as a way to seek clarification about the situation (i.e., to test whether the character's behavior was intentional or unintentional). For example, one participant stated: "I could try and start the conversation [the] first couple of times to see their reaction. If I feel they have no interest in talking to me I would stop. From then on just be polite and say hi and bye and discuss work related issues if needed. But at least I tried to communicate."

Confrontation. Participants whose responses endorsed this theme included reactions in which participants confronted the character or the behavior they deemed inappropriate, whether that was directly letting the individual know through verbal or nonverbal communication, or reaching out to a superior (i.e., contacting Human Resources or a store manager). Examples included: "If he continues following me I might eventually confront him," "I would ask [the characters] if they have an issue with me," and "Respond with what am I? I am human, rephrase your question and be more polite to those around you."

Directly addressing the microaggression. Included in broader theme of confrontation was a subtheme, wherein individuals directly addressed the microaggression by naming be problematic, racially-motivated behavior in the confrontation with the other individual. One

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participant remarked, "I would try to hold back my anger, and tell her that I am an American, born and raised." Another stated: "I would [respond] to her saying, 'So because I am a racial minority that means that I'd be not well spoken?'" Responses that endorsed confronting the microaggression directly accounted for 51.5 percent of the broader theme of confrontation.

Research Question 2: What is the Relationship Between Past Experiences of Microaggressions and Immediate Reactions to Microaggressions?

An investigation of the relationships between past experiences of racial microaggressions and qualitative initial reactions to microaggression scenarios (Study 1) was addressed using quantitative data analysis methods, utilizing the codes from the qualitative analysis to examine corresponding rates of exposure to racial microaggressions. Pearson correlations were conducted with dichotomously coded qualitative themes and previous experiences of microaggressions.

Interrater reliability. Cohen's κ was conducted to determine if there was agreement between raters with respect to whether or not the participant recognized the microaggression, and for the rating of each theme that was coded based on participants' responses. There was very good agreement on the first scenario ($\kappa = .888$, $p < .0005$), fair agreement on the second scenario ($\kappa = .329$, $p < .0005$), and very good agreement on the third ($\kappa = .909$, $p < .0005$), and fourth scenarios ($\kappa = .903$, $p < .0005$; Altman, 1991). For the rating of themes, Cohen's κ ranged from .41 to .74 for Cognitive Responses, .44 to .97 for Emotional Responses, and .42 to .68 for Behavioral Responses (see Table 1).

Recognition of the microaggression. Out of the 189 participants who provided responses to the vignettes, 63.5% were determined to have recognized at least one microaggression across the four vignettes (see Table 2 for valid percentages of microaggression recognition ratings by scenario). A one-way ANOVA revealed significant differences in

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microaggression recognition ratings for race, $F(4, 182) = 5.12$, $p = .001$. Post-hoc Bonferroni analysis indicated that participants who identified as Black or African American recognized significantly more microaggressions than those who identified as White ($p = .025$; See Table 3). Participants who identified as Multiracial recognized significantly more microaggressions than both White ($p = .002$) and Asian/Pacific Islander participants ($p = .033$; See Table 3).

Past experiences of racial microaggressions and current reactions. The current sample reported a diverse array of racial microaggression experience in the past six months ($M = .34$, $SD = .19$). The most commonly endorsed themes of microaggressions were Environmental Microaggressions ($M = .55$, $SD = .30$) and Exoticization/Assumptions of Similarity ($M = .51$, $SD = .28$), followed by Assumptions of Inferiority ($M = .33$, $SD = .35$), Microinvalidations ($M = .27$, $SD = .24$), Second-Class Citizen and Assumptions of Criminality ($M = .16$, $SD = .27$), and Workplace and School Microaggressions ($M = .16$, $SD = .26$). The relatively high standard deviations indicate that these experiences varied between individuals. A one-way ANOVA indicated that there were significant differences across racial groups for the incidence of microaggressions, $F(4, 187) = 9.82$, $p < .001$. Post-hoc Bonferroni testing indicated that participants who identified as Hispanic or Latinx, Black or African American, and Multiracial participants all reported more frequent experiences of racial microaggressions than White participants ($p < .001$). There were no significant differences across gender, $t(190) = 1.23$, $p = .21$.

Pearson correlations were conducted to examine the relationship between previous experiences of racial microaggressions (REMS) and initial reactions to the microaggression scenarios. Table 1 includes correlations between past experiences of racial microaggressions and themes endorsed by participants. Within the cognitive domain, individuals who reported more

previous experiences of racial microaggressions were also more likely to identify the

microaggression ($p = .000$) and normalize the experience of the microaggression ($p = .004$) in

response to the current scenarios, and less likely to externalize the microaggression by assuming

innocuous intent ($p = .023$) on the part of the character(s) in the vignettes. Participants who

reported a higher rate of previous exposure to racial microaggressions were significantly more

likely to endorse the emotional reaction of anger ($p = .000$) and less likely to respond with pride

or happiness ($p = .012$). Behaviorally, those who reported more previous experiences with

microaggressions were more likely to endorse disengaging from the situation or person ($p =$

$.002$), confrontation ($p = .001$), and directly addressing the microaggression ($p = .000$) as initial

reactions to the microaggression scenarios. They were also less likely to report passive responses

($p = .000$).

Research Question 3: Does Emotion Regulation Moderate the Relationship Between Incidents of Racial Microaggressions and Physical and Mental Health?

In order to assess whether emotion regulation moderates the relationship between

experiences of racial microaggressions and physical and mental health outcomes (Study 2), a

path analysis was conducted. The hypothesized causal ordering for the relationship between

racial microaggressions, emotion regulation (reappraisal and suppression), and physical and

mental health outcomes is depicted in Figure 1. A total of eight path analyses were conducted

with the REMS total score, Reappraisal and Suppression scores, and each of the SF-36 scales.

Additionally, the effects of trauma on physical and mental health were controlled for.

Descriptive statistics. SPSS and Amos were used to conduct all statistical analyses. All

assumptions for the statistical analysis conducted were evaluated and found to be met

adequately, with a few exceptions. Missing data was replaced using mean imputation. Four cases

were removed due to multivariate outliers in the health outcome measures. Correlation matrices (see Table 5) indicated significant correlation between exogenous variables; however, no evidence of multicollinearity was found.

Normality was assessed using visual evaluation of Q-Q plots and the skewness statistic. A power transformation was applied to the physical functioning, role limitations due to physical health, social functioning, and pain scales of the SF-36 to better fit a normal distribution. The transformation was wholly successful for the social functioning scale, and reduced the level of skewness for the physical functioning, role limitations due to physical health, and pain scales.

The analyses were conducted using a final sample of 244 participants. The means and standard deviations, for the total sample and by race, are displayed in Table 6 for exogenous variables and Table 7 for all possible endogenous variables. Correlation matrices are provided in Table 5, demonstrating significant relationships between the experience of racial microaggressions and six out of eight health outcomes, including role limitations due to emotional problems, energy/fatigue, emotional wellbeing, social functioning, pain, and general health.

Past experiences of racial microaggressions. Participants in Study 2 reported a higher incidence of racial microaggressions in the past six months than participants in Study 1 ($M = .43$, $SD = .20$). The most commonly endorsed themes included Environmental Microaggressions ($M = .59$, $SD = .30$), Exoticization and Assumptions of Similarity ($M = .55$, $SD = .26$), and Microinvalidations ($M = .46$, $SD = .33$), followed by Assumptions of Inferiority ($M = .38$, $SD = .34$), Workplace and School Microaggressions ($M = .26$, $SD = .33$), and Second-Class Citizen and Assumptions of Criminality ($M = .24$, $SD = .27$). A one-way ANOVA indicated significant differences across race, $F(4, 237) = 4.14$, $p = .003$. Post-hoc Bonferroni analysis revealed that

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participants who identified as Asian/Pacific Islander or Multiracial reported significantly more

racial microaggressions than White participants. The one individual who reported his race as

American Indian was excluded from this analysis. There was a significant difference across

gender, with participants who identified as female reporting a higher frequency of racial

microaggressions, $t(241) = 2.26$, $p = .03$. Additionally, there was also a significant difference

across levels of education, $F(2) = 6.45$, $p = .002$, with post-hoc Bonferroni analysis indicating

that individuals with a graduate degree reported more incidences of racial microaggression than

those participants whose highest level of education was a high school degree or GED ($p = 002$).

Evaluation of path models. Eight separate path analyses were conducted using the eight

scales of the SF-36 to test the proposed model depicted in Figure 1. The model fit was evaluated

using the following indicators: the chi-squared statistic (χ^2), the goodness-of-fit index (GFI), the

adjusted goodness-of-fit index (AGFI), the comparative fit index (CFI), and the root mean square

error of approximation (RMSEA). Models were judged to be a good fit if they resulted in a

nonsignificant χ^2 statistic, GFI, AGFI, and CFI above .90, and RMSEA less than .05.

The originally proposed model depicted in Figure 1 was found to be an inadequate fit for

all eight scales of the outcome measure based on the above criteria (see Table 8). Several

goodness-of-fit indicators (GFI, AGFI, and CFI) demonstrated that the model was an adequate fit

for some health variables, specifically role limitations due to emotional problems, energy/fatigue,

emotional wellbeing, social functioning, and pain. In particular, the CFI was inadequate for three

variables, including physical functioning (CFI = .829), role limitations due to physical health

(CFI = .859), and general health (CFI = .891). However, the model performed inadequately for

every model of the scale based on the χ^2 statistic and RMSEA (RMSEA = .083), which indicated

that while this model was close to an adequate fit, that other conceptually-driven considerations needed to be made, χ^2 (3) = 8.05, p = .045.

Reappraisal (antecedent-focused strategy) and suppression (response-focused strategy) are posited to occur at different time points during the broader emotion regulation process (Gross, 1998, 2001). Reappraisal occurs before an emotional response has been triggered, thus avoiding the activation of an individual's tendency to respond in a certain way. Suppression, on the other hand, involves decreasing an emotional response that has already been triggered. In order to capture this aspect of the theory, self-esteem (RSES) was introduced into the revised models. Self-esteem was chosen based on correlations with health outcomes (see Table 5), and its status as an endogenous variable that is not an emotion regulation strategy, but rather a trait variable that is significantly correlated with the emotion regulation strategy of suppression (r = -.223, p < .01). It was theorized that the experience of a racial microaggression may lead to implications for self-esteem, and the suppression of the emotions associated with this interaction may have consequences for physical and mental health. Reappraisal, which is posited to occur earlier in the process, was not found to be significantly correlated with self-esteem (r = .008, p > .05).

The revised models for the eight scales of the SF-36 are displayed in Figures 2 and 3. The addition of self-esteem to the pathway between racial microaggressions and suppression was successful. There were two highly similar models that emerged as a strong fit, consistent with the above goodness-of-fit indicators, for the eight SF-36 scales (see Table 9 for a summary). The revised models for role limitations due to physical health, role limitations due to emotional problems, and pain scales are represented in Figure 3 (see Table 11 for standardized coefficients). For physical functioning, energy/fatigue, emotional wellbeing, social functioning,

and general health, the modification indices suggested an additional path between RSES and the SF-36 scales (see Figure 2; see Table 10 for standardized coefficients).

CHAPTER 5: DISCUSSION

Microaggressions as a construct are inherently ambiguous, and the process by which that dissonance is resolved and responded to has yet to be examined. The resolution of that ambiguity and the subsequent internal regulation of the response, as it relates to physical and mental health outcomes, were the subject of the current investigation.

Research Questions 1 and 2 sought to investigate the initial reactions to experiencing a racial microaggression and their relationship to past exposure to racial microaggressions, in an effort to understand the immediate cognitive, emotional, and behavioral processes that occur post-event. Initial reactions to the experience of being microaggressed against vary widely, and there is a good amount of that variability that rests on whether the slight is recognized, and further, if it is recognized as racially motivated. The scenarios presented in Study 1 were sufficiently ambiguous and varied to elicit positive, negative, and neutral responses to the microaggression across the cognitive, emotional, and behavioral domains.

In the cognitive domain, the most commonly endorsed theme was an *externalization of the microaggression* that attributed the character's behavior to something *innocuous* – in other words, many participants looked for the good in the character or found a reason to excuse or explain the behavior. The second and third most highly endorsed themes were an *internalization of the microaggression*, or the participant assuming that it was their behavior or something about their personhood that elicited the microaggression, and *confusion*. The frequency of these endorsements suggests that part of the immediate cognitive response may be in direct contrast to the fundamental attribution error. Participants experienced confusion, assumed the best in others'

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motives, and assumed they were responsible for part of others' behavior. The instinctual response in a number of cases was not to assume malicious intent or to identify the microaggression. However, when prior experience with racial microaggressions is considered, individuals are more likely to identify the microaggression and less likely to assume the behavior is innocuous. Additionally, prior experience is also related to making statements that normalize the experience of racial microaggressions (i.e., "this happens often"). It should be noted that higher levels of exposure to racial microaggressions is not related to assuming malicious intent of others.

The emotional domain themes are comprised of three main categories of response; approximately half of the responses were negative in valence (*angry*, *annoyed/irritated*, *offended*, *sad*, *general distress*), while responses with a positive (*happy/proud*) or *neutral* valence each comprised a quarter of responses. The neutral and negatively valenced emotional themes that emerged are consistent with previous research on responses to microaggressions in other populations that used focus group methodology (Nadal et al., 2011; Nadal et al., 2013; Nadal, Davidoff, Davis, & Wong, 2014). Higher reports of prior experience with microaggressions in daily life were associated with reporting the initial reaction of *anger*, and negatively associated with feeling *happy and/or proud* in response to the scenarios.

Within the behavioral responses, the most commonly reported theme was *passive responses*, followed by *confrontation* and two themes that further engaged the microaggressor (*increasing social engagement* and *extending politeness/courtesy*). The range of popular responses to the microaggressive event is consistent with the ambiguity of the scenarios, and can be thought of in a variety of ways. The majority of participants reported that they would engage more with the perpetrator of the microaggression – while responses that were identified as

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explicitly *seeking clarification* were the least commonly endorsed theme, behaviors that increase social engagement and some kinds of confrontation may also be interpreted as efforts to obtain more information about the situation and make a determination about the perpetrator's motives. *Passive responses* and *disengaging from the person or situation* comprised approximately 40 percent of the behavioral responses, indicating that a substantial portion of participants were motivated to remove themselves from the situation or to allow the situation to pass or progress without an attempt to change the experience. Participants who endorsed higher rates of exposure to racial microaggressions were significantly more likely to report that they would *confront the perpetrator* and/or *directly address the microaggression*, Interestingly, higher rates of previous exposure was also associated with reacting in the opposite manner and *disengaging from the situation or person*. Individuals who have experienced more microaggressions in the past were also significantly less likely to take a *passive* approach to coping in the present.

Previous research has utilized focus group methodology to explore individuals' reactions and responses to microaggressions in the long term. Participants are asked to reflect on experiences with microaggressions and how they have coped over time. Sue, Capodilupo, and Holder (2008) describe reactions to microaggressions by Black Americans in four themes: healthy paranoia, sanity check, empowering and validating self, and rescuing offenders. Focus group research on microaggressions against women, LGB-identified individuals, and people of transgender experience revealed overlapping themes of acceptance, and resiliency and empowerment within cognitive domains, and passive, confrontational, avoidant, and protective behavioral responses (Nadal et al., 2011; Nadal et al., 2013; Nadal, Davidoff, Davis, & Wong, 2014). While some of the themes that emerged in the current study are similar to the themes from previous research, it could be posited that only over time could a person of color develop healthy

paranoia, acceptance, or resiliency and empowerment from these experiences. Inherent in focus group research is the existence of many experiences of racial microaggressions, with more micro-level processes and analysis of the singular events, from which metacognition arises.

The current research adds another dimension to the understanding of coping with microaggressions, as it introduces an earlier time point and looks at the reaction to singular events, as opposed to responses taking into account the accumulation of microaggressions over time. The emergence of emotions that have a positive valence, such as feeling *happy* and *proud*, and themes such as *confusion*, *externalizing the microaggression-assuming innocuous intent*, and *seeking clarification* at the point of initial response is likely due to this difference in methodology. In focus groups, participants have already identified the interactions they are describing as microaggressions, whereas their initial reactions to these events may not have been as strongly negative, or may have started with confusion about the ambiguous nature of the interaction.

The difference in the themes derived from the current research approach to the themes identified in focus groups supports the contention that there is a meta-level process and a progression of thinking over time. Individuals' thinking about a singular microaggression may evolve over time as they gain more experience, discuss these events with others in their identity groups, and integrate the single event with other similar experiences and knowledge about their marginalized identities. The current study found that individuals who have experienced more racial microaggressions in the past six months were more likely to have initial reactions to a single microaggressions characterized by *identifying that microaggression*, *normalizing* the experience, *anger*, and behavioral responses of either *disengaging* or *confronting* the situation or person. Less exposure to racial microaggressions is associated with *externalizing explanations of*

microaggressions that assume innocuous intent of the perpetrator, feeling *happy/proud* in response to microaggressions in which compliments are not perceived as slights, and behaviorally neutral or *passive responses*. It may be that reflections on microaggressive experiences change as people of color progress through different stages of racial and cultural identity development (Sue & Sue, 2008), and incorporate these incidents into existing schemas around race.

The findings from Study 2 provided support the inclusion of different response styles in the relationship between racial microaggressions and physical and mental health outcomes. Racial microaggressions were found to be related to certain physical health variables, such as fatigue, pain, and general health, and the strength of these relationships were impacted by the inclusion of emotion regulation in the model. The variance accounted for within the models that specifically related to physical health ranged from five to 13 percent, while the explanatory value of the model with respect to mental health variables was more robust, ranging from 12 to 31 percent.

While the overall revised model was an adequate fit, there were a number of paths between variables that were not. This may be due to an inadequate statistical power or measurement error, though it is also likely that there were a number of factors relevant to the models that were not accounted for. Higher rates of exposure to racial microaggressions were negative correlated with role limitations due to emotional problems, energy, emotional wellbeing, social functioning, pain, and general health. The emotion regulation processes within the model provided a strong moderating effect for all scales aside from general health and pain. The less emotion-focused scales of physical health, role limitations due to physical health, pain, and general health were less adequately explained by the regulatory processes, suggesting that

further research needs to be done to determine which additional variables are critical to understanding this relationship.

Previous research has used reappraisal and suppression as directives, asking participants to either think about an event they were exposed to in a way that reduces their emotional response (reappraisal) or act in a way such that others would not know they were experiencing any particular emotion (suppression). It may be that the original model (Figure 1) would perform well in an experimental paradigm wherein participants were exposed to a singular microaggression and asked to regulate their response in one of these two ways. On a broader level, prior experience with racial microaggressions was not found to be correlated with either a reappraisal- or suppression-inclined emotion regulation response style.

Taken together, the findings from Studies 1 and 2 provide support for the multicultural model of the stress process described by Slavin and colleagues (1991), and provide additional information for what this process may look like following a microaggression. After the commission of a microaggression, people of color experience a process of assigning meaning to the event (primary appraisal). Inherent in both the primary and secondary appraisal points in the process are the interactions between the themes in the cognitive and emotional response domains in Study 1, wherein confusion and clarification about the situation may be occurring. If the individual comes to this event with significant experience with microaggressions, the process of appraisal becomes easier. Within our revised models in Study 2, this is the point at which reappraisal takes place. When the extent to which the event is personally impactful, and whether the event is related to racial group membership is determined, an individual's particular responses sets are triggered (Slavin et al., 1991). Secondary appraisal is the point at which a decision about behavior occurs, and people of color determine how to cope with or respond to

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the event (Slavin et al., 1991). Following primary and secondary appraisal, coping efforts take place. Our findings suggest that when an event is determined to be a racial microaggression during the primary appraisal phase, the behavioral response set that is triggered is either confrontation (problem-focused coping) or disengagement from the person or situation (emotion-focused coping), which could be viewed in some cases as suppression. When the microaggression has not been identified, passive responses are the more likely behavior. From there, the impact on general health, emotional wellbeing, energy/fatigue, and social functioning are posited to occur. A limitation of the current research is that it does not allow for an explication of the transactional process, which microaggressions often are. After seeking clarification, a person of color may face further microaggressions or denial on the part of the perpetrator.

Additionally, the results are also consistent with the cognitive-behavioral model that asserts a relationship between thoughts, emotions, and behaviors (Beck, 2011). Consistent with this framework, thoughts and attributions about the event (primary appraisal) are highly related to emotional response and associated action urges (secondary appraisal), which in turn influences behavior (coping). From a counseling perspective, the strengthening of the reappraisal response, or changing one's thinking about the microaggression, could lead to more adaptive emotional and behavioral responses that have a less negative impact on physical and mental health outcomes. The revised models in Figures 2 and 3 demonstrate that reappraisal is positively associated with better emotional wellbeing and social functioning. It is possible that strengthening an individual's ability to consider alternative explanations for events and interpret them in a manner that effectively reduces negative emotional response could be protective for some emotional health outcomes.

Limitations

While the current studies address the research questions have further clarified existing questions in the field, there are some limitations in both studies. Within Study 1, the ambiguous microaggression scenarios were developed for use in this research and are not a standardized or validated measure. The four scenarios were developed to correspond directly to existing and replicated themes within the literature (Sue et al., 2007; Nadal, 2011), though we know from previous research that certain racial/ethnic demographics experience different microaggression themes at higher rates (e.g., individuals who identify as Black are more likely to endorse themes related to assumptions of criminality; Forrest-Bank & Jenson, 2015; Nadal, 2011). Thus, the scenarios utilized in this study may have been more or less applicable to different racial groups. Additionally, the scenarios varied in the degree of ambiguity and the tone of the microaggression. Scenarios 2 and 4 involved situations that could more easily be interpreted in a positive manner, whereas Scenarios 1 and 3 were more likely to elicit a negative response, irrespective of whether the microaggression was acknowledged. However, the order the scenarios were presented in was randomized for each participant to counterbalance for carryover effects.

Additionally, there was variability in the degree of interrater reliability in coding participants' responses for each theme in Study 1. Coders established at minimum moderate reliability ($\kappa > .40$) with all themes, but certain themes were more difficult due to their abstract nature. For example, more concrete themes such as angry ($\kappa = .88$) or happy/proud ($\kappa = .97$) had much higher interrater reliability than more abstract themes, such as internalizing the microaggression ($\kappa = .43$) or disengaging from the situation or person ($\kappa = .42$). Improvements

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such as creating a detailed coding scheme with examples could improve interrater reliability in the future.

Within Study 2, there were several specific areas of limitation that warrant discussion. First, the use of self-report measures for health status limits the strength of the conclusions that can be drawn. While the SF-36 is a gold standard measure for self-reported health status, more direct measures of health correlates or behaviors could provide more direct insight into the impact of subtle discrimination on physical health.

Previous research on discrimination and health has relied heavily on university samples, which limits the amount of variance in health outcomes as students are generally younger and in better health. The current research aimed to use a blended sample of students and community members in order to address limitations in prior studies; however, despite convenience sampling targeting an older demographic of people of color, they comprise approximately one-third of the Study 2 sample. Missing or incomplete data resulted in a disproportionate number of removals from the community sample, as there was no incentive to finish the study to completion. In the student sample, participants were compensated in course credit for their participation; therefore reciprocity may have bolstered the amount of completed protocols. It should be noted that the inclusion of community members in the sample is still an improvement on previous research that utilized only the college student population. Within the community sample, participants were recruited through convenience sampling and a snowball sampling method, wherein individuals who completed the study were asked to forward the survey to others within their circles. Therefore, it is likely that the community sample is not representative of the true population.

Within the results of Study 2, there are several factors that require further exploration. First, the variance accounted for in the final models ranged from five to 31 percent, suggesting

that there are a number of variables unaccounted for within the models. This limitation is particularly true for the scales of the SF-36 that are more directly related to physical health. The Emotional Wellbeing and Social Functioning scales had the highest effect sizes. Second, self-esteem was used as a proxy variable for emotional response in the final models. While the models are a strong fit for the relationship between racial microaggressions, suppression, and health outcomes, future studies should employ an emotion-based measure in this role. Finally, the current research demonstrated poor correlations between racial microaggressions and emotion regulation styles of Reappraisal and Suppression. This may have been due to the fact that the emotion regulation process had already occurred for the racial microaggressions measured by the REMS.

Implications and Future Directions

The current research provided strong support for the importance of continued research exploring the initial process of experiencing a microaggression, and raised important questions about the process of appraising current and past microaggressive experiences over time. Further, the revised model of the relationship between racial microaggressions, emotion regulation styles, and physical and mental health outcomes provides a base from which to further explore these relationships at the individual- and cumulative-levels.

It is apparent that when broken down into individual events, not all microaggressions are perceived as negative slights or put-downs by all people of color and not all negative slights or put-downs are perceived as microaggressions. While the concept of microaggressions is becoming more mainstream in current society, as evidenced by its recent inclusion in the Merriam-Webster dictionary (Microaggression, 2017), for some individuals these experiences may still be unsettling, confusing, and evoke negative reactions that are poorly understood.

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Therapists, counselors, and educators have the unique opportunity to put a name to the experience and validate its existence. It would be useful for researchers to examine comparisons between populations that recognize the microaggression and attribute the behavior to racism, those who recognize the slight but do not attribute the behavior to racism, and those who do not recognize the microaggression. An exploration of demographic variables, racial identity development, and social support/connectedness to communities of color would help elucidate the factors that could explain the relationships demonstrated in Study 1. Additionally, patterns of cognitive, emotional, and behavioral response themes and their relationship to identification of the microaggression may prove useful in understanding the initial internal process of being microaggressed against.

This discrepancy also has further implications for intergroup relations. Without universal knowledge or acknowledgement of microaggressions, a difficult behavioral pattern is perpetuated. The array of responses, some of which are positive, to microaggressions creates a variable reinforcement schedule for the perpetrators of microaggressions – sometimes the microaggression is confronted, sometimes it is met with courtesy or a smile. The results from this research are likely echoed in white peers' reactions to witnessing microaggressions, making them equally or more unlikely to address the microaggression in the moment. The microaggressive words or actions are met with inconsistent reinforcement and punishment by society at large, which makes extinguishing (i.e., changing and/or eliminating) the behavior more difficult. The less consistently microaggressions are confronted and acknowledged by both people in marginalized and majority groups, the more likely it is that perpetrators of microaggressions will continue to get "mixed signals" from different individuals and continue to perpetrate against others. Efforts to disseminate research on microaggressions outside of

scientific communities and into mainstream culture for the general population need to continue, for the sake of those who are microaggressed against and those who microaggress against others. A number of news media outlets (e.g., The New York Times, Time Magazine, The Washington Post) and popular culture websites (e.g., Buzzfeed) have provided commentary, critiques, or discussion of the concept.

Clinically, the research does support the contention that, for those who acknowledge it, ignoring the microaggression or suppressing the emotional response to it is associated with poorer health outcomes, particularly in emotional and social domains. Therapists and counselors working with individuals who have experienced microaggressions have the ability to validate this experience, help their clients develop appropriate coping and emotion regulation skills, and develop an understanding of broader societal factors that exist and influence their daily lives. The emotion regulation strategy of suppression could be viewed as a type of avoidance, which further entrenches dysfunctional beliefs. Certain therapeutic approaches (e.g., cognitive behavioral therapy, narrative therapy) are uniquely suited to strengthening the client's ability to engage in the reappraisal process, and therefore may provide useful tools in treatment. The concept of racial trauma could also play an important role in the treatment of people who identify with marginalized groups, as some microaggressions may serve as triggers for primary or secondary traumas related to race (e.g., the experience of being followed by a security guard triggering a traumatic reaction from watching the video of Walter Scott's shooting). Further investigation into the relationship between microaggressions and racial trauma, particularly as it is perpetuated in our current political climate and 24-hour news cycle, should be conducted.

From a methodological perspective, future research could investigate the application of the revised model in Study 2 (see Figures 2 and 3) at an individual microaggression level,

consistent with prior research with reappraisal and suppression (Gross, 1998, 2001). This would involve exposing individual participants to a microaggression, enacting or determining the emotion regulation strategy used, and measuring event-specific physical health outcomes (e.g., blood pressure) and global health outcomes. Study 1 revealed that past history with microaggressions is related to specific response styles, therefore an approach such as this could also investigate how past experiences of microaggressions inform the initial response process. Further, Study 1 also provided a range of emotions (e.g., anger) that could be included in the model in the place of self-esteem.

In order to better understand the initial internal process and how it connects to health outcomes, researchers could generate paradigms in which participants of color experience a microaggression and appraise the situation, or rate the degree to which they are likely to engage in a certain response. The vignettes used in Study 1 are an innovative approach to investigating the initial process, and a more structured, validated measure that allows people to imagine themselves in a scenario and endorse certain responses could allow for further empirical investigation of this phenomenon

Conclusion

The exposure to a microaggression is a cognitively and emotionally complex experience that is comprised of a wide range of perceptions, appraisals, and responses, all of which occur within a short window of time. This is to be expected, given that microaggressions are a construct that involve the interpretation of ambiguous stimuli, often in social settings. Furthermore, as people of color progress through their lives and have more contact with subtle discrimination, their appraisals of past events may adjust accordingly. The current research has provided support for the inclusion of emotion regulation as an important component in both the

initial process of responding to a microaggression, and raised questions about long-term

strategies of regulating emotional responses and appraising ambiguous, potentially

microaggressive situations over time.

Table 1

Summary of qualitative themes, frequencies, interrater reliability, and correlation with past experiences of racial microaggressions

Cognitive Responses	Frequency	Interrater Reliability (κ)	Correlation with REMS (r)
Confusion	250	.74	-.005
Identifying the Microaggression	161	.54	.326**
Internalizing the Microaggression	258	.43	.020
Externalizing the Microaggression			
Assuming innocuous intent	582	.41	-.144*
Assuming malicious intent	124	.57	.037
Normalization of the Microaggression	38	.61	.191**

Emotional Responses	Frequency	Interrater Reliability (κ)	Correlation with REMS (r)
Angry	126	.88	.261***
Annoyed/Irritated	59	.70	.045
Happy/Proud	204	.97	-.164*
Offended	39	.44	-.025
Sad	36	.87	-.033
General Distress	179	.44	.045
Neutral/No Reaction	182	.52	-.112

Behavioral Responses	Frequency	Interrater Reliability (κ)	Correlation with REMS (r)
Passive Responses	505	.60	-.265***
Seeking Clarification	113	.68	.085
Disengaging from the Situation or Person	131	.42	.213**
Extending Politeness/Courtesy	233	.64	-.101
Increasing Social Engagement	243	.46	-.057
Confrontation	264	.52	.214**
Directly Addressing the Microaggression	136	.49	.289***

Note. REMS = Racial and Ethnic Microaggressions Scale.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 2

Valid percentages of microaggression recognition ratings by scenario

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Did Not Recognize	82.0	61.3	63.8	83.2
Recognized (1)	3.1	27.3	4.1	2.6
Recognized (2)	14.0	11.3	32.1	14.3

Table 3

Average microaggression recognition ratings by race

	N	*M*	*SD*
Hispanic/Latinx	85	1.96	2.00
Black/African American	28	2.36	2.06
Asian/Pacific Islander	22	1.27	1.45
White	36	.94	1.12
Multiracial	16	3.06	2.14

Table 4

Demographics summary for Study 2 by sample

	Total *N* = 248	Student Sample *n* = 167	Community Sample *n* = 81
Age	*M* = 24.73 (*SD* = 8.45)	*M* = 20.10 (*SD* = 3.50)	*M* = 34.16 (*SD* = 7.71)
Female	193 (77.8%)	125 (74.9%)	68 (84.0%)
Male	54 (21.8%)	42 (25.1%)	12 (14.8%)
Transgender	1 (.4%)	0 (0.0%)	1 (1.2%)
Hispanic/Latinx	105 (42.3%)	96 (57.5%)	9 (11.1%)
Asian/Pacific Islander	49 (19.8%)	15 (9.0%)	34 (42.0%)
Black/African American	43 (17.3%)	24 (14.4%)	19 (23.5%)
White	25 (10.1%)	23 (13.8%)	2 (2.5%)
Multiracial	24 (9.7%)	8 (4.8%)	16 (19.8%)
American Indian/Alaska Native	1 (.4%)	0 (0.0%)	1 (1.2%)
Entire Life in US	202 (81.5%)	137 (82.0%)	65 (80.2%)
Born/Lived Outside US	46 (18.5%)	30 (18.0%)	16 (19.8%)
High School Diploma/GED	137 (55.2%)	134 (80.2%)	3 (3.7%)
Associates/Bachelor's Degree	50 (20.2%)	33 (19.8%)	17 (21.0%)
Graduate Degree	61 (24.6%)	0 (0.0%)	61 (75.3%)
Christian	129 (52%)	97 (58.1%)	32 (39.5%)
Atheist/Agnostic	39 (15.7%)	24 (14.4%)	15 (18.5%)
Non-Religious	38 (15.3%)	22 (13.2%)	16 (19.8%)
Muslim	19 (7.7%)	16 (9.6%)	3 (3.7%)
Spiritual/Religious	8 (3.2%)	4 (2.4%)	4 (4.9%)
Hindu	4 (1.6%)	0 (0.0%)	4 (4.9%)
Other (e.g., Jain, Panetheist)	4 (1.6%)	1 (.6%)	3 (3.7%)
Buddhist	3 (1.2%)	1 (.6%)	2 (2.5%)
Jewish	1 (.4%)	1 (.6%)	0 (0.0%)

Table 5

Correlation matrices for racial microaggressions, reappraisal, suppression, trauma screen, and physical and mental health measures

	1	2	3	4	5	6	7	8	9
1. REMS	--	-.019	.065	-.026	.291**	.025	-.056	-.154*	-.192**
2. Reappraisal		--	.115	-.012	.008	.097	.097	-.004	.099
3. Suppression			--	-.223**	.151*	.032	-.113	-.038	-.132*
4. RSES				--	-.167**	.119	.131*	.054	.168**
5. PC-PTSD					--	-.141*	-.204**	-.336**	-.334**
6. Physical Functioning						--	.441**	.184**	.221**
7. Role limitations due to physical health							--	.381**	.314**
8. Role limitations due to emotional problems								--	.402**
9. Energy/ Fatigue									--

	1	2	3	4	5	6	7	8	9
1. REMS	--	-.019	.065	-.026	.291**	-.230**	-.195**	-.236**	-.253**
2. Reappraisal		--	.115	-.012	.008	.136*	.113	.086	-.019
3. Suppression			--	-.223**	.151*	-.176**	-.078	-.055	-.102
4. RSES				--	-.167**	.314**	.264**	.108	.217**
5. PC-PTSD					--	-.464**	-.434**	-.300**	-.247**
6. Emotional Wellbeing						--	.656**	.394**	.415**
7. Social Functioning							--	.415**	.371**
8. Pain								--	.451**
9. General Health									--

Note. REMS = Racial and Ethnic Microaggressions Scale, RSES = Rosenberg Self-Esteem Scale, PTSD-PC = Primary Care PTSD Screen.
* $p < 0.05$, ** $p < 0.01$

Table 6

Means and standard deviations for Study 2 exogenous variables, total sample and by race

	Total Sample $N = 248$	Latinx/ Hispanic $N = 105$	Asian/Pacific Islander $N = 49$	Black/African American $N = 43$	White $N = 25$	Multiracial $N = 24$
REMS	.43 (.20)	.40 (.17)	.48 (.22)	.45 (.17)	.32 (.18)	.49 (.24)
PC-PTSD	1.42 (1.60)	1.18 (1.52)	1.20 (1.41)	1.58 (1.65)	1.72 (1.72)	2.38 (1.76)

Table 7

Means and standard deviations for Study 2 endogenous variables, total sample and by race

	Total Sample N = 248	Latinx/ Hispanic N = 105	Asian/Pacific Islander N = 49	Black/African American N = 43	White N = 25	Multiracial N = 24
Physical Functioning	88.95 (19.02)	89.57 (19.77)	87.86 (19.20)	90.81 (13.71)	82.00 (28.06)	92.08 (10.41)
Role limitations due to physical health	79.23 (33.40)	83.81 (28.37)	77.04 (36.03)	77.91 (35.02)	74.00 (36.43)	73.96 (39.24)
Role limitations due to emotional health	61.69 (42.07)	70.48 (39.85)	55.10 (43.85)	58.14 (44.30)	58.67 (38.83)	44.44 (42.47)
Energy/Fatigue	46.17 (20.57)	48.81 (20.21)	43.98 (18.96)	45.81 (22.09)	47.00 (20.97)	37.29 (20.80)
Emotional Wellbeing	64.74 (19.60)	68.76 (18.82)	60.49 (17.22)	64.19 (19.92)	61.60 (22.15)	58.83 (22.05)
Social Functioning	72.63 (24.54)	78.33 (22.42)	69.39 (21.51)	66.86 (29.36)	70.50 (25.99)	69.27 (23.31)
Pain	80.61 (20.34)	84.10 (18.87)	79.49 (21.93)	81.45 (17.12)	80.20 (20.36)	69.17 (19.12)
General Health	65.75 (18.29)	66.76 (17.73)	63.88 (16.53)	66.74 (22.28)	64.40 (18.89)	63.54 (16.71)
Reappraisal	4.95 (1.20)	5.13 (1.17)	4.72 (1.15)	5.17 (1.26)	4.47 (.97)	4.92 (1.17)
Suppression	3.64 (1.39)	3.71 (1.52)	3.52 (1.37)	3.48 (1.33)	3.68 (2.63)	3.91 (1.28)
Personal Strength	2.66 (1.54)	2.69 (1.56)	2.70 (1.45)	2.87 (1.60)	2.63 (1.56)	2.22 (1.51)
Spiritual Change	1.64 (1.60)	1.57 (1.52)	1.69 (1.60)	1.83 (1.88)	2.06 (1.58)	1.17 (1.39)
Intrusive Rumination	1.10 (.82)	.76 (.68)	1.47 (.77)	1.42 (.82)	.81 (.79)	1.62 (.71)
Deliberate Rumination	1.36 (.83)	1.09 (.80)	1.74 (.77)	1.65 (.72)	.98 (.75)	1.70 (.74)
Self-Esteem	16.51 (1.90)	16.43 (1.80)	16.55 (1.76)	16.67 (2.39)	16.20 (1.78)	16.75 (1.85)

Table 8

Summary of goodness-of-fit indicators for the originally proposed model of the relationship between racial microaggressions, emotion regulation styles, and health outcomes

SF-36 Scale	χ^2	df	p	GFI	AGFI	CFI	RMSEA
Physical Functioning	8.05	3	.045	.987	.935	.829	.083
Role limitations due to physical health	8.05	3	.045	.987	.935	.859	.083
Role limitations due to emotional problems	8.05	3	.045	.987	.935	.900	.083
Energy/Fatigue	8.05	3	.045	.987	.935	.912	.083
Emotional Wellbeing	8.05	3	.045	.987	.935	.946	.083
Social Functioning	8.05	3	.045	.987	.935	.934	.083
Pain	8.05	3	.045	.987	.935	.903	.083
General Health	8.05	3	.045	.987	.935	.891	.083

Note. The summary table corresponds to the original model depicted in Figure 1.

Table 9

Summary of goodness-of-fit indicators for the revised models of the relationship between racial microaggressions, emotion regulation styles, and health outcomes

SF-36 Scale	χ^2	df	p	GFI	AGFI	CFI	RMSEA	r^2
Physical Functioning	7.02	5	.219	.991	.960	.955	.041	.05
Role limitations due to physical health	8.72	6	.190	.988	.959	.945	.043	.06
Role limitations due to emotional problems	7.02	6	.319	.991	.967	.984	.026	.12
Energy/Fatigue	7.02	5	.219	.991	.960	.972	.041	.15
Emotional Wellbeing	7.02	5	.219	.991	.960	.984	.041	.31
Social Functioning	7.02	5	.219	.991	.960	.980	.041	.25
Pain	8.08	6	.232	.989	.962	.968	.038	.12
General Health	7.02	5	.219	.991	.960	.970	.041	.13

Note. The summary table corresponds to the revised models depicted in Figures 2 and 3.

Table 10

Standardized coefficients for paths in revised models for physical functioning, energy/fatigue, emotional wellbeing, social functioning, and general health

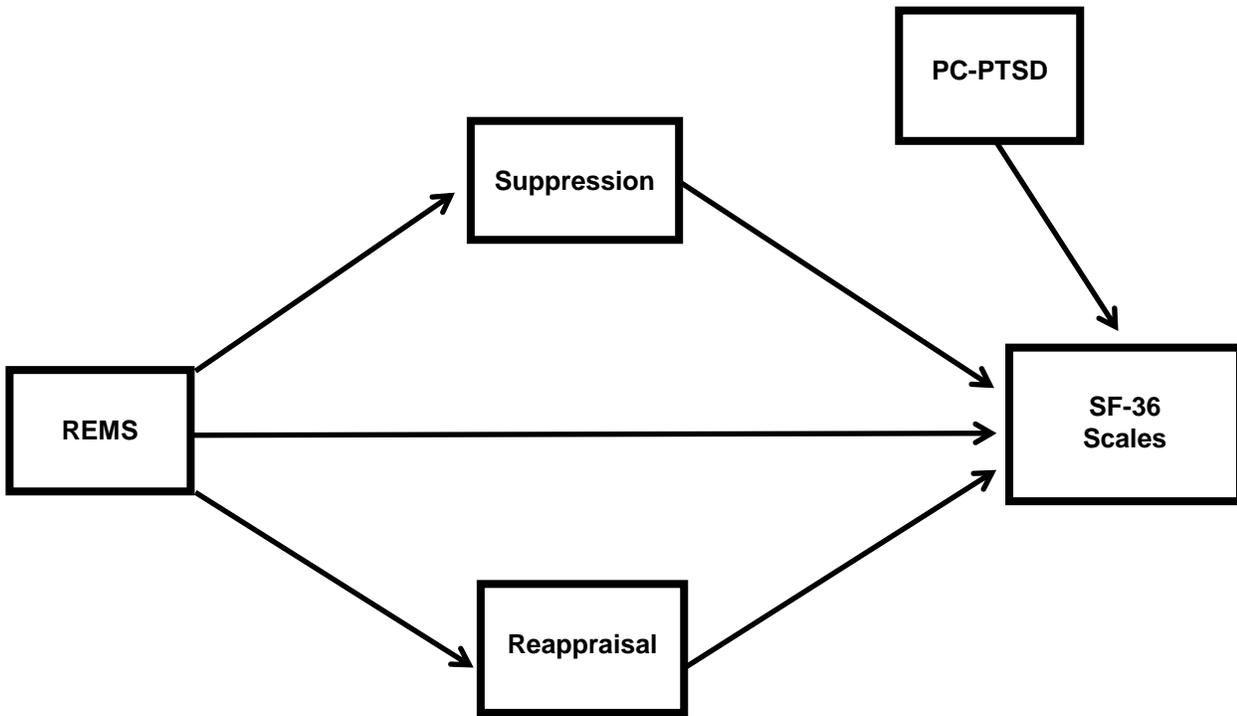|	Physical Functioning	Energy/Fatigue	Emotional Wellbeing	Social Functioning	General Health
1	.07	.10	.10	.08	.20**
2	.03	.03	.03	.03	.03
3	-.22***	-.22***	-.22***	-.22***	-.22***
4	.06	-.07	-.08	.02	-.02
5	-.02	-.02	-.02	-.02	-.02
6	.09	.11	.15**	.11*	-.02
7	-.15*	-.28**	-.39	-.38***	-.15**
8	-.17**	-.17**	-.17**	-.17**	-.17**
9	.11	.10	.23***	.20***	.18**

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < .001$

Table 11

Standardized coefficients for paths in revised models for role limitations due to physical health, role limitations due to emotional problems, and pain

	Role limitations due to physical health	Role limitations due to emotional problems	Pain
1	.01	.06	.16*
2	.03	.03	.03
3	-.22***	-.22***	-.22***
4	-.10	.01	-.02
5	-.02	-.02	-.02
6	.11	.00	.09
7	-.19**	-.32***	-.25***
8	-.17**	-.17**	-.17**

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < .001$

Figure 1. Originally proposed path model for the relationship between racial microaggressions, emotion regulation, and physical and mental health. REMS = Racial Microaggressions Scale total score, PC-PTSD = Primary Care PTSD Screen. Goodness-of-fit indicators are summarized in Table 8.
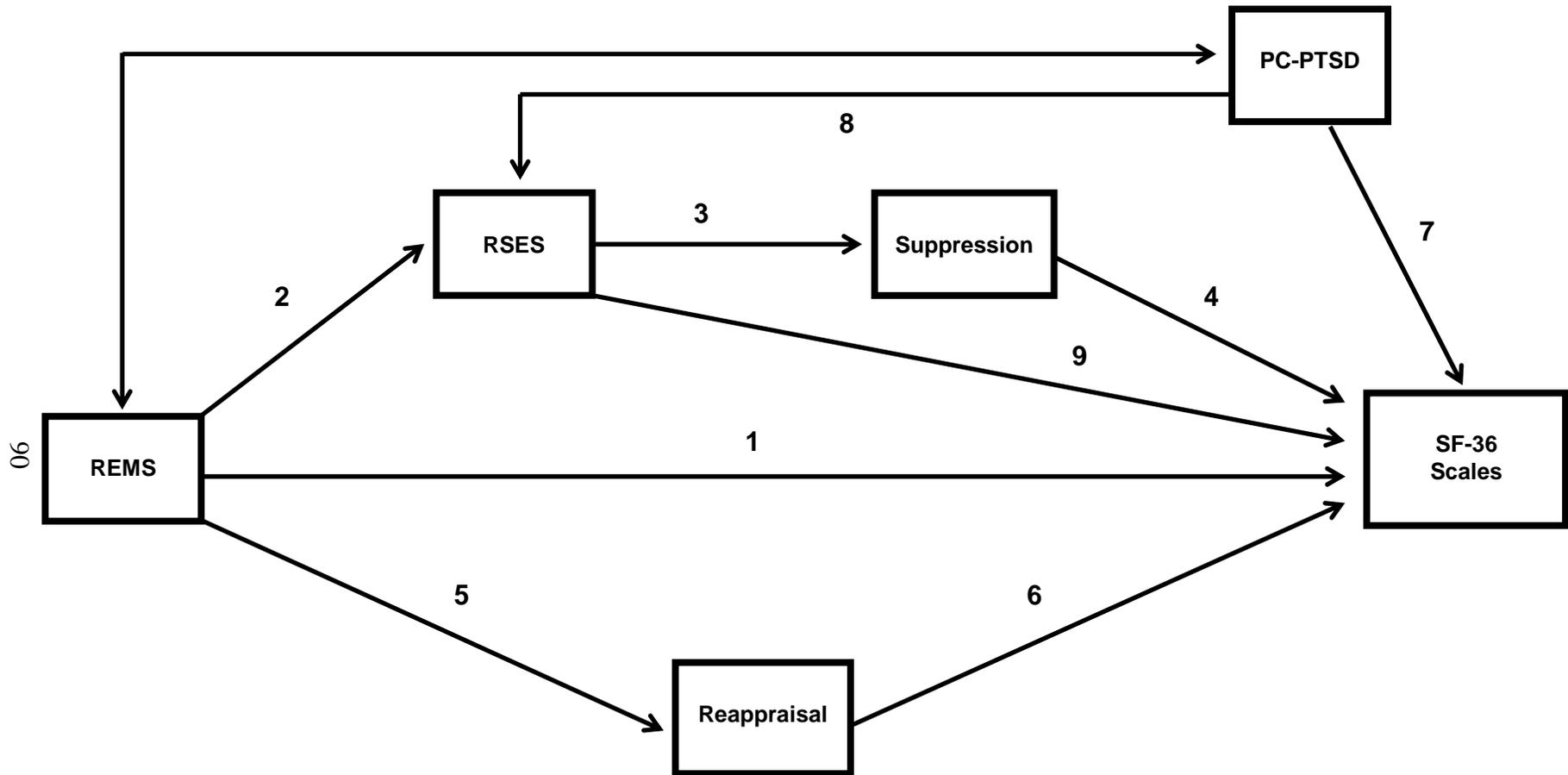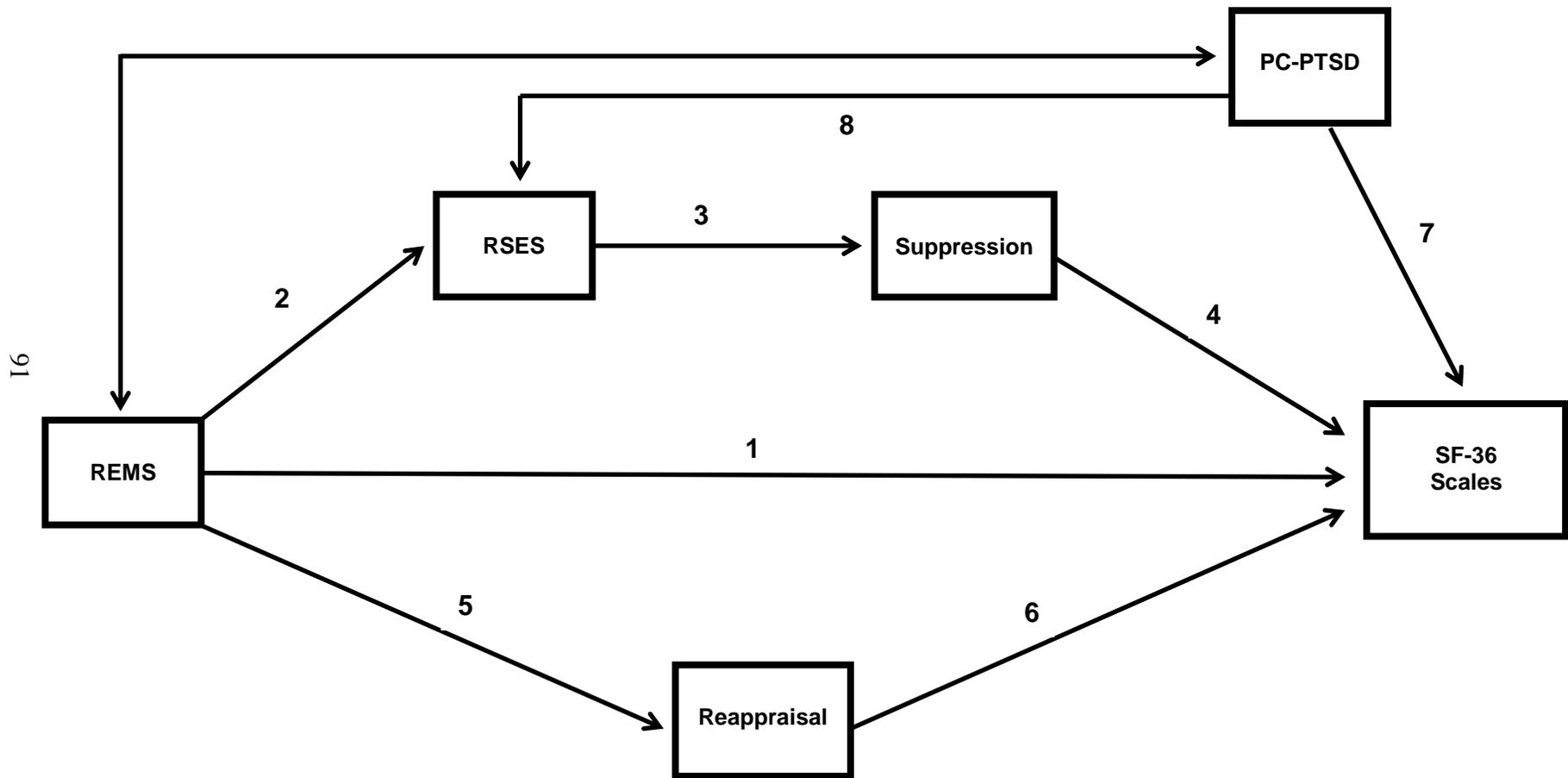
Figure 2. Revised path model for physical functioning, energy/fatigue, emotional wellbeing, social functioning, and general health scales of the SF-36. REMS = Racial Microaggressions Scale total score, RSES = Rosenberg Self-Esteem Scale, PC-PTSD = Primary Care PTSD Screen. Goodness-of-fit indicators are summarized in Table 9. Numbered paths correspond to standardized coefficients in Table 10.

Figure 3. Revised path model for role limitations due to physical health, role limitations due to emotional problems, and pain scales of the SF-36. REMS = Racial Microaggressions Scale total score, RSES = Rosenberg Self-Esteem Scale, PC-PTSD = Primary Care PTSD Screen. Goodness-of-fit indicators are summarized in Table 9. Numbered paths correspond to standardized coefficients in Table 11.

Appendix A

Ambiguous Scenarios

Instructions: **In this part of the study, you will be presented with three scenarios. Try to imagine yourself in these situations, and be aware of what your first instincts and assumptions are in response to the situations. There are no right or wrong answers – we are interested in the** *process of how you think about the scenarios* **and come to conclusions about what is going on.**

Imagine you were recently hired to a position in an office environment. Ben, the man who hired you, showed you around on your first day but after that, stops talking to you. You notice that he and another co-worker, Kimberly, often chat at the desk right next to yours but never include you in their conversations.

What is the first thing that comes to your mind after reading this scenario?

How do you <u>feel</u> in response to this scenario?

What would you <u>do</u> in response to the scenario?

Why do you think Ben and Kimberly are behaving this way?

What do you think were Ben and Kimberly's intentions?

Imagine you are sitting in class and students are talking before the professor begins lecture. Jessica, the student sitting in front of you, turns around and asks: "So, what *are* you? Where are you from?"

What is the first thing that comes to your mind after reading this scenario?

How do you <u>feel</u> in response to this scenario?

What would you <u>do</u> in response to the scenario?

Why do you think Jessica asked this question?

What do you think Jessica's intentions were?

Imagine you enter a department store to shop for clothing. You make eye contact with the security guard on the way in, and continue to the section you are interested in. You notice that the security guard has followed you, and is watching you from a short distance as you shop.

What is the first thing that comes to your mind after reading this scenario?

How do you <u>feel</u> in response to this scenario?

What would you <u>do</u> in response to the scenario?

Why do you think the security guard is behaving this way?

What do you think are the security guard's intentions?

Imagine you are traveling on a crowded sidewalk. When you pause to wait for the crosswalk signal to change, a woman approaches you and politely asks for directions to the nearest post office. You give her a set of detailed directions with landmarks. She smiles and says: "Wow, thank you so much! Has anyone ever told you that you are very well-spoken?"

What is the first thing that comes to your mind after reading this scenario?

How do you <u>feel</u> in response to this scenario?

What would you <u>do</u> in response to the scenario?

Why do you think the woman made this remark?

What were the woman's intentions?

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