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The Impact of Racial Microaggressions and Major Discriminatory Events on Mental Health

Florence Lui
The Graduate Center, City University of New York

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The Impact of Racial Microaggressions and Major Discriminatory Events on Mental Health

Florence Lui

Dissertation submitted to the Graduate Faculty in Psychology in partial fulfillment of the requirements for the degree Doctor of Philosophy, The Graduate Center, CUNY

2019
The Impact of Racial Microaggressions and Major Discriminatory Events on Mental Health

by

Florence Lui

This manuscript has been read and accepted by the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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ABSTRACT

The Impact of Racial Microaggressions and Major Discriminatory Events on Mental Health

by

Florence Lui

Advisor: Deidre Anglin, Ph.D.

The current study, a secondary data analysis, sought to determine the number and nature of latent groups for experiences of spectrum racial discrimination (i.e., both major and microaggressive racial discrimination) in a sample of emerging adults from a people of color (POC)-majority public university setting in the United States, and to understand the role of socio-demographic variables in defining each group. In addition, the study aimed to ascertain the extent to which endorsing spectrum racial discrimination experiences predicted anxiety and/or depression above the effects of general, non-race-related stress. Finally, the analyses gauged the mediating and/or moderating role of coping in the relation between racism experiences and anxiety and/or depression.

Latent class analysis (Collins & Lanza, 2010) revealed two distinct groups of spectrum racial discrimination experiences: participants tended to either experience little to no racism or some racism. Blacks were more likely than Whites to belong to the Racism group. Belonging to the Racism group predicted both anxiety and depression above and beyond the effects of perceived stress. Results indicated neither a mediation nor moderation model of coping, but did reveal an association between coping and depression scores: active coping in response to racial discrimination was correlated with lower depression scores when compared with passive coping.

Awareness of the mental health effects of both everyday and major racial discrimination may help clinicians and educators better understand the experiences of young adults of color. Future efforts to clarify the role of complex intersecting identities in endorsing racism
experiences and subsequent psychological distress may aid in more individualized approach to treating race-based stress and trauma.

Keywords: racial microaggressions, major discrimination, racism, race-based traumatic stress, anxiety, depression
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Chapter 1: Introduction

Statement of the Problem

In a review of books published about the writer James Baldwin that appeared in a May 2016 issue of *The New York Review of Books*, reviewer Nathaniel Rich questioned the utility of the current rhetoric employed by racial justice advocates:

Today, like sixty years ago, much of the public rhetoric about race is devoted to explaining to an incurious White public, in rudimentary terms, the contours of institutional racism. It must be spelled out, as if for the first time, that police killings of unarmed Black children, indifference to providing clean drinking water to a majority-Black city, or efforts to curtail the voting rights of minority citizens are not freak incidents but outbreaks of a chronic national disease. Nebulous, bureaucratic terms like “White privilege” have been substituted for “White supremacy,” or “microaggressions” for “casual racism.” “All Power to the People,” “By Any Means Necessary,” and “We Shall Overcome” have yielded to the understated, matter-of-fact “Black Lives Matter.” The rhetorical front has withdrawn from ‘How can we cure this?’ to “What is the nature of the problem? (Rich, 2016)

Rich’s interrogation of the nature of contemporary discussions of racism and discrimination is of great import for social scientists who study –isms in all their forms: has our language become too “bureaucratic”? In attempting to describe and understand the phenomenon of –isms—and in, as is the subject of this dissertation, distinguishing and investigating the intersections between different forms of racism—have we, in Rich’s words, “retreated from debates over proposed solutions to a debate over whether problems still exist”? 
Such a debate has long been brewing among academics and public intellectuals. Writer Lionel Shriver derided the “policing” nature of microaggressions as a curtailing of free speech: “In an era of weaponized sensitivity, participation in public discourse is growing so perilous, so fraught with the danger of being caught out for using the wrong word” (Shriver, 2016). Within the academic discipline of psychology, critics have contended that the conversation around microaggressions on college campuses is giving rise to a “victimhood culture” that, in supposedly protecting students from subtle racial slights and insults, is enabling them to “think pathologically”, making them more, not less, prone to anxiety and depression (Lukianoff & Haidt, 2015). Similarly, in their critique of the implicit racial bias literature, authors Mitchell & Tetlock have characterized findings that a majority of White Americans have implicit biases toward Black Americans as “an epidemic … of false-positive accusations of unconscious racism” (Mitchell & Tetlock, 2006).

Yet this debate over whether implicit racial bias and microaggressions exist is taking place against a backdrop of increasing “old fashioned” racism and xenophobia in the Western world. Globalization and resulting movements of capital and labor led to a surge in right-wing populism and an “us vs. them” mentality, culminating in the election of right-wing populist Donald Trump, the United Kingdom’s decision to exit the European Union, and anti-refugee and immigrant sentiments in Europe in the wake of the Syrian refugee crisis. The U.S. civil rights group Southern Poverty Law Center (SPLC) reported a surge in hate crime in the ten days following Donald Trump’s victory in the U.S. presidential election in 2016, identifying 867 incidents of harassment and intimidation between November 9 and November 18 (SPLC, 2016). As the Black Lives Matter movement has brought to light, African Americans account for 24 percent of those fatally shot and killed by the police despite being just 13 percent of the U.S.
population and are 2.5 times as likely as White Americans to be shot and killed by police offers. An analysis of arrest and use-of-force data from 12 police departments by the Center for Policing Equity found that Black residents were more often targeted for use of police force than White residents, even when adjusting for whether the person was a violent criminal (Goff et al., 2016).

However, at the societal level if not at the level of the individual perpetrator, microaggressive and major acts of discrimination are more connected than intuition would suggest. Higher Implicit Association Test (IAT) scores of White residents in a region were correlated with disproportionally more use of lethal force with Black residents in that region (Hehman, Flake, & Calanchini, in press), indicating the need for further investigation of the intersections between microaggressions and major discriminatory experiences from the perspective of People of Color (POC).

The current study proposes that to ask, “What is the nature of the problem?” does not represent a withdrawal but a movement forward, one aimed at elucidating the full spectrum of racism experiences, our “chronic national disease” (Rich, 2016). The present study reviewed the current literature on racial discrimination’s effects on the mental health of POC with the aim of examining the natural structure of both microaggressive and major racial discrimination, which will allow for further investigation of the intersections between the two forms of racism experiences. This study also sought to understand the extent to which socio-demographic variables (i.e. race, gender, and immigrant and nativity status) play a role in defining said structure. In addition, the study determined whether the data support a theoretical model that posits the following: (a) that minority stress enacts negative psychological effects above and beyond those caused by general stress, and (b) that this relation is mediated/moderated by
psychological processes such as coping. Results of the study are discussed with an emphasis on their implications for the mental health of people of color.

Definitions of Key Terms

**Racism, prejudice, and discrimination.**

Racism is a system sustained by an ideology that categorizes population groups into ‘races’, assigns these groups hierarchical status, and preferentially distributes societal goods and resources to groups based on this ranking. This definition of racism is systemic, located “primarily within organized institutional structures and not in individual attitudes or behavior” and means “it is possible for racism to exist in the absence of racial discrimination and prejudice at the individual level” (Williams & Williams-Morris, 2000). For instance, in highly segregated neighborhoods, access to education, healthcare, housing, and education are inequitably distributed. This often leads to the development of prejudice (i.e., negative attitudes and beliefs toward racial outgroups) and discrimination (differential treatment of members of these groups by both individuals and social institutions).

While racism is often understood as perpetuated by the White majority against minority POC, racism experiences occur between and amongst POC as well, e.g. in colorism (Hunter, 2007) and in some Asians’ endorsement of a model minority stereotype and subsequent devaluation of other minority groups (Oyserman and Sakamoto, 1997). However, such inter- and intra-POC individual discrimination is embedded in a larger system of institutional and structural racism perpetuated by the dominant culture.

**People of color.**

I elect to use the term people of color as opposed to ethnic minority for a few reasons. First, POC maintains the distinction between race and ethnicity in order to acknowledge that
perceived racial differences form one of the most fundamental divides in social life and underscores the reality of deeply entrenched discrimination that racial minorities experience. Second, minority implies numbers, even when people of color who are the numerical majority in a given region may lack resources or institutional power. Third, POC originated in activist movements and explicitly suggests a relationship among different racial minority groups; its intent is to be inclusive (for a history, see Vidal-Ortiz, 2008). The term therefore has the potential to exist beyond U.S. Census categories created by the state. Finally, the term has been used flexibly by intersectional theorists to incorporate multiple statuses (e.g. queer people of color, women of color) to allow for a more complex and relational set of identities.

**Major racial discrimination**

Major racial discrimination has been labeled as old-fashioned racism (Virtanen & Huddy, 1998), formal discrimination (Hebl et al., 2002), and racialized aggressions (Garcia & Johnston-Guerrero, 2016). Major racial discrimination occurs when “differential and unfair treatment is clearly exercised, with visible structural outcomes” and takes the form of behaviors that are unconcealed, intentional, easily recognizable, and directed at a target on the basis of his or her stigmatized characteristics (Fairhurst et al., 2011, p. 1205). Major racial discrimination can take place on the interpersonal level (e.g., using a racialized slur or making derogatory comments about another’s ethnicity) or on the structural level (e.g., discrimination in hiring, promotions, access, and resource distribution that is illegal). Major racial discrimination is more likely to be unlawful and less likely to produce hesitation and ambivalence in a bystander’s evaluation of whether the event was discriminatory or not.

**Microaggressions.**

“Aversive racism” (Gaertner & Dovidio, 1986) or “modern racism” (McConahay, 1986)
differs from overt, “old-fashioned” racism in that it is a subtle, often unintentional form of bias. It is characterized by more ambivalent and complex behaviors and attitudes, and may have significantly more influence on racial anger, frustration, and self-esteem than traditional overt forms of racism (Solorzano, Ceja, & Yosso, 2000). Racial/ethnic microaggressions are “the daily common experiences of racial aggression that characterize aversive racism: commonplace verbal or behavioral indignities, whether intentional or unintentional, that communicate hostile, derogatory, or negative racial slights and insults” (Sue et al., 2007). As with major racial discrimination, microaggressions can occur on both interpersonal (e.g., being told one should not complain about race) and structural levels (e.g., not observing people of your race in positions of power).

**Intersectionality.**

Intersectionality refers to the concept that each individual belongs to/identifies with a number of identities and some of those identities interact with each other. These identities include those defined by race, ethnicity, gender, social class, and sexuality, which are experienced multiplicatively, not additively, within a particular social context. An intersectional framework differs from other mainstream feminist, race, or class stratification theories that focus on singular or predominant sources of oppression and posits that multiple social locations must be considered in tandem rather than independently. Intersectional theorists have argued that when individuals are marginalized due to their racial identity they are more likely to be marginalized for other nonmainstream identities (Yosso et al., 2009).
Chapter 2: Literature Review

Racism and Mental Health

The effects of racial discrimination on mental health are well-documented in the literature and studies have used a range of methodologies, including experimental and correlational (for a review, see Pascoe & Richman, 2009). Among experimental approaches, studies found that exposure to discrimination in the laboratory setting led to cardiovascular and psychological reactivity among Blacks (for a review, see Harrell et al., 2003). The experimental manipulation of discrimination also led to elevated levels of psychological distress for a diverse range of POC (Dion & Earn 1975; Pak, Dion, & Dion, 1991). In correlational research using community samples, studies of a range of POC groups revealed that perceptions of racial discrimination were adversely related to mental health (for a review, see Williams & Neighbors, 2003). Specifically, two studies of Mexican-origin women found reports of discrimination to be positively associated with depressive symptomatology (Finch, Kolody, & Vega, 2000; Salgado de Snyder, 1987), a study of Black Americans found perceptions of discrimination to be associated with high levels of psychological distress (Brown et al., 2000), and a study of Southeast Asian refugees in Canada found a positive association between racial discrimination and depressive symptoms (Noh et al., 1999). In a meta-analysis of 293 studies published between 1983 and 2013, Paradies et al. (2015) found that racism was associated with poorer mental health, including depression, anxiety, and psychological stress. Longitudinal research by Sellers and Shelton (2003) suggested a causal link between the frequency of perceived racial discrimination and subsequent psychological distress.

Studies with large, nationally representative samples further corroborate the link between racial discrimination and negative mental health outcomes. In a sample of over 5,000 children of
immigrants in southern Florida and San Diego representative of the major immigrant groups in the U.S., researchers found a positive association between reports of discrimination and depressive symptoms (Rumbaut, 1994). A study using nationally representative data from 5,191 Black Americans found that racial attributions of discrimination were associated with higher odds of serious psychological distress compared with discrimination attributions to nonracial causes (Chae, Lincoln, & Jackson, 2011). A study of 2,047 Asians in the National Latino and Asian American Study found a positive association between racial discrimination and psychological distress (Yip et al., 2008).

Racism-Related Stress

Within the racism literature, stress has emerged as an especially relevant framework in elucidating the process by which racism exerts a negative mental health impact on people of color (Clark et al., 1999). As Harrell (2000) describes in a paper conceptualizing multiple dimensions of racism-related stress, stress theory is particularly relevant to the study of racism due to its conceptualization of the transactional nature between person and environment, “whereby the environment affects individual functioning and the behavior of individuals contributes to environmental demands” (p. 44). Harrell’s work draws upon Lazarus & Folkman’s (1984) transactional model of stress and coping, which holds that stress is a transaction between situational and personal characteristics that leads a person to perceive an event as stressful. When events in a person’s environment demands a coping response that is more than the individual is capable of making, psychological stress occurs.

Harrell (2000) defines racism-related stress 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” (p. 44). In accordance with Lazarus & Folkman’s stress and coping model, racism-related stress will result in higher levels of stress in POC.

Harrell outlines six categories of racism-related stress that derive from the generic stress literature’s three primary sources of stress (Wheaton, 1994): episodic stress (direct and vicarious racism experiences), daily hassles (racism microstressors), and chronic strain (chronic-contextual, collective, and transgenerational transmission). These six types are: 1) *racism-related life events*, major discriminatory events that are time-limited, e.g. being harassed by the police or being discriminated against in housing; 2) *vicarious racism experiences*, experiences of prejudice and discrimination that are not personally experienced but vicariously experienced through observation and report; 3) *daily racism microstressors*, or microaggressions, “subtle, innocuous, preconscious or unconscious degradations and putdowns” (Pierce, 1995, p. 251), e.g., being mistaken for a service employee or being overlooked while waiting in line; 4) *chronic-contextual stress*, stressors that reflect the interaction between institutional racism, distribution of economic resources, and social-role demands, e.g., numerous high-interest payday lenders in a minority-dense neighborhood or poor conditions in urban public schools; 5) *collective experiences*, cultural-symbolic and sociopolitical manifestations of racism that do not involve witnessing or hearing about a specific incident of racism, such as lack of political representation or stereotypic portrayals in the media; and 6) *transgenerational transmission*, in which the effects of group traumas such as the slavery of African people, internment of Japanese Americans during World War II, or the removal of American Indians from their tribal lands are transmitted inter-generationally through the socialization of trauma-related behavior and beliefs. It is worth noting that while these categories of racism-related stress can apply to any historically oppressed
racial/ethnic group, the qualitative nature of the experience of racism varies among groups given their differing history, cultural norms, and relationship to the dominant culture (Harrell, 2000).

In Harrell’s model, these racism-related stressors affect well-being through outcomes in five domains: physical, psychological, social, functional, and spiritual. The literature has documented racism-related stress’s association with physiological outcomes such as hypertension, cardiovascular reactivity, cigarette smoking, and physiological arousal (for a review, see Harrell, Hall, & Taliaferro, 2003). Within the psychological domain, racism has been linked to trauma-related symptoms, general psychological distress, eating problems, psychosomaticization, and violence (Carter, 2007). Harrell describes the interpersonal aspects of racism as playing a role in one’s ability and willingness to trust, have close relationships, and be part of a social group. Moreover, functional well-being, including role-related behavior such as school achievement and job performance can be adversely affected by racism, as demonstrated by the phenomenon of stereotype threat (Steele & Aronson, 1995), a self-evaluative threat of confirming a negative stereotype about one’s group. Finally, racism can threaten one’s faith-based beliefs and spiritual well-being by dehumanizing the individual (Akbar, 1991, as cited in Harrell, 2000).

Minority Stress Model

Meyer’s minority stress model (2003) builds upon Harrell’s work on racism-related stress by examining stress as a mediator for the effect of stigma on health outcomes among lesbian, gay, and bisexual (LGB) individuals. This model might be productively applied to POC too (Wong et al., 2014). Meyer’s conceptual model rests on a few basic assumptions about minority stress: that it is 1) unique, i.e. additive to general stressors that are experienced by all people, and therefore requires more adaptation effort than nonstigmatized others; 2) chronic, not acute, i.e.
occurring stably over time; and 3) socially based, i.e. stems from social processes, institutions, and structures beyond individual events, or biological and other nonsocial characteristics of the person or group.

Meyer’s model, like Harrell’s, draws upon Lazarus and Folkman’s (1984) transactional model of stress and coping. Of particular interest to Meyer is the distal-proximal distinction in the stress literature (Lazarus & Folkman, 1984). Distal stressors are objective events and conditions whereas proximal processes rely on individual perceptions and appraisals and are therefore subjective (Meyer, 2003). As applied to POC, examples of distal stressors could be hate crimes or discriminatory lending and housing policies. Proximal stress processes, in contrast, are subjective and more affected by one’s self-identity as a POC. Examples could include internalized racism (internalizing negative stereotypes about being Black, such as associating blackness with criminality) stereotype threat (experiencing increased anxiety and impaired performance when reminded of one’s minority status), and hypervigilance (actively scanning the social environment for potential threats).

Meyer’s minority stress model (2003) also distinguishes between direct and interactive effects. A direct effect suggests that identity characteristics themselves can cause distress as when feedback from others that is incompatible with one’s self-identity cause distress in a process known as identity interruptions (Burke, 1991). An interactive effect, on the other hand, describes the pathway by which identity characteristics can modify the effect of stress on outcomes in both positive and negative directions, as when a stronger minority identity leads to strong POC community affiliations and weakens the impact of minority stress, or when a stronger commitment to a POC identity enhances the impact of POC-related stressors. The salience and integration of the multiple identities a POC may hold can affect whether holding a
minority identity exacerbates or ameliorates stress (Rosenberg & Gara, 1985; Thoits, 1991; Deaux, 1993).

Meyer’s conceptual model of minority stress is depicted on the next page (Figure 1). This model depicts stress and coping and their impact on mental health outcomes. Minority stress is situated in the domain of environmental circumstances (a), which may include advantages and disadvantages related to a person’s socioeconomic status or minority status (b). Circumstances in the environment are thought to lead to exposure to stressors, including general stressors experienced by the population at large, such as death in the family (c), as well as stressors unique to minority group members, such as housing, lending, and employment discrimination (d). Distal (d) and proximal (f) stressors are depicted in the minority stress model as overlapping to illustrate their interdependence. For instance, an experience of a hate crime (d) is likely to increase expectations of rejection and hypervigilance (f). Minority status may lead to personal identification with one’s minority status (e). In turn, holding this minority identity results in additional proximal stress processes related to the person’s self-identity as a devalued and stigmatized minority (f). Meyer’s minority stress model also accounts for minority identity as an effect modifier. For instance, the level of prominence, valence, and integration of an individual’s minority identities (g) can have a positive or negative effect on the impact of minority stress. Minority identity can also be a source of strength when it leads to social support and adaptive coping strategies (h) (Meyer, 2003).
A number of researchers have suggested that minority stress may represent the mechanism through which experiencing racial discrimination impacts mental health, consistent with Harrell’s racism-related stress framework and Meyer’s minority stress model (Contrada et al., 2001; Miller and Major, 2000; Sellers et al., 2001). While few studies have directly tested this minority stress mediation hypothesis, there is growing evidence that indicates minority stress in the form of perceived discrimination is a unique predictor of psychological stress. For instance, Pierese and Carter (2007) found that, after controlling for general stress, racism-related stress accounted for a significant increment in psychological distress for African American men. Similarly, Wei et al. (2008) found that perceived discrimination had a significant direct effect on depressive systems when the effects of perceived general stress were controlled.
Psychological Mediation Framework

Hatzenbuehler’s Psychological Mediation Framework is another example of a model drawn from the LGB literature that may prove useful in investigations of POC’s experiences of minority stress (Wong et al., 2014). Hatzenbuehler (2009) posits that sexual minorities experience greater stress exposure resulting from stigma; that this stigma-related stress impacts the affected individual’s coping/emotion regulation, social/interpersonal, and cognitive processes, heightening risk for mental illness; and that these processes in turn mediate the relation between stigma-related stress and psychopathology.

While Hatzenbuehler’s framework draws upon Meyer’s, it differs in two important ways. The first distinction concerns where stress is situated in the model. In Meyer’s minority stress model, minority stress acts as a mediator in the relation between social structure/status and illness (status → stress → psychopathology). In contrast, Hatzenbeuhler’s psychological mediation framework (2009) places stigma-related stress as the initial starting point (i.e., risk factor) in the casual chain leading to psychopathology (stress → psychological mediators → psychopathology). The second distinction concerns the inclusion of “general” psychological processes, i.e. established cognitive, affective, and social determinants of mental health outcomes. Whereas Meyer’s minority stress theory focuses on group-specific processes in the form of distal and proximal stressors resulting from their minority status, Hatzenbeuhler’s framework incorporates the literature on general psychological processes, proposing that they are initiated by stigma-related stress and mediate the stress-psychopathology association.

Hatzenbuehler’s model utilizes a mediation and not moderation framework. Lazarus and Folkman (1984) argued that coping strategies mediate the effects of an event, while others argued that coping should be treated as a moderator variable (Holmbeck, 1997). This chicken-or-
egg debate highlights the importance of examining variables that mediate or moderate racism-related stress’s impact on POC. Specifically, the moderator hypothesis of coping assumes that coping responses moderate the relation of racism to psychological well-being, with the choice of coping style independent of exposure to racism (Liang & Fassinger, 2008). On the other hand, the mediator hypothesis of coping assumes that the racism-related stress determines the nature of the coping responses, which in turn explain any observed correlation between racism and psychological well-being. Hatzenbuehler’s mediation model therefore posits that for POC who frequently encounter racism, race-related stressors elicit specific maladaptive coping strategies that, in turn, give rise to psychological symptoms.

In their review article on microaggressions, Wong et al. (2014) adapted Hatzenbuehler’s psychological mediation model (see Figure 2) as a framework for understanding racial microaggressions as a stressor mediating the effects of POC status on mental health outcomes. In this adapted model, increased stress exposure of POC (distal stigma-related stressors in the form of racial microaggressions) render POC more vulnerable to general psychological processes that are known to predict psychopathology in the general population. Stigma-related stress can lead to maladaptive coping skills (e.g., rumination, suppression, and coping motives, leading to impulsive risk-taking behaviors), difficulties in the social/interpersonal realm (e.g., social isolation), and maladaptive cognitive processes (hopelessness, negative self-schemas, risk-taking behavior expectancies). These general psychological processes in turn mediate the relation between stigma-related stress and mental health outcomes in the form of internalizing and externalizing disorders.

A small but growing number of studies in the racism literature have supported Hatzehbueler’s psychological mediation model. For example, Alvarez and Juang (2010) found that coping style mediated the relation between perceived racism and self-esteem among Filipino American men; specifically, active coping was positively associated with self-esteem and avoidance was negatively associated with self-esteem. In a study of African American college students, Prelow, Mosher & Bowman (2006) found support for a social support deterioration model, which predicted that social support would decrease for those exposed to discrimination, accounting for racial discrimination’s association with greater symptoms of depression and lower levels of life satisfaction. Similarly, in Barnes and Lightsey’s (2005) study of African American students, experiences of discrimination were not shown to be linked with general coping
strategies, nor did coping strategies moderate the discrimination-stress link, lending further support to the idea of discrimination-specific coping as a mediator.

A number of studies have reported gender differences in coping styles; specifically, that women are more likely than men to use active coping. In a study of gender differences in coping with racial discrimination among Asian Americans, Liang et al. (2007) found that women were more likely to use support-seeking coping than men. Similarly, in a study examining coping and racial discrimination among African Americans, Utsey et al., (2000) found that women sought social support more than men did. Kuo (1995) found that among Asian Americans who experienced discrimination as well as those who did not, emotion-focused strategies were used more than problem-focused strategies in the overall sample. However, women reported using more problem-focused strategies than men, particularly seeking advice (Kuo 1995).

**Racial microaggressions**

**History of the microaggressions construct.**

The term racial microaggressions was first coined in 1970 by Chester Pierce, a psychiatrist working with Black Americans. He described them as:

“subtle, innocuous, preconscious, or unconscious degradations, and putdowns, often kinetic but capable of being verbal and/or kinetic. In and of itself a microaggression may seem harmless, but the cumulative burden of a lifetime of microaggression can theoretically contribute to diminished mortality, augmented morbidity, and flattened confidence” (Pierce 1995, p. 281).

Underpinning the concept of microaggressions is a theory of racism that distinguished contemporary racial attitudes from those held in the pre-civil rights era, captured in the concepts of “modern racism” (McConahay, 1986); “symbolic racism” (Sears, 1988), and “aversive
racism” (Gaertner & Dovidio, 1986). McConahay posited that modern racist beliefs in the post-civil rights era, in contrast to pre-civil rights racist beliefs about the desirability of segregation or miscegenation laws, might include the right of Blacks to put themselves into situations where they are not wanted, disbelief in the continued existence of discrimination, or the feeling that Blacks are getting more money or attention than they deserve (McConahay, 1981). Symbolic racism is defined as abstract, moralistic resentment of Blacks traceable to socialization in childhood, e.g. the feeling that Blacks violate such traditional American values as individualism and self-reliance, work ethic, and discipline (Kinder & Sears, 1981; McConahay & Hough, 1976; Sears & Kinder, 1971). Aversive racism describes a racial attitude held by White Americans who possess strong egalitarian values and therefore experience a conflict or ambivalence between a sincerely egalitarian value system and unacknowledged negative feelings and beliefs about Blacks (Gaertner & Dovidio, 1986). While there are subtle differences between these three terms, all posit that racism would be covert in the present day and emphasize its changed face from an “old fashioned” form in which overt racial hatred and bigotry is consciously and publicly displayed to something more ambiguous (Sue et al., 2007).

**Review of the microaggressions literature.**

In a landmark paper reintroducing the construct of microaggressions and recommending a research program for racism scholars interested in the construct, Sue et al. (2007) defined racial microaggressions as “brief and commonplace daily verbal, behavioral, and environmental indignities, whether intentional or unintentional, that communicate hostile, derogatory or negative racial slights or insults to the target person or group” (p. 273). In this article, Sue et al. outlined a taxonomy that included three categories of microaggressions: 1) microassaults, often conscious and explicit behaviors (including verbal) that are intended to purposefully hurt a
person such as name calling, teasing, and avoidant or discriminatory acts; 2) microinsults, often unconscious behavioral/verbal remarks or comments that demean a person’s racial heritage such as ascribing a certain degree of intelligence based on the person’s race, being treated as inferior to others of a different race, and assuming that the person is a criminal or deviant in some way because of his/her race; and 3) microinvalidations, often unconscious behaviors (including verbal) that deny or minimize the lived realities of POC such as denying the existence of racial issues and/or racism and viewing racial minorities as foreigners. According to Sue et al., all three types of racial microaggressions can occur on the macro level through laws and policies (not just interpersonally) as environmental microaggressions. Sue et al., (2007) also identified nine common themes of racial microaggressions that fall into one or all of the aforementioned three categories: ascription of intelligence, second class citizen, pathologizing cultural values/communication styles, and assumption of criminal status (microinsults); environmental microaggressions (microinsult, microassault, and/or microinvalidation); and alien in own land, color blindness, myth of meritocracy, and denial of individual racism (microinvalidations).

The literature on racial microaggressions has expanded considerably in the decade since Sue et al.’s paper was published (for a review, see Wong et al., 2014). Prior to 2007, the largest database of psychology-related literature, PsycINFO, identified only one paper (Solorzano et al., 2000) using the keyword search term “microaggression,” while in the year 2018, the same term now produces 87 unique results. This increased scholarly interest in racial microaggressions may be related to the changing manifestations of racism in North America, as it parallels findings that blatant forms of racial discrimination have decreased in frequency and intensity in North America since the post-Civil War era (Dovidio and Gaertner, 2000; Sue et al., 2007).
While Sue et al.’s taxonomy of microaggressions led to a flowering in the microaggressions literature, it should be noted that Wong et al.’s 2014 review of 72 papers concerning racial microaggressions observed that almost all articles reviewed studied microinsults and microinvalidations but not microassaults. Sue et al. (2007) defined microassaults as conscious and deliberate and therefore similar to overt, “old fashioned” forms of racism, whereas microinsults and microinvalidations are often unconsciously expressed. For example, a microassault might include calling a woman a ‘bitch’ or a ‘whore’ (Capodilupo, Nadal, Corman, Hamit, & Weinberg, 2010), whereas an example of a microinsult could be assuming an African-American customer was going to steal from a store and a microinvalidation could be stating, “I don’t see color” to a visible POC. Given this qualitative difference between the former and latter two definitions, Sue’s taxonomy has been criticized as a category mistake (Lilienfeld, 2017). It has been argued that microinsults and microinvalidations—not microassaults—capture the true definition of racial microaggressions (Wong et al., 2014).

While a relatively new concept, the negative impact of racial microaggressions on psychological well-being is already well-documented in the psychological literature. Wong et al.’s 2014 review identified numerous studies demonstrating racial microaggressions’ negative impact within the pedagogical setting, e.g. within clinical supervision (Barnes 2011; Beaumont 2010; Constantine and Sue, 2007; Cartwright et al., 2009), academia (Constantine et al., 2008; Sue et al., 2008, 2009), and university classrooms and environment (Blume et al., 2012; Gomez et al., 2011; Granger, 2011; Grier-Reed, 2010; Robinson, 2011; Smith et al., 2012; Sue and Constantine, 2007; Torres et al., 2010; Yosso et al., 2009). Studies have also explored racial microaggressions in therapy (Constantine, 2007; Crawford, 2011; Morton, 2011; Owen et al., 2011; Schoulte et al., 2011: Sue et al., 2008) and in community settings (Burdsey 2011; De
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Oliveira Braga Lopez, 2011; Huber, 2011; Nadal et al., 2012; Wang et al., 2011). In a study of 146 POC in a community setting, cultural microaggressions were found to lead to levels of psychological distress similar to those who have suffered betrayal, sexual abuse, and physical abuse (Schoulté et al., 2011).

A number of articles in this literature have explored racial microaggressions’ attributional ambiguity, i.e., the idea that POC cannot be certain whether the negative treatment they receive is due to their race or some other reason (Barrett & Swim, 1998; Crocker, Major, & Steele, 1998). Compared to old-fashioned, major forms of discrimination, microaggressions, often unconsciously committed and subtler in nature, are more difficult to attribute to racism and require cognitive and affective resources to discern and identify. In Crocker et al.’s 1991 study of Black and White students receiving negative feedback from a White evaluator, being seen by the evaluator (and thus being able to attribute negative feedback to prejudice) buffered the self-esteem of Black students from negative feedback but hurt the self-esteem of Black students who received positive feedback, indicating a kind of “double jeopardy” in which the Black students suspected the genuineness of even positive feedback. Similarly, Watkins et al., in a 2010 study of Black undergraduates attending predominantly White colleges and universities, found that Black students devoted a great deal of mental energy to determining whether or not an event was racially motivated. Sue et al.’s (2009) focus group analysis of Asian Americans found that participants expressed uncertainty about when and how to respond to subtle forms of discrimination, as well as disappointment when the microaggression was perpetrated by someone who the person respected.

Another important aspect of racial microaggressions’ attributionally ambiguous nature is that such incidents may still have an impact on whether or not individuals attribute them to -
isms. For instance, Schneider et al. (1997) found that women who reported ambiguously sexually harassing incidents (e.g. sexist jokes) in the workplace exhibited negative psychological effects, regardless of whether they answered ‘yes’ to the explicit question of whether they had been sexually harassed at work. There is some evidence that the ambiguous nature of microaggressions may cause more stress than less ambiguous and more overt forms of discrimination. Schneider et al. (2000) found that individuals who reported ethnic harassment incidents consisting only of exclusion (e.g. being excluded from work-related or social interactions due to ethnicity) exhibited more negative personal and organizational outcomes than those who experienced both exclusion and verbal ethnic harassment (e.g. ethnic slurs or derogatory comments). On the other hand, attributing microaggressions to low public regard of members of your racial group may act as a protective factor against the impact of racial microaggressions. In a sample of 314 African American adolescents, low public regard beliefs (i.e., believing other groups hold more negative attitudes toward African Americans) buffered the otherwise negative impact of racial microaggressions on psychological functioning (Sellers & Linder, 2006). In addition, holding positive attitudes about your own race was associated with more positive psychological functioning (Sellers & Linder, 2006), suggesting that for POC, holding a positive view of one’s group and understanding the role racism plays in society may ameliorate the impact of racial microaggressions.

**Microaggressions and implicit racial bias: methodological controversy.**

Studies of microaggressions and modern racism have their theoretical basis in the broader theory of implicit social cognition, which refers to those cognitive processes that occur outside of conscious awareness or conscious control in relation to social psychological constructs, including attitudes, stereotypes, and self-concepts (Nosek, Hawkins, & Frazier, 2011). The key theoretical
assumption of implicit social cognition is that traces of past experience affect subsequent behavior, even if the earlier experience is not available to self-report or introspection (Greenwald & Banaji, 1995).

Microaggressions are therefore behavioral manifestations of unconscious biases or implicit attitudes, remnants from an individual’s past experience that mediate “favorable or unfavorable feeling, thought, or action toward social objects” (Greenwald & Banaji, 1995, p. 8). Implicit stereotypes, a specific subtype of implicit attitudes, have been defined as the “introspectively unidentified (or inaccurately identified) traces of past experiences that mediate attributions of qualities to members of a social category” (Greenwald & Banaji, 1995, p. 5), i.e., unconscious attributions of specific qualities made to members belonging to a particular social group. A number of studies have documented the existence of implicit racial bias. For instance, Dovidio, Evans, & Tyler (1986) found that participants responded more quickly to positive traits that followed the prime White than Black and faster to negative traits that followed the prime Black than White. In another study, Devine (1989) found that after being subliminally exposed to a series of words, 80% of which were stereotypically associated with Black Americans (e.g. poor, jazz, slavery, Harlem, and busing), White subjects in an unrelated second task judged a race-unspecified male target to be more hostile than did subjects for whom only 20% of the words had the stereotype association.

The Implicit Association Test (IAT) is a procedure that seeks to detect implicit attitudes by measuring the strength of a respondent’s automatic association between mental representations of concepts. The Race IAT requires that users rapidly categorize two target concepts (“Black” and “White”) with an attribute (e.g. “pleasant”). Easier pairings, as indicated by faster responses, are interpreted as more strongly associated in memory than more difficult
pairings, as indicated by slower responses (Greenwald et al., 2009). Associations operating without active thought (i.e., automatically), are theorized to help performance in one of the IAT’s two “combined” tasks, while interfering with the other. When trying to overcome the effects of the automatic associations, respondents to the IAT experience a higher (i.e., conscious or explicit) level of mental operation which takes more time.

In a meta-analysis of predictive validity studies of the IAT, Greenwald et al. (2009) reviewed 122 research reports containing 184 independent samples. The authors found a moderate effect size: the average predictive validity effect size of IAT measures was .274. They found the effect size of correlations of explicit (i.e. self-report) measures with criterion measures to be larger, on average, than the effect size of IAT correlations with criterion measures. Perhaps most significantly, Greenwald et al. (2009) reported that despite this difference in effect sizes, IAT measures better predicted criterion measures involving interracial behavior and socially sensitive topics than did self-report measures. The IAT outperformed explicit measures in predicting a range of inter-group behaviors including unfriendliness toward African Americans and gay men, rating a Black author’s essay negatively, criminal sentence strength for Hispanics, discriminating against female job applicants, and physical proximity to a Black partner (Greenwald et al., 2009).

A number of methodological critiques have been lobbied against the still-young microaggressions and implicit bias literature (Lilienfeld, 2014; Blanton et al., 2009; Mitchell & Tetlock, 2006). Lilienfeld (2014) went as far to call for a moratorium on the use of the term “microaggressions”, challenging the concept’s construct validity due to microaggressions’ apparent lack of face validity as defined and their subjective and ambiguous nature: “[Microaggressions] appear to be sufficiently fluid and porous to allow a vast number of
potential behaviors, many of which hinge on highly subjective retrospective judgments, to be classified as microaggressions” (Lilienfeld, 2014, p. 148). Similarly, Blanton et al. accused IAT researchers of relying on arbitrary metrics to provide a diagnosis of racial preference (2009).

While it is important to acknowledge the methodological difficulties in capturing implicit bias which by definition exists outside of conscious awareness, the body of literature on this construct indicates predictive and not face validity may be more salient for the Race IAT (Greenwald et al., 2009). Indeed, the instrument was conceived and utilized precisely because of social desirability concerns (Greenwald et al., 1998). Recent research has lent further credibility for the construct of implicit bias, suggesting that levels of implicit bias result in negative outcomes for POC at the macro level. For instance, researchers have found that higher IAT scores of White residents in a region were correlated with disproportionally more use of lethal force with Blacks (Hehman, Flake, & Calanchini, in press) and whether or not they voted for Barack Obama in the 2008 presidential election (Greenwald et al., 2009b), indicating large societal effects for implicit racism and its behavioral consequence, microaggressive discrimination.

Major Discriminatory Events

Major discriminatory events are conceptually distinct from microaggressions and correspond to what the stress literature refers to as major life events (Oh et al., 2016). They are more severe incidents, e.g. being a victim of police abuse, being denied a promotion, or being discouraged from pursuing education on account of one’s race.

A review of the sociological literature.

In their paper on the mental health effects of everyday and major discrimination, Kessler et al. (1999) note that the latter differs from the former in that it involves major interference with advancing socioeconomic position (e.g., not hired, denied a bank loan, fired, denied scholarship).
Perhaps because major discriminatory events are embedded in structural inequities that impact the socioeconomic status (SES) of POC, there is an extensive literature on major discrimination in the discipline of sociology which focuses on providing evidence for the existence of major discrimination on a population-based level (for a review, see Pager & Shepherd, 2008).

Numerous studies in this literature employ statistical analyses to examine inequality in employment, wealth, and housing outcomes, among other domains, between groups (Pager & Shepherd, 2008). In a study controlling for age, education, urban location, and occupation, Black male high school graduates were found to be 70% more likely to experience involuntary unemployment than Whites with similar characteristics and that this disparity increased among those with higher levels of education (Wilson et al., 1995). Another found that Whites possessed roughly 12 times the wealth of African Americans (Oliver & Shapiro, 2006). This disparity in wealth is part and parcel of the credit lending racial disparity in housing markets: Blacks and Hispanics face higher rejection rates and less favorable terms in securing mortgages than do Whites with similar credit characteristics (Ross & Yinger, 1999), with Blacks paying more than 0.5% higher interest rates on home mortgages than do Whites after controlling for income level, date of purchase, and age of buyer (Oliver & Shapiro, 2006). However, it is worth noting that because it is difficult to account for all the complex factors that contribute to disparate outcomes, studies using this approach are subject to the critique that disparities attributed to racial discrimination may in fact be explained by some other unmeasured variable (Pager & Shepherd, 2008).

Given this methodological weakness, some researchers in this field have utilized experimental methods to capture the existence of major discrimination. In a laboratory experiment by Dovidio & Gaertner (2000), participants took part in a simulated hiring
experiment in which they were asked to evaluate applications for Black and White job applicants with varying levels of qualification. When applicants were either highly qualified or poorly qualified for a position, there was no evidence of discrimination. However, when applicants had acceptable but ambiguous qualifications, participants were nearly 70% more likely to recommend the White applicant than the Black applicant (Dovidio & Gaertner, 2000). In a related experimental study that examined racial discrimination in selection decisions in the context of college admissions, Hodson, Dovidio, & Gaertner (2002) found that White participants were less likely to admit Black applicants than White applicants when the applicants’ credentials were mixed (i.e., strong college board examination scores and weak high school performance or vice versa). High prejudice participants weighed the different, conflicting criteria in ways that could justify or rationalize discrimination against Black applicants (Hodson, Dovidio & Gaertner, 2000).

While laboratory experiments allow researchers to make causal inferences, they lack generalizability to the social contexts that are most relevant to identifying major discriminatory events that impact real lives (e.g. employers who make hiring decisions, landlords who approve renters, bank employees who approve mortgages). Field experiments—also called audit studies—offer a direct assessment of discrimination in real-world contexts, lending their findings greater generalizability. Such studies have documented strong evidence of discrimination in the context of employment (for a review, see Pager, 2007), housing searches (Yinger, 1995), car sales (Ayres & Siegelman, 1995), applications for insurance (Galster, Wissoker, & Zimmermann, 2001), home mortgages (for a review, see Turner, 1999), and physicians’ recommendations for medical care (Schulman et al., 1999). In the realm of hiring decisions, a study in which researchers mailed equivalent resumes to employers in Boston and Chicago using
mentally identifiable names to signal race (e.g., names like Jamal and Lakisha to signal African Americans and Brad and Emily to signal Whites), White names were called back at a 50% higher rate than those of equally qualified Black applicants (Bertrand & Mullainathan, 2004). In the domain of housing, the Department of Housing and Urban Development conducted an extensive series of audits measuring housing discrimination against Blacks, Latinos, Asians, and Native Americans comprising nearly 5500 paired tests in 30 metropolitan areas which demonstrated a clear pattern of racial discrimination: Blacks experienced consistent adverse treatment in roughly one in five housing searches and Hispanics in roughly one out of four housing searches (Turner et al., 2002; Turner et al., 2003). In the study, specific forms of housing discrimination included less information offered about units, fewer opportunities to view units, and in the case of home buyers, less assistance with financing and steering into less wealthy communities and neighborhoods with a higher proportion of minority residents (Turner et al., 2002; Turner et al., 2003).

As this literature demonstrates, major discriminatory events occur in multiple context domains, impact entire communities and institutions, and compound upon one another in a cycle of cumulative disadvantage (DiPrete & Eirich, 2006). In the context of a single life course, for instance, racial discrimination interacts with education because discriminatory segregation and racial disparities in the appropriation of educational resources affects the quality of schooling, which affects a POC’s returns on education. Furthermore, employment opportunities at the entry level are affected by prior discrimination in educational settings in addition to discrimination in the hiring process itself, which in turn affects wage growth. Cumulative disadvantage occurs intergenerationally as well, primarily in the extraction of wealth from POC. In another interaction between two domains of discrimination, subprime mortgage lending increased among
minorities in the context of high segregation; as a result, its negative impact disproportionately affected POC (Rugh & Massey, 2010). Even today, more than four decades after the Fair Housing Act was passed, housing discrimination continues to occur in insidious forms, including the threat of eviction in which assets are extracted from low-income POC (Desmond, 2012). Serial displacement in the form of mortgage foreclosure prevents the building of wealth, social integration, and psychosocial resources among POC (Saegert, Fields, & Libman, 2011). Estimates of major discrimination in any one domain (housing, education, employment, etc.) almost certainly underestimate its cumulative effects as well as the ways in which major discrimination in one domain may trigger disadvantage in others (Pager & Shepherd, 2008).

**The effects of major discrimination.**

In keeping with theories of cumulative disadvantage, studies have demonstrated that major discriminatory events can have multigenerational impact. In a quasi-experimental study examining ethnicity-specific patterns in birth outcomes before and after the federal immigration raid in Postville, Iowa in 2008, the largest in U.S. history, infants born to Latina mothers had a 24% greater risk of low birth weight after the raid when compared with the same period one year earlier, highlighting the implications of the raid (a major discriminatory incident) not only for the health of Latino immigrants, but also for their U.S.-born children (Novak, Geronimus, & Martinez-Cardoso, 2017). Another epidemiological study using data from the National Longitudinal Survey of Youth and U.S. Census found that upward socioeconomic mobility contributed to improved birth outcomes among infants born to White women who were poor as children, but that the same did not hold true for their Black counterparts (Colen et al., 2011). The authors speculated that the inability to translate upward socioeconomic mobility into beneficial birth outcomes among Black women was likely attributable to macrolevel major discrimination
that diminished the Black women’s material and psychosocial resources, such as residential segregation or racially-based differences in wealth accumulation (Colen et al., 2011).

Major discriminatory events have also been associated with greater likelihood of lifetime psychotic experiences among Black Americans (Oh et al., 2016). Specifically, police discrimination was associated with increased risk for lifetime psychotic experiences; being denied a promotion, being a victim of police abuse, and being discouraged from pursuing education were associated with lifetime visual hallucinations; and being discouraged from pursuing education was also associated with lifetime delusional ideation. Major racially discriminatory events appeared to have a dose-response effect: as a count of events, experiencing a greater range of major discriminatory events was associated with higher risk (Oh et al., 2016). Similarly, Anglin et al. (2014) found that experiencing major discriminatory events across nine domains (seeking employment, working, seeking housing, seeking medical care, getting service in a store, getting credit or a bank loan, being on the street or in a public setting or at school, encountering the police, or being in court) was associated with increased odds of endorsing subthreshold psychotic symptoms, including cognitive disorganization, unusual thinking, perceptual abnormalities, and paranoia.

As Oh et al.’s (2016) study suggests, major discriminatory events in the domain of encounters with the police may be particularly salient for African Americans, who have a unique, longstanding, and tenuous relationship with the police (Bass, 2001; Websdale, 2001). Sandra Bass, in an article summarizing the history of race, space, and policing in the U.S., traced the development of policing as an institution back to the slave-owning U.S., when regulating the movement of slaves was the job of slave patrollers. In the post-antebellum South, the desire to subjugate the behavior of newly freed slaves led to the creation of new laws against loitering and
vagrancy. In the Jim Crow era, housing policies and the creation of public housing served to isolate African-Americans from Whites in the form of residential segregation. This account demonstrates the ways in which police enforced racially discriminatory laws, a history that “perpetuates an authoritarian, regulatory, and punitive relationship between racial minorities in the police” (Bass, 2001, p. 156).

A substantial body of literature has examined the differential treatment of POC by police (Chambliss, 2001; Holmes, 2008). These practices include disrespectful treatment and verbal abuse (Mastrofski et al., 2002, Weitzer, 1999), disproportionate experiences with vehicular stops and surveillance (Lundman & Kaufman, 2003; Fagan and Davies, 2000; Jones-Brown, 2000); disproportionate arrests (D’Alessio & Stolzenberg, 2003); use of unwarranted physical and deadly force (Smith & Holmes, 2003; Terrill and Reisig, 2003); and slower response times and fewer police services (Weitzer, 2000). Young, urban Black males are particularly affected by involuntary police contact (Brunson and Miller, 2006), perhaps due to their disproportionate frequency (Fine et al., 2003).

In a population-based survey of young men on their experiences of police encounters and subsequent mental health, more police contact was correlated with greater trauma and anxiety symptoms, related to number of reported stops, the intrusiveness of the encounters, and perceptions of police fairness (Geller et al., 2014). Other findings highlight the maladaptive psychological processes that result from police harassment: negative self-schemas, as indicated by young Black men’s sense of themselves as “symbolic assailants” (Brunson & Miller, 2006), feelings of helplessness and despair (Brunson, 2007), and rumination (Brunson, 2007). Billies (2015) introduced the concept of surveillance threat, which comprises three aspects of police-civilian interaction: 1) the actual, potential harms civilians face; b) the threatening attitude and
behavior of officers; and c) civilian perception of imminent harm. Surveillance threat creates a psychological problem for civilians who must assess and negotiate such threats to their bodies before, during, and after they occur (Billies, 2015).

Moreover, police misconduct can combine with other racism-related risk factors to contribute to recurrent interpersonal violence, a major cause of death and disability among young Black men. In a qualitative study based on interviews with young Black male victims of violence, Rich & Grey (2005) found that a combination of traumatic stress, the “code of the street” (i.e. the need for respect), and lack of faith in the police contributed to a disrupted sense of safety, which led to maladaptive coping mechanisms (substance use, violent retaliation) that increased the risk of re-injury. This narrative can be understood through the psychological mediation framework (Hatzenbuehler, 2003): the young men’s psychological processes (coping, emotion regulation, and social/interpersonal processes) are affected by racism-related stress, as exemplified by the young men’s mistrust in the police and subsequent development of a “code of the street” to buffer self-esteem (Rich & Grey, 2005). These psychological processes in turn mediate the relation between racism-related stress and psychopathology in the form of PTSD and substance use disorders.

Towards a Spectrum of Racism Experiences

While the literature documenting racism’s negative effects on mental health is quite considerable, research describing the intersections between microaggressive and major racial discrimination is scant and often contradictory, with most studies focusing solely on one form of discrimination versus the other and the remaining claiming that one has more impact on mental health than the other.
The overall literature suggests that everyday or microaggressive discrimination has a greater overall impact on mental health than major discriminatory events, perhaps because of the former’s chronic nature (Sue et al., 2007) or because of its focus on assaults to one’s character (Kessler, Mickelson, & Williams, 1999). Kessler, Mickelson, & Williams (1999) found that only the highest category (i.e., the most frequent experiencers) of everyday discrimination predicted Major Depression and Generalized Anxiety Disorder. However, the joint effects of everyday discrimination and major discriminatory events additively predicted both Major Depression and nonspecific psychological distress (Kessler, Mickelson, & Williams., 1999), in keeping with the minority stress theory that the cumulative effects of minority stress enact a mental health toll on POC. In a study of South African adults, both major discriminatory events and everyday discrimination were associated with an elevated risk of 12-month and lifetime rates of any psychiatric disorder, but the associations were more robust for everyday vs. major discriminatory events (Moomal et al., 2009). Similarly, another report found that among Asian Americans, everyday discrimination was associated with greater odds of having any DSM disorder, depressive disorder, or anxiety disorder in the past year (Gee et al., 2007).

Another possibility is that the effects of microaggressive/everyday vs. major discrimination experiences are difficult to parse because they hold different salience and subjective meaning for different POC groups. In a study comparing the effects of microaggressions and macroaggressions on the mental health of Black women, both were associated with negative mental health outcomes, with macroaggressions being the less common but more detrimental of the two (Donovan et al., 2012). On the other hand, experiences of subtle but not overt racial bias were associated with levels of depressive symptoms among Korean immigrants, suggesting microaggressions may have particular salience for this population (Noh,
Kaspar, & Wickrama, 2007). Similarly, Greene et al. (2006) reported a finding that Asian American students reported more discrimination by adults at the start of the study compared with their Puerto Rican peers, perhaps because microaggressive differential treatment by teachers was not experienced positively by Asian American students who felt pressure to live up to the expectations of the “model minority myth”. These findings are in concert with the notion that the dominant culture’s perceptions of Asian Americans as perpetual “foreigners” (Tuan, 1998) who present an economic, educational, or cultural threat may elicit racial dynamics that are quite distinct from the experiences of African Americans (Alvarez, Juang, & Liang, 2006).

It is important to note that, while conceptually distinct, major and everyday discrimination often occur together. Take as an example an unlawful encounter with the police, a major discriminatory event. This would activate an individual’s sense of surveillance threat (Billies, 2015), behaviorally manifested as increased vigilance and attention to one’s surroundings that Bhabha (2004, as cited in Billies, 2015) has described as “visceral intelligence” developed through interactions with dominant power. Related everyday microaggressions (e.g. assumptions of criminality, experiences in which others crossing the street to avoid walking next to you) are therefore experienced in addition to and in the context of major discriminatory experiences (and vice versa). This updates Wong et al.’s version of Hatzehbuehler’s psychological mediation framework, which conceptualizes microaggressions as the single stressor mediating the effects of POC status on mental health outcomes. In a spectrum approach to racism experiences, both everyday/microaggressive and major discriminatory events are understood as increasing the stress exposure of POC, negatively affecting psychological well-being. Moreover, major and microaggressive racial discrimination in concert represent a
unique predictor of psychopathology, in keeping with Meyer’s minority stress hypothesis and Harrell’s conceptualization of racism-related stress (see Figure 3).

**Figure 3.** Spectrum racial discrimination psychological mediation model (adapted from Hatzehbuehler, 2009 and Wong et al., 2014).

**Sociodemographic covariates of interest**

Significant gaps also remain in our understanding of how discrimination experiences may differ by race, gender, SES, and immigrant and nativity status. Despite scholars’ longstanding interest in the role that sociodemographic variables may play in the relation between racism experiences and health, the extant literature on this subject is currently mixed and inconclusive (Paradies et al., 2015).

**Race.**

The literature suggests that POC experience both acute and chronic forms of racial discrimination across a spectrum of racism experiences. However, the prevalence and frequency of reported racial discrimination differs by race. First, Black Americans appear to report the highest levels of both everyday and major racially discriminatory events. In a study using a
nationally representative sample of White, Latino, and Black individuals 50 years and older living in the U.S., while 30% of the general population reported at least one type of major lifetime discrimination, almost 45% of Black adults reported such discrimination (Ayalon & Gum, 2010). Black participants also reported the greatest frequency of everyday discrimination (82.6%), while Latinos were significantly less likely to report any everyday discrimination (64.2%). These findings parallel those from a national survey of 25-74 year olds, which documented that approximately 49% of Black respondents reported experiencing one major discriminatory event while 81% reported experiencing at least one incident of everyday discrimination (Kessler, Mickelson, & Williams, 1999). Among youth, previous research indicates that African American youth perceived more racial discrimination than their Hispanic, Asian American or European American peers (Romero & Roberts, 1998; Fisher, Wallace, & Fenton, 2000). Similarly, in a sample of 409 Asian, Latino, Black, and White young adults, participants in the non-White groups reported significantly higher rates of racially microaggressive experiences than respondents in the White group, with Black participants experiencing the highest levels of racial microaggressions, followed by Latinos/Hispanics and Asians (Forrest-Bank & Jenson, 2015).

It has also been suggested that the qualitative nature of racism experiences may differ by racial group membership. For instance, in a sample of 506 participants, there were no significant differences in the total amount of microaggressions experienced among Black, Latina/o, Asian, and multiracial participants, but subscale scores differed by race, with Black and Latina/o participants experiencing more inferiority-related microaggressions than Asian participants, Black participants experiencing more criminality-related microaggressions than Latina/o and Asian participants, and Asian participants experiencing more environmental and exoticization
microaggressions than Black participants (Nadal et al., 2014). Another study using the same microaggressions scale similarly found that Latino/Hispanic and Asian participants scored highest on the Exoticization and Assumptions of Similarity subscale while Blacks scored highest on the Assumptions of Inferiority subscale (Forrest-Bank & Jenson, 2015).

The empirical data examining race as a moderator of the relation between racism and health outcomes is largely inconclusive. A meta-analysis on racism and mental health found that the negative psychological effects of racism were significantly larger for POC than for Whites experiencing anti-White discrimination, but found no significant differences between POC subgroups (Schmitt et al., 2014). Similarly, a meta-analysis comparing the associations between discrimination and mental and physical health in Asian, Black, Hispanic, Native American, and White participants showed no significant differences based on racial group (Pascoe & Richman, 2009). On the other hand, another meta-analysis of 293 racism studies found that for the mental health outcome of depression, the associations for Asian Americans produced the largest effect size, followed by associations for Latino/a Americans when compared with African Americans (Paradies et al., 2015). This suggests that while racism has a negative effect on all POC groups, it may result in particularly negative mental health consequences for Asian Americans, perhaps because this group has not yet adopted effective coping strategies such as preparation for bias as compared with Black Americans (Phinney & Chavira, 1995).

**Race x Gender.**

Research regarding gender differences in perceived discrimination among POC has largely indicated the absence of differences on the group level. In two recent meta-analyses, gender did not significantly moderate the association between racial discrimination and mental health (Paradies et al., 2015; Pascoe & Richman, 2009).
However, these meta-analyses, which include White participants in their analyses of gender differences, may miss differences at the intersection of race and gender (Kim & Noh, 2014). Sidanius and Pratto (1999) proposed examining gender intersectionally with race when investigating the prevalence and effects of racial discrimination on POC. Specifically, they argued that in a racial hierarchy, subordinate males as opposed to females will be the primary targets of discrimination because discrimination is practiced to reduce competition for power (Sidanius and Pratto, 1999). In keeping with this theory, one study found that Black men perceived more discrimination than Black women (Sellers & Shelton, 2003). Similarly, in a study of the prevalence of perceived discrimination among African American and Caribbean Black youth, males perceived more discrimination than their female counterparts (Seaton et al., 2008).

However, race x gender differences in prevalence may not map onto equivalent differences in the effects of perceived discrimination. Gendered expectations consistent with Sidanius and Pratto’s theory may make females more susceptible to racial discrimination’s effects. In a study of a nationally representative sample of Black youth using data from the National Survey of African Life, Seaton et al. (2010) found that older (adolescent) Caribbean Black females exhibited higher depressive symptoms and lower life satisfaction in the context of high levels of perceived discrimination compared to older (adolescent) African American males. The authors speculated that experiences of discrimination were interpreted as normative for males but not for females since discrimination is part of the “lived experience” for urban, African American male youth. Caribbean females who had not undergone equivalent racial socialization processes to prepare themselves for experiences of discrimination could have therefore suffered adverse effects in comparison to their male counterparts (Seaton et al., 2010). Similarly, in a
study examining ethnic and gender differences in exposure to discrimination and its association with depressive symptoms among five immigrant groups, women were significantly less likely than men to experience discrimination, but that the relation between discrimination and depressive symptoms was greater for women than for men (Kim & Noh, 2014).

Studies employing an intersectional lens have also focused on the unique, non-additive effects of discrimination for individuals identifying with more than one social group. For example, one study found that the association between atypical gender role behaviors in women (i.e., dominance) and negative outcomes in the workplace was moderated by race. Specifically, White female and Black male leaders were conferred lower status when they expressed dominance rather than communality whereas Black female and White male leaders were not, highlighting that prescriptive and proscriptive norms differ at the intersection of race and gender (Livingston, Rosette, & Washington, 2012).

The intersection of race and gender may also affect the qualitative nature of discrimination that is experienced. McCabe et al.’s (2009) study of 82 Black, Latinx, and White students identified unique themes at the intersection of race and gender: Black men were seen as threatening, Latinas were exoticized, Black women experienced racial microaggressions in the classroom, and White women experienced microaggressions in male-dominated majors. In another study, Black and Latinx adolescents perceived similar levels of racial discrimination, but boys were more likely to report discrimination in police encounters while girls were more likely to report discrimination in shops (Wiehe et al., 2010). Such findings serve to challenge racism researchers to reexamine essentialist assumptions that often homogenize the discrimination experiences of POC.
Socioeconomic status.

A number of researchers have argued that given the longstanding history of systemic racial oppression in the U.S. and its expression in the economic subjugation of POC, race and SES are confounding variables in studies of the effects of racial discrimination. Put another way, because racism is fundamentally involved in structuring economic, social, and health opportunities for POC, it has been difficult to disentangle the differential effects of racism and socioeconomic status (LaVeist, 2005). For instance, in a study of 520 White and 586 Black Americans, Williams et al. (1997) found that while observed racial differences in health were markedly reduced when adjusted for education and income, experiences of discrimination accounted for part of the association between income and health, suggesting that economic and non-economic forms of discrimination relate to each other and combine with socioeconomic position and other risk factors and resources to affect health.

Interestingly, SES appears to positively correlate with the prevalence of reported racial discrimination among POC. Kessler et al. (1999) found that in a nationally representative sample of adults, major lifetime perceived discrimination was more common among respondents with high rather than low levels of education. In a study of 1503 adult respondents in the Chinese American Psychiatric Epidemiologic Study, in comparison with those who did not report discrimination, those who reported discrimination were of higher SES (Goto, Gee, & Takeuchi, 2002). Similarly, in a study of young African American adults, reported racial discrimination was more common in those with higher educational attainment (Borrell et al., 2006).

A number of findings lend support to the idea that racial discrimination has negative effects above and beyond their socioeconomic impact (for a review, see Williams et al., 2012). In a study using a nationally representative sample of African American adults, Hudson et al.
(2012) found significant positive interactions between education and experiences of major racial discrimination in African American men such that more highly educated men reported more frequent major racial discrimination, which was associated with greater odds of depression. In addition, the study documented that racial discrimination negatively affected the association between socioeconomic position and depression among African American men, suggesting that benefits typically conferred with higher educational attainment were undermined by racial discrimination in this group (Hudson et al., 2012). The authors speculated that if the high-SES African American men had higher expectations and hopes for equal treatment, they may have suffered greater adverse consequences to their mental health when discrimination occurred (Hudson et al., 2012). One contributor to the persistence of such racial disparities after controlling for SES is that traditional measures of SES such as level of education are not equivalent across racial groups and do not necessarily confer the same benefits to each group (Williams et al., 2012). For instance, college-educated Black Americans are more likely to experience unemployment than their White counterparts and Black American men in the highest education category are more likely to die as a result of homicide than White males in the lowest education group (Williams & Jackson, 2005).

For highly educated POC, the benefits of higher SES may not protect against the negative psychological effects of racial discrimination. In a 10-year cohort study of White and non-Hispanic Black youth, Black students from professionally educated families had the greatest discrimination scores, which correlated positively with depressive symptoms. Moreover, greater levels of parental education did not protect against discrimination’s effects among Black youth (Cheng, Cohen, & Goodman, 2015). In a study using data from the National Latino and Asian American Study, education moderated the relation between perceived everyday racial
discrimination and psychological distress such that it was stronger for Asian Americans with college or more levels of education (Zhang & Hong, 2013). Therefore, despite overall findings in the public health literature documenting education’s positive relation to health (Goesling, 2007; Liu & Hummer, 2008), SES may have a different relation to racial discrimination and its subsequent effects (Zhang & Hong, 2013). It has been postulated that higher levels of education among POC may be associated with greater exposure to racism and increased vulnerability to discrimination, particularly when interracial interactions foster higher expectations for distributive justice in POC (Saguy et al., 2009). This hypothesis is further buffeted by recent findings that upwardly mobile young adults were more likely than their socioeconomically stable counterparts to experience acute and chronic discrimination (Colen, Ramey, Cooksey, & Williams, 2017).

**Immigrant and nativity status.**

Immigrant status represents another significant variable in understanding the effects of racism experiences on POC. The general consensus in the literature is that prejudice and racial discrimination are central aspects of acculturative stress for immigrants to the U.S. who, in their countries of origin, were members of the majority or in-group (Sanchez & Fernandez, 1993). For individuals new to the U.S., racial and language discrimination has been found to contribute to acculturative stress, which, in turn, has been associated with increased depressive symptoms (Salgado de Snyder, 1987).

Despite the increase in experiences of discrimination that likely occur upon immigration, first-generation immigrants typically report less racial discrimination than second-generation or native-born POC. This is likely because immigrants who emigrate from countries in which they were formerly in the majority may experience a learning curve with regards to racism.
experiences. For example, in a study comparing the discrimination experiences of foreign-born and native-born Mexican Americans, native Spanish speakers born outside of the U.S. were more likely to perceive discrimination as their levels of English usage and acculturation increased (Finch, Kolody, & Vega, 2000), suggesting that immigrants and migrants with low mastery of English may be less aware of the cultural nuances of individual-level discrimination than those who have firmer mastery of English. Similarly, Krieger et al. (2011) found that foreign-born Black immigrants were nearly twice as likely to report having never experienced racial discrimination compared with the U.S.-born Black participants, but that self-reports of the number of situations in which racial discrimination was experienced significantly increased with higher percentages of time spent in the U.S. In addition, Kuo (1995) found that Asian Americans born in the U.S. were more likely to report experiencing discrimination compared to their counterparts who were born outside of the U.S. (1995), citing greater interracial contact and competition as important factors in explaining higher numbers of discrimination experiences reported by the U.S.-born. Other researchers have suggested that racial discrimination may in part account for “the immigrant paradox”, the phenomenon by which immigrants start out with better-than-average mental health but whose health decline as they acculturate in the U.S. (Gee et al., 2006).

The Present Study

Given the extensive documentation of the effects of both major and microaggressive racial discrimination on POC, it is perhaps surprising that the different attributes of both forms of racism experiences and their sociodemographic moderators are less understood. Moreover, the two most commonly cited theoretical models of racism’s effects on mental health remain largely untested as potential explicable frameworks. In Meyer’s minority stress model (Meyer, 2003),
minority stress is conceptualized as distinct from other general life stressors and exercises a uniquely negative impact beyond other forms of stress (perceived discrimination \(\rightarrow\) psychopathology, controlling for general stress). In the psychological mediation model (Hatzehbuehler, 2009), general psychological processes (such as coping) mediate the relation between racism-related stress and psychological outcome (perceived discrimination \(\rightarrow\) passive coping \(\rightarrow\) psychopathology). The present study sought to combine both theoretical frameworks in testing a multivariable regression model in a sample of emerging adults from a POC-majority public university setting in the United States. In addition, the study aimed to determine the number and nature perceived discrimination latent subgroups that exist within the sample (accounting for both major and microaggressive discrimination) and their relation to two indicators of psychological distress. This study also sought to understand the extent to which socio-demographic variables (i.e. race, gender, and immigrant and nativity status) played a role in defining each group.

**Statement of Hypotheses**

The proposed study has the following aims and hypotheses:

**Aim 1:** to determine the number and nature of racial discrimination latent subgroups in the sample

**Hypothesis 1a:** Latent Group analyses will classify respondents into 4 mutually exclusive groups: 1) a group with high levels of both major and microaggressive racial discrimination, 2) a group with high major racial discrimination but relatively low microaggressions, 3) a group with high racial microaggressions but relatively low major racial discrimination, and 4) a group with low levels of both major and microaggressive racial discrimination.
Hypothesis 1b: Black participants will be more likely to belong to Group 1 than White participants.

Hypothesis 1c: Asian and Latino participants will be more likely to belong to Group 3 than White participants.

Hypothesis 1d: First-generation immigrants will be more likely to belong to Group 4 than second-generation immigrants and non-immigrants.

Hypothesis 1e: High-SES individuals will be more likely to belong to Group 1 than low-SES individuals.

Hypothesis 1f: Black male participants will be more likely to belong to Group 1 than Black female participants.

Aim 2: to determine whether spectrum racial discrimination is associated with anxiety and/or depression over and above non-race specific stress

Hypothesis 2a: Group 1 (high levels of both major and microaggressive racial discrimination) will be associated with anxiety and depression when controlling for perceived stress

Hypothesis 2b: Group 2 (high level of racial microaggressions but relatively low level of major racial discrimination) will be associated with anxiety when controlling for perceived stress

Hypothesis 2c: Group 3 (high level of major racial discrimination but relatively low racial microaggressions) will be associated with depression when controlling for perceived stress

Hypothesis 2d: Group 4 (low levels of both major and microaggressive racial discrimination) will not be associated with anxiety or depression
**Aim 3**: to determine whether passive coping mediates the relation between spectrum racial discrimination and anxiety and/or depression, and whether sociodemographic factors moderate this relation.

**Hypothesis 3a**: Group 1 (high levels of both major and microaggressive racial discrimination) will be associated with anxiety and depression, with coping style mediating this association. Specifically, active coping will be negatively associated with anxiety and depression and passive coping will be positively associated with anxiety and depression.

**Hypothesis 3b**: Race/ethnicity will moderate this relation in that passive coping will mediate the relation among emerging adults of color, but not among White participants.

**Hypothesis 3c**: Gender will moderate this relation in that women will be more likely than men to use active coping than passive coping.

![Figure 4. Study’s Hypothesis 3c of a moderated psychological mediation model between perceived spectrum racial discrimination and psychological outcomes as mediated by coping and](image-url)
moderated by race/ethnicity and gender.

The present study contributes to the current literature on racism experiences in the following ways. First, it provided support for minority stress and psychological mediation frameworks, charting a pathway from racial discrimination to passive coping to increased perceived anxiety and depression, controlling for perceived general stress and examining potential sociodemographic moderators of this mediator relation. Second, it examined the intersections between multiple attributes of discrimination in a *spectrum* approach to racism experiences, a contrast to the trend in the current literature of studying one form of discrimination or the other, or to make claims for one having more significance than the other without acknowledging their co-occurrence. Third, the sample in the present study used inclusion criteria based on immigrant and/or minority status and age (emerging adulthood) in order to capture the experience of a group in which racial discrimination is particularly relevant, at a crucial stage in the life course when participants’ racial identities are beginning to cohere (Erikson, 1968; Marcia, 1966; Cross & Fhagen-Smith, 2001). Fourth, to the best of the author’s knowledge, the study is the first in this literature to use multivariate latent class analysis, which allowed for the exploration of the “natural structure” of perceived racial discrimination.
Chapter 3: Method

Study Design

This study is a secondary data analysis using data from a study entitled “Social Stressors and Unusual Experiences.” The original study sought to examine the association between socio-cultural variables (e.g. racial discrimination, ethnic identity, and ethnic density, among others) and psychosis risk in a sample of emerging adults of color.

The present study will follow a correlational, cross-sectional design to explore the associations between two forms of racial discrimination (major and microaggressive), coping style, and two indicators of psychological distress (depression and anxiety). It will utilize a novel analytical strategy to examine the natural structure of spectrum racial discrimination in the sample as well as sociodemographic predictors of group membership.

Participants & Procedure

The original study recruited N=915 participants from a large urban public university system in the northeastern United States whose students reflect the demographics of the surrounding urban communities (i.e., commuter students and a high proportion of ethnic minorities and immigrants). Undergraduate students were recruited through an online participant recruitment website from fall 2014-spring 2017. Inclusion criteria outlined on the recruitment website specified emerging adults (i.e., individuals aged 18-29) who either self-identified as Black/African American/African descent or as a first- or second-generation immigrant to maximize recruitment of young ethnic minority adults. Completion time ranged from 30 minutes to one hour. The Institutional Review Board of the university approved the study protocol and researchers obtained written informed consent from all participants prior to enrollment. All
participants received credit toward partial fulfillment of their psychology course’s research requirement for their participation in the study.

Measures

**Experiences of Discrimination (EOD).**

Self-reported major discriminatory events were determined using the Experiences of Discrimination (EOD) instrument (Krieger et al., 2005), which captures both the number of different situations in which respondents experienced discrimination due to race, ethnicity, or color, and the frequency of such occurrences. The 9 situations assessed include: at school; getting hired/getting a job; at work; getting housing; getting medical care; getting service in a store; getting credit or a loan; on the street; and from the police or in the courts. Respondents endorse whether or not they have experienced major discriminatory event(s) in each domain (yes or no) and, if endorsed, their relative frequency: once, two-three times, or four or more times. Responses were recoded on a 4-point ordinal scale as no=0, once=1, two-three times=2, and four or more times=3.

The measure has been psychometrically validated in a study of African American, Latino, and White working adult participants, showing good reliability and validity (Krieger et al., 2005). Cronbach’s alpha for the 9-item version was .74 or higher among all racial groups, demonstrating high internal consistency, and test-retest reliability coefficients were .70, indicating scale reliability. The EOD was also significantly associated with psychological distress and not associated with social desirability (Krieger et al., 2005), demonstrating strong predictive validity.

**Racial and Ethnic Microaggressions Scale (REMS).**

Self-reported experiences of racial microaggressions were determined using the Racial
and Ethnic Microaggressions Scale (REMS; Nadal, 2011). The 45 items load onto six factors: (a) Assumptions of Inferiority, (b) Second-Class Citizen and Assumptions of Criminality, (c) Microinvalidations, (d) Exoticization/Assumptions of Similarity, (e) Environmental Microaggressions, and (f) Workplace and School Microaggressions. Respondents are instructed to indicate the level of frequency a racial microaggression occurred in the past 6 months (I did not experience this event in the past six months, I experienced this event 1-3 times in the past six months, I experienced this event 4-6 times in the past six months, I experienced this event 7-9 times in the past six months, and I experienced this event 10 or more times in the past six months). Example items include: Someone assumed that I would have a lower education because of my race, Someone avoided walking near me on the street because of my race, and Someone told me that they “don’t see color.”

The REMS has demonstrated good reliability and validity in a racially and ethnically diverse population of Asian Americans/Pacific Islanders, Latinx, Black African Americans, and multiracial individuals (Nadal, 2011), with Cronbach’s alpha score of .91 for the overall model and subscales ranging from .78 to .87 (Nadal, 2011). It has been tested for concurrent validity against the Daily Life Experiences-Frequency Scale (DLE-F) and Racism and Life Experiences-Self-Administration Version (RaLES-B) (Nadal, 2011).

For the purposes of this study, workplace and school microaggressions (items 1, 15, 16, 25, and 44) were discarded in order to eliminate potential overlap with school and employment EOD domains, resulting in a total of 40 items. The Cronbach’s alpha score for the 40-item scale was .88 (vs. .89 for the 45-item scale), showing good internal consistency. Responses were coded on a 5-point ordinal scale as follows: 0=I did not experience this event in the past six months, 1=I experienced this event 1-3 times in the past six months, 2=I experienced this event
4-6 times in the past six months, 3=I experienced this event 7-9 times in the past six months, and 4=I experienced this event 10 or more times in the past six months. Item responses within each REMS factor (excluding workplace and school microaggressions) were added to create 5 subscale scores: (1) Assumptions of Inferiority ($\alpha = .88$), (2) Second-Class Citizen and Assumptions of Criminality ($\alpha = .84$), (3) Microinvalidations ($\alpha = .85$), (4) Exoticization/Assumptions of Similarity ($\alpha = .80$), and (5) Environmental Microaggressions ($\alpha = .84$).

The 5 REMS and the 9 EOD items described above comprise the observed indicators of the latent variable, perceived spectrum racial discrimination, for the latent class analysis.

**Passive and active coping.**

The EOD measure (Krieger et al., 2005) was also used to assess the degree of passive and active coping in response to racial discrimination using the two items inquiring about responses to unfair treatment due to race, ethnicity, or skin color. Participants chose between two typical responses to discrimination in item 1 (“If you feel you have been treated unfairly, do you usually accept it as a fact of life” or “…talk to others about it”) and again in item 2 (“If you feel you have been treated unfairly, do you try to do something about it” or “…keep it to yourself”). Responses from the two items were summed to create three groups ranging from most passive reflected by Group 1 (i.e., accept it as a fact of life and keep it to yourself) to the most active reflected by Group 3 (i.e., try to do something about it and talk to others about it). The second group reflected a combination of active and passive coping strategies.

**Perceived Stress Scale.**

The Perceived Stress Scale (Cohen, Kamarck & Merrelstein, 1983) is a 10-item instrument that gauges the degree to which situations that happened within the last month are
perceived as stressful. In particular, items focus on the degree to which participants felt past situations were unpredictable and that they lacked control over such situations. Answers range from Never (0) to Very Often (4). The measure demonstrated high internal reliability (Cronbach’s $\alpha = .89$) and good divergent and convergent validity in a multi-racial sample of emerging adults (Roberti, Harrington, & Storch, 2006). For the purposes of this study, the ten items were added to create a total PSS scale score.

**State-Trait Anxiety Inventory-Trait Form-Anxiety Subscale.**

The State–Trait Anxiety Inventory-Trait Form-Anxiety Subscale (STAI-trait) (Spielberger et al., 1970) will be employed to assess anxiety. This version contains items that only load highly onto the anxiety factor and excludes items that load primarily onto the depression factor, so as to capture generalized anxiety without comorbidity (Bieling, Antony, & Swinson, 1998). The seven items are scored using a Likert scale that asks participants to report how frequently they experience a particular symptom of anxiety (almost never, 0; sometimes, 1; often, 2; and almost always, 3). Scores range from 0–21, with scores greater than or equal to 11 typically indicating clinical anxiety disorder (Bieling, Antony, & Swinson, 1998). The STAI-trait has high construct (Smeets, Merckelbach, & Griez 1997) and convergent (Peterson & Reiss, 1987) validity and test–retest reliability (Rule & Traver, 1983). For the purposes of this study, the seven items were added to create a total STAI scale score.

**Center for Epidemiologic Studies – Depression Scale (CES-D), 10-item version.**

The 10-item CES-D scale (Radloff, 1977) is designed to measure depressive symptomatology in the general population. Items on the scale represent major components of depressive symptoms from factor analytic studies, including depressed mood, feelings of guilt and worthlessness, feelings of helplessness and hopelessness, psychomotor retardation, loss of
appetite, and sleep disturbance. The items are scored using a Likert scale that asks participants to report how frequently they experienced a particular symptom of depression in the past week: rarely or none of the time (less than 1 day), some or a little of the time (1-2 days), occasionally or a moderate amount of time (3-4 days), and most or all of the time (5-7 days). Two items (items 5 and 8) are reverse coded. Scores range from 0 to 30, with scores greater than or equal to 10 typically indicating clinical depression (Andresen et al., 1994). The CES-D has high criterion validity (Irwin, Artin, & Oxman, 1999), satisfactory internal consistency reliability (Zhang et al., 2012), and test-retest reliability (Andresen et al., 1994). For the purposes of this study, the 10 items were added to create a total CES-D scale score.

**Sociodemographic covariates (race, gender, immigrant status, age, and SES).**

Sociodemographic data were obtained on the sample via a sociodemographic questionnaire. Self-identified race and ethnicity was assessed using a question in which participants are instructed to “Choose one category that best captures how you see yourself,” and given several options. These answers were grouped into 5 categories for the present analyses: 1) Black (includes those born in USA, Africa, and Caribbean/West Indians); 2) Hispanic/Latino; 3) Asian/Pacific Islander; 4) White; and 5) Other (includes Native Americans, Biracial, and Middle Eastern). Immigrant status was ascertained using two Yes/No questions: (1) ‘Were you born in the US?’ and (2) ‘Were both of your parents born inside the US?’ Respondents indicating Yes to question 1 and Yes to question 2 were categorized as non-immigrant; No to question 1 and No to question 2 as first-generation immigrant; and Yes to question 1 and No to question 2 as second generation immigrant. Gender was assessed in a question requesting participants to check off male or female and age was assessed via a write-in question asking participants to report their age. SES was assessed using two different variables. The first was paternal educational
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achievement, measured via question in which participants were asked, “What is the highest level of school your father completed or the highest degree he received?” and given 6 Likert-scale options: 1) less than a HS degree, 2) HS degree or equivalent, 3) associate’s degree or a 2-year college completed, 4) 4 years of college attended, 5) bachelor’s degree, and 6) graduate degree. The second SES variable was family income, assessed using a question in which participants were asked, “What is the best estimate of your family’s yearly income before taxes?” and given 19 options ranging from less than $2,000 to over $100,000 per year in $1k increments up to $9,999, $2.5k increments from $10,000-$14,999, $4k increments from $15,000-$24,999, $15k increments from $25,000-$49,999, a $20k increment from $50,000-$69999, a $30k increment from $60,000-$99,999, and an upper bound of $100k and over. For the purposes of this study, family income was treated continuously.

Data Analysis

Preliminary analyses were conducted to determine the sociodemographic characteristics of the sample and to assess for differences between racial/ethnic groups in reported frequency of the variables of interest (i.e., major discriminatory events as captured by the Experiences of Discrimination measure and racial microaggressions as captured by the Racial/Ethnic Microaggressions Scale).

Rather than representing major and microaggressive discrimination as disparate and unrelated categories, latent class analysis (LCA) can examine how they jointly co-occur (Chung et al., 2006), consistent with the present study’s spectrum conceptualization of racism experiences (Aim 1). This study will employ polytomous variable latent class analysis, a statistical method used to find subtypes of related cases (latent classes) from multivariate categorical data with polytomous outcome variables. Latent class analysis uses conditional
probability to classify respondents into a series of mutually exclusive categories. Individual members of any given latent class have similar response patterns to categorical variables (e.g. Hagenaars and McCutcheon, 2002; Muthén, 2001). LCA has been demonstrated to be an appropriate methodology to examine experiences of multiple forms of discrimination and bullying (Garnett et al., 2013), determine the nature and number of ethnic identity groups in a population of racial/ethnic minority emerging adults (Anglin et al., 2016; Espinosa et al., 2016) and investigate the effects of perceptions of racial discrimination and racial socialization on racial identity development (Seaton et al., 2012).

Missing data will be included in analyses as poLCA, which uses the iterative nature of the expectation-maximization (EM) algorithm (Dempster, Laird, & Rubin, 1977), is able to estimate the latent class model even when some of the observations on the manifest variables are missing (Linzer & Lewis, 2011). In the present study, only one case (representing less than 1% of cases) was missing, an inconsequential number unlikely to result in biases or loss of power (Graham, 2009). A central assumption of the LCA model is local independence, which specifies that conditional on the latent variable, the observed indicators (i.e., the 9 EOD and 5 REMS items) must be independent. To evaluate the local independence assumption, the bivariate residuals will be examined following the latent class enumeration (Vermunt and Magidson, 2005; Guo et al., 2009, Rehoussin et al., 2008). All analyses were conducted using R and the poLCA procedure for R, an R package for polytomous variable latent class analysis (Linzer & Lewis, 2011).

The LCA analytic plan is summarized below and follows the framework proposed by Collins & Lanza (2010) for polytomous variable LCA. Sequential steps were followed to: (1) determine the appropriate number of groups of spectrum perceived racial discrimination within
the sample and (1a) relate latent class membership to sociodemographic predictors of latent class membership, (Aim 1), (2) determine whether spectrum racial discrimination is associated with anxiety and/or depression above and beyond the effects of general perceived stress (Aim 2), and (3) determine whether coping style mediates the relation between spectrum racial discrimination and anxiety and/or depression (Aim 3).

1. Determine the appropriate number of classes: The final number of groups will be determined by considering a combination of statistical criteria, parsimony, and interpretability (Collins & Lanza, 2010). Absolute model fit, which refers to whether a specified latent class model provides an adequate representation of the data in absolute terms (i.e., without reference to competing models), will be determined using the likelihood ratio Chi square goodness-of-fit test where the null hypothesis is that the LCA model proposed produced the observed data. A significant p value indicates a lack of adequate model fit (Collins & Lanza, 2010). Relative model fit, which refers to deciding which of two or more models represents an optimal balance of fit to the particular data set, will be examined using the Bayesian information criterion parsimony index (BIC; Schwarz, 1978) and the Akaike information criterion (AIC; Bozdogan, 1987). The goal is to select the model which minimizes the BIC and AIC without estimating an excessive number of parameters. The quality of the resulting classification will be evaluated in terms of the separation of the latent groups using an entropy measure based on the fitted cross-classification table estimated by the latent class model (Linzer & Lewis, 2011). Entropy measures capture how well it is possible to predict group membership given the observed outcomes. Values range from 0 to 1, and high values are preferred (Jung &
Wickrama, 2008). Generally, values of .8, .6, and .4 represent high, medium, and low entropy, respectively (Clark & Muthén, 2009).

1a. Relate latent class membership to descriptors of each group: Once the final number of latent groups is established, characteristics that predict membership in the various groups will be identified. Bivariate analyses will be conducted to describe the sociodemographic composition (i.e., age, gender, family income, race/ethnicity, and immigrant status) of the latent classes and to determine whether and which sociodemographic variables increased the likelihood of belonging to each latent class.

2. Determine the associations between group membership and indicators of psychological distress and test for the validity of the minority stress model: A categorical variable for spectrum discrimination will be created based on the class structure that emerges from the LCA model and dummy coded for use in a hierarchical linear regression model. The LCA groups will be entered as independent variables and anxiety and depression as dependent variables, with perceived stress entered as a covariate, and adjusted for sociodemographic covariates. Separate analyses will be conducted for anxiety and depression to determine whether latent group membership differentially predicts anxiety vs. depression.

3. Test the validity of the moderated psychological mediation model: Coping will be entered as a mediator variable to test whether it influences the relation between spectrum discrimination group membership and the two indicators of psychological distress (psychological mediation model), and race/ethnicity and gender will be entered as moderators of the relation between group membership and anxiety and depression as well as the relation between group membership and coping style. To
further examine the direct and indirect effects between spectrum discrimination group membership, coping, and anxiety and depression, bootstrapping procedures with 95% confidence intervals (CIs) and 10,000 resamples will be used via PROCESS, a macro for SPSS (Hayes, 2013). Mediation effects are declared significant if the 95% bias-corrected bootstrap CI does not include zero.
Chapter 4: Results

Preliminary Analyses

Demographics of the sample. The sample is predominantly female (60%), immigrant (89.5% first or second generation), and largely represented by ethnic minorities, with Blacks, Asians, and Hispanics each comprising at least 20% of the sample. The age of participants in the sample ranged from 18-36 years, with a mean age of 19.94 (SD=2.47). The mean family income level for the sample was closest to the $25k-$34,999 range (Table 1).

Table 1. Demographic characteristics of the sample.

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Overall Sample (n = 915)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male, n (%)</td>
<td>366 (40)</td>
</tr>
<tr>
<td>Age (years), mean (SD) [range]</td>
<td>19.94 (2.47) [18-36]</td>
</tr>
<tr>
<td>Family Income, mean (SD)</td>
<td>14.58 (3.97)</td>
</tr>
<tr>
<td>Paternal Educational Achievement, mean (SD)</td>
<td>2.92 (1.81)</td>
</tr>
<tr>
<td>Race, n (%)</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>190 (20.8)</td>
</tr>
<tr>
<td>Asian</td>
<td>289 (31.6)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>282 (30.8)</td>
</tr>
<tr>
<td>White</td>
<td>75 (8.2)</td>
</tr>
<tr>
<td>Other</td>
<td>79 (8.6)</td>
</tr>
<tr>
<td>Immigrant Status, n (%)</td>
<td></td>
</tr>
<tr>
<td>First Generation</td>
<td>340 (37.2)</td>
</tr>
<tr>
<td>Second Generation</td>
<td>479 (52.3)</td>
</tr>
<tr>
<td>Non-Immigrant</td>
<td>96 (10.5)</td>
</tr>
<tr>
<td>EOD Domains, mean (SD) [range]</td>
<td>1.83 (1.73) [0-9]</td>
</tr>
<tr>
<td>EOD Frequency, mean (SD) [range]</td>
<td>3.67 (3.91) [0-24]</td>
</tr>
<tr>
<td>REMS Count, mean (SD) [range]</td>
<td>14.82 (7.42) [1-41]</td>
</tr>
<tr>
<td>Spectrum discrimination by Group, n (%)</td>
<td></td>
</tr>
<tr>
<td>Low/No Racism</td>
<td>650 (71)</td>
</tr>
<tr>
<td>Racism</td>
<td>265 (29)</td>
</tr>
<tr>
<td>PSS mean (SD) [range]</td>
<td>32.58 (6.69) [0-60]</td>
</tr>
<tr>
<td>STAI mean (SD) [range]</td>
<td>7.11 (4.30) [0-21]</td>
</tr>
<tr>
<td>CESD mean (SD) [range]</td>
<td>8.59 (5.17) [0-28]</td>
</tr>
</tbody>
</table>

Note: Family income mean of 14.58 represents $25k-$34,999. Paternal educational achievement mean of 2.92 represents associates degree or 2 years of college completed. EOD = Experiences Of Discrimination Scale. REMS = Racial/Ethnic Microaggressions Scale. PSS = Perceived Stress Scale. STAI = State-Trait Anxiety Scale. CES-D = Center for Epidemiologic Studies Depression Scale.
Racism experiences of the sample. Means for the 5 categories of Racial/Ethnic Microaggressions Scale (REMS) and 9 domains of the Experiences of Discrimination (EOD) measure comprising the observed indicators of the latent variable (i.e., perceived spectrum racial discrimination) were compared by racial/ethnic group.

Racial/Ethnic Microaggressions Scale. Levene’s test showed that the variances for REMS Inferiority \( F(4, 910) = 37.94, p<.001 \), Criminality \( F(4, 910) = 43.00, p<.001 \), Microinvalidations \( F(4, 910) = 12.99, p<.001 \), Exoticization \( F(4, 910) = 4.84, p=.001 \), and Environmental \( F(4, 910) = 38.89, p<.001 \) categories were not equal. Differences in the REMS subscales across race/ethnicity were verified using non-parametric models since the equal variance assumption was not satisfied. Specifically, a nonparametric Kruskal-Wallis H test was run to determine if there were differences in Inferiority, Criminality, Microinvalidations, Exoticization, and Environmental scores between the five racial/ethnic groups in the sample: White, Black, Hispanic, Asian, and Other.

Distributions of scores in all REMS categories were found to be different between racial/ethnic groups. REMS category means, standard deviations, and Kruskal-Wallis chi-square statistics are presented in Table 2.
### Table 2. Racial/Ethnic Microaggressions Scale (REMS) Category Means & Standard Deviations by Race.

<table>
<thead>
<tr>
<th>Category</th>
<th>Other (n = 79)</th>
<th>White (n = 75)</th>
<th>Asian (n = 289)</th>
<th>Hispanic (n = 282)</th>
<th>Black (n = 190)</th>
<th>Kruskal-Wallis H test (χ²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental</td>
<td>23.73 (5.27)</td>
<td>16.07 (9.45)</td>
<td>24.01 (3.65)</td>
<td>22.84 (4.25)</td>
<td>22.24 (4.47)</td>
<td>69.86***</td>
</tr>
<tr>
<td>Exoticization</td>
<td>9.13 (6.32)</td>
<td>5.25 (4.26)</td>
<td>9.70 (6.44)</td>
<td>9.56 (6.64)</td>
<td>7.48 (6.04)</td>
<td>46.02***</td>
</tr>
<tr>
<td>Microinvalidations</td>
<td>5.24 (6.97)</td>
<td>3.39 (3.40)</td>
<td>3.14 (3.85)</td>
<td>3.46 (4.65)</td>
<td>5.03 (6.49)</td>
<td>10.87**</td>
</tr>
<tr>
<td>Criminality</td>
<td>2.85 (4.50)</td>
<td>0.47 (1.26)</td>
<td>1.43 (2.96)</td>
<td>1.44 (2.68)</td>
<td>3.57 (4.69)</td>
<td>93.00***</td>
</tr>
<tr>
<td>Inferiority</td>
<td>3.84 (5.43)</td>
<td>1.23 (1.85)</td>
<td>2.18 (3.41)</td>
<td>4.48 (5.86)</td>
<td>4.91 (6.16)</td>
<td>58.48***</td>
</tr>
</tbody>
</table>

*p<.10, **p<.05, ***p<.001

Note: Ranges differ slightly between REMS categories due to an unequal number of items in each category. The potential range of scores in each category are: Inferiority [0-32], Criminality [0-28], Microinvalidations [0-36], Exoticization [0-36], Environmental [0-28].
REMS pairwise comparisons. Subsequently, pairwise comparisons were performed using Dunn’s (1964) procedure with a Bonferroni correction for multiple comparisons. Dunn’s test statistics and adjusted p values are summarized in this section.

This post hoc analysis revealed statistically significant differences in Inferiority scores between racial/ethnic groups. Blacks \((z=5.60, p<.001)\), Hispanics \((z=5.28, p<.001)\), and participants racially categorized as “Other” \((z=-3.36, p<.05)\) reported more Inferiority-type racial microaggressions than Whites. In addition, Blacks \((z=5.39, p<.001)\) and Hispanics \((z=5.09, p<.001)\) reported more Inferiority microaggressions than Asians.

There were also statistically significant differences in Criminality scores between racial/ethnic groups. Blacks \((z=8.15, p<.001)\), the “Other” group \((z=-5.53, p<.001)\), Hispanics \((z=3.89, p<.01)\), and Asians \((z=3.41, p<.05)\) reported more Criminality-type racial microaggressions than Whites. In addition, Blacks \((z=7.16, p<.001)\) and the “Other” group \((z=-3.54, p<.01)\) reported more Criminality microaggressions than Asians. Furthermore, Blacks \((z=6.45, p<.001)\) and the “Other” group \((z=-3.03, p<.05)\) reported more Criminality microaggressions than Hispanics.

Although distributions of REMS-Microinvalidations scores were not similar for all groups, the post hoc analysis revealed no statistically significant differences in Microinvalidations scores between any group combination.

The post hoc analysis also revealed statistically significant differences in Exoticization scores between racial/ethnic groups. Specifically, Asians \((z=5.69, p<.001)\), Hispanics \((z=5.35, p<.001)\), and the “Other” group \((z=-3.96, p<.01)\) reported more Exoticization-type racial microaggressions than Whites. In addition, Asians \((z=-4.10, p<.001)\) and Hispanics \((z=-3.62, p<.01)\) reported more Exoticization microaggressions than Blacks.
Finally, there were statistically significant differences in Environmental scores between racial/ethnic groups. Asians (z=7.45, p<.05), the “Other” group (z=-6.36, p<.001), Hispanics (z=5.14, p<.01), and Blacks (z=4.04, p<.01) reported more Environmental-type racial microaggressions than Whites. In addition, Asians (z=-4.44, p<.001) and the “Other” group (z=-3.54, p<.01) reported more Environmental microaggressions than Blacks. Furthermore, Asians reported more Environmental microaggressions than Hispanics (z=-3.56, p<.01).

**Experiences of Discrimination (EOD).** Levene’s test showed that the variances for EOD-School (F(4, 910) = 9.08, p<.001), EOD-Job (F(4, 910) = 23.90, p<.001), EOD-Work (F(4, 910) = 9.59, p<.001), EOD-Housing (F(4, 910) = 3.88, p=.004), EOD-Medical (F(4, 910) = 2.71, p=.029), EOD-Service (F(4, 910) = 55.38, p<.001), EOD-Credit (F(4, 910) = 6.07, p<.001), EOD-Public (F(4, 910) = 11.65, p<.001), and EOD-Police (F(4, 910) = 31.31, p<.001) were not equal. Given the violation of the assumption of equal variances for all 9 EOD domains, a nonparametric Kruskal-Wallis H test was run to determine if there were differences in EOD domain scores between the five racial/ethnic groups in the sample: White, Black, Hispanic, Asian, and Other.

Distributions of scores in some EOD domains were found to be different between racial/ethnic groups. EOD domain means, standard deviations, and Kruskal-Wallis chi-square statistics are presented in Table 3.
MENTAL HEALTH IMPACT OF SPECTRUM RACIAL DISCRIMINATION

Table 3. Experiences of Discrimination (EOD) Domain Means & Standard Deviations by Race.

<table>
<thead>
<tr>
<th>Experience</th>
<th>Other (n = 79)</th>
<th>White (n = 75)</th>
<th>Asian (n = 289)</th>
<th>Hispanic (n = 282)</th>
<th>Black (n = 190)</th>
<th>Kruskal-Wallis (χ2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (SD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>At school</td>
<td>0.92 (1.17)</td>
<td>0.44 (0.95)</td>
<td>1.10 (1.18)</td>
<td>0.68 (1.08)</td>
<td>0.89 (1.15)</td>
<td>34.65***</td>
</tr>
<tr>
<td>Getting hired or getting a job</td>
<td>0.37 (0.79)</td>
<td>0.04 (0.26)</td>
<td>0.27 (0.65)</td>
<td>0.18 (0.54)</td>
<td>0.38 (0.78)</td>
<td>20.25***</td>
</tr>
<tr>
<td>At work</td>
<td>0.29 (0.8)</td>
<td>0.09 (0.41)</td>
<td>0.27 (0.73)</td>
<td>0.31 (0.79)</td>
<td>0.41 (0.88)</td>
<td>10.20**</td>
</tr>
<tr>
<td>Getting housing</td>
<td>0.16 (0.61)</td>
<td>0.04 (0.35)</td>
<td>0.09 (0.42)</td>
<td>0.11 (0.44)</td>
<td>0.13 (0.50)</td>
<td>4.05</td>
</tr>
<tr>
<td>Getting medical care</td>
<td>0.16 (0.59)</td>
<td>0.08 (0.43)</td>
<td>0.11 (0.46)</td>
<td>0.07 (0.37)</td>
<td>0.10 (0.44)</td>
<td>3.01</td>
</tr>
<tr>
<td>Getting service in a store or restaurant</td>
<td>0.57 (0.98)</td>
<td>0.05 (0.36)</td>
<td>0.55 (0.93)</td>
<td>0.76 (1.07)</td>
<td>1.05 (1.14)</td>
<td>65.35***</td>
</tr>
<tr>
<td>Getting credit, bank loans, mortgage</td>
<td>0.09 (0.43)</td>
<td>0.03 (0.16)</td>
<td>0.02 (0.17)</td>
<td>0.07 (0.37)</td>
<td>0.04 (0.31)</td>
<td>4.95</td>
</tr>
<tr>
<td>On the street or in a public setting</td>
<td>1.19 (1.20)</td>
<td>0.49 (0.95)</td>
<td>0.49 (1.19)</td>
<td>0.96 (1.15)</td>
<td>1.21 (1.24)</td>
<td>23.48***</td>
</tr>
<tr>
<td>From the police or in the courts</td>
<td>0.41 (0.87)</td>
<td>0.08 (0.43)</td>
<td>0.08 (0.54)</td>
<td>0.33 (0.75)</td>
<td>0.47 (0.86)</td>
<td>40.14***</td>
</tr>
</tbody>
</table>

*p<.10, **p<.05, ***p<.001

Note: EOD domain scores are on an ordinal scale: no=0, once=1, two-three times=2, and four or more times=3
**EOD pairwise comparisons.** Subsequently, pairwise comparisons were performed using Dunn's (1964) procedure with a Bonferroni correction for multiple comparisons for the EOD domains for which the Kruskal-Wallis H test revealed statistically significant differences between racial/ethnic groups (i.e., at school, getting hired or getting a job, at work, getting service in a store or a restaurant, on the street or in a public setting, and from the police or in the courts). Dunn’s test statistics and adjusted p-values are presented.

This post hoc analysis revealed statistically significant differences in EOD-School scores between racial/ethnic groups. Specifically, Asians (z=4.76, p<.001) and Blacks (z=3.05, p<.05) reported more experiences of racial discrimination at school than Whites. In addition, Asians reported more experiences of discrimination at school than Hispanics (z=-4.72, p<.001).

There were also statistically significant differences in EOD-Job scores between racial/ethnic groups. Blacks (z=3.82, p<.01), the “Other” group (z=-3.25, p<.05), and Asians (z=2.97, p<.05) reported more experiences of racial discrimination getting hired or getting a job than Whites. In addition, Blacks reported more experiences of racial discrimination getting hired or getting a job than Hispanics (z=2.88, p<.05).

Statistically significant differences were found in EOD-Work scores between racial/ethnic groups. Specifically, Blacks reported more experiences of racial discrimination at work than Whites (z=3.06, p<.05).

In addition, EOD-Service scores differed between racial/ethnic groups. Blacks (z=7.47, p<.001), Hispanics (z=5.58, p<.001), Asians (z=4.00, p<.01), and the “Other” group (z=-3.26, p<.05) reported more experiences of racial discrimination getting service in a store or a restaurant than Whites. In addition, Blacks reported more experiences of racial discrimination
getting service than Asians \((z=5.36, p<.001)\), the “Other” group \((z=3.69, p<.01)\), and Hispanics \((z=3.13, p<.05)\).

EOD-Public scores also differed between racial/ethnic groups. Specifically, Blacks \((z=4.46, p<.001)\), Asians \((z=4.08, p<.001)\), the “Other” group \((z=-3.70, p<.01)\), and Hispanics \((z=3.16, p<.05)\) reported more experiences of racial discrimination on the street or in a public setting than Whites.

Finally, there were statistically significant differences in EOD-Police scores between racial/ethnic groups. Blacks \((z=4.59, p<.001)\) and Hispanics \((z=2.93, p<.05)\) reported more experiences of racial discrimination from police or in the courts than Whites. In addition, Blacks \((z=5.48, p<.001)\) and Hispanics \((z=3.18, p<.05)\) reported more police/court discrimination than Asians.

**Main Results**

**Hypothesis 1a.**

A 2-group model was the model of best fit with lowest information criteria and high entropy (.81) suggestive of strong group delineation (Table 4).

<table>
<thead>
<tr>
<th>Number of Latent Classes</th>
<th>BIC</th>
<th>ΔBIC</th>
<th>cAIC</th>
<th>ΔcAIC</th>
<th>LR</th>
<th>ΔLR</th>
<th>Entropy Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18988</td>
<td>----</td>
<td>19035</td>
<td>----</td>
<td>7944</td>
<td>----</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>17911</td>
<td>1077</td>
<td>18006</td>
<td>1029</td>
<td>6540</td>
<td>1404</td>
<td>0.81</td>
</tr>
<tr>
<td>3</td>
<td>17980</td>
<td>-69</td>
<td>18123</td>
<td>-117</td>
<td>6282</td>
<td>258</td>
<td>0.75</td>
</tr>
<tr>
<td>4</td>
<td>18105</td>
<td>-125</td>
<td>18310</td>
<td>-187</td>
<td>6094</td>
<td>188</td>
<td>0.74</td>
</tr>
<tr>
<td>5</td>
<td>18301</td>
<td>-196</td>
<td>18827</td>
<td>-517</td>
<td>5977</td>
<td>117</td>
<td>0.63</td>
</tr>
</tbody>
</table>

Note: BIC = Bayesian Information Criterion, cAIC = consistent Akaike Information Criterion, LR = Likelihood Ratio, Δ = Difference.
Posterior probabilities of the best fitting-model were utilized to classify participants’ spectrum racial discrimination experiences, which tended to fall in a binary pattern (i.e., none or more than once) (Table 5).

Table 5. Conditional Probabilities of the 2-Latent-Class-Analytic Model of Experiencing Racial Discrimination (N = 915).

<table>
<thead>
<tr>
<th>Conditional Probabilities</th>
<th>None</th>
<th>More than once</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n = 650)</td>
<td>(n = 265)</td>
</tr>
</tbody>
</table>

**Lifetime experiences of racial discrimination**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>At school</td>
<td>0.72</td>
<td>0.69</td>
</tr>
<tr>
<td>Getting hired or getting a job</td>
<td>0.93</td>
<td>0.36</td>
</tr>
<tr>
<td>At work</td>
<td>0.94</td>
<td>0.35</td>
</tr>
<tr>
<td>Getting housing</td>
<td>0.98</td>
<td>0.14</td>
</tr>
<tr>
<td>Getting medical care</td>
<td>0.98</td>
<td>0.14</td>
</tr>
<tr>
<td>Getting service in a store or restaurant</td>
<td>0.81</td>
<td>0.69</td>
</tr>
<tr>
<td>Getting credit, bank loans, or a mortgage</td>
<td>0.99</td>
<td>0.1</td>
</tr>
<tr>
<td>On the street or in a public setting</td>
<td>0.69</td>
<td>0.89</td>
</tr>
<tr>
<td>From the police or in the courts</td>
<td>0.93</td>
<td>0.36</td>
</tr>
</tbody>
</table>

**Racial microaggressions in the past 6 months**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Assumptions of inferiority (e.g., “Someone assumed that I would not be educated because of my race”)</td>
<td>0.86</td>
<td>0.69</td>
</tr>
<tr>
<td>Second-Class citizen and assumptions of criminality (e.g., “Someone avoided walking near me on the street because of my race”)</td>
<td>0.95</td>
<td>0.54</td>
</tr>
<tr>
<td>Microinvalidations (e.g., “Someone told me that they ‘don’t see color’”)</td>
<td>0.83</td>
<td>0.56</td>
</tr>
<tr>
<td>Exoticization/assumptions of similarity (e.g., “Someone told me that all people in my racial group look alike”)</td>
<td>0.49</td>
<td>0.90</td>
</tr>
<tr>
<td>Environmental microaggressions (e.g., “I observed people of my race portrayed positively in movies”)</td>
<td>0.02</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*Note.* Conditional probabilities greater than .50 are highlighted in bold to ease interpretation.
Given that the study sample is comprised of university undergraduate students, it seemed likely that participants may not have been exposed to specific EOD domains that older adults were more likely to have experienced due to their developmental stage (e.g., getting housing, credit, etc.). Therefore, analyses were conducted which showed there were outliers in age, as visually assessed by boxplot. Age was centered at the median as a measure of central tendency that is robust to outliers. A point-biserial correlation was run between median-centered age and LCA group. Data are mean +/- standard deviation, unless otherwise stated. There was a statistically significant, though small, correlation between age and LCA group, \( r_{pb}(915) = 0.10, p = 0.002 \), with those experiencing discrimination an average of 20.33 years old (+/- 2.62) and those not experiencing discrimination an average of 19.77 years old (+/- 2.38). Age accounted for 1% of the variability in LCA group membership.

In three of the nine EOD domains, a majority of participants in the Racism LCA group endorsed more than one experience of major discrimination (at school, getting service, and on the street).

**Hypothesis 1b.**

To determine whether Black participants were more likely to belong to the Racism Group than the White participants, the new LCA group membership variable (i.e., Group 1 or Group 2) was appended to the SPSS file. A chi-square test of independence was conducted between racial/ethnic group and LCA group.

All expected cell frequencies were greater than five. There was a statistically significant association between racial/ethnic group and LCA group membership, \( \chi^2(9) = 37.44, p<.001 \). The association was small to moderate (Cohen, 1988), Cramer’s V = .20. Cells with a large absolute adjusted standardized residual indicate where the lack of independence is occurring within the
crosstabulation (Kateri, 2014). A common guideline to determine when a cell deviates significantly from independence is when the absolute adjusted standardized residuals are greater than 3 (standard errors) in a large table (Agresti, 2007; Agresti, 2013). Black participants were more likely to belong to the Racism than Low/No Racism LCA group and White participants were more likely to belong to the Low/No Racism than the Racism LCA group (Table 6).

Table 6. Crosstabulation of Racial/Ethnic Group and Latent Class Analysis Group

<table>
<thead>
<tr>
<th>LCA Group</th>
<th>Racial/Ethnic Group, n (%)</th>
<th>Racial/Ethnic Group, n (%)</th>
<th>Racial/Ethnic Group, n (%)</th>
<th>Racial/Ethnic Group, n (%)</th>
<th>Racial/Ethnic Group, n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Black (58%)</td>
<td>Hispanic (73%)</td>
<td>Asian (74%)</td>
<td>White (92%)</td>
<td>Other (62%)</td>
</tr>
<tr>
<td>Low/No Racism</td>
<td>110 (58%)</td>
<td>207 (73%)</td>
<td>215 (74%)</td>
<td>69 (92%)</td>
<td>49 (62%)</td>
</tr>
<tr>
<td></td>
<td>(4.5)</td>
<td>(-1.1)</td>
<td>(-1.5)</td>
<td>(-4.2)</td>
<td>(1.8)</td>
</tr>
<tr>
<td>Racism</td>
<td>80 (42%)</td>
<td>75 (27%)</td>
<td>74 (26%)</td>
<td>6 (8%)</td>
<td>30 (38%)</td>
</tr>
<tr>
<td></td>
<td>(-4.5)</td>
<td>(1.1)</td>
<td>(1.5)</td>
<td>(4.2)</td>
<td>(-1.8)</td>
</tr>
</tbody>
</table>

Note. Adjusted residuals appear in parentheses below observed frequencies.

**Hypothesis 1c.**

As depicted in Table 6, Asian and Hispanic cells in the crosstabulation did not evidence absolute adjusted standardized residuals greater than 3. In the 2-class LCA solution, Asian and Hispanic participants were not statistically more or less likely to belong to the Racism group as compared to other racial/ethnic groups.

**Hypothesis 1d.**

To determine whether first-generation immigrants were more likely to belong to the Low/No Racism group than second-generation immigrants and non-immigrants, a chi-square test of independence was conducted between immigrant status (non-immigrant, first-generation immigrant, and second-generation immigrant) and LCA group membership. All expected cell frequencies were greater than five. There was not a statistically significant association between
the two variables. First-generation immigrants were not statistically significantly more or less likely to belong to the Low/No Racism group.

**Hypothesis 1e.**

Preliminary analyses showed there were outliers in family income after taxes, as visually assessed by boxplot. Family income was centered at the median as a measure of central tendency that is robust to outliers. There was a homogeneity of variances, as assessed by Levene’s test for equality of variances. To test whether high SES individuals were more likely to belong to the Racism Group than lower SES individuals, a point-biserial correlation was run between median-centered family income and LCA Group. There was a statistically significant, though small, correlation between family income and LCA Group, \( r_{pb}(915) = .08, p = .014 \). Those experiencing discrimination reported an average family income of $20k-24,999 while those not experiencing discrimination reported an average family income of $25k-35,000. Family income accounted for .64% of the variability in LCA group membership.

A point-biserial correlation was also run between paternal educational achievement and LCA group. Preliminary analyses showed there were (a) no outliers, as assessed by boxplot; (b) paternal educational level was normally distributed, as assessed by Shapiro-Wilk’s test \( p > .05 \); and (c) there was homogeneity of variances, as assessed by Levene’s test for equality of variances. There was a statistically significant correlation between paternal educational achievement and LCA group membership at the .1 level of significance, \( r_{pb}(915) = .06, p = .06 \). Higher paternal educational achievement was associated with a greater likelihood of belonging to the low/no racism LCA group. Sample characteristics of the low/no racism group vs. the racism group are displayed in Table 7.
Table 7. Sample Characteristics of the Low/No Racism and Racism Groups.

<table>
<thead>
<tr>
<th></th>
<th>Total Sample (N = 915)</th>
<th>Low/No Racism (n = 650)</th>
<th>Racism (n = 265)</th>
<th>d / φ or CC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anxiety</strong></td>
<td>7.12 (4.3)</td>
<td>6.68 (4.88)</td>
<td>8.24 (4.34)</td>
<td>0.37****</td>
</tr>
<tr>
<td><strong>Depression</strong></td>
<td>8.6 (5.17)</td>
<td>7.78 (4.88)</td>
<td>10.6 (5.31)</td>
<td>0.55****</td>
</tr>
<tr>
<td><strong>Covariates</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>19.93 (2.46)</td>
<td>19.77 (2.62)</td>
<td>20.33 (2.38)</td>
<td>0.22***</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td>0.03</td>
</tr>
<tr>
<td>Male</td>
<td>366 (40%)</td>
<td>265 (40.8%)</td>
<td>101 (38.1%)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>549 (60%)</td>
<td>385 (59.2%)</td>
<td>164 (61.9%)</td>
<td></td>
</tr>
<tr>
<td>Family Income</td>
<td>14.58 (3.97)</td>
<td>14.78 (3.82)</td>
<td>14.08 (4.28)</td>
<td>0.17**</td>
</tr>
<tr>
<td>Maternal Education</td>
<td>2.88 (1.72)</td>
<td>2.92 (1.75)</td>
<td>2.79 (1.66)</td>
<td>0.08</td>
</tr>
<tr>
<td>Paternal Education</td>
<td>2.92 (1.81)</td>
<td>3.00 (1.83)</td>
<td>2.75 (1.75)</td>
<td>0.14*</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td>0.20****</td>
</tr>
<tr>
<td>Black</td>
<td>190 (20.8%)</td>
<td>110 (16.9%)</td>
<td>80 (30.2%)</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>282 (30.8%)</td>
<td>207 (31.8%)</td>
<td>75 (28.3%)</td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>289 (31.6%)</td>
<td>215 (33.1%)</td>
<td>74 (27.9%)</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>75 (8.2%)</td>
<td>69 (10.6%)</td>
<td>6 (2.3%)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>79 (8.6%)</td>
<td>49 (7.5%)</td>
<td>30 (11.3%)</td>
<td></td>
</tr>
<tr>
<td>Immigrant Status</td>
<td></td>
<td></td>
<td></td>
<td>0.01</td>
</tr>
<tr>
<td>Non-immigrant</td>
<td>96 (10.5%)</td>
<td>67 (10.3%)</td>
<td>29 (10.9%)</td>
<td></td>
</tr>
<tr>
<td>First-generation</td>
<td>340 (37.2%)</td>
<td>243 (37.4%)</td>
<td>97 (36.6%)</td>
<td></td>
</tr>
<tr>
<td>Second-generation</td>
<td>479 (52.3%)</td>
<td>340 (52.3%)</td>
<td>139 (52.5%)</td>
<td></td>
</tr>
</tbody>
</table>

*p<0.1, **p < .05, ***p<.01, ****p<.001

Note. d = Cohen’s measure of effect size for mean differences; φ = phi coefficient for a 2x2 table, equivalent to Pearson r; CC = Contingency Coefficient, a measure of effect size for contingency tables greater than 2x2. Family income was assessed continuously in proportionally increasing increments (i.e., 1=<$2k, 2=$2k-$2999 ... 10=$10k-$12499 ... 14=20k-$24,999, 15=$25k-$34999 and so on). Maternal and paternal education were assessed ordinally (1=less than a HS degree, 2=HS degree or equivalent, 3=associate’s/2 year degree completed, 4=4 years of college but not completed, 5=bachelor’s degree, 6=graduate degree).
Hypothesis 1f.

To test whether there was a moderating effect of gender on the association between Black race/ethnicity and LCA group membership, a hierarchical regression equation was conducted that included race/ethnicity (using a dummy-coded variable representing Black race/ethnicity), gender (using a dummy-coded variable representing female gender), and a multiplicative term representing the interaction between race and gender (using a dummy-coded variable representing female gender and Black race/ethnicity). In this model, a significant interaction term with a negative beta would suggest that identifying as female buffers the relation between identifying as Black and endorsing spectrum racial discrimination experiences. A significant interaction term with a positive beta would indicate that identifying as female amplifies the relation (Aiken & West, 1991; Baron & Kenny, 1986).

While the Black dummy variable contributed significantly to LCA group membership ($\beta=-.16, t=-2.96, p<.01$), the female dummy variable did not ($\beta=-.02, t=-0.64, p>0.1$) and nor did the interaction term. There was no main effect of gender and no interaction effect between race and gender among Black participants (Figure 5).
Figure 5. LCA Group Means (1=experiences racism, 2=low/no racism experiences) by race and gender.
Hypothesis 2a.

**Anxiety.** Bivariate analyses were run between sociodemographic variables (age, gender, race, family income, and immigrant status) and the outcome variable of anxiety to determine whether to include them as predictors in a multiple regression model.

**Age.** A Pearson’s product-moment correlation was run to assess the relation between age (centered at the median of 19) and anxiety scores. There was a small negative correlation between age and anxiety, \( r(915) = -.10, p<.01 \), meaning younger respondents were more likely to report higher levels of anxiety. Age explained 1% of the variation in anxiety scores.

**Gender.** An independent-samples t-test was run to determine if there were differences in anxiety scores (STAI total) between males and females. Females reported higher levels of anxiety (7.36 +/- 4.30) than males (6.76 +/- 4.27), a statistically significant difference of 0.6 points (95% CI, 0.31 to 0.89) \( t(913) = 2.08, p<.05 \).

**Race.** A one-way ANOVA was conducted to determine if anxiety scores differed by racial/ethnic group. Data is presented as mean +/- standard deviation. Anxiety scores were significantly different between racial/ethnic groups, \( F(4, 910) = 7.44, p<.001, \eta^2 = .03 \). Anxiety scores were lowest among Hispanics (6.25 +/- 3.93), followed by Whites (6.63 +/- 4.28), Blacks (6.91 +/- 4.19), Others (7.57 +/- 4.32), with the highest scores among Asians (8.10 +/- 4.52). Tukey post hoc analysis revealed that the difference between anxiety scores of Asians and Blacks (1.19, 95% CI [0.80 to 1.59]) was statistically significant (\( p<.05 \)), as was the difference in anxiety scores between Asians and Hispanics (1.85, 95% CI [1.50 to 2.21], \( p<.001 \)). No other group differences were statistically significant.
Family income. A Pearson’s product-moment correlation was run to assess the relation between family income (centered at the median) and anxiety scores. There was no statistically significant correlation found between the two variables.

Immigrant status. A one-way ANOVA was conducted to determine if anxiety scores differed by immigrant status (non-immigrant, first-generation immigrants, and second-generation immigrants). No statistically significant differences were found between groups.

To determine whether endorsing racism experiences contributed to anxiety over and above the effects of non-race specific stress, a hierarchical multiple regression was employed to predict anxiety across the two spectrum discrimination LCA groups. Model 1 included age, gender, and race (potential sociodemographic covariates) as predictors. In the second step (Model 2), perceived stress was entered into the model. In the third step, the 2 LCA groups were entered into the model.

The full model of age, gender, race, perceived stress, and spectrum discrimination group to predict anxiety (Model 3) was statistically significant, \( R^2 = .25, F(8, 905) = 37.08, p<.001; \) adjusted \( R^2 = .24. \) The addition of perceived stress led to a statistically significant increase in \( R^2 \) of .20, \( F(1, 906) = 238.55, p<.001. \) Furthermore, the addition of spectrum discrimination LCA group membership led to a statistically significant increase in \( R^2 \) of .007, \( F(1, 905) = 7.86, p<.01 \) (Table 8).
Table 8. Summary of Hierarchical Regression Analysis for Variables Predicting Anxiety.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
<th>Model 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>ß</td>
<td>B</td>
<td>SE B</td>
<td>ß</td>
<td>B</td>
<td>SE B</td>
</tr>
<tr>
<td>Age</td>
<td>-0.10</td>
<td>0.06</td>
<td>-0.06*</td>
<td>-0.04</td>
<td>0.05</td>
<td>-0.03</td>
<td>-0.06</td>
<td>0.05</td>
</tr>
<tr>
<td>Female</td>
<td>0.67</td>
<td>0.29</td>
<td>0.08**</td>
<td>0.28</td>
<td>0.26</td>
<td>0.03</td>
<td>0.28</td>
<td>0.26</td>
</tr>
<tr>
<td>Asian</td>
<td>1.31</td>
<td>0.55</td>
<td>0.14**</td>
<td>1.81</td>
<td>0.49</td>
<td>0.20****</td>
<td>1.64</td>
<td>0.49</td>
</tr>
<tr>
<td>Hispanic</td>
<td>-0.51</td>
<td>0.55</td>
<td>-0.05</td>
<td>-0.35</td>
<td>0.49</td>
<td>-0.04</td>
<td>-0.50</td>
<td>0.49</td>
</tr>
<tr>
<td>Black</td>
<td>0.17</td>
<td>0.58</td>
<td>0.02</td>
<td>0.11</td>
<td>0.52</td>
<td>0.01</td>
<td>-0.16</td>
<td>0.52</td>
</tr>
<tr>
<td>Other</td>
<td>0.85</td>
<td>0.68</td>
<td>0.06</td>
<td>1.09</td>
<td>0.61</td>
<td>0.07*</td>
<td>0.83</td>
<td>0.61</td>
</tr>
<tr>
<td>Perceived Stress</td>
<td></td>
<td></td>
<td></td>
<td>0.29</td>
<td>0.02</td>
<td>0.45****</td>
<td>0.28</td>
<td>0.02</td>
</tr>
<tr>
<td>Spectrum racial discrimination</td>
<td></td>
<td></td>
<td></td>
<td>0.81</td>
<td>0.29</td>
<td>0.09**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCA group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.04</td>
<td></td>
<td></td>
<td>0.24</td>
<td></td>
<td></td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>$F$ for change in $R^2$</td>
<td>6.35****</td>
<td></td>
<td></td>
<td>238.55****</td>
<td></td>
<td></td>
<td>7.86**</td>
<td></td>
</tr>
</tbody>
</table>

*p<0.1, **p < .05, ***p<.01, ****p<.001

Note. Age was centered at its median of 19. For gender, male was the reference group. For race, White was the reference group. For spectrum racial discrimination LCA group, Group 2 (no/low racism) was the reference group.
**Depression.** Bivariate analyses were run between the same sociodemographic variables (age, gender, race, family income, and immigrant status) and the outcome variable of depression to determine whether to include them as predictors in a multiple regression model.

**Age.** A Pearson’s product-moment correlation was run to assess the relation between age (centered at the median of 19) and depression scores. There was no statistically significant correlation found between the two variables.

**Gender.** An independent-samples t-test was run to determine if there were differences in depression scores between males and females. There was no statistically significant correlation found between the two variables.

**Race.** A one-way ANOVA was conducted to determine if depression scores differed by racial/ethnic group. Data is presented as mean +/- standard deviation. Depression scores significantly differed between racial/ethnic groups, $F(4, 909) = 4.76$, $p<.01$, $\eta^2 = .02$. Depression scores were lowest among Hispanics (7.65 +/- 4.83), followed by Whites (8.05 +/- 4.67), Blacks (8.72 +/- 5.53), and Asians (9.32 +/- 5.14), with the highest scores among individuals racially categorized as “Other” (9.54 +/- 5.48). Tukey post hoc analysis revealed that the difference between depression scores of Asians and Hispanics (1.67, 95% CI [1.24 to 2.10]) were statistically significant ($p<.01$), as was the difference in scores between Others and Hispanics (1.90, 95% CI [1.24 to 2.55], $p<.05$), but no other group differences were statistically significant.

**Family income.** A Pearson’s product-moment correlation was run to assess the relation between family income (centered at the median) and depression scores. There was no correlation found between the two variables.
Immigrant status. A one-way ANOVA was conducted to determine if depression scores differed by immigrant status (non-immigrant, first-generation immigrants, and second-generation immigrants). No statistically significant differences were found between groups.

To determine whether endorsing racism experiences contributed to depression over and above the effects of non-race specific stress, a hierarchical multiple regression was employed to predict depression across the two spectrum discrimination LCA groups. Model 1 included race (a potential sociodemographic predictor of depression) as predictors. In the second step (Model 2), perceived stress was entered into the model. In the third step, the spectrum racial discrimination groups were entered into the model.

The full model of race, perceived stress, and spectrum discrimination to predict depression (Model 3) was statistically significant, $R^2 = .20, F(6, 907) = 38.36, p<.001$; adjusted $R^2 = .20$. The addition of perceived stress led to a statistically significant increase in $R^2$ of 0.15, $F(1, 908) = 169.47, p<.001$. Furthermore, the addition of spectrum discrimination LCA group membership led to a statistically significant increase in $R^2$ of .028, $F(1, 907) = 31.68, p<.001$ (Table 9).
Table 9. Summary of Hierarchical Regression Analysis for Variables Predicting Depression.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>ß</td>
</tr>
<tr>
<td>Asian</td>
<td>1.27</td>
<td>.66</td>
<td>.11*</td>
</tr>
<tr>
<td>Hispanic</td>
<td>-.40</td>
<td>.67</td>
<td>-.036</td>
</tr>
<tr>
<td>Black</td>
<td>.67</td>
<td>.70</td>
<td>.05</td>
</tr>
<tr>
<td>Other</td>
<td>1.49</td>
<td>.83</td>
<td>.08*</td>
</tr>
<tr>
<td>Perceived Stress</td>
<td>.31</td>
<td>.02</td>
<td>.40****</td>
</tr>
<tr>
<td>Spectrum racial discrimination</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCA group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$F$ for change in $R^2$</td>
<td>4.76***</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.1, **p < .05, ***p<.01, ****p<.001

Gender and age were not entered into the model for CESD outcomes because they were not found to correlate with CESD scores. For race, White was the reference group. For spectrum racial discrimination LCA group, Group 2 (no/low racism) was the reference group.
Hypotheses 2b & 2c.

Because hypotheses 2b and 2c were predicated upon a hypothesized 4-group LCA solution, they were not pursued.

Hypothesis 2d.

The signs of the beta coefficients in Tables 8 and 9 demonstrate a positive relation, i.e. that belonging to the Racism group predicts increases in anxiety and depression, while belonging to the Low/no racism group does not predict such outcomes.

Hypothesis 3a.

Anxiety. Coping was examined as a mediator of the relation between spectrum racial discrimination and anxiety using Model 4 in PROCESS (Hayes, 2013). Age, gender, race, and perceived stress were entered into the PROCESS macro as covariates. Anxiety (STAI Total) was entered as the outcome variable (Y), coping was entered as the mediator (M) variable, and LCA group was entered as the independent variable (X). The total effect model (i.e., the model of Y without M in the model) was significant ($\text{adj}R^2=.21, F(5, 908)=49.69, p\.001$), but the indirect effect did not reach the level of statistical significance. A bootstrap 95% CI for the indirect effect ($ab = -0.06$) based on 10,000 bootstrap samples included zero (-.18 to .05), meaning there was no evidence coping style influenced anxiety scores through LCA group.

Depression. Coping was examined as a mediator of the relation between spectrum racial discrimination and depression using Model 4 in PROCESS (Hayes, 2013). Race and perceived stress were entered into the PROCESS macro as covariates. Depression (CESD Total) was entered as the outcome variable (Y), coping was entered as the mediator (M) variable, and LCA group was entered as the independent variable (X). The total effect model (i.e., the model of Y without M in the model) was significant ($\text{adj}R^2=.22, F(4, 909)=65.20, p\.001$), but the indirect
effect did not reach the level of statistical significance. A bootstrap 95% CI for the indirect effect \((ab = -.06)\) based on 10,000 bootstrap samples similarly included zero (-.23 to .08), meaning there was no evidence coping style influenced depression through LCA group.

**Hypotheses 3b & 3c.**

Indirect effects were examined using Model 8 in PROCESS to determine whether sociodemographic variables moderated the mediating relation of coping on the association between spectrum racial discrimination and anxiety and/or depression when separated by levels of the moderator (i.e., whether moderated mediation existed for females or males only, and/or for some racial/ethnic groups but not others) using Model 8 in PROCESS (Hayes, 2013).

**Gender & anxiety.** Age, race, and perceived stress were entered into the PROCESS macro as covariates. Anxiety (STAI Total) was entered as the outcome variable \((Y)\), coping was entered as the mediator \((M)\) variable, LCA group was entered as the independent variable \((X)\), and gender was entered as the moderator variable \((W)\). A bootstrap 95% CI for index of moderated mediation based on 10,000 bootstrap samples included zero (-.33 to .15), meaning there was no evidence of coping mediating the relation between spectrum racial discrimination and anxiety for males or females.

**Gender & depression.** Race and perceived stress were entered into the PROCESS macro as covariates. Depression (CESD Total) was entered as the outcome variable \((Y)\), coping was entered as the mediator \((M)\) variable, LCA group was entered as the independent variable \((X)\), and gender was entered as the moderator variable \((W)\). A bootstrap 95% CI for index of moderated mediation based on 10,000 bootstrap samples included zero (-.41 to .20), meaning there was no evidence of coping mediating the relation between spectrum racial discrimination and depression for males or females.
Race & anxiety. Age and perceived stress were entered into the PROCESS macro as covariates. Anxiety (STAI Total) was entered as the outcome variable \( (Y) \), coping was entered as the mediator \( (M) \) variable, LCA group was entered as the independent variable \( (X) \), and race (with White as the reference group) was entered as the moderator variable \( (W) \). Bootstrap 95% CIs for the index of moderated mediation based on 10,000 bootstrap samples included zero for Blacks (-.67 to .90), Hispanics (-.90 to .67), Asians (-.83 to .73), and “Other” (-.69 to .93), meaning there was no evidence of coping mediating the relation between spectrum racial discrimination and anxiety across these racial/ethnic groups.

Race & depression. Perceived stress was entered into the PROCESS macro as a covariate. Depression (CESD Total) was entered as the outcome variable \( (Y) \), coping was entered as the mediator \( (M) \) variable, LCA group was entered as the independent variable \( (X) \), and race (with White as the reference group) was entered as the moderator variable \( (W) \). Bootstrap 95% CIs for the index of moderated mediation based on 10,000 bootstrap samples included zero for Blacks (-.84 to 1.23), Hispanics (-1.14 to .95), Asians (-1.04 to 1.04), and “Other” (-.91 to 1.29), meaning there was no evidence of coping mediating the relation between spectrum racial discrimination and depression across these racial/ethnic groups.

Exploratory Analyses

Moderation analysis.

Given that no mediation effect was found between coping style, LCA group membership, and anxiety and/or depression in Hypothesis 3a, the study’s author conjectured that testing a moderation effect might be more appropriate (i.e., coping style moderates instead of mediates the relation between spectrum racial discrimination and anxiety and/or depression).
Anxiety. Coping was first examined as a moderator of the relation between spectrum racial discrimination and anxiety using Model 1 in PROCESS (Hayes, 2013). Age, gender, race, and perceived stress were entered into the PROCESS macro as covariates. Anxiety (STAI Total) was entered as the outcome variable (Y), LCA group was entered as the independent variable (X), and coping was entered as the moderator variable (W), with passive coping as the referent. The overall model was significant ($F(9, 904)=34.27, p<.0001$), accounting for 25% of the overall variance in anxiety scores ($R^2=.25$). Coping did not contribute significantly to the model, nor did the interaction between coping and spectrum racial discrimination. Therefore, coping was not a significant moderator of the link between spectrum racial discrimination and anxiety.

Depression. Coping was similarly examined as a moderator of the relation between spectrum racial discrimination and depression using Model 1 in PROCESS (Hayes, 2013). Race and perceived stress were entered into the PROCESS macro as covariates. Depression (CESD Total) was entered as the outcome variable (Y), LCA group was entered as the independent variable (X), and coping was entered as the moderator variable (W), with passive coping as the referent, and. The overall model was significant ($F(7, 906)=38.13, p<.0001$), accounting for 23% of the overall variance in anxiety scores ($R^2=.23$). Active coping contributed significantly to the model: a bootstrap 95% CI for the direct effect of active coping based on 10,000 bootstrap samples did not include zero (-.10.06 to -2.31). There was a significant main effect of coping such that individuals who engaged in active coping evidenced lower depression scores on average than those who engaged in passive coping (see Figure 6). However, the interaction between coping and spectrum racial discrimination was not significant. Therefore, coping was not a significant moderator of the link between spectrum racial discrimination and depression.
Sociodemographic differences in coping.

Given the finding that active coping was associated with lower depression scores, further exploratory analyses were conducted to determine whether certain groups were more or less likely to employ active vs. passive coping strategies in response to discrimination.

Race/Ethnicity. A chi-square test of independence was conducted between race/ethnicity and coping style to determine whether there was a difference in coping style between groups. All expected cell frequencies were greater than five. There was not a statistically significant association between race/ethnicity and coping style, $\chi^2 (8) = 9.974$, $p=0.267$.

Cells with a large absolute adjusted standardized residual indicate where the lack of independence is occurring within the crosstabulation (Kateri, 2014). A common guideline to determine when a cell deviates significantly from independence is when the absolute adjusted standardized residuals are greater than 3 (standard errors) in a large table (Agresti, 2007; Agresti, 2013). While no cells evidenced adjusted standardized residuals greater than 3, Asian participants were less likely to use active coping strategies (adjusted standardized residual = -2.8).
and more likely to use a combination of active and passive strategies (adjusted standardized residual = 2.7) (Table 10).

Table 10. Crosstabulation of Racial/Ethnic Group and Coping Style

<table>
<thead>
<tr>
<th>Racial/Ethnic Group</th>
<th>Coping</th>
<th>Black</th>
<th>Hispanic</th>
<th>Asian</th>
<th>White</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passive</td>
<td>20</td>
<td>30</td>
<td>32</td>
<td>7</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.1)</td>
<td>(0.2)</td>
<td>(0.5)</td>
<td>(-0.3)</td>
<td>(-0.8)</td>
<td></td>
</tr>
<tr>
<td>Combination</td>
<td>55</td>
<td>74</td>
<td>106</td>
<td>23</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-0.6)</td>
<td>(-1.9)</td>
<td>(2.7)</td>
<td>(0)</td>
<td>(-0.6)</td>
<td></td>
</tr>
<tr>
<td>Active</td>
<td>115</td>
<td>178</td>
<td>151</td>
<td>45</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.5)</td>
<td>(1.7)</td>
<td>(-2.8)</td>
<td>(0.2)</td>
<td>(1.0)</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Adjusted residuals appear in parentheses below observed frequencies.

**Gender.** We also examined whether gender moderated the moderation effect (i.e., were females more likely than males to use active coping, and if so, did this result in different effects on depression scores between males and females). A chi-square test of independence was conducted between gender and coping style to determine whether there was a difference in coping style between men and women. All expected cell frequencies were greater than five. There was not a statistically significant association between gender and coping style, $\chi^2(2) = 2.834$, $p=0.242$. No cells evidenced adjusted standardized residuals greater than 2, suggesting gender had no effect on coping style.
Chapter 5: Discussion

Introduction

The mental health toll of both major and microaggressive racial discrimination on POC has been extensively documented in the literature (for a review, see Pascoe & Richman, 2009). In a study of 6 ethnic groups in the UK, major discriminatory events (reports of insults, unfair treatment at work, or job denial stemming from race, religion, or language) was associated with a threefold risk of anxiety and depression among ethnic minorities (Bhui et al., 2005). Cultural microaggressions against POC were found to lead to levels of psychological distress similar to those who have suffered betrayal, sexual abuse, and physical abuse (Schoulte et al., 2011). Moreover, the attributional ambiguity of such experiences may have contributed to their association with psychological stress: studies demonstrated that participants devoted a great deal of mental energy to determining whether or not an event was racially motivated (Watkins et al., 2010; Sue et al., 2009).

Few studies have examined both forms of racism experiences simultaneously to determine their joint effects on mental health outcomes. The present study clarifies the debate between the relative impact of major vs. microaggressive racial discrimination, demonstrating that POC who experience one form of racism most likely also experience the other. In the current literature on racism experiences, the two most commonly cited theoretical models of racism’s effects on mental health (Hatzenbuehler, 2009; Meyer, 2003) remain largely untested as potential explicatory frameworks. This study provides further support for the minority stress model and demonstrates that spectrum racism experiences contribute to mental health outcomes over and above the effects of non-race specific stress. It also explores the protective role of active coping against depressive symptoms. In addition, this study sought to understand the extent to which
socio-demographic variables (i.e. race, gender, SES, and immigrant and nativity status) played a role in defining each group and suggests that racism remains largely a Black/White issue in a U.S. context, with a greater proportion of Blacks belonging to the Racism group when compared to Whites. A more detailed summary of the study’s findings will be presented in the following section contextualized by a discussion of the relevant literature, the study’s limitations, and future directions for research. Finally, clinical implications will be discussed.

**Summary of Findings**

**Racism matters.**

One of the study’s most statistically robust findings was that endorsing spectrum racial discrimination experiences was positively associated with anxiety and depressive symptoms over and above the effects of non-race specific stress. This result supports the notion that racial discrimination is a unique source of stress that is different from general stress and validates the argument that both conceptually and in research practice, perceived racial discrimination should be considered separately from general stress (Harrell, 2000; Meyer, 2003).

**A binary solution for spectrum racial discrimination experiences.**

In contrast to the study’s original hypothesis, the latent class analysis ultimately showed two distinct groups of participants who 1) did not endorse lifetime major experiences of racial discrimination and endorsed none or few racial microaggressions in the past 6 months, or 2) endorsed more than one lifetime experience of major racial discrimination and endorsed more than one experience of racial microaggressions in the past 6 months.

There were several deviations from this overall binary pattern. While those in the low/no racism group tended not to endorse any experiences of major nor microaggressive racial discrimination, slightly more than half (51%) endorsed at least one exoticization microaggression
and nearly all (98%) endorsed at least one environmental microaggression in the past six months. This indicates that exoticization and environmental microaggressions are so common among POC that even those who endorse low levels of discrimination overall have some exposure to these forms of microaggressions.

In parallel, although those in the Racism group tended to endorse at least one racially discriminatory experience in each category, a minority endorsed major experiences of racial discrimination in the following domains: getting hired or getting a job (36%), at work (35%), getting housing (14%), getting medical care (14%), getting credit, bank loans, or a mortgage (10%), and from the police or in the courts (36%). Qualitatively, some of these major discriminatory experiences are more likely to occur later in development in adulthood (for instance, getting a job, at work, getting housing, and getting medical care); the present study’s sample of college-age young adults may not yet have had exposure to such events. The finding that age positively correlated with greater likelihood of belonging to the Racism group supports this theory. In addition, major discriminatory events such as police and legal discrimination may be comparatively low-incidence and correspond to what the stress literature refers to as major life events (Oh et al., 2016). In contrast, a majority of participants in the Racism group endorsed 2 or more (vs. 1) lifetime experiences of major discrimination in the following three domains: at school, getting service, and on the street.

As hypothesized, a disproportionate percentage of Black participants (42%) belonged to the Racism group when compared with White participants (8%). On the other hand, Asians and Hispanics were not statistically significantly more or less likely to belong to the Racism group as compared to other racial/ethnic groups. Contrary to our original hypotheses, no significant differences were found in the proportions of immigrants and non-immigrants in the Racism and
Low/no racism groups, nor were individuals with higher family incomes more likely to endorse racism experiences than their poorer counterparts. With regards to the latter, the reverse was true: higher family income was associated with a greater likelihood of belonging to the Low/no racism group. There was no significant difference in the proportion of Black females vs. Black males belonging to the Racism vs. Low/no racism groups, suggesting that for our sample, Black male and Black female experiences with racism may be more similar than different.

**Racism experiences qualitatively differ by race.**

Results from the study also suggest significant and qualitative differences in racism experiences between races. Specifically, findings indicated Blacks, Hispanics, and those in the “Other” category who mainly comprised individuals from the Middle East, reported more microaggressions in which they were perceived as inferior (e.g., less educated, poor, less intelligent, or inarticulate due to their race) compared to White respondents. Moreover, Blacks and Hispanics reported more such microaggressions than Asians. While all POC groups (Blacks, Hispanics, Asians, and “Other”) reported more microaggressions in which they were perceived as criminal or as a second-class citizen (e.g., observing others avoid them, clench their purse or wallet, or assumed by others to be violent) compared to Whites, Blacks and the “Other” group reported more such microaggressions than Asians and Hispanics.

In contrast, Asians, Hispanics, and individuals in the “Other” group were more likely than Whites to report experiences in which they were exoticized or homogenized for their race/ethnicity (e.g., objectified, told that all people in their racial group look alike, or assumed to be foreign-born or lack fluency in English). In addition, Asians and Hispanics reported more such microaggressions than Blacks. While all POC groups reported more Environmental-type microaggressions (e.g., not observing people of their race portrayed positively in media or
represented in business, work and school, or government) than Whites, Asians and the “Other” group reported more such microaggressions than Blacks. Asians also reported more environmental microaggressions than Hispanics.

In the realm of major racially discriminatory events, Blacks and Asians reported more racial discrimination at school than Whites and Asians reported more such discrimination than Hispanics. Blacks, Asians, and the “Other” group reported more racial discrimination getting hired or getting a job than Whites, with Blacks reporting more such experiences than Hispanics. Blacks reported more racial discrimination at work than Whites. All POC groups reported more racial discrimination getting service in a store or a restaurant than Whites, with Blacks reporting more such experiences than all other POC groups. All POC groups reported more racial discrimination on the street or in a public setting than Whites; and Blacks and Hispanics reported more racial discrimination from police or in the courts than Whites and Asians.

Sociodemographic covariates of anxiety and depression.

Those reporting high levels of anxiety were more likely to be younger and female. Anxiety scores differed between racial/ethnic groups, with the highest scores among Asians, followed by participants racially categorized as “Other”, Blacks, Whites, and Hispanics. No correlation was found between family income and anxiety nor immigrant status and anxiety.

Age and gender were not correlated with depression outcomes. However, depression scores differed significantly among racial/ethnic groups, with the highest scores among participants racially categorized as “Other,” followed by Asians, Blacks, Whites, and Hispanics. No correlation was found between family income and depression nor immigrant status and depression.
Perceived stress explained approximately 20% of the variance in the models for both outcomes of anxiety and depression. In addition, perceived stress explained some of the effect of age and gender on anxiety to the level of statistical non-significance. However, neither the addition of perceived stress nor endorsing racism experiences significantly reduced the effect of race/ethnicity in the adjusted model for the outcomes of anxiety or depression, suggesting that Asians and participants racially categorized as “Other” were more prone than other racial/ethnic groups to psychological distress even when accounting for the effects of both racial discrimination and non-race-specific stress.

**The role of coping.**

The present study did not find support for Hatzenbuehler’s psychological mediation model, which proposes that racism-related stress determines the nature of the coping responses, which in turn explain any observed correlation between racism and psychological well-being. Nor did it find support for the moderator hypothesis of coping, which assumes that coping responses moderate the relation of racism to psychological well-being, with the choice of coping style independent of exposure to racism (Liang & Fassinger, 2008). However, using active coping in response to racism experiences (i.e., “Do something about it” and “Talk to others about it”) was associated with lower depression (but not anxiety) scores.

While no statistically significant association was found between race/ethnicity and coping style, Asians were less likely to use active coping strategies and more likely to use a combination of active and passive coping strategies.
Findings in the Context of the Literature

Racism matters.

The present study adds evidence to a growing body of research demonstrating that racial discrimination is a unique source of stress apart from general stress (Harrell, 2000). The findings are in keeping with the minority stress theory that cumulative effects of minority stress enact a mental health toll on POC (Meyer, 2003) and echo previous findings that the joint effects of everyday, microaggressive racial discrimination and major racially discriminatory events additively predicted Major Depression and nonspecific psychological distress (Kessler, Mickelson, & Williams., 1999).

The finding that perceived stress accounted for much of gender’s effects on anxiety is consistent with the literature on stress sensitivity, which proposes that gender differences in affective disorders are related to differences in stress responses to adverse events, and therefore vulnerability to psychological distress, between females vs. males (Bale, 2006). Given the study’s findings that perceived stress failed to explain the effect of Asian and “Other” race/ethnicity on anxiety and depression, it is possible that these groups’ propensity to endorse anxious and depressive symptoms may be similarly related to differences in these groups’ stress responses to racism, and therefore their increased vulnerability to psychological distress. Slavin et al. (1991) has postulated that stress may be differently expressed and handled by different racial-cultural groups.

A binary solution for spectrum racial discrimination experiences.

The two-group solution taken together with the finding that Blacks were more likely to belong to the Racism group than the Low/No Racism group indicates that racism experiences in a U.S. context continue to be framed largely through a Black/White race paradigm (Perea, 1997),
with Black populations more likely to endorse racism experiences than other POC groups. This may be rooted in history—indeed, African Americans’ history of slavery has set them apart from other groups of color (Carter, 2007).

Participants in the Racism group tended to endorse 2 or more (vs. 1) lifetime experiences of major discrimination in three of nine domains, suggesting that in a parallel to the literature on trauma, major racial discrimination may operate in such a way that individuals who experience it may be vulnerable to repeated experiences. In an article on recognizing and assessing race-based traumatic stress, Carter et al. (2007) describe racism experiences as “chronic and pervasive,” “frequent and intense” (p. 86). This parallels the traumatic stress literature, which posits that events experienced as negative, out of one’s control, sudden, ambiguous, and repeated increase an individual’s stress response, leading to PTSD (Carlson, 1997, my emphasis). The frequency and severity of racism experiences in our sample may in part explain the association between endorsing racism experiences and subsequent elevated depression and anxiety scores.

The present study’s finding that higher SES is associated with fewer reports of racial discrimination contradicts previous studies in the literature, many of which found that higher SES correlated with more reports of racial discrimination (Kessler et al., 1999; Goto, Gee, & Takeuchi, 2002; Borrell et al., 2006; Hudson et al., 2012). Williams et al. (2012) have suggested that traditional measures of SES such as level of education are not equivalent across racial groups as they do not necessarily confer the same benefits to each group, with POC more likely to experience unemployment and lower income than their White counterparts at the same level of education. This notion is supported by the present study’s results, which find family income to be a more sensitive predictor of endorsement of racism experiences than paternal educational level. It is worth noting that in a participant pool oversampled for immigrant status, paternal
educational level is less likely to correlate with income, as immigrants are more likely to be face initial disadvantages in labor force assimilation and may be overqualified for jobs they accept out of necessity (De Jong & Madamba, 2001).

However, the nonequivalence of SES measures between racial groups does not explain the directionality of the present study’s findings, which remain in opposition to previous results in the literature. Some researchers have posited that increased interracial contact between POC and Whites at higher SES levels lead to increased potential for racism experiences and may even foster greater expectations of distributive justice in POC (Saguy et al., 2009). A potential explanation for the present study’s differing results is that the young adults in this sample, who attend an urban university located in New York City, have experienced interracial contact regardless of SES level such that participants at all income levels have equal potential for exposure to racism experiences. For this sample, then, higher family income may in fact protect against racism experiences, as higher status and family income and wealth may shield these young adults from being the targets of overt racial bias.

The finding that Black females and Black males were equally likely to belong to the Racism group is also in tension with previous literature; Sidanius and Pratto’s (1999) intersectional theory of racial hierarchy proposed that subordinate males as opposed to females would be the primary targets of discrimination because a racial hierarchy is imposed to reduce the competition for power. Indeed, a number of studies have found black males to perceive more racial discrimination than their female counterparts (Sellers & Shelton, 2003; Seaton et al., 2008).

However, our results may reflect that the forms of racial discrimination most frequently reported in the study are experienced equally by males and females of color. Environmental
microaggressions, experienced by 98% of our sample, are reflected in the postsecondary institutions familiar and relevant to them, where Blacks make up only 6% of full-time faculty, Asians 10%, and Hispanics 4% (U.S. Department of Education, 2017). An experimental audit study of academia found that faculty were significantly more responsive to fictitious Ph.D. applicants whose names signaled Caucasian male identity than those with names signaling minority identity status, with larger effect sizes for Black females than Black males in the fields of business, education, and engineering and computer science (Milkman, Akinola, & Chugh, 2014). On the other hand, major discriminatory events that might be more likely to differ by gender according to an intersectional theory of racial hierarchy were less commonly experienced in our young adult sample (e.g., getting medical care, getting credit or a mortgage, from the police and in the courts).

Racism experiences qualitatively differ by race.

The differences between POC groups in racial microaggression experiences are fairly consistent with previous findings in the literature: in a study by Forrest-Bank & Jensen (2015) examining differences in microaggression experiences among 409 Asian, Latino, Black, and White young adults, White participants reported significantly fewer racial microaggressions than POC groups, with Blacks reporting the most Inferiority microaggressions and Hispanics and Asians reporting the most Exoticization microaggressions. The present study’s findings echo these results and confirm that racial microaggressions are a significant issue for POC. In addition, the findings appear to mirror commonly occurring racial and ethnic stereotypes in the U.S. (Forrest-Bank & Jensen, 2015). For instance, Black and Hispanic Americans are frequently stereotyped as not intelligent and/or not hard-working (Cuddy, Fiske, & Glick, 2007; Steele & Aronson, 1995), while Asian Americans are stereotyped using the “model minority myth,” the
notion that Asian Americans achieve universal academic and occupational success (Museus & Kiang, 2009). The present study’s findings that Black, Hispanic, and “Other” participants reported more microaggressions in which they are presumed inferior while Asians did not are in keeping with such characterizations. Similarly, Asian and Hispanic participants reported more microaggressions in which they are exoticized and/or homogenized, likely signifying stereotypes that are linked to a greater proportion of recent immigrants from Latin American and Asian countries whose primary language may not be English and whose cultural practices may not reflect U.S. norms (Forrest-Bank & Jensen, 2015).

Interestingly, while POC groups differed in the types of racial discrimination they experienced, differences in major vs. microaggressive experiences did not parallel one another across domains, suggesting that the experiential realities of racism differ from stereotypes concerning different racial/ethnic groups. For example, while Blacks reported the greatest frequency of Inferiority microaggressions (e.g., perceived as less educated, poor, less intelligent, or inarticulate due to their race), both Blacks and Asians reported more discrimination at school than Whites and Asians reported more such discrimination than Hispanics. This suggests that despite being targets of the “model minority” stereotype and reporting fewer Inferiority microaggressions than Blacks and Hispanics, Asians may still experience high levels of racial discrimination in the school setting. Indeed, a recent audit experimental study in academia of over 6,500 professors at U.S. universities found that faculty were significantly more likely to respond via email to Caucasian males than to women and POC, with the biggest discriminatory gaps in response rates for groups with names suggesting that the letter-writers were Asian. Specifically, researchers found a 29 percentage point gap at private colleges and universities in the response rate to white men vs. Chinese women, a 21 percentage point gap in responses to
those with an Indian male name, and a 19 percentage point gap for those with an Indian female name (Milkman, Akinola, & Chugh, 2014).

On the other hand, Blacks endorsed the greatest number of Criminality microaggressions and the greatest number of experiences of discrimination from the police or in the courts, indicating consistency between stereotypes of Black people and their lived reality. These results confirm previous findings that police and legal discrimination are particularly salient for Black Americans, who have had a tenuous relationship with police dating back to the Jim Crow era (Bass, 2001; Websdale, 2001).

Of note is the number of significant findings for participants racially categorized as “Other”: this group reported a high frequency of racism experiences across numerous domains. Examination of an item in which study participants could write-in their ethnicity, nationality, and/or race suggests that a substantial number (75%) of these participants identified as Middle Eastern; such individuals are not recognized by the U.S. government as a minority group and therefore were not captured by U.S. Census categories utilized in the study. A number of studies have suggested that the events of September 11, 2011 led to a sharp increase in prejudice and discrimination against those of Arab and Middle Eastern descent (Ajrouch, 2005; ADC Research Institute, 2003; Awad, 2010). Because individuals in this group are classified as White on the U.S. Census, they are without minority status and their experiences of racial discrimination are most likely underreported (Awad, 2010). The present study’s findings reveal the limitation of U.S. Census categories and demonstrate the importance of capturing the racism experiences of Arab/Middle Eastern Americans in a U.S. context.
**Sociodemographic covariates of anxiety and depression.**

While community studies using standardized diagnostic interview schedules typically show that Asian Americans have lower rates of anxiety disorders than other groups (Asnaani et al., 2010; Huang et al., 2006), the present study’s findings that Asians endorsed higher levels of anxiety and depression echo those from similarly designed studies in college settings using symptom scales (Sue, Sue, Sue, & Takeuchi, 1995; Hwang & Goto, 2008). Yet the present study found that gender did not correlate with depression, diverging from previous findings that have suggested females suffer from depression at higher rates than males (for a review, see Piccinelli et al., 2000). However, it is worth noting that few studies have examined gender differences in depression among POC, for whom an interaction of factors may be occurring (Brown & Keith, 2003; Roxburgh, 2009). This may indicate that studies, including our own, are capturing interactive influences between immigrant status, gender, and ethnicity (Leu, Walton, & Takeuchi, 2011).

Roxburgh (2009) proposed an intersectional model that considers gender and race as intertwined contexts that account for variation in the relation between SES and mental health outcomes. This model, which argues that low SES is differentially significant for men and women and differentially significant across race/ethnicity, may shed light on the present study’s mixed results regarding relative rates of psychological distress for different POC groups. Specifically, Roxburgh (2009) outlines two patterns relevant to high SES POC and women: *attenuated advantage*, a condition in which resource-rich POC men or women are more psychologically distressed than White Americans or men and therefore derive less benefit than Whites or men from high SES; and *enhanced advantage*, a state in which high SES POC and/or women are significantly less psychologically distressed than Whites or men, potentially because
well-resourced POC and/or women are temperamentally and characterologically endowed with the tools they need to succeed. With regards to the under-resourced, Roxburgh delineates two more intersectional patterns: *double jeopardy*, in which low resources among POC and/or women is associated with higher psychological distress when compared to their White counterparts due to facing additional stressors such as institutional racism; and *social normative*, in which POC and/or women are relatively less distressed when under-resourced because of habituation to resource scarcity or alternative coping arrangements (Scott et al., 2000 as cited in Roxburgh, 2009). It is possible that these patterns are differentially observed among intersecting identities of race and gender in ways that are not captured by the present study. Another potential explanation is that such patterns are not yet detectable among the young adults in our sample, who have not habituated to their circumstances given their nascent emergence into adulthood.

**The role of coping.**

Our finding that active coping in response to racial discrimination was associated with lower depression scores represents an important, if limited, addition to the current literature on racism and coping. Studies have suggested that avoidant or passive strategies such as acceptance or resignation, while common, may be more harmful compared to active approaches such as problem-solving or seeking support (Utsey, Ponterotto, Reynolds, & Cancelli, 2000; Noh et al., 1999). Results from the present study provide further support for the notion that active coping may protect against the negative effects of racial discrimination.

Scholars have identified factors that may contribute to the likelihood of utilizing active vs. passive coping strategies in response to racial discrimination (for a review, see Brondolo et al., 2009). One important construct that has emerged from this literature is ethnic identity, i.e., the degree to which an individual identifies with a racial or ethnic group (for a review, see
Phinney, 1990). Specifically, a strong racial/ethnic identity is postulated to influence the salience of racism experiences and affect subsequent appraisals of and coping responses to these events, lessening the harmful mental health effects of experiences of racial discrimination (Oyserman et al., 2003, Quintana, 2007). For instance, Chavira & Phinney (1991) found that Hispanics with higher levels of ethnic identity had higher self-esteem and were more likely to use active forms of coping (e.g., discussing it with others and disproving racist stereotypes). Another factor that may increase the likelihood of employing active coping strategies is racial socialization, the process by which parents of racial minorities transmit messages to their children about issues such as cultural heritage and group social status, including the prevalence of stereotypes and racial discrimination (Hughes et al., 2006). Specifically, racial socialization may enable young POC to anticipate, recognize and cope with discrimination (Hughes et al., 2006). For instance, a study of African American college freshmen found that parental messages emphasizing the use of African American cultural resources to cope with racism reduced the impact of racism on psychological stress (Bynum, Burton, & Best, 2007). Another study of middle-class African American families found that children whose parents believed children should respond proactively to racial situations (engaging the person, asserting oneself, or getting parents help) were least likely to use passive coping strategies and evidenced less internalized racism (Johnson, 1994).

Previous research also suggests that whether active coping suppresses or amplifies stress or distress in response to racial discrimination may depend upon an individual’s social context. A study of Korean immigrants in Toronto found that problem-focused (i.e., active) coping methods moderated stress among the better acculturated individuals in the sample but diminished significantly among those who were less acculturated and distressed by acculturation demands.
MENTAL HEALTH IMPACT OF SPECTRUM RACIAL DISCRIMINATION

(Noh & Kaspar, 2003). These results suggest that interventions aimed solely at the coping efforts of individuals are likely to be ineffective; rather, interventions that change social circumstances and decrease acculturation demands may be more effective in lessening the negative effects of racial stigma on the mental health of POC groups.

The finding that Asian Americans were less likely than other groups to use active coping is consistent with previous studies showing that Asian Americans are more likely to employ emotion-focused or suppressive coping than problem-focused coping (Kuo, 1995; O’Connor & Shimizu, 2002; Wei et al., 2008). However, no association was found between gender and coping style, a finding that contradicts previous studies in the literature (for a review, see Tamres, Janicki, & Helgeson, 2002). Theories of gender differences in coping tend to revolve around stereotypes of male vs. female behavior, in which the former are believed to confront problems head-on and/or deny problems and the latter are believed to exhibit a more emotional response to problems and/or to make use of social support (Tamres, Janicki, & Hegelson, 2002). Given the present study’s findings that depressive symptoms did not differ by gender, the lack of association between gender and coping style may similarly indicate that interactive influences between race and gender are at play in our POC-majority sample.

Limitations and Directions for Future Research

Because the present study makes use of cross-sectional and self-report data, it is not possible to posit a causal relation between racial discrimination and the outcomes of anxiety and depression. Moreover, mediation analyses posit a causal pathway, suggesting the present study’s mediation results using cross-sectional data must be interpreted with caution. Future studies should make use of time-lag designs to examine whether racial discrimination at time point 1 contributes to additional psychological distress at time point 2. Experimental designs in which
actual discrimination is delivered by a confederate of the study may also help produce more insight into the causal nature of this relation.

Another significant limitation of this study is that different ethnic groups are lumped together in pan-ethnic labels, potentially distorting differences between ethnic populations. The present study’s categorization of Middle Eastern, Native American, and multiracial individuals as “Other” limits its ability to meaningfully draw conclusions from findings concerning this group. Researchers have observed that statistics on Asian Americans often misrepresent Pacific Islanders and Southeast Asian Americans, who are often lumped in an aggregate category with other ethnic populations and portrayed as achieving the highest levels of academic success when in fact they have exhibited levels of educational attainment lower than other racial populations in the U.S. (Museus & Kiang, 2009), a factor that could contribute to the perpetuation of the model minority myth. Researchers have similarly argued that aggregating Hispanic subjects into a single group masks significant variability in a number of domains including lifetime risk of psychiatric disorders (Alegria et al., 2008) and post-secondary educational attainment (Garcia & Bayer, 2005). Future studies comparing racism experiences of POC groups should disaggregate ethnic groups to make more fine-tuned distinctions between their respective racism experiences.

In addition, it is possible that selection criteria for the sample contributed to the non-significant finding that immigrants were not less likely to endorse experiences of racism. Participants were selected for immigrant status and/or POC status, resulting in a sample primarily comprised of immigrants (37.2% first generation, 52.3% second generation, and 10.5% non-immigrant). Moreover, the present study’s definition of immigrant vs. non-immigrant may have contributed to the non-significant finding. The term “first-generation” can refer to either people who were born in one country and relocated to another at a young age, or to their children
born in the country to which they immigrated. For the purposes of this study, only foreign-born participants were considered immigrants; second-generation immigrants were considered non-immigrants. It is possible second-generation immigrants in our sample had more in common with first-generation immigrants than with non-immigrants. Therefore, another limitation of our study is a lack of statistical power with which to compare first and second-generation immigrants (comprising 89.5%) percent of the sample with non-immigrants (comprising 10.5% of the sample). To properly address this hypothesis, future studies should include equal proportions of first-generation, second-generation, and non-immigrants.

Another limitation is the study’s use of a coping assessment that only assessed for passive vs. active coping, binary forms of coping that may not be culturally relevant for non-Western participants (Heppner et al., 2006). Western-based individualistic and dispositional styles of coping that emphasize personal autonomy over collectivistic and situation-specific coping may not fully capture the coping styles of Asians and Latinx with different cultural values (Heppner et al., 2006; Kim & Omizo, 2005). In a study examining the effects of culturally syntonic forms of coping on the relation between racial discrimination and depressive symptoms among Asian Americans, reactive coping strengthened the association between racial discrimination and depressive symptoms, while family support buffered it (Wei, Heppner, Ku, & Liao, 2010). Future studies examining coping among diverse groups may wish to utilize measures such as the Collectivistic Coping Styles (Heppner et al., 2006) or the Cross-Cultural Coping Scale (Kuo et al., 2006).

**Clinical Implications and Conclusions**

Perhaps the study’s most clinically relevant and statistically robust finding was that endorsing spectrum racial discrimination experiences was positively associated with anxiety and
depressive symptoms over and above the effects of non-race specific stress. This result supports the idea that racial discrimination is a unique stressor above non race-related stress that confers disproportionate risk on POC (Harrell, 2000). The results have significant clinical implications and indicate that resources aimed at decreasing race-related stress and racism experiences among young adults of color would ameliorate their risk for negative psychological outcomes. In addition, both major and microaggressive racism experiences contributed jointly to elevated depression and anxiety scores, implying that clinicians should utilize a spectrum approach when assessing for racism experiences in POC, and can assume that major and microaggressive discrimination often co-occur.

The study’s binary LCA solution demonstrated that young adults of color tend to report either repeated racism experiences or little to no racism experiences and that Black participants were disproportionately likely to belong to the Racism group vs. the Low/no racism group. Moreover, in results that parallel those in the trauma literature, a more detailed examination of the study’s findings showed that individuals who experience major discriminatory events may be vulnerable to repeated exposure, a risk that fell largely on Black participants, given their disproportionate representation in the Racism group. This provides support for the argument to treat racism experiences as potential forms of traumatic stress that can create physiological and psychological damage to victims (Carter et al., 2007). Clinicians who treat POC should assess for race-based stress or trauma as is typically done for other forms of traumatic stress. In addition, these findings underline the importance of viewing the individual’s difficulties as rooted in situational stress as opposed to making dispositional or characterological attributions, especially when working with clients of color who are disproportionately the targets of racism experiences (Herman, 1992, as cited in Carter et al., 2007).
Another finding of interest was that Asians reported the highest levels of anxiety and depression, with Asian ethnicity significantly contributing to psychological distress in models controlling for perceived stress. These results, together with the finding that Asians were less likely to use active coping strategies, underscore the importance of assessing for both psychological distress and use of coping strategies in this population. Moreover, the finding that Asians reported high levels of experiences of discrimination at school but lower levels of Inferiority microaggressions suggests a dissonance between stereotype and reality in the racism experiences of Asian Americans; clinicians and educators should carefully examine their own assumptions and biases concerning Asian students and clients.

The finding that active coping was associated with lower depression scores also has important clinical (as well as political and social) implications. Encouraging clients who have experienced racial discrimination to seek social support and engage in self-advocacy may be a proactive and useful intervention to counteract race-based traumatic stress.

Finally, the study’s mixed results in determining the interactive effects of race and gender underscore the importance of using an intersectional approach when assessing for discrimination and its psychological effects. A variety of sociodemographic factors including but not limited to educational level, income, family wealth, gender, and immigrant status may result in unique, non-additive effects of discrimination for individuals identifying with more than one social group.
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