

POTENTIAL MODERATORS OF THE RELATION BETWEEN
MICROAGGRESSIONS AND MENTAL HEALTH AMONG RACIAL AND ETHNIC
MINORITY COLLEGE STUDENTS

A Dissertation
Submitted to
The Temple University Graduate Board

In Partial Fulfillment of the
Requirements for the Degree
DOCTOR OF PHILOSOPHY

by
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August 2015

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ABSTRACT

Potential Moderators of the Relation between Microaggressions and Mental Health among Racial and Ethnic Minority College Students

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Doctor of Philosophy

Temple University, 2015

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In the US, racial and ethnic minority individuals have higher rates of many psychological and physical health problems than Whites, and the experience of racial discrimination may partially explain these disparate health statistics. Given the harmful nature of discrimination, minority individuals may utilize a number of psychological resources to cope with and diminish the negative impact associated with the experience of discrimination. The current dissertation investigated the impact of modern day, subtle forms of discrimination referred to as microaggressions. Prior research has illustrated that the experience of perceived racism and microaggressions plays an important role in the physical and mental health of ethnic minority individuals. The current study explored subtypes of microaggressions and the rates at which different minority groups experience these microaggressions; the concurrent impact of different microaggressions on psychological health outcomes (i.e., symptoms of anxiety, depression, and substance use); the moderating role of coping strategies (i.e., ethnic identity formation, social support) on the relation between the experience of specific microaggressions and psychological health; potential racial or ethnic differences related to main effects of

microaggressions on psychological health; and significant interactions between the potential moderators (i.e., racial identity formation and social support) and the experience of microaggressions. Results of the present study indicate that first, minority individuals report experiencing significantly more microaggressions than non-minority participants. Additionally, the experience of microaggressions varied by minority group identification. Second, the experience of microaggressions was associated with higher rates of problematic alcohol use, as well as symptoms of anxiety and depression. Third, aspects of racial/ethnic identity formation and social support were associated with lower rates of problematic alcohol use (but not anger or anxiety or depressive symptoms) among individuals who experienced microaggressions, suggesting a potential buffering effect of these moderators. Finally, some racial differences in the correlation between these moderating variables and microaggression variables were found, which suggests that there are likely racial differences in the way that racial/ethnic identity formation and social support can be protective. Future research is needed to increase understanding of racial and ethnic differences in the protective nature of identity formation, social support, and other potential coping strategies. Clinical implications are discussed.

DEDICATION

This dissertation is dedicated to my amazing family and husband. This journey would not have been possible without your never-ending love, encouragement, and support.

ACKNOWLEDGEMENTS

First and foremost, I would like to express my gratitude to my advisor, Deborah Drabick, for her support and encouragement throughout my graduate studies. Thank you for your enthusiasm, frequent advice, and willingness to allow me to pursue my research topic of interest.

Finally, I would like to thank my committee members, Michael McCloskey, Ronald Taylor, Tania Giovannetti, Catherine Panzarella, Eunice Chen, and Andrew Karpinski, for their insightful questions and comments related to this dissertation. Your feedback has been invaluable.

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CHAPTER 1 INTRODUCTION

When compared to White Americans, racial and ethnic minority individuals are at higher risk of developing various mental and physical health problems (Kochanek, Xu, Murphy, Miniño, & Kung, 2011; US Department of Health and Human Services, 2001; Williams, Lavizzo-Mourey, & Warren, 1994; Williams, Neighbors, & Jackson, 2003). The US Department of Health and Human Services (Kochanek et al., 2011; US DHHS, 2001) and the National Institutes of Health (2000) have found that people of color in the US have higher rates of cardiovascular disease, diabetes, stroke, sexually transmitted diseases, and shorter overall life expectancy, as well as higher rates of psychological health issues, such as depression, anxiety, somatization disorders, and substance use problems (US DHHS, 2001).

The experience of racial discrimination is one potential explanation for these disparate physical and psychological health statistics. US history is littered with individual, institutional, and societal level examples of discrimination and prejudice toward racial and ethnic minorities. The current research investigated the impact of modern day, subtle forms of discrimination referred to as microaggressions, which likely play an important role in the physical and mental health of ethnic minorities. The term “microaggressions” was first used by Pierce and colleagues (1978) to describe the “subtle, stunning, often automatic, and nonverbal exchanges which are ‘put-downs’” (p. 66) towards Black Americans. The term also has been used to describe subtle insults that occur both automatically and unconsciously, and are directed toward people of color (Solorzano et al., 2000). Further understanding of microaggressions and the

psychological impact they have on recipients should inform the development and improvement of prevention and intervention strategies and should increase cultural competence in the mental health field.

The current study explored areas that warrant further investigation including (a) the examination of specific subtypes of microaggressions and the rates that different minority groups experience these microaggressions; (b) the investigation of the concurrent impact of different microaggressions on psychological health outcomes such as symptoms of anxiety, depression, anger, and problematic alcohol use; (c) the potentially protective role of coping strategies such as ethnic identity formation and social support on the relation between the experience of specific microaggressions and psychological health; and (d) the specific exploration of potential racial or ethnic differences related to the main effects of microaggressions on psychological health, as well as interactions between the potential moderators (i.e., racial/ethnic identity formation and social support) and the experience of microaggressions.

A review of the pertinent literature is provided below. Topics covered include the definition of race, ethnicity, and discrimination; the development and changes of racism and discrimination over time; a review of the types of microaggressions, a form of modern day discrimination; the physical and psychological impacts of racial discrimination and microaggressions; and potential protective factors that may help individuals cope with the experience of microaggressions.

Definition of Key Terms and Concepts

Race and Ethnicity. Despite increased research interests related to race and ethnicity, there is no consensus on how to define each of these terms, or how to parse

apart their differences and identify their similarities (Markus, 2008). Although the terms are often used interchangeably, it is important to understand how and why they are different constructs. Historically, race has been defined as a biological construct, or genotypic and phenotypic differences in physical characteristics (e.g., skin color, hair texture, facial features) (Thompson & Neville, 1999), whereas definitions of ethnicity have focused on cultural distinctions such as values, traditions, and other ways of living, which can be used to differentiate groups of people (Markus, 2008).

Recognizing the limitations and inaccuracies associated with the biological definition of race, social scientists have moved towards defining race as a social construct. For example, Carter (2007) defines race as a social construct within the US that uses skin color, language, and physical features to identify, group, and rank people into separate racial groups. These groups are generally White, or Caucasian people, and people of color, or Americans who have historically been disenfranchised (i.e., Black/African, Hispanic/Latino, Asian/Pacific Islanders, Native-Indigenous Indians, and biracial individuals) (Carter, 2007). In diverse societies, race is frequently used to group individuals and to distribute resources and opportunities (Carter & Pieterse, 2005; Marger, 2003), often to the detriment of whatever group is in the minority. The social and legal separation of racial groups in the US has allowed for the development of distinct cultural patterns and preferences within different racial groups (Marger, 2003). Markus and Moya (2010) similarly define race as a construct that uses perceived differences in physical and behavioral characteristics to sort people into groups, which are associated with disparate levels of power and privilege. The authors go on to state that race is a dynamic, historically based construct that can change as ethnic groups become threatening or if

justification for prejudicial behavior towards a group is needed (e.g., the racialization of Middle Eastern heritage post 9/11, and Hispanic/Latino heritage in connection to increased immigration and unemployment rates).

Ethnicity can be defined as the grouping of people based on perceived commonalities such as language, nation of origin, customs, traditions, history, religious beliefs, physical appearance, and ancestry (Markus & Moya, 2010). At times, ethnicity can be a source of identity that imparts a sense of belonging, pride, and motivation. Carter (2007) associates ethnicity with culture, which can be defined as “a system of meaning with values, norms, behaviors, language, and history that is passed from one generation to the next through socialization and participation in the group’s organization and institutions” (Carter, 2007; p. 18).

The study of race and ethnicity has been, and will likely continue to be, rather complex. Cultural sensitivity and understanding is very important when considering the role that race and/or ethnicity might play in psychological development and functioning (Rogler, 1999). It is also important to recognize that sometimes effects attributed to race and ethnicity may actually be better explained by other factors such as socioeconomic status. Given the perception of race as a social construct, the unique culturally based component of racial groups in the US, and the fluidity of racial and ethnic categorization of groups, race and ethnicity are often considered comparable constructs for the purposes of research.

Racism and Discrimination. The word racism has been used in many different ways and has had many different definitions over time (Carter, 2007). Jones (1997) explored conceptualizations of racism and found a multitude of definitions across many

fields. Some of these conceptualizations considered racism as a way to justify the superiority of one group over another by ignoring sociohistorical context and developing complex beliefs and attitudes about the “out group” (Jones, 1997). Other definitions characterize racism as attitudes and beliefs that influence the distribution of resources (Feagin & Vera, 1995), in-group self-interest, and political processes (Goldberg, 1990). Still other conceptualizations focus on sociohistorical context, as well as the systemic and structural nature of racism, which can change over time.

Jones (1997) recognized that many conceptualizations of racism ignore context and instead fixate on personal characteristics, often deciding that minority groups are not contributing to society at a level deemed acceptable by the group in power. By determining what values, behaviors, and beliefs are important, the group in power can rationalize their belief of superiority by postulating that minority groups just need to earn their social status without any accommodations or preferential treatment (Jones, 1997). A definition of racism that relies less on rationalization, and considers the importance of the historical context, is important for understanding the link between racism and psychological health (Carter, 2007).

Clark and colleagues (1999; p. 805) define racism as “beliefs, attitudes, institutional arrangements, and acts that tend to denigrate individuals or groups because of phenotypic characteristics or ethnic group affiliations.” This denigration can take place anywhere from the institutional to interpersonal level, though cultural-level racism is generally considered necessary because it allows for the inherent ranking of racial/ethnic groups and supports the social norms and institutions that apply this ranking (Jones, 1997).

Racism often leads to the formation of negative attitudes and beliefs, or prejudices, about other racial/ethnic groups, and discrimination in the form of treatment disparities towards members of these groups by both individuals and social institutions (Williams & Mohammed, 2009). Discrimination is conceptualized as the manifestation of racist ideologies that benefits a small portion of society (Sue & Sue, 2008). Despite society-level efforts to improve the treatment of and protections in place for racial and ethnic minorities, racism and social disparities for racial and ethnic minorities are still present in the US.

In sum, race and ethnicity are social constructs used to group people into categories based on physical or cultural differences, which can allow for racism and discrimination across all levels of society. Although the definitions of racism and discrimination have changed over time, racism generally refers to the negative attitudes, beliefs, and prejudices toward members of other groups, whereas discrimination is the manifestation of racist beliefs.

The Evolving Nature of Racism and Discrimination

Historical research examining racism and discrimination has generally focused on an individual's tendency to be racially biased (Okazaki, 2009). Since Allport's (1954) groundbreaking work on the social and psychological aspects of prejudicial attitudes and beliefs, research related to discrimination has transitioned to focus more on the experience of individuals targeted by discrimination instead of the perpetrators. Research has found that people of color have a very different perspective on racial relations than Whites (Jones, 1997). White Americans tend to believe that racial/ethnic equality exists, that racism and discrimination are on the decline, and that neither plays an influential role

in the lives of minorities anymore (Sue, Capodilupo, et al., 2007). Nevertheless, minorities generally view White Americans as believing they are superior to people of color, racially insensitive, protective of their wealth and position, and controlling (Sue, Capodilupo, et al., 2007). This clash of racial/ethnic realities has considerable implications on the conversation about race and racism in the US. Because Whites often fail to recognize their own racism, it is likely very frustrating and stressful for people of color to attempt to process and resolve discriminatory acts (Sue, 2010). Despite significant efforts to improve race relations in America, racism and discrimination continue to be a divisive problem in modern society (Clark et al., 1999; Markus, 2008; Thompson & Neville, 1999).

The term “old-fashioned racism” has been used to identify blatant and visible forms of racism at three different levels—individual, institutional, and cultural (Dovidio & Gaertner, 2000; Jones, 1997). First, individual racism refers to interpersonal interactions that are meant to deny goods and services, or humiliate an individual because of their perceived minority status (Jones, 1997). These personal acts can range from overt, violent hate crimes to more subtle, nonviolent acts like refusing to sell a house to a Black family (Sue, 2010). Second, institutional racism refers to the policies, practices, and norms that lead to economic, legal, political, and social restrictions that cause racial/ethnic inequalities (Jones, 1997). Practices like “separate but equal” discrimination in the workplace, racial/ethnic profiling, Eurocentric education curriculums, and disparities in health care are all examples of institutional level racism (Sue, 2010). Finally, cultural racism is the societal-level omission of cultural practices and values of minority groups, along with the assumption that White cultural values are the norm and thus

superior (Jones, 1997). Examples of cultural racism include the preference for individualism over collectivism; valuing the Protestant work ethic; encouraging capitalism; and assuming the universality of Christianity, the English language, written traditions, and European features (Sue, 2010). In sum, racism and discrimination occur on not only the individual level, but also the institutional and cultural level as well.

As awareness of overt racism and concern for equality has increased over time, overt expressions of racism have declined. Many argue that overtly racist acts have been replaced with more subtle, covert forms of racism that are part of our cultural assumptions, beliefs, and values (Dovidio & Gaertner, 2000; Essed, 1991; Rowe, 1990; Solórzano, Ceja, & Yosso, 2000; Sue, Capodilupo, et al., 2007). These contemporary forms of racism have been described as symbolic racism (Sears, 1988), modern racism (McConahay, 1986), implicit racism (Banaji, Hardin, & Rothman, 1993), aversive racism (Dovidio & Gaertner, 2000), everyday racism (Essed, 1991), microinequity (Rowe, 1990), and racial/ethnic microaggressions (Sue, Capodilupo, et al., 2007).

Despite the various labels for contemporary racism, each definition is similar in its emphasis on the covert nature of these acts, and its acknowledgement that these acts are hard to detect. To better understand the nature of modern racism, a thorough understanding of how, when, and in what form modern racism and discrimination occur is necessary (Sue, Capodilupo, et al., 2007). Sue (2010) and colleagues (2007), who refer to modern racism as “microaggressions,” have performed extensive qualitative research in an effort to develop a taxonomy of modern racism. The taxonomy provides a valuable framework in understanding both the experience and impact of microaggressions.

Taxonomy of Microaggressions

Sue and colleagues (2007, 2008) have proposed a taxonomy of racial/ethnic, gender, and sexual-orientation microaggressions that fall into three categories: microassaults, microinsults, and microinvalidations. Microassaults are “conscious, deliberate, and either subtle or explicit racial/ethnic, gender, or sexual-orientation biased attitudes, beliefs, or behaviors that are communicated to marginalized groups through environmental cues, verbalizations, or behaviors” (Sue, 2010; p. 28). They are used to attack the group identity of the person and/or hurt them through name-calling, avoidant behavior, or purposeful discriminatory acts (Miller & Garren, 2008; Nelson, 2006), and thus are more consistent with historical examples of overt racism.

Microinsults are “interpersonal or environmental communications that convey stereotypes, rudeness, and insensitivity and that demean a person’s racial/ethnic, gender, or sexual orientation, heritage, or identity” (Sue, 2010; p. 31). Microinsults are often unintentional, but generally contain a message implying that minority individuals are either not qualified, or their success must be the result of affirmative action and not ability. Sue and colleagues (2007) identified five common themes within microinsults: assigning a degree of intelligence to a person based on their race (ascription of intelligence), treatment as a lesser person or group (second class citizen), thinking that the values and communication styles of people of color are abnormal (pathologizing cultural values), presuming that someone is a criminal or dangerous based on race (assumption of criminal status), and being forced into roles of sexual objects, domestic servants, and exotic images (Sue Bucci et al., 2007).

Microinvalidations are “communications or environmental cues that exclude, negate, or nullify the psychological thoughts, feelings, or experiential reality of certain

groups” (Sue, 2010; p. 37). This form of microaggression is considered one of the most damaging because microinvalidations tend to directly deny the racial/ethnic, gender, and sexual-orientation reality of these groups, which some consider the ultimate form of oppression (e.g., Sue, 2010). Sue and colleagues (2007) identified four common themes within microinvalidations: belief that visible minorities citizens are actually foreigners (alien in own land), claiming to not see color or race (color blindness), asserting that race plays a minor role in life success (myth of meritocracy), and denial of personal racism or one’s role in its perpetuation (denial of individual racism).

Asian Americans and Latino Americans are more likely to experience microinvalidations that fall into the alien in one’s own land category, which involves being perceived as a perpetual foreigner (Sue, Capodilupo, et al., 2007). Examples include Asian Americans being complimented on their English skills and being asked where they were born, and Latino Americans being told to “go back to Mexico.” African Americans are less likely to experience this type of microinsult, but this may be because the general public tends to be perceive them as “more American” than Asian and Latino Americans (Devos & Banaji, 2005).

Responding to Microaggressions

Acts of microaggressions are often perpetrated by individuals who self identify as unbiased and well-intentioned, but are the result of racist and ethnocentric ideologies that influence behavior (Dovidio & Gaertner, 2000; Gaertner & Dovidio, 2005). Empirical evidence suggests many microaggressive acts are automatic and the result of cultural conditioning (Abelson, Dasgupta, Park, & Banaji, 1998). For example, laboratory

experiments have found that police officers, without conscious awareness, fire their weapons at Black suspects more than White suspects (Plant & Peruche, 2005).

The automatic, seemingly unintentional nature of microaggressions, combined with the possibility of other plausible explanations for individuals' behaviors, can make it difficult for an individual to recognize or prove that a microaggression has occurred. Additionally, it is easy for Whites to assume that race played no role in the interaction, and consequently extremely difficult for the victim to process their psychological distress (Sue, Capodilupo, et al., 2007). Even though seemingly non-biased reasons often can be used to explain away microaggressive acts, many people of color still describe feeling disrespected, attacked, and as if something was amiss about the interaction (Franklin, 2004; Reid & Radhakrishnan, 2003). As such, Jones (1997) suggests that the minority individual, rather than the individual in power, should be the one to determine if a certain act was racist or discriminatory to avoid further invalidation of the individual.

When individuals respond to microaggressions, many of them are accused of overreacting or being oversensitive, especially because microaggressions often are considered innocuous (Steele, Spencer, & Aronson, 2002). A person who experiences a microaggression is placed in a proverbial catch-22 (Crocker & Major, 1989) and must consider a number of things—for example, was the act intentional, should I confront the person, will I be believed, and is this worth it? After experiencing a microaggression, people of color are forced to weigh the pros of responding—relieving pent-up emotions—against the potential cons of responding—experiencing additional microaggressive acts, confirming other people's racial/ethnic stereotypes (e.g., “pulling

the race card,” being an angry Black man), and/or creating greater hostility between racial/ethnic groups (Sue, Capodilupo, et al., 2007).

Although some have argued that microaggressions do not impact physical and psychological health (Thomas, 2008), others have hypothesized that dealing with microaggressions may be more difficult than dealing with overt forms of racism because of the vagueness of the event and the ability to develop other explanations or attributions for a person’s actions (Solórzano et al., 2000). Microaggressions are considered stressors (i.e., they are external events that place a psychological demand on the individual) that go above and beyond the normal life stressors experienced by everyone (King, 2005; Lazarus & Folkman, 1984; Utsey, Giesbrecht, Hook, & Standard, 2008). The Microaggressive Process Model, which is reviewed below, proposes that the stress associated with microaggressions can cause serious psychological harm unless effective coping strategies are utilized or the stressor is eliminated (Sue, 2010).

The Microaggression Process Model

To date, few studies have quantitatively explored the rate of microaggressions and their impact on recipients. The Microaggression Process Model provides a context to understand how the experience of microaggressions might have a negative impact on psychological health, and how the utilization of coping strategies could be protective against this negative influence. Below the model is summarized and useful directions for future research are discussed.

The first phase of the process model focuses on the stressor, or the exposure to an event that can be interpreted as microaggressive. This event or incident, which can be verbal, behavioral, or environmental, can occur during an ongoing interaction between

the perpetrator and the recipient, or it can be part of a more passive relationship (e.g., overhearing something in public, part of the general environment). After experiencing an event that may be microaggressive, recipients move to the second phase where they attempt to determine whether the event was racially motivated. Participants described asking themselves questions, a core feature of the perception phase, to determine the intent behind and meaning to ascribe to certain actions (Sue, Capodilupo, et al., 2008; Sue, Nadal, et al., 2008). The recipient's relationship to the perpetrator, the racial/cultural identity development of the recipient, the theme of the microaggression, and the personal experiences of the target all influenced whether an event was interpreted as racially motivated. Participants frequently described this questioning process as the most energy-depleting aspect of the process.

The third phase describes the cognitive, behavioral, and emotional reactions that a person experiences while processing microaggressive actions, which go beyond the more immediate classification of whether an event was racially motivated. The researchers found several common reaction styles across the two studies: healthy paranoia, sanity check, empowering and validating self, and rescuing the offenders (Sue, Capodilupo, et al., 2008; Sue, Nadal, et al., 2008). The fourth phase refers to the interpretation or meaning (i.e., the significance and the intention of the perpetrator) that is given to a microaggressive event. Several meanings emerged as themes in the Sue, Capodilupo, and Holder (2008) study: you do not belong, you are abnormal, you are intellectually inferior, you are not trustworthy, and you are all the same. The fifth phase of the model explores the short- and long-term psychological effects of microaggressions, though these consequences likely are experienced throughout earlier phases of the process as well (Sue,

2010). Although microaggressions can impact behavioral patterns, coping strategies, cognitive reasoning, and psychological well-being over time in a variety of ways, four specific themes for potential consequences have been identified (Sue, Capodilupo, & Holder, 2008; Sue, Lin, et al., 2009).

Discrimination and Health Outcomes

Carter's (2007) theory of race-based traumatic stress highlights the importance of investigating the impact of discrimination in all forms (e.g., systematic, covert, subtle, unconscious) because of the potentially cumulative nature of racism. Alternatively stated, even a seemingly minor form of discrimination can result in a stress reaction (Carter, 2007), which implies that the experience of microaggressions over time can have an impact similar to that of overt racism on psychological health.

Numerous studies have demonstrated the negative impact that overt racism and overt racial discrimination have on an individual's physical and psychological health. Specifically, experiencing perceived racial discrimination is associated with increases in psychological distress, depressive symptoms, obsessive-compulsive symptoms, anxiety, stress, and substance use, as well as decreases in self-esteem and general psychological health (see reviews in Krieger, 1999; Krieger, Rowley, Hermann, Avery, & Phillips, 1993; Paradies, 2006; Williams & Williams-Morris, 2000). Discrimination has also been found to evoke anger (Brondolo et al., 2008; Broudy et al., 2007; Cleveland, 2003; Feagin, Early, & McKinney, 2001; Landrine & Klonoff, 1996), which in turn can contribute to other negative health outcomes (Armstead et al., 1989; Dorr, Brosschot, Sollers, & Thayer, 2007; Krieger, 1990; Krieger & Sidney, 1996). Perceived racism also is associated with increased blood pressure, heart rate, and hypertension; low infant birth

weight; heart disease; and diabetes (for reviews, see Brondolo, Rieppi, Kelly, & Gerin, 2003; Paradies, 2006; Williams et al., 2003; Wyatt et al., 2003). More recent research is starting to shed light on health disparities and perceived discrimination in racial groups other than African Americans, as well as international samples (e.g., Africa, Asia, Australia, Europe; Williams & Mohammed, 2009).

Far fewer studies have explored the relations between microaggressions and health outcomes. A number of qualitative studies have utilized semi-structured interviews and focus groups to explore the taxonomy of microaggressions with specific racial and ethnic groups (Rivera, Forquer, & Rangel, 2010; Sue, Bucceri, Lin, Nadal, & Torino, 2007; Sue, Nadal, et al., 2008). Empirical studies indicate that racial and ethnic minorities experience microaggressions in educational and counseling settings (e.g., Constantine & Sue, 2007; Rivera et al., 2010; Solórzano et al., 2000; Sue, Capodilupo, et al., 2008; Sue, Nadal et al., 2008; Watkins, LaBarrie, & Appio, 2010). The experience of microaggressions is associated with weaker therapeutic alliance between White counselors and Black clients, as well as lower counseling satisfaction among ethnic minority clients (Constantine, 2007; Sue, Nadal, et al., 2008); poor supervisory relationships between White supervisors and Black supervisees (Constantine & Sue, 2007); feelings of stress among African Americans (Sue, Capodilupo, et al., 2008); and binge drinking among ethnic minority college students and adolescents (Blume et al., 2011; Terrell, Miller, Foster, & Watkins, 2006). People of color also report that experiencing microaggressions in the academic setting makes them feel drained, helpless, frustrated, angry, and isolated (Solórzano et al., 2000).

Further study of microaggressions in the academic setting among college undergraduate students is warranted. The stressors related to the transition between high school and college already place students at increased risk for anxiety, depression (Voelker, 2003), and problematic substance use (White et al., 2006). Addition of the unique stressor of microaggressions may result in greater rates of anger, as well as anxiety, depression, and substance use symptoms among students of color (Blume et al., 2011; Terrell, et al., 2006). Indeed, the experience of microaggressions puts minority adolescents and students at greater risk for binge drinking (Blume et al., 2011; Terrell et al., 2006), which in turn increases risk for poor academic performance and dropping out of college (Andersson, Johnson, Berglund, & Ojehagen, 2009).

The majority of the current literature related to the impact of microaggressions has been conducted among African Americans. Far less is known about the short- and long-term consequences of microaggressions among other minority groups such as Asian Americans and Hispanics/Latinos, though there is evidence to suggest that these groups also suffer psychological distress because of the experience of microaggressions (Finch, Kolody, & Vega, 2000; Inman & Yeh, 2007; Liang, Alvarez, Juang, & Liang, 2007; Lopez, 2005; Mio et al., 2007; Yoo & Lee, 2008). Further research is needed to explore the impact of microaggressions on and generalizability of findings across different minority groups. Consideration of the impact of microaggressions on multiple minority groups may reveal that these groups experience different rates and types of microaggressions, which in turn may have a differential impact on psychological functioning. It also may indicate that moderators of the relation between

microaggressions and psychological health (e.g., coping strategies) vary across racial/ethnic group.

Unfortunately, research to date has provided little insight as to how individuals should respond to, or cope with, microaggressions to preclude or attenuate the negative outcomes associated with the experience of microaggressions (Solórzano et al., 2000). Additional research is needed to better understand these connections and to determine to what extent and which coping strategies can reduce the negative outcomes associated with the experience of microaggressions.

Coping with Racism and Discrimination

Given the harmful nature of microaggressions, people of color may utilize a number of psychological resources to diminish the negative impact associated with the experience of microaggressions. For example, in a sample of 4,086 participants aged 25 to 37 (48% Black, 52% White; 45% male), most people (69%-78% depending on race and sex) would decide to do something and talk to others when faced with discrimination, and nearly all participants (86%-97%) would at least talk to others even if they decided not to do something (Krieger & Sidney, 1996).

Although there are a wide variety of variables that may moderate the relation between microaggressions and psychological health, the current study focused on the potential moderating roles of ethnic identity formation and social support. These constructs were chosen because of the consistent anecdotal evidence and qualitative research that suggest these variables lessen the stress associated with the experience of microaggressions, which should in turn attenuate their negative effect on psychological health. In addition, racial and ethnic identity development (Ong, Phinney, & Dennis,

2006) and social support (Cohen & Wills, 1985) have been identified as psychological resources that can buffer the relation between overt discrimination and negative psychological outcomes (see Brondolo et al., 2009, for a review). The buffering effect of ethnic identity formation and social support on the relation between microaggressions and psychological outcomes has yet to be explored. Consideration of these potential moderators may provide some data to explain why not all people of color exhibit negative health outcomes despite experiencing microaggressions.

Racial and Ethnic Identity Formation. The development of racial/ethnic identity includes self-identification and involvement with a particular group, a feeling of belonging, preference for that group, ethnic knowledge, and positive evaluation of the group (Phinney, 1990, 1996). Racial/ethnic identity may protect against the negative effects of discrimination in several ways. First, the development of racial/ethnic identity may help to foster a sense of belonging, which may protect against the feelings of ostracism and anger associated with discrimination (Brondolo et al., 2009). It also may give individuals time to prepare for the experience of discrimination, which allows for the development of coping strategies (Hughes et al., 2006). Finally, the development of racial/ethnic identity may provide the individual with knowledge and experiences that help them to attribute discriminatory action in a way that protects the individual's self-esteem (Cross, 2005).

Previous research has tested the buffering effect of racial/ethnic identity formation on the relation between exposure to racism and psychological distress and depressive symptoms, though findings are mixed (see Brondolo et al., 2009 for review). A few studies have found evidence of a buffering effect of racial/ethnic identity among Filipino

Americans (Mossakowski, 2003) and African Americans (Fisher & Shaw, 1999). Other studies have failed to find evidence of a buffering effect of racial/ethnic identity among African Americans (Fisher & Shaw, 1999; Wong, Eccles, & Sameroff, 2003) and Asian Americans (Lee, 2003, 2005). Other research has suggested that racial/ethnic identity may exacerbate the effect of discrimination among Asian refugees (Noh, Beiser, Kaspar, Hou, & Rummens, 1999), African American adolescents (Seller, Copeland-Linder, Martin, & Lewis, 2006), and Asian Americans (Yoo & Lee, 2008). The findings related to the main effect of racial/ethnic identity on distress are similarly mixed (see Brondolo et al., 2009, for a review).

The extant literature suggests that the effect of racial/ethnic identity on psychological health is fairly complex. Although some evidence suggests that ethnic identity development may be protective, especially when considering the impact of ethnic pride on depression (Brondolo et al., 2009), other literature suggests that it could be harmful. Numerous factors, including the type of discrimination experienced and participants' self-identified race, should be considered to address these discrepancies in the literature. To date, the literature has focused on overt forms of racism or indices of racism and discrimination that assess for the level of stress experienced by the individual (Brondolo et al., 2009). The impact of ethnic identity formation on pervasive and chronic experiences of discriminations (i.e., microaggressions) has not been considered. Lumping all types of discrimination together limits our ability to understand the complex nature of microaggressions, as well as the potential role that ethnic identity may have on reducing the stress associated with the experience of microaggressions and discrimination. To address this issue, the effectiveness of ethnic identity and relevant coping strategies

should be examined within the different types of microaggressions and within different racial groups.

When considered in the context of the Microaggression Process Model (Sue, 2010), racial/ethnic identity formation could protect against the negative effects of microaggressions in a number of ways. During the perception and questioning of the incident phase, a strong sense of identity may help victims to quickly assess the situation and determine whether an event is racially biased. Research indicates that the questioning phase is one of the most taxing and energy depleting (Sue, Capodilupo, & Holder, 2008; Sue, Nadal, et al., 2008), so a quick resolution of this phase could prevent or otherwise mitigate the negative impact of microaggressions. During the reaction phase of the process, strong racial/ethnic identity may help victims utilize reactions that are adaptive, like empowering and validating the self. It also may help individuals develop a healthy paranoia, which again can reduce the energy depletion associated with the constant internal questioning and rumination related to the experience of microaggressions. During the consequence and impact phase, a strong racial/ethnic identity could counteract the feelings of powerlessness and invisibility discussed in the fifth phase. Alternatively, strong identity could exacerbate the conflict experienced by individuals who feel forced to comply with the values of dominant culture and feel the pressure to positively represent their entire group, suggesting that ethnic identity could serve as a risk or resilience factor during this phase.

Given the lack of literature investigating this effect of ethnic identity on the relation between microaggressions and psychological health, further investigation is warranted. Exploring this relation within the multiple forms of microaggressions, and

how racial/ethnic groups experience different rates of these microaggressions, could clarify whether racial/ethnic identity formation is protective or harmful.

Social Support. Social support can be defined as “the existence or availability of people on whom we can rely, people who let us know that they care about, value, and love us” (Sarason, Levine, Basham, & Sarason, 1983; p. 127). Social support has a positive influence on physical and psychological health (e.g., Allgower, Wardle, & Steptoe, 2001; Barnett & Gotlib, 1988; Park, 1996; Swickert & Hittner, 2009; Symister & Friend, 2003), perhaps in part because social support influences how an individual copes with stressful events (Cohen & Wills, 1985).

Cohen and Wills (1985) developed a model illustrating the potentially buffering effect of social support on the relation between stressful events and physical or psychological health. According to their model, social support can act as a buffer when the individual decides whether an event is stressful, as well as when the individual is coping with an event that was perceived as stressful (Cohen & Wills, 1985). The authors hypothesized that the buffering effect of social support acts through four types of social resources: esteem support (i.e., indication that a person is valued and accepted); information support (i.e., defining, understanding, and coping with a stressful event); social companionship (i.e., interpersonal interactions and engagement in recreational activities); and instrumental support (i.e., financial or need-based support). Within the framework of the Microaggression Process Model (Sue, 2010), social support could act as a buffer during the perception and questioning phase (i.e., when questioning whether an event was microaggressive); the reaction process phase (i.e., when defining and

coping with microaggressive acts); and/or the interpretation and meaning phase (i.e., during the internalization of the microaggressive act).

Many studies have provided evidence that individuals often seek social support after experiencing discrimination (Krieger, 1990; Krieger & Sidney, 1996; Mellor, 2004; Shorter-Gooden, 2004; Thompson Saunders, 2006; Utsey, Ponterotto, Reynolds, & Cancelli, 2000). Nevertheless, previous research has generally failed to find empirical support for the buffering effect of social support on the relation between discrimination and psychological health (Fischer & Shaw, 1999; Noh & Kaspar, 2003; Thompson Sanders, 2006). Only one study known to me has found evidence of the buffering effect of social support on the relation between the experience of discrimination and psychological health; this study considered a sample of Aboriginal people in Australia (Priest, Paradies, Stewart, & Luke, 2011), though some studies have found evidence for the buffering effect of social support on physical health among individuals experiencing discrimination (Clark, 2003; Clark & Gochett, 2006; Finch & Vega, 2003). Lack of empirical support for the buffering effect of social support on psychological health among individuals experiencing discrimination may be a function of differing conceptualizations and measurements of social support in the literature (e.g., scales assessing support seeking, assessment of the quality of the support network, single item measures that assess level of support). Alternatively, seeking social support for discrimination requires conversations that may be considered anxiety-provoking for both parties, which may prevent individuals from utilizing their strong support networks or may result in continued stress or depressive symptoms because of the continued sharing and discussion, or co-rumination, of race-related stressors (Brondolo et al., 2009).

It is important to consider the role of social support when considering the impact of microaggressions on psychological health. The research related to physical health suggests that high levels of social support are only protective when considering the effect of social support on the relation between low levels of racism and health (Clark, 2003; Clark & Gochett, 2006). Microaggressions are considered to be constant, low levels of racial stress that negatively impact health and well-being over time; thus, it is possible that social support could play a protective role between microaggressions and psychological health, similar to the protective role social support plays between low levels of racism and physical health. Although the moderating role of social support on the relation between microaggressions and psychological functioning has not been previously explored, evidence that people seek social support after the experience of discrimination (Krieger, 1990; Krieger & Sidney, 1996; Mellor, 2004; Shorter-Gooden, 2004; Thompson Saunders, 2006; Utsey et al., 2000) suggests that further investigation is warranted. Thus, social support may play an important, and potentially protective, role when it comes to the processing of microaggressive acts.

Within the context of the Microaggression Process Model (Sue, 2010), social support may protect against the negative effects of microaggressions in a number of ways. First, within the perception and questioning phase, strong social support may provide victims with people with whom they can talk about the incident. Getting the perspective of others who may have had similar experiences could limit the amount of time spent in the questioning phase of microaggressions. During the reaction process phase, strong social support can provide valuable reality testing and inform healthy paranoia, both of which can validate the racial experiences of the victim. Strong social support also may

protect against the popular themes (e.g., you do not belong, you are abnormal, you are intellectually inferior, you are not trustworthy) discussed in the interpretation and meaning phase by providing strong evidence to the contrary of these messages. Similar to racial/ethnic identity formation, it is also possible that strong social support could exacerbate the conflict experienced with forced compliance and pressure to represent one's group. For example, social support networks could create additional stress by criticizing one's choice to cope with microaggressions in those ways (e.g., feeling pressured to speak up about a school or work place microaggression from peers, but then deciding not to say anything).

To date, no studies known to me have investigated the moderating role of social support on the relation between microaggressions and psychological health. Similar to the moderating role of ethnic identity formation, the buffering effect of social support is likely tied to specific types of microaggressions. Should this be the case, racial/ethnic group differences in the effectiveness of social support as a moderator would be expected, as it is expected that racial/ethnic groups will experience microaggressions at different rates.

Gaps in the Literature and the Present Study

Currently, there is a relatively small body of literature examining the role of microaggressions on psychological health. As such, there are a number of gaps in the literature that limit the understanding of the impact of microaggressions on everyday life. Areas of research that warrant further investigation include the examination of specific subtypes of microaggressions; the investigation of microaggressions on psychological health outcomes such as anxiety, depression, anger, and substance use; the potentially

protective role of coping strategies such as racial/ethnic identity formation and social support; the exploration of potential racial or ethnic differences related to the experience of microaggressions and psychological health; and racial differences related to the potentially protective role of coping strategies such as racial/ethnic identity formation and social support. The current study examined these literature gaps using a sample of undergraduate students that included subsamples that were created based on self-identified racial group. In addition, although current theory and past research suggest that microaggressions against different racial groups share many similarities (e.g., all racial groups are subjected to all types of microaggressions, microaggressions are detrimental to psychological and physical health, microaggressions tend to be related to racial stereotypes), it is still not clear whether and to what extent the experience of microaggressions impacts individuals from different racial/ethnic groups similarly.

The current study examined rates of microaggressions experienced by undergraduates of different self-identified racial and ethnic groups and whether the outcomes associated with microaggressions differ in quality (type) or severity depending on the form of microaggression experienced. In addition, the current research could clarify whether different racial/ethnic groups cope with the stress associated with microaggressions differently (e.g., are some groups more likely to rely on the potentially protective aspects of ethnic identity formation whereas others rely on social support?). Indeed, given that the selection and use of coping strategies are significantly impacted by culture (Chang, 1996), it is likely that individuals from different racial/ethnic groups choose different coping strategies to deal with stress related to experiencing microaggressions. Exploration of these gaps in the literature might explain the mixed

findings related to the moderating effect of racial/ethnic identity formation and social support. A better understanding of coping response style also could aid in the development of more effective and specific intervention strategies.

In the current study, I explored the rate of perceived microaggressions experienced by minority students compared to White students at a large, diverse, urban university in the mid-Atlantic region. I also tested whether rates of experiencing different subtypes of microaggressions differed among different racial/ethnic groups. I then examined the extent of the relation between these microaggressions and anxiety, depression, anger, and problematic alcohol use. Next, I explored whether particular coping responses (i.e., ethnic identity and use of social support) act as moderators of the relations between microaggressions and these psychological symptoms. Finally, I explored potential racial or ethnic differences related to any significant main effects of microaggressions on psychological health and any significant interactions between the potential moderators (i.e., racial/ethnic identity formation and social support) and the experience of microaggressions. Specific aims and hypotheses for the current study are outlined below.

Aims and Hypotheses

Aim 1. To examine the rate of perceived microaggressions experienced by undergraduate students at a large, diverse, urban university in the mid-Atlantic region. The rate of microaggressions experienced by White students was compared to the rate of microaggressions experienced by students of color. The types and subtypes of microaggressions experienced by different racial/ethnic groups were also examined.

Hypothesis 1. It was hypothesized that students of color would report experiencing significantly higher levels of microaggressions than non-minority students. It was also hypothesized that certain racial/ethnic groups would report experiencing some microaggressions more than others. Consistent with previous literature (Sue, 2010; Sue, Bucceri, et al., 2007; Sue, Nadal, et al., 2008), African American and Hispanic/Latino participants were hypothesized to experience higher rates of microaggressions categorized as the second-class citizen and the assumption of criminality subtypes, whereas Asian Americans were expected to experience higher rates of microaggressions categorized as the assumption of similarity and exoticization subtypes when compared to other minority groups.

Aim 2. To examine the association between perceived microaggressions and psychological health (i.e., symptoms of anxiety, depression, anger, and problematic alcohol use).

Hypothesis 2. Previous research has established that the experience of overt racism has a negative impact on psychological health (Krieger, 1999; Krieger, Rowley, Hermann, Avery, & Phillips, 1993; Paradies, 2006; Williams & Williams-Morris, 2000). Although few studies have investigated the relation between microaggressions and psychological health, it is hypothesized that effects would be similar. More specifically, the experience of microaggressions was hypothesized to predict higher levels of problematic alcohol use, anxiety, depression, and anger, which is consistent with qualitative reports of the impact of microaggressions (Sue, 2010; Sue, Bucceri, et al., 2007; Sue, Nadal, et al., 2008).

Aim 3. To examine the roles of (a) racial/ethnic identity and (b) social support as potential moderators of the relations between microaggressions and symptoms of anxiety, depression, anger, and problematic alcohol use.

Hypothesis 3a. As highlighted above, findings concerning the moderating role of racial/ethnic identity on the relation between overt racism and mental health have been mixed (Brondolo et al., 2009; Fisher & Shaw, 1999; Lee, 2003; Lee, 2005; Mossakowski, 2003; Noh et al., 1999; Sellers et al., 2006; Wong et al., 2003; Yoo & Lee 2008); however, it was hypothesized that racial/ethnic identity would act as a protective factor against problematic alcohol use, symptoms of anxiety and depression, and anger. This hypothesis stems from previous work that suggests that racial/ethnic identity development can make individuals more aware of, and therefore more prepared to face, discriminatory situations (Fischer & Shaw, 1999). Additionally, the Microaggression Process Model (Sue, 2010) suggests that strong racial/ethnic identity formation can reduce the amount of time spent wondering if an act was microaggressive, allow for reactions that are validating, and counteract feelings of powerlessness, each of which should reduce the negative impact of microaggressions.

Hypothesis 3b. Although the literature on the moderating role of social support has been mixed (Mellor, 2004; Noh & Kaspar, 2003; Priest, et al., 2011; Shorter-Gooden, 2004; Thompson Saunders, 2006; Utsey et al., 2000), it was hypothesized that social support would diminish the relation between microaggressions and anxiety, depression, anger, and problematic alcohol use symptoms, such that greater social support would be associated with better psychological functioning in each of these psychological outcomes. Similar to racial/ethnic identity formation, the Microaggression Process Model (Sue,

2010) suggests that social support may reduce the amount of time that is spent in considering whether an event is microaggressive and may determine how an individual processes events that are perceived as microaggressive.

Aim 4. To explore potential racial/ethnic differences in the main effects and interactions identified during analyses associated with the previous aims.

Hypothesis 4. Given that microaggressions are grounded in the prejudices and stereotypes held about specific racial and ethnic groups (Sue, 2010; Sue, Bucceri, et al., 2007; Sue, Nadal, et al., 2008), it was expected that the experience and impact of microaggressions would differ across groups. Because the variables used in this step were determined by significant results of previous steps, no specific hypotheses about group differences were made.

CHAPTER 2

METHOD

Participants

Participants were 1,031 undergraduate college students enrolled in psychology and business courses in a large urban area in the Mid-Atlantic region. The total sample was 67.5% female, and on average 21.46 years old ($SD=3.69$). As expected, the majority of participants self-identified as White or Caucasian (58.5%), with 13.7% identifying as African-American or Black, 12.9% as Asian or Asian-American, 12.5% as multiracial or “other,” and 7.5% of the sample also identifying as Hispanic or Latino. Participants were considered part of a racial and/or ethnic minority group if they self identified as Asian-American, American Indian, African-American, Native Hawaiian, Middle Eastern, or Hispanic/Latino. The subsample of minority participants ($n=418$) was mostly female (69.1%); $M = 21.51$ ($SD=4.05$) years old; 33.7% African-American or Black, 31.8% Asian or Asian-American, 27.9% multiracial or “other,” and 4.8% Caucasian or White, with a total of 18.4% of the final sample identifying as Hispanic or Latino. Twenty participants identified racially as Caucasian or White and ethnically as Hispanic or Latino, and were thus retained in the final sample.

Procedure

Temple University’s Institutional Review Board (IRB) has continuously approved the current study, along with its informed consent and study procedures. Participants were recruited from the pool of students taking psychology and business courses at a large urban university in the Mid-Atlantic region. To recruit participants, a description of the study was placed on the university’s Sona System research account where interested students could voluntarily sign up for the study. Sona Systems is a web-based data

collection tool that aggregates a list of research opportunities throughout the university. Information included a study description, potential risks and benefits, amount of time needed to complete the study, available compensation, and an option to sign up for a time to participate in the study. Once signed up for the study, participants were asked to provide informed consent, and then completed the battery of questionnaires online. For their time, participants received a single credit towards the research participation requirements for their psychology or business course.

Measures

Racial and Ethnic Microaggressions. The Racial and Ethnic Microaggressions Scale – Checklist (REMS; Nadal, 2011) was used to assess exposure to microaggressions within the past six months. The REMS ($\alpha = .94$) is a 45-item, self-report measure, with six subscales: assumption of inferiority (8 items, $\alpha = .89$, “Someone assumed that I would not be intelligent because of my race”); second-class citizen and assumptions of criminality (7 items, $\alpha = .88$, “Someone avoided walking near me on the street because of my race”); microinvalidations (9 items, $\alpha = .81$, “I was told that I should not complain about race”); exoticization/assumptions of similarity (9 items, $\alpha = .83$, “Someone assumed that I spoke a language other than English”); environmental microaggressions (7 items, $\alpha = .91$, “I observed people of my race portrayed positively on television”); and workplace and school microaggressions (5 items, $\alpha = .81$, “I was ignored at school or work because of my race”). Participants were asked to respond *yes* (1) or *no* (0) to indicate whether they experienced each example of a microaggression in the past 6 months. Items were reverse scored as needed, summed, and total scores were calculated for the total scale and each subscale, with higher scores indicating more experienced

microaggressions. Research has indicated that the total REMS score (α s= .91-.93) and the REMS subscales (α s= .80-.93) are reliable measures of microaggressions in combined samples and samples divided by racial/ethnic groups (Nadal, 2011). The validity of the REMS is supported by its significant correlation with existing measures of racism (Nadal, 2011).

Racial and Ethnic Identity. The Multigroup Ethnic Identity Measure (MEIM; Roberts et al., 1999) is a 12-item, self-report measure that was used to assess racial and ethnic identity. The MEIM consists of two subscales, with one item loading on both subscales—the 6-item Exploration subscale (α =.80), which indexes engagement in experiences or the seeking of information relevant to one’s ethnicity; and the 7-item Affirmation/Belonging subscale (α = .89), which is defined as a sense of belonging to one’s racial or ethnic group. Participants responded to questions such as, “I have a strong sense of belonging to my own ethnic group” and “I think a lot about how my life will be affected by my ethnic group membership” on a scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Average scores for each subscale were calculated with higher scores indicative of more developed racial/ethnic identity. The MEIM has shown to be a reliable (α s ranging from .81-.89 based on self-identified ethnicity, .85 overall) and valid (significant positive correlations with measures of coping, mastery, self-esteem, and optimism; significant negative correlations with loneliness and depression) measure (Roberts et al., 1999). The MEIM has been used extensively in studies investigating the impact of identity formation on the relation between discrimination and psychological health (Lee, 2003, 2005; Mossakowski, 2003).

To further assess racial/ethnic identity, the Multidimensional Inventory of Black Identity (MIBI; Sellers, Rowley, Chavous, Shelton, & Smith, 1997) was also administered. The MIBI is a 56-item self-report measure with three scales—the 8-item Centrality scale ($\alpha = .70$); the Regard scale (12 items; $\alpha = .78$; 6-item Private Regard subscale, and 6-item Public Regard subscale), and the Ideology scale (33 items; $\alpha = .79$; 9-item Assimilation subscale, 9-item Humanist subscale, 9-item Oppressed Minority subscale, and 9-item Nationalist subscale). The Centrality scale assesses the extent that one defines oneself related to race, whereas Regard assesses feelings of positivity and negativity related to one's race. The Ideology scale assesses a variety of beliefs, opinions, and attitudes related to how members of a certain race should act. Consistent with past research with participants from a variety of racial and ethnic groups (e.g., Johnson, Kurpius, Rayle, Arredondo, & Tovar-Gamero, 2005), the questions of the MIBI were altered to replace “Black(s)” with a blank space, and participants were instructed to fill in their self-identified racial or ethnic group in the blank space. Sample questions include, “I am proud to be Black,” and “In general, others respect Black people.” Participants responded to items using a Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) and mean scores were calculated, with higher scores indicative of more developed racial/ethnic identity. The MIBI has been shown to be a reliable (α s ranging between .60 and .79) and valid measure of racial/ethnic identity formation (Sellers et al., 1997).

Social Support. Participants reported on social support using the 12-item Multidimensional Scale of Perceived Social Support (MSPSS; $\alpha = .95$; Zimet, Dahlem, Zimet, & Farley, 1988). Participants were asked to respond to items indicating their level of social support from family (e.g., “My family really tries to help me”); friends (e.g., “I

can talk about my problems with my friends”); and significant others (e.g., “There is a special person who is around when I am in need”) on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Average scores were calculated for each subscale. The MSPSS has been shown to have strong internal reliability ($\alpha = .88$), test-retest reliability ($r = .85$) and construct validity (significant negative correlations with anxiety and depression; Zimet et al., 1988). The MSPSS continues to be widely used in the literature (e.g., Brown, 2008; Chou, 2012; Stevens-Watkins, Perry, Harp, & Oser, 2012).

Alcohol Use. An adapted version of the Rutgers Alcohol Problem Index (RAPI; White & Lobouvie, 1989) was used to assess how often 23 different negative drinking consequences occurred while drinking or because of drinking over the past six months ($\alpha = .93$). Example situations for this psychometrically sound, self-report measure include not being able to do homework or study for a test, getting into fights with people, going to work drunk or high, noticing a change in their personality, or feeling as if they were dependent on alcohol. Responses were rated on a scale from 0 to 4, with 0 = *None*, 1 = *1-2 times*, 2 = *3-5 times*, 3 = *6-10 times*, and 4 = *more than 10 times*. The RAPI has been used to assess the drinking behavior of adolescents and college students extensively, and past research also has used the RAPI to examine the drinking behavior of ethnic minority college students (e.g., Broman, 2005; Orona, Blume, Morera, & Perez, 2007).

Anxiety Symptoms. The 21-item Beck Anxiety Inventory (Beck, Epstein, Brown, & Steer, 1988) was used to assess symptoms of anxiety including somatic and pain-related symptoms ($\alpha = .95$). Items assess how bothered participants were by things like “numbness or tingling,” “feeling restless,” or “feelings of choking” over the past month. Participants responded using a 4-point Likert scale with 0 = *Not at all*; 1 = *Mildly: It did*

not bother me much; 2 = *Moderately: It was very unpleasant, but I could stand it*; and 3 = *Severely: I could barely stand it*; and a total score was calculated. The BAI has been shown to have strong internal reliability and validity, and has been used extensively in the literature, including among students of color (e.g., Blume et al., 2011).

Depression Symptoms. Participants reported symptoms of depression over the past month using the Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996). The BDI-II is a 21-item ($\alpha = .94$) self-report measure that assesses the severity of depressive symptoms such as sadness, loss of pleasure, changes in sleep or appetite, and irritability using a 4-point Likert scale. The item assessing suicidal thoughts and wishes was omitted because participants responded to questions online. The scale is specific for each item, but ranges from 0, to indicate that this symptom has not been an issue, to 3, to indicate significant presence of a symptom. Total scores were calculated for each participant. The BDI-II has been shown to have strong internal reliability ($\alpha = .81$ in nonpsychiatric samples) and validity (Beck, Steer, & Garbin, 1988), and has been used extensively in the literature.

Anger Symptoms. The 15-item, self-report State Anger scale (S-Anger) from the State-Trait Anger Expression Inventory (STAXI-2) was used to assess current symptoms of anger and anger intensity (Spielberger, 1999). The S-Anger scale consists of three 5-item scales (α s = .91-.92) including feeling angry (e.g., “I felt furious”), feeling like expressing verbal anger (e.g., “I felt like yelling at somebody), and feeling like expressing physical anger (e.g., “I felt like breaking things”). Participants used a 4-point Likert scale with 1 = *Not at all* to 4 = *Very much so* to indicate how much they had felt that way over the past week. The S-Anger scale of the STAXI-2 (STAXI-SAS) has been

shown to have good internal reliability ($\alpha = .73-.93$) and strong convergent validity when compared with other measures of anger (Spielberger, 1999).

Analyses

Preliminary Analyses

Data were analyzed using SPSS/PASW version 21. Descriptive statistics and correlation matrices were completed to identify any problems with distributions (e.g., outliers, skewness, kurtosis) or multicollinearity among the variables. Two outcome variables, the Rutgers Alcohol Problem Index and the Beck Depression Inventory, were positively skewed. To address this skew, both variables were transformed using a square root function. The pattern of missing data was analyzed as well. Results indicated that 3.40% of values were missing and 40.43% of participants had at least some missing data. No significant differences were found between participants with complete versus incomplete data for the REMS total and subscale scores (t s range from -1.18 to 1.33, p s range from .13 to .65, Cohen's d s range from .01 to .13); measures of racial and ethnic identity formation (t s range from -.56 to 1.82, p s range from .16 to .96, Cohen's d range from .03 to .22); social support ($t = .45, p = .63, \text{Cohen's } d = .05$); or any problematic alcohol use, anxiety, depression, or anger (t s range from -.75 to .41, p s range from .30 to .98, Cohen's d s range from .03 to .09). Additionally, Little's Missing Completely at Random (MCAR) test was performed in SPSS to examine whether there were any patterns to the missing data. The results were non-significant, indicating there were no patterns to the missing data ($\chi^2 = 1294.49, df = 4590, p = .999$). As such, listwise deletion was used for all analyses. To account for multiple comparisons, the Bonferroni procedure was used, where the significance value of a single hypothesis test (0.05) was divided by

the total number of tests performed (168). Thus, *p*-values were considered significant only if they were less than or equal to 0.0003 after the Bonferroni correction.

Aim 1

Independent sample *t*-tests were performed to compare the average rates of microaggressions, as measured by the REMS total and subscale scores, experienced by minority versus non-minority participants. Then, a one-way MANOVA was performed to assess for mean differences in reported rates of microaggressions experienced across racial/ethnic group. If MANOVAs were significant, univariate ANOVAs and Tukey post-hoc tests were used to test whether there were racial/ethnic differences for each individual REMS subscale and the total score.

Aim 2

It was initially proposed that structural equation modeling would be used to examine the relations among the REMS subscales and symptoms of anxiety, depression, anger, and problematic alcohol use concurrently. Models run using Mplus 7.1 (Muthén & Muthén 1998-2014) were unable to converge. Attempts were made to obtain convergence and improve model fit by correlating predictor variables, removing problematic predictor variables, examining each outcome individually, and transforming outcome variables, but model convergence was not obtained and the number of iterations that were required to achieve adequate model identification resulted in a model that deviated substantially from the original conceptual model. Given the extensive modifications and divergence from the proposed conceptual model, I elected to use a more streamlined modeling approach. Specifically, hierarchical linear regressions were performed to look at the ability of (a) the REMS total score and (b) the REMS subscale scores to predict each outcome

independently. Although it was initially proposed that age and sex would be included in all analyses as control variables, they were excluded from all final analyses, as neither variable was significant in any model or changed the direction or strength of any main effects.

Aim 3

Hierarchical linear regressions were used to examine potential moderators of the relation between microaggressions and psychological symptoms. Interaction terms were created by multiplying variables for the predictors (microaggression total score and microaggression subscales) and the potential moderators (racial identity subscales and social support). To test for moderation, regressions predicting each outcome variable (problematic alcohol use, anxiety, depression, and anger) were conducted with the *z*-scored predictor and *z*-scored moderator variable entered into step one, and the interaction term derived from the *z*-scored predictors entered into step two. As described above, although it was proposed that age and sex would be included as control variables, these variables were excluded from final analyses based on their lack of significance in the main effect analyses.

For significant interaction terms, post-hoc probing using procedures described by Holmbeck (2002) was performed. To accomplish this, two new conditional moderator variables (one *SD* above and below the mean of the predictor) were created and used to make new interaction terms. Slopes for the significant interactions were found by running two post-hoc regressions, each of which involved simultaneous entry of the microaggression variable, one of the conditional moderator variables, and the new interaction term. From these analyses, unstandardized betas (slopes) and constants

(intercepts) were derived for the microaggression variables, and significant interactions were graphed.

Aim 4

It was proposed that multiple group modeling would be used to explore whether there were significant differences across racial/ethnic groups for the main effect and moderation analyses performed previously. As outlined in Aim 2, structural equation modeling could not be used because of difficulty obtaining model convergence despite a variety of modifications to the variables and model. Instead, correlations between significant moderators and predictor variables were calculated for each racial/ethnic group. Fisher's (1915) r to z -transformations were then used to compare these correlations to identify significant differences. Significant differences in the correlation between moderator and predictor variables across groups would suggest differences in the moderating relation between those variables based on race/ethnicity.

CHAPTER 3

RESULTS

Preliminary Analyses

Means, standard deviations, and *n*'s for the study variables for minority and non-minority participants are presented in Table 1. Independent sample *t*-tests were conducted to compare minority and non-minority participants on the dependent variables. Results of the independent sample *t*-tests for the REMS total score and subscales are reported under Aim 1. No significant differences based on the Bonferroni-corrected *p*-value were found between minority and non-minority participants for any other variables (all *ts* < 6.57, *ps* > .015, Cohen *ds* < .25).

	Minority Participants		Non-Minority Participants	
	<i>n</i>	Mean (<i>SD</i>)	<i>n</i>	Mean (<i>SD</i>)
Racial and Ethnic Microaggressions				
Total Score	387	21.53 (10.44)	571	12.43 (7.70)
Assumption of Inferiority	387	2.76 (2.90)	571	1.00 (1.60)
2 nd Class Citizen/Criminality	387	2.03 (2.48)	571	0.65 (1.36)
Microinvalidations	387	3.95 (2.95)	571	3.64 (2.53)
Exoticization/Similarity	387	4.90 (2.69)	571	2.32 (2.27)
Environmental Microaggressions	387	6.60 (1.08)	571	4.31 (2.66)
Work and School Microaggressions	387	1.28 (1.67)	571	0.51 (1.07)
Multigroup Ethnic Identity Measure				
Exploration	383	17.79 (3.14)	530	15.05 (3.28)
Affirmation/Belonging	383	22.75 (3.85)	530	20.76 (3.65)
Multidimensional Inventory of Black Identity				
Centrality	361	4.41 (0.99)	455	3.63 (1.04)
Regard	361	6.39 (1.14)	455	6.85 (1.12)
Ideology	361	4.51 (0.71)	605	4.22 (0.63)
Multidimensional Scale of Perceived Social Support	413	5.62 (1.21)	605	5.77 (1.19)
Beck Anxiety Inventory	411	15.91 (13.37)	605	18.05 (13.62)
Beck Depression Inventory	387	11.16 (10.67)	587	11.61 (10.52)
Beck Depression Inventory (Square Root)	387	2.88 (1.69)	587	2.97 (1.68)
State-Trait Anger Expression Inventory - State Anger	411	28.26 (12.27)	602	29.06 (11.01)
Rutgers Alcohol Problem Index	394	5.90 (8.93)	590	8.68 (9.97)
Rutgers Alcohol Problem Index (Square Root)	394	1.74 (1.70)	590	2.38 (1.74)

Bivariate correlations among microaggression measures and the moderating and outcome variables are reported in Table 2. For the microaggression total and subscale

scores, higher values indicated more reported microaggressions. Higher values for moderator variables indicated more developed racial/ethnic identity formation or greater social support.

As expected, all REMS subscale scores were significantly correlated with each other. There were numerous negative correlations between the REMS subscales and the potential moderating variables of Social Support and the MIBI Regard subscale, suggesting that higher levels of reported microaggressions were associated with lower levels of support and an index of racial identity formation (MIBI Regard). There were also numerous positive correlations between the REMS subscales and other measures of racial identity formation (MEIM Exploration and Affirmation/Belonging, MIBI Centrality), suggesting that higher reported rates of microaggressions were associated with more developed racial identity in these domains. All outcome variables were also positively correlated with the majority of the REMS subscales suggesting that higher rates of microaggressions are associated with higher levels of anxiety, depression, anger, and problematic alcohol use. The Environmental REMS subscale was negatively correlated with anxiety, anger, and problematic alcohol use, suggesting the opposite relation among these variables.

Table 2. *Bivariate Correlations among Microaggressions Measures and Racial Identity, Social Support, Anxiety, Depression, Anger, and Alcohol Use Variables*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) REMS Total	-	.87***	.83***	.68***	.80***	.42***	.83***
(2) REMS Inferiority		-	.79***	.51***	.60***	.22***	.77***
(3) REMS 2 nd Class/Criminal			-	.50***	.55***	.21***	.78***
(4) REMS Microinvalidation				-	.46***	-.06*	.53***
(5) REMS Exoticization/ Similarity					-	.23***	.58***
(6) REMS Environmental Micros						-	.17***
(7) REMS Work/School Micros							-
(8) MEIM Exploration	.35***	.27***	.25***	.16***	.40***	.16***	.24***
(9) MEIM Affirmation/Belonging	.16***	.12***	.08*	.03	.23***	.10**	.09**
(10) MIBI Centrality	.26***	.21***	.18***	.06	.28***	.23***	.16***
(11) MIBI Regard	-.33***	-.32***	-.33***	-.12***	-.16***	-.26***	-.31***

(12) MIBI Ideology	.02	.01	.03	.02	.09**	-.01	-.04
(13) MSPSS Social Support	-.24***	-.14***	-.26***	-.11**	-.17***	-.07	-.25***
(14) Beck Anxiety Inventory	.13***	.11**	.10**	.21***	.17***	-.15***	.16***
(15) Beck Depression Inventory	.17***	.15***	.12***	.18***	.18***	-.06	.19***
(16) BDI (Square Root)	.22***	.17**	.15**	.18**	.28**	-.07	.19**
(17) STAXI SAS	.17***	.15***	.12*	.18***	.18***	-.11*	.15**
(18) Rutgers Alcohol Problem Index	.19***	.18**	.20***	.21***	.16***	-.10***	.20***
(19) RAPI (Square root)	.35**	.24**	.30**	.27**	.30**	-.07	.30**
<i>n</i>	958	1011	1017	1014	1001	1009	995
<i>M</i>	16.11	1.71	1.20	3.80	3.41	5.24	0.82
<i>SD</i>	9.96	2.37	1.99	2.71	2.75	2.43	1.39

Note. REMS = Racial and Ethnic Minority Scale, MEIM = Multigroup Ethnic Identity Measure, MIBI = Multidimensional Inventory of Black Identity, BDI= Beck Depression Inventory MSPSS = Multidimensional Scale of Perceived Social Support, STAXI SAS v= State-Trait Anger Expression Inventory – State Anger Scale, RAPI = Rutgers Alcohol Problem Index.
* $p < .05$, ** $p < .01$, *** $p < .001$.

Bivariate correlations among the moderating and outcome variables are reported in Table 3. For all outcome variables, higher scores indicated greater impairment. The subscales of the MEIM were positively correlated with each other, as were the MIBI subscales. All subscales of the MEIM were positively correlated with the subscales of the MIBI, except for scales assessing exploration and positive regard towards one's racial/ethnic group. Social support was positively correlated with all measures of racial/ethnic identity formation except MEIM exploration. Significant negative correlations were found between measures of racial/ethnic identity and social support for each outcome variable (anxiety, depression, anger, and problematic alcohol use).

	(1)	(2)	(3)	(4)	(5)	(6)
(1) MEIM Exploration	-	.71***	.49***	.04	.28***	.05
(2) MEIM Affirmation/ Belonging		-	.57***	.31***	.32***	.25***
(3) MIBI Centrality			-	.22***	.32***	.09**
(4) MIBI Regard				-	.37***	.40***
(5) MIBI Ideology					-	.39***
(6) MSPSS Social Support						-
(7) Beck Anxiety Inventory	-.01	-.08*	-.03	-.02	.05	-.12***
(8) Beck Depression Inventory	-.01	-.13***	-.04	-.14***	-.06	-.31***
(9) BDI (Square Root)	.01	-.15**	-.10*	-.16**	-.08	-.24***
(10) STAXI – SAS	.02	-.05	.01	-.07*	.03	-.16***

(11) Rutgers Alcohol Problem Index	-.04	-.09**	-.06	-.10**	.22***	-.22***
(12) RAPI (Square Root)	-.08	-.10	-.11*	-.15**	-.23***	-.23***
<i>n</i>	975	928	991	962	827	1018
<i>M</i>	16.01	21.61	3.93	6.67	4.35	5.71
<i>SD</i>	3.52	1.39	3.54	3.86	1.11	1.16
<i>Note.</i> MEIM = Multigroup Ethnic Identity Measure, MIBI = Multidimensional Inventory of Black Identity, BDI= Beck Depression Inventory MSPSS = Multidimensional Scale of Perceived Social Support, STAXI – SAS = State-Trait Anger Expression Inventory – State Anger Scale, RAPI = Rutgers Alcohol Problem Index.						
* $p < .05$, ** $p < .01$, *** $p < .001$.						

Bivariate correlations among the outcome variables are reported in Table 4.

Anxiety, depression, anger, and problematic alcohol use were all significantly positively correlated, suggesting that higher scores on any given outcome variable are associated with higher scores on all other outcome variables.

	(1)	(2)	(3)	(4)	(5)	(6)
(1) Beck Anxiety Inventory	-	.61***	.58***	.52***	.22***	.26***
(2) Beck Depression Inventory		-	.94***	.55***	.24***	.24***
(3) BDI (Square Root)			-	.53***	.24***	.24***
(4) STAXI – SAS				-	.25***	.25***
(5) Rutgers Alcohol Problem Index					-	.92***
(6) RAPI (Square Root)						-
<i>n</i>	1016	974	974	1013	984	984
<i>M</i>	17.18	11.43	2.93	28.74	7.57	2.12
<i>SD</i>	13.55	10.57	1.68	11.54	9.66	1.75
<i>Note.</i> BDI = Beck Depression Inventory, STAXI – SAS = State-Trait Anger Expression Inventory – State Anger Scale, RAPI = Rutgers Alcohol Problems Index						

Aim 1: Examination of Microaggression Rates Across Groups

Independent sample *t*-tests were used to compare the level of microaggressions, as measured using the REMS total score and subscales, experienced by minority and non-minority participants. Means and standard deviation values for the REMS total and subscale scores for minority and non-minority participants are reported above in Table 1, and for ease of review, below in Table 5. As predicted, minority participants reported experiencing more total microaggressions (Table 5). Additionally, minority participants

reported higher rates on the Assumption of Inferiority subscale, 2nd Class Citizen/Assumption of Criminality subscale, Exoticization/Assumption of Similarity subscale, Environmental Microaggressions subscale, and the Work and School Microaggressions subscale when compared to non-minority participants. The only non-significant comparison was found for the Microinvalidations subscale.

Table 5. *Descriptive Statistics for the Racial and Ethnic Microaggression Variables for Minority Study Participants and Non-Minority Study Participants with Independent t-test results*

	Minority Participants		Non-Minority Participants		Independent Sample <i>t</i> tests		
	<i>n</i>	Mean (<i>SD</i>)	<i>n</i>	Mean (<i>SD</i>)	<i>t</i>	<i>p</i> -value	Cohen's <i>d</i>
REMS							
Total Score	387	21.53 (10.44)	571	12.43 (7.70)	-15.51	<.0003	1.02
Assumption of Inferiority	387	2.76 (2.90)	571	1.00 (1.60)	-12.23	<.0003	0.79
2 nd Class Citizen/Criminality	387	2.03 (2.48)	571	0.65 (1.36)	-10.98	<.0003	0.72
Microinvalidations	387	3.95 (2.95)	571	3.64 (2.53)	-1.74	.082	0.11
Exoticization/Similarity	387	4.90 (2.69)	571	2.32 (2.27)	-15.92	<.0003	1.05
Environmental	387	6.60 (1.08)	571	4.31 (2.66)	-16.57	<.0003	1.06
Work and School	387	1.28 (1.67)	571	0.51 (1.07)	8.85	<.0003	0.57

Note. Cohen *d* effect sizes small = 0.20, medium = 0.50, large = 0.80; significant results using the Bonferroni-corrected *p* value are in bold.

A one-way MANOVA was run to determine the effect of self-identified racial/ethnic group on reported experience of microaggressions. The REMS total score and all subscales scores were compared for the following four groups: Asian or Asian-American, Black or African-American, Hispanic, and Multiracial. Means and standard deviation scores for the REMS total score and each subscale are reported by group below (Table 6). There was a significant difference among racial/ethnic groups for the combined dependent variables (all microaggression scales). Follow-up univariate ANOVAs showed that Assumption of Inferiority, 2nd Class Citizen/Assumption of Criminality, Exoticization/Assumption of Similarity, and Work and School Place Microaggressions were significantly different among participants of different racial/ethnic groups. Tukey post-hoc tests showed that for the Assumption of Inferiority and 2nd Class Citizen/Assumption of Criminality subscales, Black/African-American

participants reported higher rates than Asians/Asian-Americans, Hispanics, and Multiracial participants. There were no other significant differences among groups for the Assumption of Inferiority and 2nd Class Citizen/Assumption of Criminality subscales. On the Exoticization/Assumption of Similarity subscale, Asian/Asian-American participants reported higher rates than Black/African-American participants; there were no other group differences. Finally, on the Work and School Place subscale, Black/African-American participants reported higher rates than Hispanic participants; there were no other group differences.

Table 6. Results of Between-Subject Effects for the Racial and Ethnic Microaggression Scale (REMS) Total Score and Subscales

	<i>F</i>	<i>p</i> -value	Wilkes Λ	η^2			
All REMS Subscales	14.46	<.0003	0.54	0.19			
	(1) Asian <i>n</i> =133	(2) Black <i>n</i> =141	(3) Hispanic <i>n</i> =70	(4) Multi <i>n</i> =74	<i>F</i>	<i>p</i> -value	η^2
REMS Total Score	20.02 (9.50)	24.38 (11.48)	19.25 (9.85)	21.00 (9.41)	5.42	.001	0.06
Assumptions of Inferiority 2 significantly higher than 1, 3, and 4	1.67 (2.44)	4.20 (2.89)	2.29 (2.75)	2.29 (2.71)	18.84	<.0003	0.15
2 nd -Class Citizen/Criminality 2 significantly higher than 1, 3, and 4	1.34 (2.07)	3.17 (2.70)	1.11 (1.96)	1.73 (2.10)	18.91	<.0003	0.11
Microinvalidations	3.21 (2.88)	4.63 (2.92)	3.69 (2.73)	4.39 (2.95)	5.67	.001	0.05
Exoticization/Similarity 1 significantly higher than 2	5.96 (2.30)	4.03 (2.72)	4.78 (2.73)	4.86 (2.64)	11.38	<.0003	0.08
Environmental	6.80 (0.62)	6.50 (1.19)	6.46 (1.44)	6.56 (1.18)	1.86	.135	0.00
Workplace and School 2 significantly higher than 3	1.05 (1.58)	1.78 (1.81)	0.73 (1.30)	1.24 (1.54)	8.16	<.0003	0.02

Note. REMS = Racial and Ethnic Microaggression Scale; η^2 effect sizes for one-way MANOVA and ANOVA small = 0.01, medium = 0.06, large = 0.14. Significant results based on the Bonferroni-corrected *p* value are in bold.

Aim 2: Examination of Impact of Microaggressions on Psychological Health

Regression analyses were conducted to examine the relations among the experience of microaggressions and problematic alcohol use, anxiety, depression, and

anger scores (Table 7). Results reveal that the REMS total score predicted problematic alcohol use, anxiety, and depression. The REMS total score did not predict anger.

	B	SE B	β	<i>t</i>	<i>p</i> -value	<i>R</i> ²
RAPI (Square Root)	.06	.01	.35	7.06	<.0003	.12
Beck Anxiety Inventory	.36	.06	.28	5.68	<.0003	.08
BDI (Square Root)	.04	.01	.22	4.34	<.0003	.05
STAXI – SAS	.20	.06	.17	3.38	.001	.03

Note. REMS = Racial and Ethnic Microaggression Scale, RAPI = Rutgers Alcohol Problem Index, BDI = Beck Depression Inventory, STAXI – SAS = State-Trait Anger Expression Scale – State Anger Scale. Significant results based on the Bonferroni-corrected *p* value are in bold.

Next, the Assumption of Inferiority, 2nd Class Citizen/Criminality, Microinvalidations, Exoticization/Assumption of Similarity, Environmental, and Work/School Place microaggression subscales were concurrently included in four regression analyses, with each outcome considered separately (problematic alcohol use, anxiety, depression, and anger). The prediction models for problematic alcohol use, anxiety, and depression, were statistically significant (Table 8), but none of the individuals REMS subscale scores met criteria for significance established by the Bonferroni correction (Table 9).

	<i>F</i>	<i>p</i> -value	<i>R</i> ²
RAPI (Square Root)	10.10	<.0003	.15
Beck Anxiety Inventory	8.68	<.0003	.12
BDI (Square Root)	5.44	<.0003	.08
STAXI – SAS	3.62	.002	.06

Note. REMS = Racial and Ethnic Microaggression Scale, RAPI = Rutgers Alcohol Problem Index, BDI = Beck Depression Inventory, STAXI – SAS = State-Trait Anger Expression Scale – State Anger Scale. Significant results based on the Bonferroni-corrected *p* value are in bold.

Although not significant, examination of individual predictors (Table 9) suggests that for problematic alcohol use, the overall model significance seemed to be driven by higher levels on the Exoticization/Assumption of Similarity and 2nd Class Citizen/Criminality subscales. For anxiety, the overall model significance appeared to be

driven by Exoticization/Assumption of Similarity and Microinvalidations. The prediction model for depressive symptoms seemed to be driven by the Exoticization/Assumption of Similarity.

	B	SE B	β	<i>t</i>	<i>p</i> -value
<i>Rutgers Alcohol Problem Index (Square Root)</i>					
Assumption of Inferiority	-.06	.05	-.10	-1.18	.230
2 nd Class Citizen/Criminality	.14	.06	.20	2.33	.020
Microinvalidations	.05	.04	.09	1.34	.180
Exoticization/Similarity	.11	.04	.17	2.98	.003
Environmental	-.08	.08	-.05	-.98	.327
Work/School Place	.09	.09	.09	.95	.345
<i>Beck Anxiety Inventory</i>					
Assumption of Inferiority	-.38	.37	-.08	-1.01	.313
2 nd Class Citizen/Criminality	-.24	.46	-.05	-.53	.599
Microinvalidations	.74	.30	.17	2.50	.013
Exoticization/Similarity	1.01	.29	.21	3.52	.0004
Environmental	-.71	.59	-.06	-1.19	.235
Work/School Place	1.07	.72	.14	1.49	.137
<i>Beck Depression Inventory (Square Root)</i>					
Assumption of Inferiority	-.01	.05	-.01	-.15	.88
2 nd Class Citizen/Criminality	-.03	.06	-.04	-.49	.63
Microinvalidations	.01	.04	.02	.28	.78
Exoticization/Similarity	.14	.04	.23	3.80	.0004
Environmental	-.10	.08	-.07	-1.29	.199
Work/School Place	.12	.10	.12	1.23	.221
<i>STAXI – SAS</i>					
Assumption of Inferiority	.170	.36	.04	.47	.636
2 nd Class Citizen/Criminality	-.47	.44	-.10	-1.09	.278
Microinvalidations	.24	.29	.06	.85	.398
Exoticization/Similarity	.50	.27	.11	1.82	.069
Environmental	-1.18	.57	-.11	-2.07	.039
Work/School Place	.89	.69	.12	1.30	.196
<i>Note.</i> REMS = Racial and Ethnic Microaggression Scale, STAXI – SAS = State-Trait Anger Expression Scale – State Anger Scale, Outcome variable italicized.					

Aim 3: Exploration of Potential Moderating Variables Including Racial Identity Formation and Social Support

Racial/Ethnic identity formation, as indexed by subscales of the MEIM and MIBI, as well as social support, were examined as potential moderators of the relation between microaggressions and problematic alcohol use, anxiety, depression, and anger. For all analyses, standardized versions of the moderating and microaggression variables were entered into step one, and an interaction term incorporating the standardized values was

entered into step two. Significant moderating results were found for the relation between microaggressions and problematic alcohol use (Table 10), indicating that the association between the experience of microaggressions and problematic alcohol use is conditional on values of racial/ethnic identity formation and social support. There were no significant moderations for the relations between microaggressions and anxiety symptoms (Table 11), depression symptoms (Table 12), or anger (Table 13). Some standardized beta values reported below have a magnitude greater than one, which can legitimately occur with variables that evidence some skew and when similar variables are concurrently considered in the same regression equation (Jöreskog, 1999).

Table 10. *Racial/Ethnic Identity Formation and Social Support as Moderators of the Relation Between Microaggressions and Problematic Alcohol Use (Square Root)*

	B	SE B	β	<i>t</i>	<i>p</i>	<i>R</i> ²
<i>MEIM Exploration x REMS</i>						
REMS Total Score	-1.11	.53	-.66	-2.10	.036	.16
Assumption of Inferiority	-.97	.53	-.57	-1.83	.068	.08
2 nd Class Citizen/Criminality	-1.30	.52	-.77	-2.49	.013	.11
Microinvalidations	-.82	.52	-.48	-1.57	.118	.09
Exoticization/Similarity	-.95	.49	-.56	-1.94	.053	.11
Environmental	.27	.55	.16	.49	.63	.01
Work/School Place	-1.18	.54	-.70	-2.20	.029	.12
<i>MEIM Affirmation x REMS</i>						
REMS Total Score	-1.77	.53	-1.04	-3.32	.001	.17
Assumption of Inferiority	-1.24	.52	-.72	-2.37	.018	.09
2 nd Class Citizen/Criminality	-1.41	.51	-.83	-2.75	.006	.12
Microinvalidations	-1.02	.52	-.60	-1.95	.052	.09
Exoticization/Similarity	-1.52	.52	-.89	-2.92	.004	.12
Environmental	.21	.78	.13	.27	.79	.02
Work/School Place	-1.49	.52	-.87	-2.84	.005	.12
<i>MIBI Centrality x REMS</i>						
REMS Total Score	-1.32	.46	-.78	-2.89	.004	.17
Assumption of Inferiority	-.84	.42	-.49	-1.99	.047	.09
2 nd Class Citizen/Criminality	-.77	.40	-.45	-1.91	.057	.12
Microinvalidations	-.44	.41	-.26	-1.07	.284	.09
Exoticization/Similarity	-2.00	.40	-1.17	-5.00	<.0003	.16
Environmental	-.21	.55	-.12	-.38	.71	.02
Work/School Place	-1.10	.42	-.64	-2.64	.009	.13
<i>MIBI Regard x REMS</i>						
REMS Total Score	-1.72	.48	-1.00	-3.60	<.0003	.16
Assumption of Inferiority	-1.08	.48	-.63	-2.24	.025	.07
2 nd Class Citizen/Criminality	-1.29	.49	-.75	-2.64	.009	.11
Microinvalidations	-.67	.47	-.39	-1.41	.159	.09
Exoticization/Similarity	-2.02	.48	-1.17	-4.25	<.0003	.14
Environmental	-.86	.71	-.50	-1.22	.223	.03
Work/School Place	-.92	.46	-.53	-2.00	.046	.11
<i>MIBI Ideology x REMS</i>						
REMS Total Score	-2.02	.49	-1.16	-4.14	<.0003	.22
Assumption of Inferiority	-2.10	.54	-1.21	-3.87	<.0003	.15
2 nd Class Citizen/Criminality	-2.07	.52	-1.21	-4.02	<.0003	.19
Microinvalidations	-2.14	.53	-1.23	-4.07	<.0003	.17
Exoticization/Similarity	-2.61	.55	-1.47	-4.77	<.0003	.19
Environmental	-1.15	.95	-.64	-1.21	.227	.06
Work/School Place	-1.91	.48	-1.10	-3.96	<.0003	.18
<i>MSPSS Total Support x REMS</i>						
REMS Total Score	-.96	.33	-.56	-2.91	.004	.17
Assumption of Inferiority	-1.15	.35	-.67	-3.26	.001	.12
2 nd Class Citizen/Criminality	-1.05	.34	-.62	-3.09	.002	.14
Microinvalidations	-.76	.35	-.44	-2.19	.029	.13
Exoticization/Similarity	-1.34	.36	-.77	-3.69	<.0003	.15
Environmental	-.77	.61	-.45	-1.25	.212	.07
Work/School Place	-.67	.32	-.40	-2.12	.034	.13

Note. REMS = Racial and Ethnic Microaggression Scale, MEIM = Multigroup Ethnic Identity Measure, MIBI = Multidimensional Inventory of Black Identity, MSPSS = Multidimensional Scale of Perceived Social Support. Interaction terms are italicized. Significant results based on the Bonferroni-corrected *p* value are in bold.

Table 11. *Racial/Ethnic Identity Formation and Social Support as Moderators of the Relation Between Microaggressions and Anxiety Symptoms*

	B	SE B	β	<i>t</i>	<i>p</i>	<i>R</i> ²
<i>MEIM Exploration x REMS</i>						
REMS Total Score	-9.79	3.90	-.74	-2.51	.013	.09
Assumption of Inferiority	-11.49	3.83	-.86	-3.00	.003	.06
2 nd Class Citizen/Criminality	-9.16	3.87	-.68	-2.37	.018	.05
Microinvalidations	-7.74	3.87	-.57	-2.00	.046	.09
Exoticization/Similarity	-6.21	3.72	-.46	-1.67	.096	.10
Environmental	-4.71	4.12	-.35	-1.14	.254	.01
Work/School Place	-7.90	3.76	-.60	-2.10	.036	.08
<i>MEIM Affirmation x REMS</i>						
REMS Total Score	-5.65	4.21	-.43	-1.34	.180	.08
Assumption of Inferiority	-5.68	4.02	-.44	-1.41	.159	.05
2 nd Class Citizen/Criminality	-6.53	4.07	-.49	-1.60	.110	.05
Microinvalidations	-3.57	4.03	-.27	-.89	.376	.09
Exoticization/Similarity	-5.96	4.03	-.45	-1.48	.140	.11
Environmental	-16.57	5.91	-1.27	-2.80	.005	.03
Work/School Place	-3.92	4.04	-.30	-.97	.333	.07
<i>MIBI Centrality x REMS</i>						
REMS Total Score	-.14	3.73	-.01	-.04	.971	.08
Assumption of Inferiority	-1.61	3.36	-.12	-.48	.632	.03
2 nd Class Citizen/Criminality	2.48	3.34	.18	.74	.459	.04
Microinvalidations	-2.64	3.23	-.20	-.82	.414	.08
Exoticization/Similarity	-5.02	3.21	-.37	-1.56	.119	.10
Environmental	-2.24	4.25	-.17	-.53	.599	.01
Work/School Place	1.76	3.32	.13	.53	.595	.06
<i>MIBI Regard x REMS</i>						
REMS Total Score	-.60	3.74	-.05	-.16	.891	.08
Assumption of Inferiority	-3.25	3.65	-.25	-.89	.374	.04
2 nd Class Citizen/Criminality	-3.02	3.81	-.24	-.79	.429	.04
Microinvalidations	-6.46	3.53	-.49	-1.83	.068	.09
Exoticization/Similarity	-3.22	3.62	-.24	-.89	.374	.10
Environmental	5.98	5.47	.45	1.10	.274	.02
Work/School Place	.30	3.47	.02	.09	.931	.06
<i>MIBI Ideology x REMS</i>						
REMS Total Score	-4.81	3.94	-.36	-1.22	.22	.08
Assumption of Inferiority	-10.02	4.10	-.75	-2.44	.015	.05
2 nd Class Citizen/Criminality	-6.35	4.05	-.47	-1.57	.118	.04
Microinvalidations	-3.41	3.94	-.25	-.87	.387	.08
Exoticization/Similarity	-5.21	3.98	-.38	-1.31	.191	.09
Environmental	-10.34	6.66	-.74	1.55	.121	.02
Work/School Place	-4.21	3.76	-.32	-1.12	.263	.06
<i>MSPSS Total Support x REMS</i>						
REMS Total Score	-1.03	2.61	-.08	-.40	.693	.09
Assumption of Inferiority	-1.54	2.77	-.12	-.56	.579	.06
2 nd Class Citizen/Criminality	-2.40	2.73	-.18	-.86	.380	.05
Microinvalidations	-5.05	2.69	-.38	-1.88	.061	.11
Exoticization/Similarity	-4.93	2.85	-.37	-1.73	.084	.11
Environmental	-4.90	4.76	-.37	-1.03	.304	.05
Work/School Place	-1.03	2.45	-.08	-.42	.675	.06

Note. REMS = Racial and Ethnic Microaggression Scale, MEIM = Multigroup Ethnic Identity Measure, MIBI = Multidimensional Inventory of Black Identity, MSPSS = Multidimensional Scale of Perceived Social Support. Interaction terms are italicized.

Table 12. *Racial/Ethnic Identity Formation and Social Support as Moderators of the Relation Between Microaggressions and Depressive Symptoms (Square Root)*

	B	SE B	β	<i>t</i>	<i>p</i>	<i>R</i> ²
<i>MEIM Exploration x REMS</i>						
REMS Total Score	-.10	.57	-.06	-.18	.857	.04
Assumption of Inferiority	-.65	.56	-.39	-1.17	.243	.03
2 nd Class Citizen/Criminality	-.50	.57	-.29	-.87	.384	.02
Microinvalidations	.56	.55	-.33	-1.02	.310	.03
Exoticization/Similarity	-.08	.51	-.05	-.15	.878	.08
Environmental	-.03	.54	-.02	-.06	.954	.01
Work/School Place	.24	.56	.14	.42	.676	.04
<i>MEIM Affirmation x REMS</i>						
REMS Total Score	-1.25	.58	-.74	-2.17	.030	.08
Assumption of Inferiority	-1.32	.53	-.78	-2.49	.013	.07
2 nd Class Citizen/Criminality	-1.38	.54	-.81	-2.57	.011	.06
Microinvalidations	-.96	.54	-.56	-1.77	.077	.06
Exoticization/Similarity	-1.32	.53	-.77	-2.49	.013	.11
Environmental	-.08	.77	-.05	-.10	.918	.03
Work/School Place	-.37	.55	-.22	-.67	.505	.06
<i>MIBI Centrality x REMS</i>						
REMS Total Score	-.21	.51	-.12	-.40	.686	.06
Assumption of Inferiority	-.61	.44	-.35	-1.37	.172	.04
2 nd Class Citizen/Criminality	-.10	.44	-.06	-.23	.822	.04
Microinvalidations	-.47	.43	-.27	1.08	.283	.04
Exoticization/Similarity	-.64	.42	-.37	-1.52	.130	.09
Environmental	-.29	.54	-.18	-.54	.587	.02
Work/School Place	.17	.46	.10	.37	.713	.04
<i>MIBI Regard x REMS</i>						
REMS Total Score	-.13	.49	-.08	-.27	.788	.054
Assumption of Inferiority	-.66	.48	-.39	-1.37	.173	.04
2 nd Class Citizen/Criminality	-.76	.51	-.44	-1.51	.132	.04
Microinvalidations	-.63	.47	-.37	-1.33	.186	.05
Exoticization/Similarity	.18	.48	.10	.37	.709	.09
Environmental	-.17	.7-	-.10	-.24	.814	.04
Work/School Place	.18	.46	.11	.39	.697	.04
<i>MIBI Ideology x REMS</i>						
REMS Total Score	-1.03	.51	-.59	-2.04	.043	.07
Assumption of Inferiority	-1.83	.55	-1.07	-3.36	.001	.06
2 nd Class Citizen/Criminality	-1.48	.53	-.86	-2.78	.006	.05
Microinvalidations	-1.18	.54	-.68	-2.17	.031	.05
Exoticization/Similarity	-.47	.56	-.27	-.84	.400	.09
Environmental	-.18	.95	-.11	-.19	.847	.01
Work/School Place	-.75	.50	-.44	-1.50	.134	.04
<i>MSPSS Total Support x REMS</i>						
REMS Total Score	-.33	.34	-.20	-.99	.325	.10
Assumption of Inferiority	-.69	.35	-.41	-1.97	.049	.09
2 nd Class Citizen/Criminality	-.78	.35	-.46	-2.25	.025	.09
Microinvalidations	-.51	.35	-.31	-1.46	.144	.10
Exoticization/Similarity	-.32	.36	-.19	-.89	.375	.12
Environmental	.21	.60	.13	.35	.729	.08
Work/School Place	-.28	.32	-.17	-.89	.376	.07

Note. REMS = Racial and Ethnic Microaggression Scale, MEIM = Multigroup Ethnic Identity Measure, MIBI = Multidimensional Inventory of Black Identity, MSPSS = Multidimensional Scale of Perceived Social Support. Interaction terms are italicized.

Table 13. *Racial/Ethnic Identity Formation and Social Support as Moderators of the Relation Between Microaggressions and Anger*

	B	SE B	β	<i>t</i>	<i>p</i>	<i>R</i> ²
<i>MEIM Exploration x REMS</i>						
REMS Total Score	3.49	4.08	.29	.86	.393	.03
Assumption of Inferiority	.99	3.87	.08	.26	.797	.02
2 nd Class Citizen/Criminality	1.92	3.96	.16	.49	.628	.02
Microinvalidations	-2.87	3.91	-.23	-.73	.463	.03
Exoticization/Similarity	-1.93	3.68	-.16	-.53	.600	.04
Environmental	-1.02	3.91	-.08	-.26	.795	.01
Work/School Place	6.81	3.96	.57	1.72	.086	.03
<i>MEIM Affirmation x REMS</i>						
REMS Total Score	-4.07	4.07	-.33	-1.00	.318	.04
Assumption of Inferiority	-5.84	3.79	-.48	-1.54	.125	.04
2 nd Class Citizen/Criminality	-3.14	3.83	-.26	-.82	.413	.03
Microinvalidations	-7.65	3.86	-.62	-1.99	.048	.06
Exoticization/Similarity	-6.92	3.88	-.55	-1.78	.075	.06
Environmental	-3.53	5.63	-.29	-.63	.532	.02
Work/School Place	-.32	3.85	-.03	-.08	.933	.03
<i>MIBI Centrality x REMS</i>						
REMS Total Score	8.13	3.48	.66	2.34	.020	.05
Assumption of Inferiority	4.21	3.06	.34	1.38	.169	.03
2 nd Class Citizen/Criminality	7.39	2.98	.60	2.48	.014	.03
Microinvalidations	1.59	3.02	.13	.53	.598	.04
Exoticization/Similarity	-2.10	3.03	-.17	-.69	.489	.04
Environmental	.94	3.91	.08	.24	.811	.02
Work/School Place	9.60	3.03	.79	3.17	.002	.05
<i>MIBI Regard x REMS</i>						
REMS Total Score	-1.11	3.50	-.09	-.32	.751	.03
Assumption of Inferiority	-4.35	3.36	-.35	-1.29	.197	.03
2 nd Class Citizen/Criminality	-3.10	3.51	-.25	-.88	.378	.03
Microinvalidations	-5.69	3.30	-.46	-1.72	.086	.05
Exoticization/Similarity	-.72	3.37	-.06	-.21	.832	.05
Environmental	-1.92	5.02	-.16	-.382	.703	.04
Work/School Place	3.92	3.30	.32	1.19	.236	.03
<i>MIBI Ideology x REMS</i>						
REMS Total Score	-2.19	3.71	-.17	-.59	.556	.03
Assumption of Inferiority	-5.98	3.76	-.49	-1.59	.113	.03
2 nd Class Citizen/Criminality	-4.13	3.72	-.33	-1.11	.268	.02
Microinvalidations	-3.68	3.368	-.29	-1.00	.319	.04
Exoticization/Similarity	.73	3.74	.06	.195	.845	.03
Environmental	3.51	6.83	.28	.51	.608	.01
Work/School Place	.03	3.60	.01	.01	.995	.03
<i>MSPSS Total Support x REMS</i>						
REMS Total Score	-4.31	2.43	-.35	-1.77	.078	.05
Assumption of Inferiority	-5.52	2.51	-.45	-2.20	.028	.06
2 nd Class Citizen/Criminality	-5.41	2.48	-.44	-2.18	.030	.04
Microinvalidations	-4.20	2.53	-.34	-1.66	.098	.06
Exoticization/Similarity	-5.21	2.67	-.42	-1.95	.052	.06
Environmental	1.37	4.43	.11	.31	.757	.04
Work/School Place	-3.40	2.29	-.28	-1.48	.139	.04

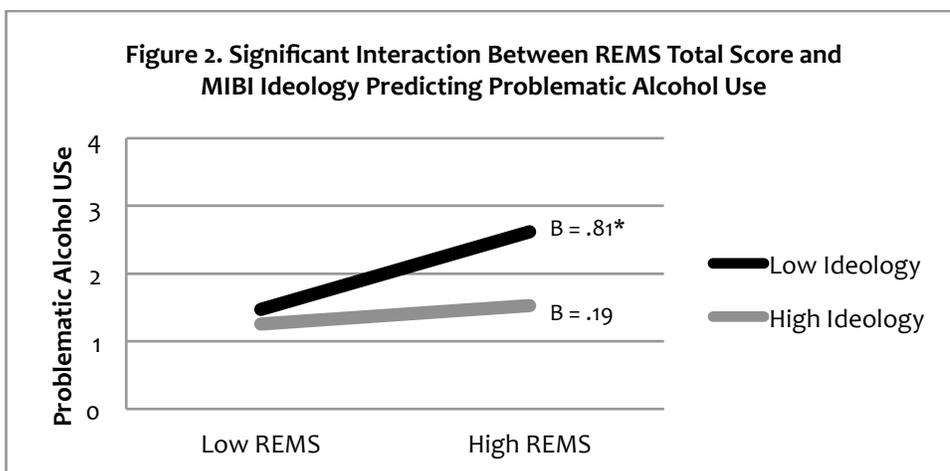
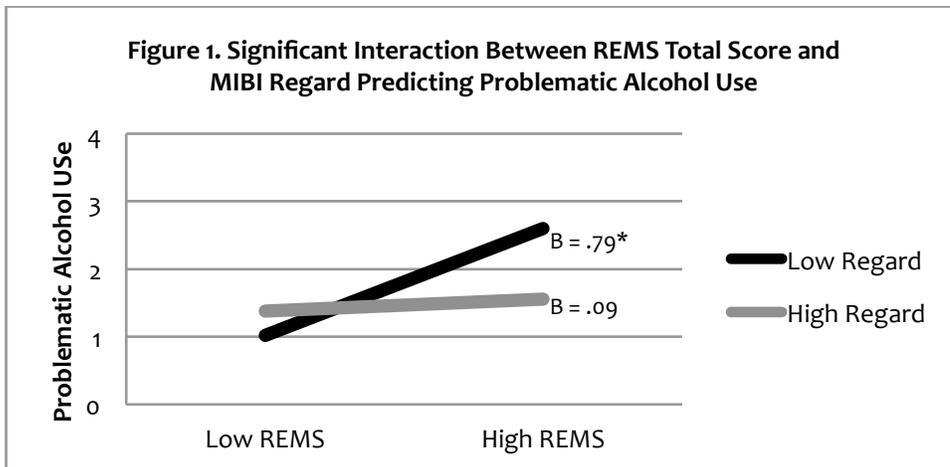
Note. REMS = Racial and Ethnic Microaggression Scale, MEIM = Multigroup Ethnic Identity Measure, MIBI = Multidimensional Inventory of Black Identity, MSPSS = Multidimensional Scale of Perceived Social Support. Interaction terms are italicized.

Post-Hoc Probing of Significant Moderations. Post-hoc probing using the Holmbeck (2002) method was performed to assess significance of the moderating relation for one standard deviation above and below the mean of the moderating variable. To accomplish this, conditional variables were calculated for one standard deviation above and one standard deviation below the moderator variable and new conditional interaction terms were calculated for each level of the moderator. Then, to assess the significance of the interactions at different levels of the moderator variable, two regressions were run to generate the simple slopes for the high and low moderator conditions.

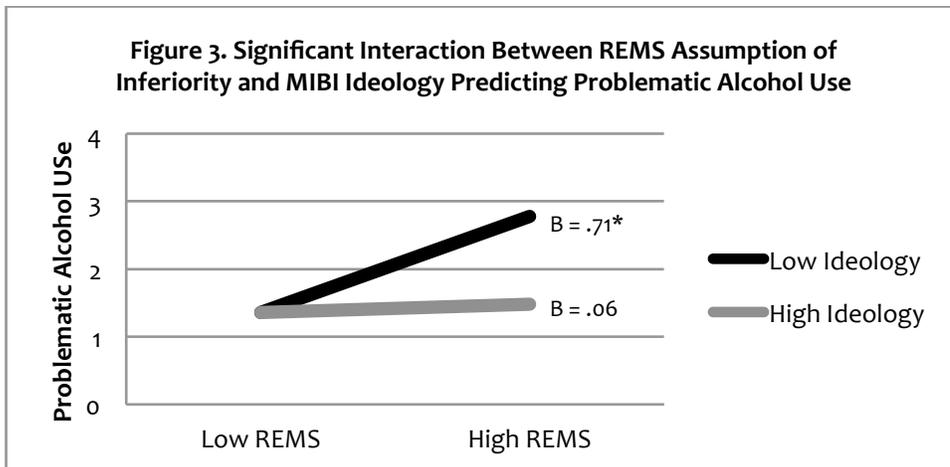
The results of post-hoc probing revealed that the slopes for high values of the moderating variables (i.e., strong racial/ethnic identity formation or social support) were non-significant, resulting in low problematic alcohol use regardless of level of microaggressions reported. The slopes for low values of the moderating variables (i.e., poorly developed racial/ethnic identity formation or lower levels of social support) were significant such that higher levels of reported microaggressions were associated with the highest level of problematic alcohol use. Each individual interaction is discussed below, with specific values for each slope presented in Table 14 and graphed in Figures 1 through 10. In the table below, each italicized row represents the interactions between specific microaggression variables and the significant moderators, which are presented in the indented row below. For Figures 1 through 10, asterisks are used to identify slopes that are significantly different from zero.

Table 14. <i>High and Low Slope Values for Significant Interactions between Racial/Ethnic Identity Formation Variables and REMS Predicting Problematic Alcohol Use (Square Root)</i>				
	<i>1 SD Above M</i>	<i>p-value</i>	<i>1 SD Below M</i>	<i>p-value</i>
<i>REMS Total Score x Moderator Variables</i>				
MIBI Regard	.09	.573	.79	<.0003
MIBI Ideology	.19	.135	.81	<.0003
<i>Assumption of Inferiority x Moderator Variable</i>				
MIBI Ideology	.06	.634	.71	<.0003
<i>2nd Class Citizen/Criminality x Moderator Variable</i>				
MIBI Ideology	.16	.182	.80	<.0003
<i>Microinvalidations x Moderator Variable</i>				
MIBI Ideology	.10	.451	.75	<.0003
<i>Exoticization/Assumption of Similarity x Moderator Variables</i>				
MIBI Centrality	.09	.443	.91	<.0003
MIBI Regard	.14	.232	.84	<.0003
MIBI Ideology	.08	.527	.85	<.0003
Social Support	.14	.256	.71	<.0003
<i>Work/School Place x Moderator Variable</i>				
MIBI Ideology	.13	.307	.73	<.0003
<i>Note. SD = standard deviation, M = mean, REMS = Racial and Ethnic Microaggression Scale, MEIM = Multigroup Ethnic Identity Measure, MIBI = Multidimensional Inventory of Black Identity, MSPSS = Multidimensional Scale of Perceived Social Support. Interaction terms are italicized. Significant results based on the Bonferroni-corrected p value are in bold.</i>				

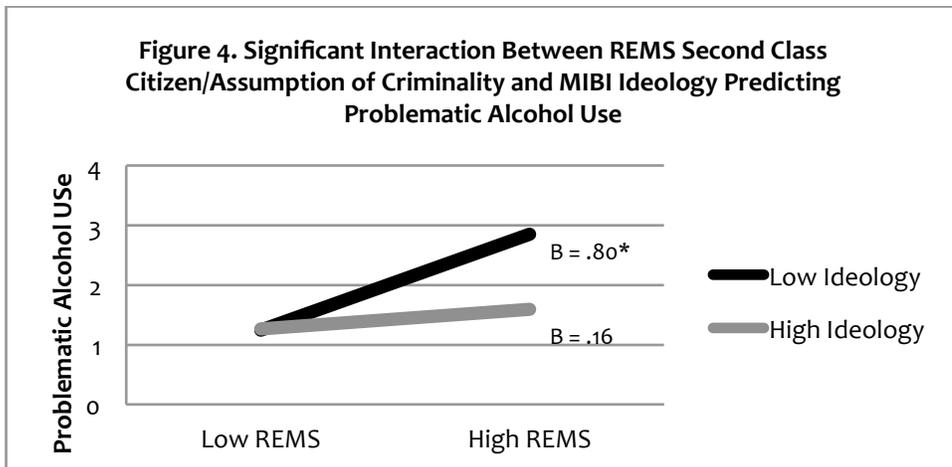
The REMS Total Score was significantly moderated by the MIBI subscales of Regard (Figure 1) and Ideology (Figure 2). The slopes for High Regard and High Ideology (gray lines) were not significant showing that the level of problematic alcohol use was low regardless of level of racial/ethnic identity formation. The slopes for Low Regard and Low Ideology (black lines) were significant; thus, problematic alcohol use was lower when microaggressions were also lower, but problematic alcohol use was higher when reported microaggressions were also higher. These results suggest that feelings of positivity towards one's race/ethnicity and having strong values and beliefs related to one's race/ethnicity may protect against problematic alcohol use in the context of microaggressions.



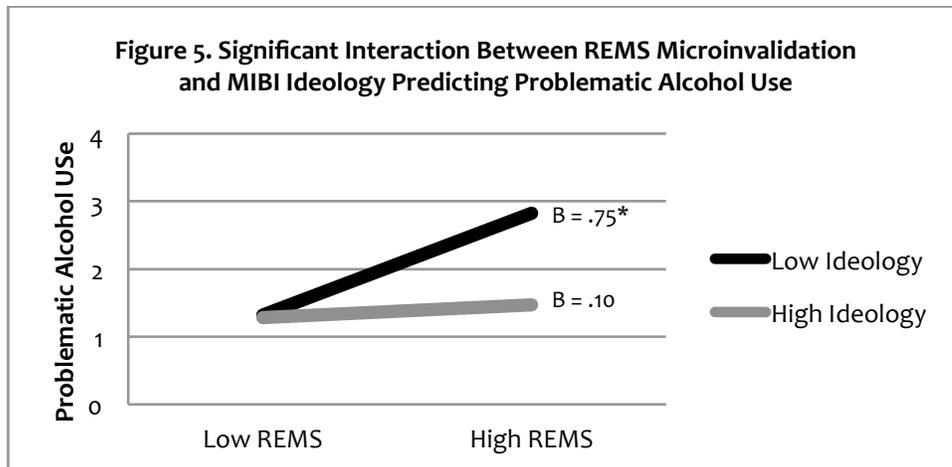
The REMS Assumption of Inferiority subscale was significantly moderated by the MIBI Ideology subscale (Figure 3). The slope for High Ideology (gray line) was not significant indicating that problematic alcohol use was low regardless of level of microaggressions experienced. The slope for Low Ideology (black line) was significant such that problematic alcohol use was lower in the context of lower levels of experienced microaggressions. Problematic alcohol use was highest when Ideology was lower and Microaggressions were higher. These results suggest that a more developed value and belief system related to one's race can potentially protect against the association between the presumption of inferior status (e.g., lower education, poor, limited professional success) and problematic alcohol use.



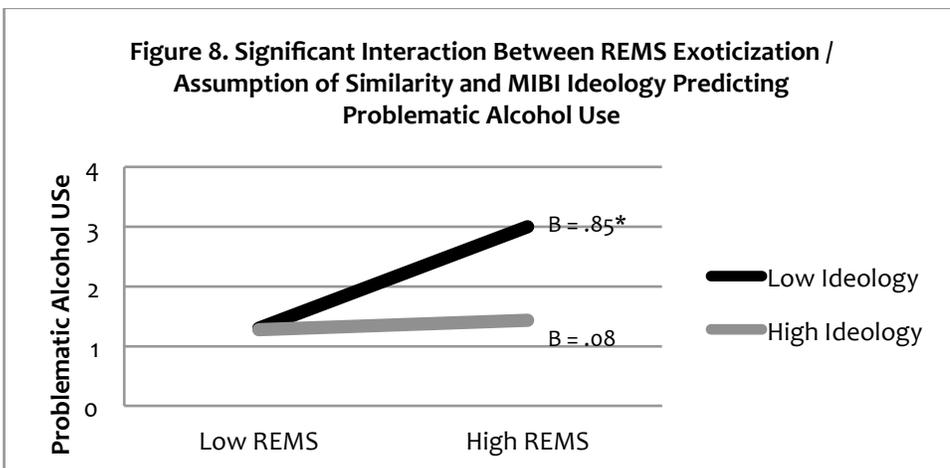
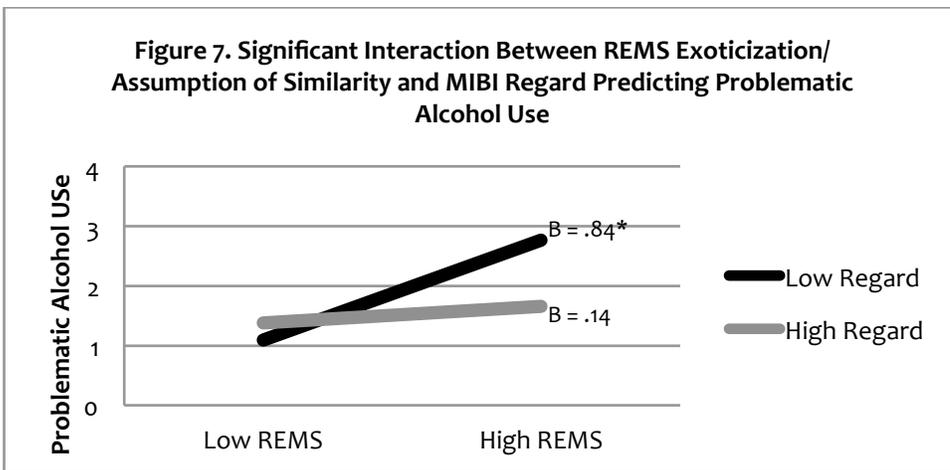
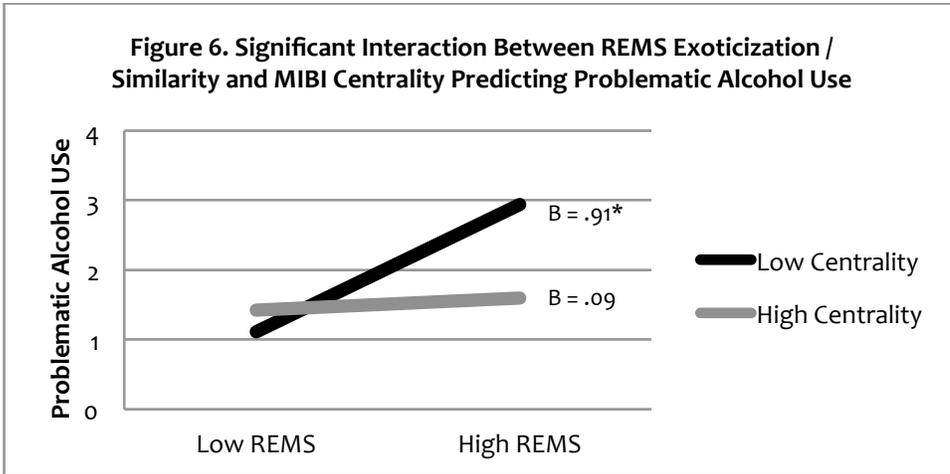
The REMS Second Class Citizen/Assumption of Criminality subscale was also significantly moderated by the MIBI Ideology subscale (Figure 4). The slope for High Ideology (gray line) was not significant indicating that problematic alcohol use was low regardless of level of microaggressions experienced among individuals with higher levels of ideology. The slope for Low Ideology (black line) was significant, indicating that problematic alcohol use was lower in the context of lower vs. higher levels of experienced microaggressions. Problematic alcohol use was highest when Ideology was lower and Microaggressions were higher. These results suggest that a developed value and belief system related to one’s race can possibly protect against the positive association between the experience of poor treatment or assumption of criminality (e.g., scared body language, crossed the street to get away from, avoided eye contact, substandard treatment at a store) and problematic alcohol use.



The REMS Microinvalidations subscale was also significantly moderated by the MIBI Ideology subscale (Figure 5). The slope for High Ideology (gray line) was not significant indicating that problematic alcohol use was low regardless of level of microaggressions experienced. The slope for Low Ideology (black line) was significant such that problematic alcohol use was low as long as experienced microaggressions were also low. Problematic alcohol use was highest in the context of lower Ideology and higher Microaggressions. These results suggest that a developed value and belief system related to one's race can protect against the positive association between microinvalidations (e.g., statements about being color blind or not seeing race, claims that racism does not occur any more, discouraging communication about race/racism) and problematic alcohol use.

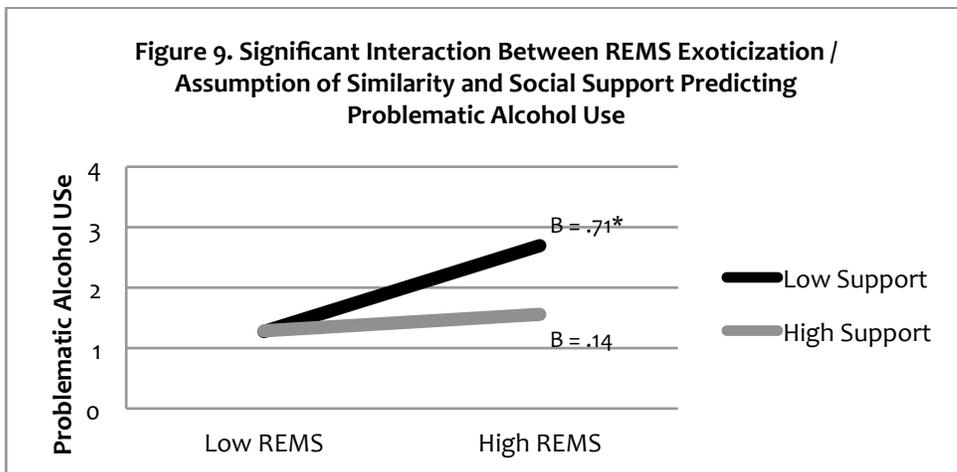


The REMS Exoticization/Assumption of Similarity subscale was significantly moderated by the MIBI Centrality (Figure 6), Regard (Figure 7), and Ideology (Figure 8) subscales. The slopes for High Centrality, Regard, and Ideology (gray lines) were not significant indicating that problematic alcohol use was low regardless of level of microaggressions experienced among individuals who exhibited higher levels of centrality, regard, and ideology. The slopes for Low Centrality, Regard, and Ideology (black lines) were significant such that problematic alcohol use was lower in the context of lower levels of experienced microaggressions. Problematic alcohol use was highest when the moderator variables were low and Microaggressions were high. These results suggest that strongly defining oneself related to one's race/ethnicity, positive feelings towards one's racial/ethnic group, and a developed value and belief system related to one's race can protect against the positive association between exoticization and assumptions of similarity (e.g., assumption that English is not someone's native language, only liking/dating someone related to their race, presuming that a person's interests or likes align with others with their race) and problematic alcohol use.



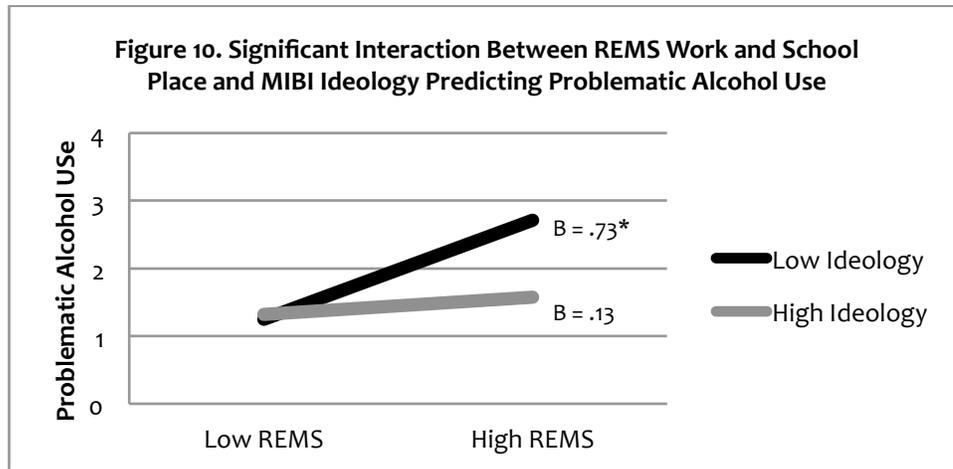
The REMS Exoticization/Assumption of Similarity subscale was also significantly moderated by Social Support (Figure 9). The slope for High Social Support (gray line) was not significant indicating that problematic alcohol use was low regardless

of level of microaggressions experienced. The slope for Low Social Support (black line) was significant such that problematic alcohol use was lower so long as experienced microaggressions were also lower. Problematic alcohol use was highest when social support was lower and microaggressions were higher. These results suggest that the negative impact of experiencing microaggressions in the form of exoticization and assumptions of similarity on problematic alcohol use is buffered by strong social support from friends, family members, and/or a significant other.



Finally, the REMS Workplace and School Microaggressions subscale was significantly moderated by the MIBI Ideology subscale (Figure 10). The slope for High Ideology (gray line) was not significant indicating that problematic alcohol use was low regardless of level of microaggressions experienced among individuals higher on ideology. The slope for Low Ideology (black line) was significant such that problematic alcohol use was low in the context of lower levels of experienced microaggressions, but problematic alcohol use was highest when Ideology was lower and Microaggressions were higher. These results suggest that having a developed set of values and beliefs related to one’s race/ethnicity may protect against the negative impact of workplace and

school microaggressions (e.g., having unfriendly co-workers, being ignored, receiving differential treatment) on problematic alcohol use.



Aim 4: Exploration of Potential Racial Difference in the Significant Main Effects and Interactions

In an attempt to identify potential racial and ethnic differences in the impact of microaggressions, bivariate correlations between the microaggressions, moderating, and outcome variables were calculated for each self-identified racial/ethnic group (Asian-American/Asian, African-American/Black, Hispanic/Latino, and Multiracial/Other). These correlation values were then compared across racial/ethnic groups using Fisher’s *r* to *z* transformations (e.g., the correlation between REMS Total Score and RAPI for the Asian-American/Asian group was compared the correlation for African-Americans/Blacks, Hispanic/Latinos, and Multiracial/Other groups and so on for each racial/ethnic group). The bivariate correlation values for each racial/ethnic group are presented in Table 15. Correlations were considered significantly different if the *p*-value for the Fisher *r* to *z* transformation was less than .0003 as established by the Bonferroni correction.

Table 15. <i>Bivariate Correlations Between Significant Main Effect Predictor and Outcome Variables and Significant Interaction Variables Presented for Each Self-Reported Racial/Ethnic Group</i>				
	(1) Asian <i>n</i> =133	(2) Black <i>n</i> =141	(3) Hispanic <i>n</i> =70	(4) Multi. <i>n</i> =74
<i>Correlations of Significant Main Effect Variables for Each Racial/Ethnic Group</i>				
REMS Total Score x RAPI (Square Root)	.44***	.35***	.38*	.30*
REMS Total Score x BAI	.35***	.27*	.14	.46***
REMS Total Score x BDI (Square Root)	.28***	.27*	.20	.19
<i>Correlations of Significant Interaction Variables for Each Racial/Ethnic Group</i>				
REMS Total Score x MIBI Ideology	.21*	-.19*	.16	.06
REMS Total Score x MIBI Regard	-.40***	-.34***	-.17	-.13
REMS Assumption of Inferiority x MIBI Ideology	-.21*	-.10	.14	.01
REMS 2 nd Class/Criminality x MIBI Ideology	-.18	-.11	.11	.10
REMS Microinvalidation x MIBI Ideology	-.19*	-.15	.09	.20
REMS Exoticization/Similarity x MIBI Centrality	.01	-.18*	.33*	.27*
REMS Exoticization/Similarity x MIBI Regard	-.13	-.35***	-.08	.16
REMS Exoticization/Similarity x MIBI Ideology	.03	-.25***	.24	.28*
REMS Exoticization/Similarity x MSPSS Support	-.11	-.40***	.13	-.12
REMS Work/School x MIBI Ideology	-.31***	-.15	.06	-.01
<i>Note.</i> REMS = Racial and Ethnic Microaggression Scale, MIBI = Multidimensional Inventory of Black Identity. * $p < .05$, ** $p < .01$, *** $p < .001$.				

The correlation between REMS Exoticization/Similarity and MIBI Centrality was significantly different between African-American/Black and Hispanic/Latino participants ($Z = -3.47, p < .0003, \text{Cohen's } d = .49$). The correlation of REMS Exoticization/Similarity and MIBI Centrality was positive among Hispanic/Latino participants, which was consistent with the correlation of these variables in the total sample. Among African-American participants, the correlation between Exoticization/Similarity and Centrality was negative, indicating that as one variable increases the other variable decreases. These results suggest that the significant interaction between Exoticization/Similarity and MIBI Centrality reported previously may operate differently when assessed in an African-American/Black sample.

A significant difference was also found for the correlation between Exoticization/Similarity and Social Support for African-American/Black and Hispanic/Latino participants ($Z = -3.74, p < .0003$, Cohen's $d = .53$). Again, this correlation was positive for the Hispanic/Latino group and negative for the African-American/Black group, but the correlation between Exoticization/Similarity and Social Support was also negative in the total sample. These results suggest that the significant interaction between Exoticization/Similarity and Social Support reported previously may behave differently when assessed in a Hispanic/Latino population.

Finally, the correlations between Exoticization/Similarity and MIBI Regard ($Z = -3.65, p < .0003$, Cohen's $d = .51$) and Ideology ($Z = -3.72, p < .0003$, Cohen's $d = .52$) were significantly different when compared across African-American/Black and Multiracial/Other participants. The correlation between REMS Exoticization/Similarity and MIBI Regard and Ideology were both positive for Hispanic/Latino participants and negative for African-American/Black participants. Interestingly, the correlation between Exoticization/Similarity and MIBI Regard was negative in the total sample, whereas the correlation between Exoticization/Similarity and MIBI Ideology was positive in the total sample. These findings suggest that the significant interaction between Exoticization/Similarity and Regard previously reported may operate differently when assessed in a Hispanic/Latino sample. Similarly, the interaction between Exoticization/Similarity and Ideology reported above may behave differently when assessed in an African-American/Black sample. No other significant differences were found when comparing correlations across racial/ethnic groups.

CHAPTER 4

DISCUSSION

Although numerous studies have demonstrated the negative impact that overt racism and discrimination can have on an individual's physical health (for reviews, see Brondolo et al., 2003; Paradies, 2006; Williams et al., 2003; Wyatt et al., 2003) and psychological health (see reviews in Brondolo et al., 2008; Broudy et al., 2007; Cleveland, 2003; Krieger, 1999; Krieger et al., 1993; Paradies, 2006; Williams & Williams-Morris, 2000), far fewer studies have explored the impact of microaggressions on physical and psychological health. There is a small but growing body of literature that suggests not only that racial and ethnic minorities experience microaggressions, but also that the experience of microaggressions is associated with feelings of stress, helplessness, frustration, isolation, and binge drinking (Blume et al., 2011; Terrell et al., 2006; Solórzano et al., 2000; Sue, Capodilup, et al., 2008).

Because of the limited amount of research related to microaggressions, there are a number of gaps in the literature that limit the understanding of the impact of microaggressions on psychological functioning. Some of the areas of research that warrant further investigation include the examination of specific subtypes of microaggressions and the impact that they have on psychological functioning; the potentially protective role of coping strategies, such as racial/ethnic identity formation and social support, that may limit the negative impact of microaggressions; and finally, whether there are differences in the experience of microaggressions and the impact this experience can have on psychological functioning, as well as differences in the protective role of things such as racial/ethnic identity formation and social support, across racial and

ethnic groups. The present study addressed these gaps in the literature through (a) examination of the rates of microaggressions experienced in minority and non-minority participants, as well as the rates of microaggressions experienced by different minority groups; (b) investigation of the impact of microaggressions on a variety of psychological variables including anxiety, depression, anger, and problematic alcohol use; (c) exploration of potential protective factors including racial identity development and social support on the relation between microaggressions and psychological health; and (d) identification of potential racial and ethnic differences for both the relations between microaggressions and psychological health, as well as any identified protective factors.

Results indicated that (a) minority participants reported higher rates of microaggressions and there were differences in rates and subtypes across racial and ethnic groups; (b) microaggressions significantly predicted higher reports of problematic alcohol use and symptoms of anxiety and depression; (c) racial identity formation and social support moderated the relation between microaggressions and problematic alcohol use; (d) there may be racial and ethnic differences related to these significant moderations, particularly when comparing African-American, Hispanic, and Multiracial participants. In sum, the current study provides additional evidence that the experience of microaggressions has a negative impact on psychological health, and it was the first to show that certain variables including racial identity formation and support potentially can protect against these negative effects. Additionally, the present study began exploring the racial and ethnic differences of the impact of microaggressions and protective role of racial identity formation and support. Results related to each aim and hypothesis are discussed in detail below.

Aim 1: Examination of Microaggression Rates Across Groups

The rate of experienced microaggressions was explored by comparing rates endorsed by minority and non-minority participants. Differences in the rate and type of microaggressions experienced across racial and ethnic groups were also compared, as prior research has shown that racial/ethnic minorities report experiencing microaggressions at different rates (Sue, 2010; Sue, Bucceri, et al., 2007; Sue, Nadal, et al., 2008). It was hypothesized that results for the current study would replicate these prior findings.

As hypothesized, minority participants reported experiencing significantly higher rates of microaggressions across nearly all subscales of the REMS. These findings provide clear and quantitative evidence that minority individuals experience daily discriminatory acts that are subtle and covert in nature, and consistent with conceptualizations of contemporary forms of racism (Benaji et al., 1993; Dovidio & Gaertner, 2000; Essed, 1991; McConahay, 1986; Rowe, 1990; Sears, 1988; Solórzano et al., 2000; Sue, 2010; Sue, Capodilupo, et al., 2007). The only non-significant comparison between minority and non-minority participants was found for the microinvalidations subscale. Microinvalidations are oppressive in nature, denying the racial/ethnic reality of an individual through communication or environmental situations that exclude, negate, or nullify the experiences of a certain group (Sue, 2010). Given that the rate of endorsement of items was rather high (on average, almost four out of nine items were endorsed by both minority and non-minority participants), this non-significant finding is likely attributable to the way the microinvalidation items are worded on the REMS (Nadal, 2011). Specifically, items are worded in a way that can be interpreted in different ways or

have different meaning depending on one's race/ethnicity. For example, the item "Someone told me that they do not see race" could be endorsed by all participants, but could have a different meaning or weight among minority participants (e.g., denial of racial existence, personal) compared to non-minority participants (e.g., directed towards others, little personal impact).

Regarding racial/ethnic group differences, the total rate of experienced microaggressions was similar across racial/ethnic groups. Despite this, there were a number of racial/ethnic differences related to the rates of experienced microaggression subscales. Consistent with my hypotheses and previous research (Rivera et al., 2010; Sue, 2010; Sue, Bucceri, et al., 2007; Sue, Nadal, et al., 2008; Watkins et al., 2010), African-American participants reported significantly higher rates of microaggressions categorized as Second Class Citizen or Assumption of Criminality, and Asian-American participants reported the highest rates of Exoticization and Assumption of Similarity. Counter to prior research and my hypothesis, Hispanic participants did not report higher rates of Second Class Citizen or Assumption of Criminality when compared to other racial/ethnic groups. It was also hypothesized that other racial/ethnic group differences would be identified, though there was no prior research on which to base these hypotheses so the lack of findings was not entirely surprising. Results found that African-American participants reported higher rates of Assumption of Inferiority and Work and School Place microaggressions. These findings provide evidence that the experience of microaggressions is complex, and highlight the importance of assessing all forms of microaggressions to fully understand the experiences of different racial/ethnic groups.

In sum, minorities experience significantly higher rates of microaggressions when compared to non-minorities, as would be expected. Additionally, types of microaggressions were experienced at different rates based on race/ethnicity. For example, compared to other groups, African-Americans reported being treated as lesser people; having others assume that they are criminals, dangerous, or deviant based on race alone; and receiving poor treatment in the work or school environment. Asian-Americans reported higher rates of objectification and presumption that they were similar to other members of their race. Despite differences related to the specific subtypes of microaggressions experienced by racial/ethnic groups, the overall rates of microaggressions experienced were similar across groups.

Aim 2: Examination of Impact of Microaggressions on Psychological Health

The relations between the experience of microaggressions with problematic alcohol use, anxiety, depression, and anger were assessed to add to the small body of literature examining the negative impact of microaggressions on psychological health. As hypothesized, and consistent with previous research (Blume et al., 2011; Rivera et al., 2010; Solórzano et al., 2000; Sue, 2010; Sue, Bucceri, et al., 2007; Sue, Nadal, et al., 2008; Terrell et al., 2006), the experience of microaggressions predicted higher rates of problematic alcohol use, anxiety, and depression. These current findings add to the growing body of literature examining the negative impact of microaggressions on psychological health, which to date has been predominately qualitative in nature, restricted to a single racial/ethnic group, and involved small sample sizes (Blume et al., 2011; Rivera et al., 2010; Solórzano et al., 2000; Sue, 2010; Sue, Bucceri, et al., 2007; Sue, Nadal, et al., 2008; Terrell et al., 2006). The present study expands upon past

research by examining the impact of microaggressions on psychological health, particularly anxiety, depression, and problematic alcohol use, using a reliable and valid measure of microaggressions in a racially and ethnically diverse and large sample.

Counter to my hypothesis and prior research (Brondolo et al., 2008; Broudy et al., 2007; Cleveland, 2003; Feagin et al., 2001), the experience of microaggressions was not associated with increased rates of anger. Given the extensive literature suggesting that the experience of discrimination is associated with feelings of anger and frustration, it is surprising that the experience of microaggressions did not also predict feelings of anger. Previous research has found that some discriminatory events are more upsetting or stressful than others, with the most stressful events including overt acts of racism and discrimination and feeling as if one cannot defend oneself (Landrine & Klonoff, 1996). Although microaggressions clearly cause distress, the experience of microaggressions may not create ongoing feelings of anger or frustration that can be assessed once the individual is removed from the microaggressive event. Minority individuals may also be so used to the experience of everyday microaggressions that these acts no longer trigger feelings of intense anger. Alternatively, microaggressions may indeed cause feelings of anger immediately after a microaggressive act, but that anger may dissipate quickly and not add to overall symptoms or intensity of anger overall. It is also possible that the measure used to assess anger, the State Anger Scale from the STAXI, was not the best way to capture changes in anger expression that may occur after experiencing microaggressions.

Also counter to my hypotheses, and despite overall model significance, no individual REMS subscales significantly predicted problematic alcohol use, anxiety,

depression, or anger. Although unexpected given the significant positive correlations between the REMS subscales and outcome variables, this lack of significant results is likely related to the conservative alpha value ($p < .0003$) and high correlations among subscales.

Aim 3: Exploration of Potential Moderating Variables Including Racial Identity Formation and Social Support

Racial/ethnic identity formation and social support were examined as potential moderators of the relation between microaggressions and problematic alcohol use, anxiety, depression, and anger. To date findings related to both the protective capabilities of racial/ethnic identity formation and social support have been mixed (Brondolo et al., 2009; Fisher & Shaw, 1999; Lee, 2003; Lee, 2005; Mossakowski, 2003; Noh et al., 1999; Seller et al., 2006; Wong et al., 2003; Yoo & Lee 2008). Despite these inconsistent findings, it was hypothesized that racial/ethnic identity formation and social support would buffer the relation between the experience of microaggressions and problematic alcohol use, anxiety, depression, and anger.

As hypothesized, aspects of racial/ethnic identity formation (defining oneself related to race, strong feelings of positivity related to one's race, and having clearly defined beliefs and opinions related to how members of a certain race should act; Sellers et al., 1997) and social support were identified as significant moderators of the relation between microaggressions and problematic alcohol use. All significant moderating results were protective in nature, with the highest rates of problematic alcohol use found among participants who reported higher rates of microaggressions and lower rates of the moderating variable. Among individuals with higher levels of the moderating variable,

levels of problematic alcohol use were similar regardless of the reported level of microaggressions experienced. Counter to my hypothesis, racial/ethnic identity formation and social support did not significantly moderate the relations between microaggressions and symptoms of anxiety, depression, or anger.

The current results add to the growing body of literature (albeit with mixed findings) that examines the moderating roles of racial/ethnic identity formation and social support on the association between discrimination and psychological health (Brondolo et al., 2009; Fisher & Shaw, 1999; Lee, 2003; Lee, 2005; Mossakowski, 2003; Noh et al., 1999; Seller et al., 2006; Wong et al., 2003; Yoo & Lee 2008). It is likely that the moderating roles of these variables are complex, and failure to find consistent buffering effects may be a function of the need to match coping strategies with specific outcomes (Brondolo et al., 2009). Alternatively stated, strong racial/ethnic identity formation and/or social support may be particularly effective for coping with microaggressions in the short-term, which may limit problematic alcohol use, but not in the long-term, consequently having less of an impact on symptoms of anxiety or depression. It is also possible that racial/ethnic identity formation and social support substantially reduce symptoms of anxiety, depression, and anger, as expected, but these processes may not effectively buffer the effects of microaggressions on these psychological outcomes.

Aim 4: Exploration of Potential Racial Difference in the Significant Main Effects and Interactions

Microaggressions are based on prejudices and stereotypes held for specific racial and ethnic groups (Sue, 2010), which suggests that the patterns of microaggressions experienced would differ based on racial and/or ethnic group. Although no prior studies

have tested this assumption, it was hypothesized that there would be significant differences in the relations between microaggression, moderating, and outcome variables across racial/ethnic groups. To assess this possibility, the bivariate correlations between significant predictor and outcomes variables, as well as the significant interactions between predictor and moderating variables, were compared across racial/ethnic group.

As hypothesized, two racial group differences were identified between African-American and Hispanic participants, and African-American and Multiracial participants. Specifically, the correlation between Exoticization/Assumption of Similarity and two moderating variables, MIBI Centrality and Social Support, were negative among African-Americans and positive among Hispanics. Similarly, the correlation between Exoticization/Assumption of Similarity and two additional moderating variables, MIBI Regard and Ideology, were negative among African-Americans and positive among Multiracial individuals. This pattern of findings suggests that the moderating role of these variables would be different among African-Americans compared to either Hispanic or Multiracial individuals when looking at their interaction with Exoticization/Assumption of Similarity. More specifically, these moderating variables might not serve as protective factors among African-Americans, given that high rates of the microaggression variable were associated with low rates of the moderating variable. Should that be true, it would also suggest that the most effective coping responses would be variable among different racial/ethnic groups and might depend on the microaggressions in question.

Results also revealed that the correlation between the overall experience of microaggressions on problematic alcohol use, anxiety, and depression were not significantly different when comparing different racial/ethnic groups. These results

suggest that the overall impact of experiencing microaggressions in terms of these psychological outcomes is similar among all racial/ethnic groups represented in the current study.

Strengths, Limitations, and Future Directions

Among the strengths of this study was the racial and ethnic diversity of the sample that was also representative of the population from which this sample was collected. The diversity of the current sample suggests that the current findings would hold true among young adults of a variety of racial/ethnic backgrounds. Additionally, the fact that the sample was drawn from a racially/ethnically diverse university would suggest that minorities experience and are negatively impacted by microaggressions in both diverse and non-diverse settings. Another strength of the current study was the large sample size, which allowed for extensive analyses and comparisons of some results across racial/ethnic groups. Many previous studies have had small sample sizes and focused on single racial or ethnic minority groups, so the diversity and size of the sample suggests increases generalizability of the present results. An additional strength of this study was the utilization of a reliable and valid scale to assess the variety of microaggressions experienced by racial/ethnic minorities. Many previous studies have relied on qualitative self-report measures to assess both the experience and sometimes the negative impact of microaggressions as well. Use of a valid measure allowed for the empirical investigation of research questions related to the impact of microaggressions.

Despite these strengths, there were a few limitations to the present study. First, the sample, which was predominantly female and recruited from a college population, is not representative of all individuals. As such, the findings of the current study are only

generalizable to young adult population. Second, because the study only required participants to report on whether they had experienced certain microaggressions recently, it is difficult to assess how distressed participants actually were by the experience of microaggressions. Being able to assess how distressed participants were by the experience of microaggressions may provide additional insight about who is most likely to experience the negative outcomes associated with the experience of microaggressions, and which coping responses might be most helpful. Finally, the current study was cross-sectional in nature, meaning that it was only possible to identify associations, and not causal relations, between the experience of microaggressions and psychological health.

Future research might address these limitations by collecting data from a sample that is representative of the general population in terms of sex, socioeconomic status, and educational level. Relatedly, data collected from participants living and working a variety of settings (both diverse and non-diverse) would provide valuable understanding of the experience of microaggressions across situations. Collecting data prospectively would allow for examination of the direction of effects among the experience of microaggressions and their relations with psychological health. Additionally, prospective data collection would potentially allow for stronger statements about direction of effects for the relations between the experience of microaggressions and poor psychological health. Finally, the microaggression literature is small, so future research investigating the impact of microaggressions on other outcomes variables (e.g., physical health, educational attainment and performance, missed days at work/school, etc.) and other variables that may moderate the negative impact of experiencing microaggressions (e.g., sex, self-reliance, other psychosocial stressors, positive parenting practices, acculturation,

self esteem) is important. This research will help to provide a more thorough understanding of the impact of microaggressions on everyday life, while also identifying variables that may buffer or confer risk for different outcomes among individuals who experience microaggressions.

Summary and Clinical Implications

Several main findings emerged from this study. First, minority individuals report experiencing significantly more microaggressions than non-minority participants. Additionally, the experience of microaggressions varied by minority group identification, with African-Americans reporting the highest rates of Assumption of Inferiority, 2nd Class Citizen/Assumption of Criminality, and Work/School Place microaggressions, whereas Asian-Americans reported the highest rates of Exoticization/Assumption of Similarity. Second, the experience of microaggressions predicted higher rates of problematic alcohol use, as well as symptoms of anxiety and depression. Third, aspects of racial identity formation, such as a developed sense of belonging to one's racial or ethnic group, defining oneself related to race, strong feelings of positivity (as well as low negative feelings) related to one's race, and having clearly defined beliefs and opinions related to how members of a certain race should act, can potentially protect against the negative impact of microaggressions and reduce rates of problematic alcohol use, though prospective research is needed to test the direction of these effects. Having a strong social support network was also associated with lower levels of alcohol use, similarly suggesting that social support may protect against the negative impact of microaggressions to reduce problematic alcohol use. Surprisingly, racial/ethnic identity formation and social support did not moderate the relations between microaggressions

and symptoms of anxiety, depression, or anger. Finally, some racial differences in the correlations between these putative moderator variables and microaggression variables were found, which suggests that there are likely racial/ethnic differences in the way that racial/ethnic identity formation and social support may be protective. Future research is needed to thoroughly understand racial and ethnic differences in the protective nature of identity formation, social support, and other potential coping strategies.

The current research has many implications for clinical practice as well. First, the current research highlights the fact that minority individuals continue to experience discriminatory acts that can have a negative impact on their psychological health. It is important for professionals in the field to be aware of this, and to pursue strategies that they or members of their institution may be inadvertently committing microaggressive acts. Providing education about microaggressions and working actively to prevent them is an important aspect of preventing the continuation of blatant and subtle forms of discrimination that occur as part of everyday life.

Second, the present study highlights the importance of clinicians being aware of the various types of microaggressions that clients may be experiencing. Knowledge of the types of microaggressions experienced can be used to improve rapport, inform case conceptualization, identify treatment goals, develop a treatment plan, and improve treatment satisfaction. Finally, the current research reveals the importance of understanding how clients are currently coping with the experience of microaggressions. This area of assessment is particularly important for clients who present with concerns related to problematic alcohol use who may benefit from improved social support, particularly from members of their racial/ethnic community who may have a unique

understanding of their experiences. Similarly, clinicians should be aware that among clients dealing with symptoms of anxiety, depression, or anger, encouraging racial/ethnic identity formation or reliance on social support networks likely will not be enough to counteract the negative impact of microaggressions.

REFERENCES

- Allgower, A., Wardle, J., & Steptoe, A. (2001). Depressive symptoms, social support, and personal health behaviors in young men and women. *Health Psychology, 20*, 223–227.
- Allport, G. (1954). *The nature of prejudice*. New York, NY, US: Doubleday.
- Andersson, C., Johnsson, K. O., Berglund, M., & Öjehagen, A. (2009). Stress and hazardous alcohol use: Associations with early dropout from university. *Scandinavian Journal of Public Health, 37*, 713–719.
- Armstead, C.A., Lawler, K.A., Gorden, G., Cross, J., & Gibbons, J. (1989). Relationship of racial stressors to blood pressure responses and anger expression in Black college students. *Health Psychology, 8*(5), 541-556.
- Asseltine, R.H., Gore, S., Gordon, J. (2000). Life stress, anger and anxiety, and delinquency: An empirical test of general strain theory. *Journal of Health and Social Behavior, 41*, 256-275.
- Barnett, P. A., & Gotlib, I. H. (1988). Psychosocial functioning and depression: Distinguishing among antecedents, concomitants, and consequences. *American Psychological Association, 104*, 97–126.
- Beck, A. T., Epstein, N., Brown, G., & Steer, R. A. (1988). An inventory for measuring clinical anxiety: Psychometric properties. *Journal of Consulting and Clinical Psychology, 56*, 893-897.
- Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Manual for the Beck Depression Inventory-II*. San Antonio, TX, US: Psychological Corporation.

- Beck, A. T., Steer, R. A., & Garbin, M. G. (1988). Psychometric properties of the Beck Depression Inventory: Twenty- five years of evaluation. *Clinical Psychology Review, 8*, 77-100.
- Blume, A. W., Lovato, L. V., Thyken, B. N., & Denny, N. (2012). The relationship of microaggressions with alcohol use and anxiety among ethnic minority college students in a historically White institution. *Cultural Diversity and Ethnic Minority Psychology, 18*, 45-54.
- Broidy, Lisa (2001). A test of general strain theory. *Criminology, 39*, 9-33.
- Broman, C. L. (2005). Stress, race, and substance use in college. *College Student Journal, 39*, 340–352.
- Brondolo, E., Brady ver Halen, N., Pencille, M., Beatty, D., & Contrada, R. J. (2009). Coping with racism: A selective review of the literature and a theoretical and methodological critique. *Journal of Behavioral Medicine, 32*, 64-88.
- Brondolo, E., Rieppi, R., Kelly, K. P., & Gerin, W. (2003). Perceived racism and blood pressure: a review of the literature and conceptual and methodological critique. *Annals of Behavioral Medicine, 25*, 55-65.
- Brown, D. L. (2008). African Americans resiliency: Examining racial socialization and social support as protective factors. *Journal of Black Psychology, 34*, 32-48.
- Brown, M.W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K.A. Bollen & J.S. Long (Eds.), *Testing structural equation models*. Newbury Park, CA, US: Sage.
- Carter, R. T. (2007). Racism and psychological and emotional injury recognizing and assessing race-based traumatic stress. *The Counseling Psychologist, 35*, 13-105.

- Chou, K. L. (2012). Perceived discrimination and depression among new migrants to Hong Kong: The moderating role of social support and neighborhood collective efficacy. *Journal of Affective Disorders, 138*, 63-70.
- Chronbach, L. J. (1987). Statistical tests for moderator variables: Flaws in analyses recently proposed. *Psychological Bulletin, 102*(3), 414-417.
- Clark, R. (2003). Self-reported racism and social support predict blood pressure reactivity in Blacks. *Annals of Behavioral Medicine, 25*, 127-136.
- Clark, R., Anderson, N.B., Clark, V.R., & Williams, D.R. (1999). Racism as a stressor for African Americans: A biopsychosocial model. *American Psychologist, 54*, 805-816.
- Clark, R., & Gochett, P. (2006). Interactive effects of perceived racism and coping responses predict a school-based assessment of blood pressure in black youth. *Annals of Behavioral Medicine, 32*, 1-9.
- Cleveland, D. (2003). Beating the odds: Raising academically successful African American males. *Journal of Men's Studies, 12*, 85-86.
- Cohen, S., & Wills, T.A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*, 310-357.
- Constantine, M.G. (2007). Racial microaggressions against African American clients in cross-racial counseling relationships. *Journal of Counseling Psychology, 54*, 1-16.
- Constantine, M.G., & Sue, D.W. (2007). Perceptions of racial microaggressions among Black supervisees in cross-racial dyads. *Journal of Counseling Psychology, 54*, 142-153.

- Cross, W. E., Jr. (2005). *Ethnicity, race, and identity*. Chicago, IL, US: University of Chicago Press.
- DeVos, T., & Banaji, M. R. (2005). American = White? *Journal of Personality and Social Psychology*, *88*, 447-466.
- Dorr, N., Brosschot, J.F., Soller, J.J., & Thayer, J.F. (2007). Damned if you do, damned if you don't: The differential effect of expression and inhibition of anger on cardiovascular recovery in black and white males. *International Journal of Psychophysiology*, *66*(2), 125-134.
- Dovidio, J.F., & Gaertner, S.L. (2000). Aversive racism and selective decisions: 1989-1999. *Psychological Science*, *11*, 315-319.
- DuBois, D.L., Burk-Braxton, C., Swenson, L.P., Tevendale, H.D., Hardesty, J.L. (2002). Race and gender influences on adjustment in early adolescence: Investigation of an integrative model. *Child Development*, *73*, 1573-1592.
- Enders, C. K. (2001). The performance of the full information maximum likelihood estimator in multiple regression models with missing data. *Educational and Psychological Measurement*, *61*, 713-740.
- Essed, P. (1991). *Understanding everyday racism*. Newbury Park, CA, US: Sage.
- Feagin, J.R., Early, K.E., & McKinney, K.D. (2001). The many costs of discrimination: The case of middle-class African Americans. *Indiana Law Review*, *34*, 1313-1360.
- Finch, B. K., Kolody, M., & Vega, W. A. (2000). Perceived discrimination and depression among Mexican-origin adults in California. *Journal of Health and Social Behavior*, *41*, 295-313.

- Finch, B. K., & Vega, W. A. (2003). Acculturation stress, social support, and self-rated health among Latinos in California. *Journal of Immigrant Health, 5*, 109-117.
- Fischer, A. R., & Shaw, C. M. (1999). African Americans' mental health and perceptions of racist discrimination: The moderating effects of racial socialization experiences and self-esteem. *Journal of Counseling Psychology, 46*, 395-407.
- Fisher, R. A. (1915). Frequency distribution of the values of the correlation coefficient in samples of an indefinitely large population. *Biometrika, 10*(4), 507-521.
- Gaertner, S.L., & Dovidio, J.F. (2005). Understanding and addressing contemporary racism: From aversive racism to the common ingroup identity model. *Journal of Social Issues, 61*, 615-639.
- Graham, J. W. (2009). Missing data analysis: Making it work in the real world. *Annual Review of Psychology, 60*, 549-576.
- Henkel, K.E., Dovidio, J.F., & Gaertner, S.L. (2006). Institutional discrimination, individual racism, and Hurricane Katrina. *Analysis of Social Issues and Public Policy, 6*, 99-124.
- Holmbeck, G. N., (2002). Post-hoc probing of significant moderational and mediational effects in studies of pediatric populations. *Journal of Pediatric Psychology, 27*, 87-96.
- Hughes, D., Rodriguez, J., Smith, E. P., Johnson, D. J., Stevenson, H. C., & Spicer, P. (2006). Parents' ethnic-racial socialization practices: A review of research and directions for future study. *Developmental Psychology, 42*, 747-770.
- Johnson, T. M., Kurpius, S. E. R., Rayle, A. D., Arredondo, P., & Tovar-Gamero, Z. G. (2005). The Multidimensional Inventory of Black Identity: Its use with Euro-

- American, Latino, and Native American undergraduates. *Measurement & Evaluation in Counseling & Development*, 38(2), 92-103.
- Jones, J.M. (1997). *Prejudice and racism (2nd ed.)*. Washington, DC, US: McGraw-Hill.
- Jöreskog, K. G. (1999). How large can a standardized coefficient be. *The Help-File of the LISREL program*.
- King, K.R. (2005). Why is discrimination stressful? The mediating role of cognitive appraisal. *Cultural Diversity and Ethnic Minority Psychology*, 11, 202-212.
- Kochanek, K. D., Xu, J., Murphy, S. L., Miniño, A. M., & Kung, H. C. (2011). National vital statistics reports. *National Vital Statistics Reports*, 59, 1-117.
- Krieger, N. (1990). Racial and gender discrimination: Risk factors for high blood pressure? *Social Science and Medicine*, 30, 1273–1281.
- Krieger, N. (1999). Embodying inequality: A review of concepts, measures, and methods for studying health consequences of discrimination. *International Journal of Health Services*, 29, 295-352.
- Krieger, N., Rowley, D. L., Herman, A. A., & Avery, B. (1993). Racism, sexism, and social class: Implications for studies of health, disease, and well-being. *American Journal of Preventive Medicine*, 18, 341-378.
- Krieger, N., & Sidney, S. (1996). Racial discrimination and blood pressure: The CARDIA study of young black and white adults. *American Journal of Public Health*, 86, 1370–1378.
- Landrine, H., & Klonoff, E.A. (1996). The schedule of racist events: A measure of racial discrimination and a study of its negative physical and mental health consequences. *Journal of Black Psychology*, 22(2), 144-168.

- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal and coping*. New York: Springer.
- Lee, R. M. (2003). Do ethnic identity and other-group orientation protect against discrimination for Asian Americans? *Journal of Counseling Psychology, 50*, 133-141.
- Lee, R. M. (2005). Resilience against discrimination: Ethnic identity and other-group orientation as protective factors for Korean Americans. *Journal of Counseling Psychology, 52*, 36-44.
- Liang, C. T. H., Alvarez, A. N., Juang, L. P., & Liang, M. X. (2007). The role of coping in the relationship between perceived racism and racism-related stress for Asian Americans: Gender differences. *Journal of Counseling Psychology, 54*, 132-141.
- Lopez, J. D. (2005). Race-related stress and sociocultural orientation among Latino students during their transition into a predominantly White, highly selective institution. *Journal of Hispanic Higher Education, 4*, 354-365.
- MacCallum, R. C., Browne, M. W., Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods, 1*, 130-149.
- Markus, H.R. (2008). Pride, prejudice, and ambivalence: Toward a unified theory of race and ethnicity. *American Psychologist, 63*, 651-670.
- Markus, H. R., & Moya, P. (Eds.). (2010). *Doing race: 21 essays for the 21st century*. New York: Norton.
- Mellor, D. (2004). Responses to racism: A taxonomy of coping styles used by aboriginal Australians. *American Journal of Orthopsychiatry, 74*, 56-71.

- Miller, J., & Garren, A. M. (2008). *Racism in the United States*. Belmont, CA, US: Brooks Cole.
- Mio, J. S., Nagata, D. K., Tsai, A. H., & Tewari, N. (2007). Racism against Asian/Pacific Island Americans. In F.T.L. Leong, A. Inman, A. Ebreo, L.H. Yang, L.M. Kinoshita, M. Fu (Eds.), *Handbook of Asian American Psychology* (pp. 341-361). Los Angeles: Sage.
- Mossakowski, K. N. (2003). Coping with perceived discrimination: Does ethnic identity protect mental health? *Journal of Health and Social Behavior, 44*, 318–331.
- Muthén, L. K., & Muthén, B. O. (1998–2014). *Mplus user's guide. (7th ed.)*. Los Angeles, CA, US: Muthén & Muthén.
- Nadal, K.L. (2011). The Racial and Ethnic Microaggressions Scale (REMS): Construction, reliability, and validity. *Journal of Counseling Psychology, 58*, 470-480.
- National Institutes of Health. (2000). *Strategic research plan to reduce and ultimately eliminate health disparities, fiscal years 2002-2006*. Washington, DC, US: Authors.
- Nelson, T. D. (2006). *The psychology of prejudice*. Boston, MA, US: Pearson.
- Noh, S., Beiser, M., Kaspar, V., Hou, F., & Rummens, J. (1999). Perceived racial discrimination, depression, and coping: A study of Southeastern Asian refugees in Canada. *Journal of Health and Social Behavior, 40*, 193-207.
- Noh, S., & Kaspar, V. (2003). Perceived discrimination and depression: Moderating effects of coping, acculturation and ethnic support. *American Journal of Public Health, 93*, 232– 238.

- Okazaki, S. (2009). Impact of racism on ethnic minority mental health. *Perspectives on Psychological Science, 4*, 103-107.
- Ong, A.D., Phinney, J.S., & Dennis, J. (2006). Competence under challenge: Exploring the protective influence of parental support and ethnic identity in Latino college students. *Journal of Adolescence, 29*, 961-979.
- Orona, J. A., Blume, A. W., Morera, O. F., & Perez, S. (2007). Examining drinking consequences and reasons for drinking in a bilingual college sample. *Hispanic Journal of Behavioral Sciences, 29*, 101–115.
- Paradies, Y. (2006). A systematic review of empirical research on self-reported racism and health. *International Journal of Epidemiology, 35*, 888–901.
- Park, C. L. (1996). Assessment and prediction of stress-related growth. *Journal of Personality, 64*, 71-105.
- Phinney, J. S. (1990). Ethnic identity in adolescents and adults: Review of research. *Psychological Bulletin, 108*, 499–514.
- Phinney, J. S. (1996). When we talk about American ethnic groups, what do we mean? *American Psychologist, 51*, 918–927.
- Piquero, N.L., Sealock, M.D. (2000). Generalizing general strain theory: An examination of an offending population. *Justice Quarterly, 17*, 449-484.
- Rivera, D.P., Forquer, E.E., & Rangel, R. (2010). Microaggressions and the life experience of Latina/o Americans. In D.W. Sue (Ed.), *Microaggressions and marginality: Manifestations, dynamics, and impact* (pp. 59-84). New York, NY, US: Wiley.

- Roberts, R.E., Phinney, J.S., Masse, L.C., Chen, Y.R., Roberts, C.R., & Romero, A. (1999). The structure of ethnic identity of young adolescents from diverse ethnocultural groups. *Journal of Early Adolescence, 19*, 301-322.
- Rogler, L.H. (1999). Methodological sources of cultural insensitivity in mental health research. *American Psychologist, 54*, 424-433.
- Rowe, M.P. (1990). Barriers to equality: The power of subtle discrimination to maintain unequal opportunity. *Employee Responsibilities and Rights Journal, 3*, 153-163.
- Sarason, I. G., Levine, H. M., Basham, R. B., & Sarason, B. R. (1983). Assessing social support: The Social Support Questionnaire. *Journal of Personality and Social Psychology, 44*, 127-139.
- Sellers, R. M., Copeland-Linder, N., Martin, P. P., & Lewis, R. L. (2006). Racial identity matters: The relationship between racial discrimination and psychological functioning in African American adolescents. *Journal of Research on Adolescence, 16*, 187-216.
- Sellers, R. M., Rowley, S. A. J., Chavous, T. M., Shelton, N., & Smith, M. A. (1997). Multidimensional inventory of Black identity: A preliminary investigation of reliability and construct validity. *Journal of Personality and Social Psychology, 73*(4), 805-815.
- Simons, R.L., Chen Y., Stewart, E.A., Brody, G.H. (2003). Incidents of discrimination and risk for delinquency: A longitudinal test of strain theory with an African American sample. *Justice Quarterly, 20*, 827-854.
- Simons, R.L., Simons, L.G., Burt, C.H., Drummund, H., Stewart, E., Brody, G.H., ... Cutrona, C. (2006). Supportive parenting moderates the effect of discrimination

- upon anger, hostile view of relationships, and violence among African American boys. *Journal of Health and Social Behavior*, 47, 373-389.
- Shorter-Gooden, K. (2004). Multiple resistance strategies: How African American women cope with racism and sexism. *The Journal of Black Psychology*, 30(3), 406-425.
- Solórzano, D., Ceja, M., & Yosso, T. (2000). Critical race theory, racial microaggressions, and campus racial climate: The experiences of African American college students. *Journal of Negro Education*, 69, 60-73.
- Spielberger, C. D. (1999). State-trait anger expression inventory research edition. *Professional manual*. Odessa, FL: Psychological Assessment Resources.
- Stevens-Watkins, D., Perry, B., Harp, K. L., & Oser, C. B. (2012). Racism and illicit drug use among African American women: The protective effects of ethnic identity, affirmation, and behavior. *Journal of Black Psychology*, 38, 471-496.
- Sue, D.W. (2010). *Microaggressions in everyday life: Race, gender, and sexual orientation*. Hoboken, NJ, US: Wiley.
- Sue, D.W., Bucceri, J.M., Lin, A.I., Nadal, K.L., & Torino, G.C. (2007). Racial microaggressions and the Asian American experience. *Cultural Diversity and Ethnic Minority Psychology*, 13, 72-81.
- Sue, D.W., Capodilupo, C.M., & Holder, A.M.B. (2008). Racial microaggressions in the life experience of Black Americans. *Professional Psychology: Research and Practice*, 39, 329-336.

- Sue, D.W., Capodilupo, C.M., Torino, G.C., Bucceri, J.M., Holder, A.M.B., Nadal, K.L., & Esquilin, M. (2007). Racial microaggressions in everyday life: Implications for clinical practice. *American Psychologist, 62*, 271-286.
- Sue, D.W., Nadal, K.L., Capodilupo, C.M., Lin, A.I., Torino, G.C., & Rivera, D.P. (2008). Racial microaggressions against Black Americans: Implications for counseling. *Journal of Counseling and Development, 86*, 330-338.
- Sue, D.W., & Sue, D. (2008). *Counseling the culturally diverse: Theory and practice (5th ed.)*. Hoboken, NJ, US: Wiley.
- Swickert, R., & Hittner, J. (2009). Social support coping mediates the relationship between gender and posttraumatic growth. *Journal of Health Psychology, 14*, 387-393.
- Symister, P., & Friend, R. (2003). The influence of social support and problematic support on optimism and depression in chronic illness: A prospective study evaluating self-esteem as a mediator. *Health Psychology, 22*, 123-129.
- Terrell, F., Miller, A.R., Foster, K., & Watkins, E.C. (2006). Racial discrimination-induced anger and alcohol use among black adolescents. *Adolescence, 41*, 485-492.
- Thomas, K.R. (2008). Macrononsense in multiculturalism. *American Psychologist, 63*, 274-275.
- Thompson Sanders, V. L. (2006). Coping responses and the experience of discrimination. *Journal of Applied Social Psychology, 36*, 1198-1214.

- Ullman, J. B., & Bentler, P. M. (2009). Structural equation modeling. In M. Hardy & A. Bryman (Eds.), *Handbook of Data Analysis* (pp. 431-458). Thousand Oaks, CA, US: Sage.
- US Department of Health and Human Services. (2001). *Mental health: Culture, race and ethnicity-A supplement to mental health: A report of the Surgeon General*. Rockville, MD, US: Author.
- Utsey, S.O., Giesbrecht, N., Hook, J., & Standard, P.M. (2008). Cultural, sociofamilia, and psychological resources that inhibit psychological distress in African Americans exposed to stressful life events and race related stress. *Journal of Counseling Psychology, 55*, 49-62.
- Utsey, S. O., Ponterotto, J. G., Reynolds, A. L., & Cancelli, A. A. (2000). Racial discrimination, coping, life satisfaction, and self- esteem among African Americans. *Journal of Counseling and Development, 78*, 72–80.
- Voelker, R. (2003). Mounting student depression taxing campus mental health services. *The Journal of the American Medical Association, 289*, 2055-2056.
- Watkins, N.L., LaBarrie, T.L., & Appio, L.M. (2010). Black undergraduates' experiences with perceived racial microaggressions. In D.W. Sue (Ed.), *Microaggressions and marginality: Manifestations, dynamics, and impact* (pp. 25-57). New York, NY, US: Wiley.
- White, H. R., & Labouvie, E. W. (1989). Towards the assessment of adolescent problem drinking. *Journal of Studies on Alcohol and Drugs, 50*, 30-37.
- White, H.R., McMorris, B.J., Catalano, R.F., Fleming, C.B., Haggerty, K.P., Abbott, R.D. (2006). Increases in alcohol and marijuana use during the transition out of high

- school into emerging adulthood: The effects of leaving home, going to college, and high school protective factors. *Journal of Studies on Alcohol*, 67, 810-822.
- Williams, D. R., Lavizzo-Mourey, R., & Warren, R. C. (1994). The concept of race and health status in America. *Public Health Reports*, 109, 26-41.
- Williams, D. R., & Mohammed, S. A. (2009). Discrimination and racial disparities in health: Evidence and needed research. *Journal of Behavioral Medicine*, 32, 20–47.
- Williams, D.R., Neighbors, H.W., & Jackson, J.S. (2003). Racial/ethnic discrimination and health: Findings from community studies. *American Journal of Public Health*, 93, 200- 208.
- Williams, D. R., & Williams-Morris, R. (2000). Racism and mental health: The African American experience. *Ethnicity and Health*, 5, 243–268.
- Wong, C. A., Eccles, J. S., & Sameroff, A. (2003). The influence of ethnic discrimination and ethnic identification on African American adolescents' school and socioemotional adjustment. *Journal of Personality*, 71, 1197–1232.
- Wyatt, S. B., Williams, D. R., Calvin, R., Henderson, F. C., Walker, E. R., & Winters, K. (2003). Racism and cardiovascular disease in African Americans. *American Journal of the Medical Sciences*, 325, 315-331.
- Yoo, H. C., & Lee, R. M. (2008). Does ethnic identity buffer or exacerbate the effects of frequent racial discrimination on situational well-being of Asian Americans? *Journal of Counseling Psychology*, 55, 63-74.
- Zimet, G.D., Dahlem, N.W., Zimet, S.G., & Farley, G.K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment*, 52, 30-41.