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RACIAL DISCRIMINATION, RACIAL IDENTITY AFFILIATION, AND ALCOHOL USE IN MULTIRACIAL INDIVIDUALS

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RACIAL DISCRIMINATION, RACIAL IDENTITY AFFILIATION, AND ALCOHOL USE
IN MULTIRACIAL INDIVIDUALS

BY

TESSA NALVEN

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR

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ABSTRACT

Despite vast group heterogeneity among multiracial individuals, their rates of heavy alcohol use (binge drinking five or more times in a month) tend to be disproportionately high when compared to monoracial individuals. Multiracial individuals also report high rates of perceived racial discrimination compared to monoracial individuals, which is of concern as perceived racial discrimination has a robust relationship with heavy alcohol use. Further, research has identified racial identity affiliation as a protective factor against heavy alcohol use for some minority groups; however, results have been mixed among multiracial individuals. There is also reason to believe that the relationship between racial identity affiliation and heavy alcohol use may vary by sex. Yet there is a dearth of literature examining the relations between racial discrimination, racial identity affiliation, sex, and heavy alcohol use among multiracial individuals. Therefore, the purpose of the present study is to test the following hypotheses: 1) multiracial people will be more likely to report (a) heavy alcohol use than Asian, White, and Black individuals; (b) higher levels of perceived racial discrimination than White and Asian individuals but no significant differences compared to Black individuals; and (c) lower overall scores on racial identity affiliation than Asian, White, and Black individuals; 2) among multiracial individuals, greater perceived racial discrimination and less racial identity affiliation will be related to significantly greater likelihood of reporting heavy alcohol use; 3) racial identity affiliation will moderate the relationship between perceived racial discrimination and heavy alcohol use in multiracial individuals; and 4) there will be a three-way interactive effect of sex, racial identity affiliation, and perceived racial discrimination

on heavy alcohol use. Data for the current study was drawn from the National Epidemiologic Survey on Alcohol and Related Conditions-III data (NESARC-III), sponsored by the National Institute on Alcohol Abuse and Alcoholism (NIAAA). The NESARC-III data consists of a nationally representative sample of adults ($n = 36,309$; 56.4% female), including 598 multiracial individuals (2.1%). From 2012–2013, participants were administered the Alcohol Use Disorder and Associated Disabilities Interview Schedule-IV, an interview-based assessment of alcohol use and potentially related variables. Logistic regression analysis, controlling for sex, revealed that multiracial individuals were significantly more likely to report heavy alcohol use than White ($p = .006$, $OR = 1.69$) and Asian ($p < .001$, $OR = 2.94$) individuals, but were not significantly different from Black individuals ($p = .950$, $OR = 0.99$). Two linear regression analyses, controlling for sex, compared perceived racial discrimination and racial identity affiliation across racial groups and found multiracial individuals reported significantly greater perceived racial discrimination than White ($b = 1.37$, $p < .001$) and Asian individuals ($b = 0.38$, $p = .002$), but less than Black individuals ($b = -0.31$, $p = .004$). Further, multiracial individuals reported less affiliation with their racial identity than Black ($b = -5.29$, $p < .001$) and Asian individuals ($b = -3.63$, $p < .001$), but were not significantly different than White individuals. Next, within the multiracial sample, a logistic regression analysis examined whether perceived racial discrimination and racial identity affiliation were related to heavy alcohol use while controlling for sex. Greater discrimination was the only factor significantly related to heavy alcohol use ($p = .034$, $OR = 1.13$). We next examined the interaction of discrimination by racial identity affiliation and found it was not significantly related to

heavy alcohol use in multiracial individuals ($b = -0.02, p = .127$); nor was the three-way interaction of discrimination by identity affiliation by sex significant ($b = 0.01, p = .580$). This study suggests a complex picture such that multiracial individuals experience higher levels of perceived racial discrimination and heavy alcohol use but racial identity affiliation that is relatively low when compared to monoracial members of marginalized groups. Yet, perceived racial discrimination was the only variable significantly related to heavy alcohol use and racial identity affiliation; their interactions were not significant. These findings suggest that there are other unique factors associated with heavy alcohol use among multiracial individuals. Therefore, constructs related to multiracial heavy alcohol use warrant further exploration in order to develop interventions specifically aimed at reducing alcohol use among this high-risk population.

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CHAPTER 1.

INTRODUCTION

Problematic Alcohol Use in the Multiracial Population

Alcohol use is a major public health concern, especially for multiracial individuals who are at higher risk for alcohol use compared to those who are monoracial (Chavez & Sanchez, 2010; Choi, Harachi, Gillmore, & Catalano, 2006; Jackson & LeCroy, 2009; Sakai, Wang, & Price, 2010; Udry, Li, & Hendrickson-Smith, 2003). The National Survey on Drug Use and Health (NSDUH) found that when compared to other racial/ethnic groups, multiracial adults have the second highest rates of past month alcohol use (66.9% versus 74.4% among White, 63.6% Hispanic, 58.0% Asian, 62.2% Black, and 58.8% American Indian/Alaska Native adults) and heavy alcohol use (6.4–8.6% versus 7.7% among White, 4.9–5.5% Hispanic, 2.1–2.9% Asian, 4.7–4.8% Black, and 6.8–7.3% American Indian/Alaska Native adults; Substance Abuse and Mental Health Services Administration, 2018). Heavy alcohol use, in particular, defined by NIAAA as binge drinking (five drinks in 2 hours for males, four drinks in 2 hours for females) on five or more days in a month (National Institute on Alcohol Abuse and Alcoholism), is associated with increased risk of experiencing negative physical or mental health consequences or developing an alcohol use disorder (Oesterle et al., 2004). Research has also consistently shown that men are more likely to engage in heavy alcohol use than women, and therefore experience more alcohol-related consequences (Wilsnack, Wilsnack, Gmel, & Kantor, 2018). Despite there being little research on alcohol-related problems in multiracial adults; research among multiracial youth suggests that they are more likely to

experience alcohol-related problems (e.g. getting in trouble due to alcohol use) compared to other minoritized groups, such as Black or Asian youth, and are at levels similar to those seen in American Indian youth (Heaton, 2018). Therefore, to address the dearth of existing literature, the present study will examine factors associated with heavy alcohol use among multiracial adults. The results may help to explain the higher rates of problematic alcohol use in multiracial individuals which may inform intervention efforts.

Racial Identity Affiliation and Alcohol Use

Much of the existing research noted above measured racial identity, which refers to an individual's self-identification with a particular group or groups (e.g. White, Black, Asian; Hud-Aleem & Countryman, 2008). However, categorizing race in this way is likely to oversimplify the importance of race, especially for multiracial individuals because it may mask the heterogeneity that exists within groups. For example, identifying someone as multiracial overlooks the value and importance of the individual's racial identities. In contrast, racial identity affiliation is more comprehensive in that it allows an individual to report the strength with which they identify with any particular group or groups (Hud-Aleem & Countryman, 2008; Poston, 1990). How strongly an individual identifies with their racial identity (e.g., racial identity affiliation) may influence heavy alcohol use. Previous research has shown that racial identity affiliation may develop differently among different sexes (Archer, 1989). Further, multiracial individuals may have difficulty deciding which group or groups they identify with and how strongly (Hud-Aleem & Countryman, 2008; Poston, 1990). Theoretical papers have proposed stronger racial identity affiliation is influential in the development of heavy alcohol use because it influences

how individuals view themselves by promoting higher self-esteem and self-efficacy and lower discrimination vulnerability (Cheng & Lee, 2009; Hud-Aleem & Countryman, 2008; Poston, 1990; Renn, 2008; Rockquemore & Brunnsma, 2002; Rockquemore & Laszloffy, 2005; Root, 1992; Varvil-Weld Cullen, 2015). While multiple theoretical hypotheses have been proposed, there is a dearth of empirical research exploring these theories.

Existing literature on the relationship between racial identity affiliation and alcohol use or heavy alcohol use have a nearly exclusive focus on monoracial people and studies exploring this relationship have yielded mixed results. Some research finds that a strong sense of racial identity affiliation is protective against alcohol and marijuana use for Black individuals, but less so for American Indians and multiracial people (Joseph, 2017; Urbaeva, Booth, & Wei, 2017; Zapolski, Fisher, Banks, Hensel, & Barnes-Najor, 2017). Other researchers have identified strong racial identity affiliation as a protective factor against substance use in members from minoritized backgrounds and as having a robust relationship with overall well-being (Fisher, Zapolski, Sheehan, & Barnes-Najor, 2017; Smith & Silva, 2011).

Although few studies exist among multiracial individuals, these findings are even more mixed. Prior research suggests that in multiracial people, strong cultural identity affiliation is a protective factor against depression and anxiety (Coleman & Carter, 2007; Lusk, Taylor, Nanney, & Austin, 2010; Sanchez, Shih, & Garcia, 2009) and is associated with higher self-esteem (Lusk et al., 2010; Shih & Sanchez, 2005). Yet, there are no studies that explore this relationship with heavy alcohol use. One study found strong racial identity affiliation was not significantly associated with alcohol consumption (i.e. neither quantity nor frequency of alcohol use; Joseph, 2017).

Others studies have found strong racial identity affiliation was associated with less frequent substance use, which included alcohol as part of a combined measure (i.e. frequency of drinking alcohol, smoking tobacco or marijuana, sniffing inhalants, using crack/cocaine, and binge drinking combined; Choi, Harachi, Gillmore, et al., 2006) and a history of past month substance use (i.e. marijuana, cigarettes, alcohol, inhalants, and other substances combined; Fisher et al., 2017; Zapolski et al., 2017). The mixed findings may be the result of small, non-representative samples (because previous studies may not be considering the high degree of heterogeneity that exists with this racial group) or measurement error; therefore, it is clear that further research is necessary to explore the relationship between identity affiliation and heavy alcohol use. No studies to date have explored this relationship specifically with heavy alcohol use or studied these variables as they relate to sex in multiracial individuals.

Perceived Racial Discrimination and Alcohol Use

Several studies have found that multiracial people experience unique types of racial discrimination, such as invalidation of their racial identities, or the racial misclassification (or identification) on an individual by others (Franco & O'Brien, 2018; Sanchez & Bonam, 2009). They may also perceive more racial discrimination than their monoracial White or minoritized peers (Brackett et al., 2006; Greig, 2014). In fact, though they did not make a direct comparison to other racial groups, Pew Research Center found that as many as 55% of multiracial individuals reported having experienced racial discrimination (Parker, Horowitz, Morin, & Lopez, 2015); similar rates have been found among Black individuals (51%), while lower rates have been found among Asian (32%) and White individuals (23%; "Discrimination in America: Final Summary," 2018).

Of concern, racial discrimination and alcohol use/heavy alcohol use have been found to be robustly related among individuals from monoracial minoritized groups, whereby greater perceived racial discrimination is associated with greater alcohol use and heavy alcohol use (Madkour et al., 2015; Metzger et al., 2018; Salas-Wright et al., 2018). While this relationship has not been well studied among multiracial individuals, perceived racial discrimination in multiracial people has been found to be associated with having ever used marijuana or been drunk and frequency of overall substance use (Choi, Harachi, Gillmore, et al., 2006). Therefore, it seems likely that perceived racial discrimination may be associated with heavy alcohol use in multiracial individuals.

Perceived Racial Discrimination, Racial Identity Affiliation, and Alcohol Use

The mixed findings regarding the role of racial identity affiliation in heavy alcohol use indicate that there are likely other factors influencing the relationship. One such factor may be experiences of perceived racial discrimination. Franco and O'Brien (2018) suggested that racial identity invalidation (i.e., a type of racial discrimination in which others deny an individual's racial identity) among multiracial individuals detrimentally affects perception of one's self, which ultimately influences racial identity affiliation. Similarly, Jackson and colleagues (2012) studied the influence of multiracial identity affiliation and perceived racial discrimination on psychological adjustment in a sample of multiracial adults, where they defined multiracial identity affiliation by racial conflict (i.e., the perception of contradictions between the values and norms of one's racial identities) and separation of racial identities (i.e., the perception that one's racial identities are separate from one another). They found that multiracial identity affiliation moderated the relationship between perceived racial discrimination and psychological adjustment, such that those who experienced racial

discrimination were better psychologically adjusted if they had stronger multiracial identity affiliation (Jackson et al., 2012). These results suggest that strong racial identity affiliation may buffer against the negative effects of perceived racial discrimination on psychological adjustment and may have other psychological benefits. Only one study to date has examined the relationship between racial identity affiliation, perceived racial discrimination, and binge drinking in multiracial adults (Gale, 2018). This study failed to find a significant relationship between racial discrimination or racial identity affiliation and binge drinking. However, there were a number of methodological limitations in this study. For example, less than five percent of their sample identified as non-female, the sample was geographically restricted (thus not nationally representative), and the measure of binge drinking was not clearly defined. Therefore, the relationship between racial identity affiliation, perceived racial discrimination, and heavy alcohol use requires further exploration in multiracial individuals with a more nationally representative sample while also exploring their relationship with sex.

In sum, multiracial individuals are a rapidly growing population (Goings, Salas-Wright, Howard, & Vaughn, 2018; Parker et al., 2015) and have disproportionately high rates of heavy alcohol use as compared to their monoracial counterparts (Chavez & Sanchez, 2010; Choi, Harachi, Gillmore, et al., 2006; Jackson & LeCroy, 2009; Sakai et al., 2010; Udry et al., 2003). This is of concern given the association with negative health outcomes, including alcohol use disorders and dependence (Chavez & Sanchez, 2010). Though related factors are largely unexplored among multiracial people, perceived racial discrimination is a robust predictor of greater heavy alcohol use and alcohol-related problems among minoritized monoracial

people (Madkour et al., 2015; Metzger et al., 2018; Salas-Wright et al., 2018). This fact is alarming given that there is some evidence to suggest that multiracial people may experience even more racial discrimination than monoracial individuals (Brackett et al., 2006; Greig, 2014). In addition, several theories suggest that the role of racial identity affiliation may relate to this increased risk of heavy alcohol use found in multiracial people, yet findings investigating these associations are mixed (Fisher et al., 2017; Hud-Aleem & Countryman, 2008; Renn, 2008). Therefore, it is important to explore the role of perceived racial discrimination and its association with heavy alcohol use, especially as it relates with racial identity affiliation and sex in order to inform intervention efforts.

Current Study

The purpose of the current study was to extend previous research by examining how perceived racial discrimination, racial identity affiliation, and sex relate to heavy alcohol use in multiracial individuals. The results from this study may help to identify a framework for preventing or reducing problematic alcohol use among multiracial individuals. Specifically, we aim to:

1. Test the hypothesis that multiracial people will be more likely to report (a) heavy alcohol use than Asian, White, and Black individuals; (b) higher levels of perceived racial discrimination than White and Asian individuals but no significant differences compared to Black individuals; and (c) lower overall scores on racial identity affiliation than Asian, White, and Black individuals.
2. Test the hypothesis that among multiracial individuals, greater perceived racial discrimination and less racial identity affiliation will be related to greater likelihood of reporting heavy alcohol use.

3. Test the hypothesis that racial identity affiliation will moderate the association between perceived racial discrimination and heavy alcohol use in multiracial individuals such that those who experience high perceived racial discrimination will report lower rates of heavy alcohol use if they are high in racial identity affiliation.
4. Conduct exploratory analyses that will evaluate the three-way interactive effect of sex, racial identity affiliation, and perceived racial discrimination on heavy alcohol use.

CHAPTER 2.

METHODOLOGY

Sample

A total of 36,309 adults, 18-years-old and above, completed study measures. Because the American Indian/Alaska Native and Native Hawaiian and Other Pacific Islander groups had very small sample sizes, they were not included in analyses, as the samples may not be representative of the entire population. We also excluded 366 individuals who did not report their race, of whom 93.4% identified as Hispanic ($n = 342$). Therefore, the present study retained a sample consisting of 29,026 adults who identified either as monoracial White, Black, or Asian, or as multiracial (see “Racial Identity” in “Measures” section below for a definition); 66.1% of the present sample identified as non-Hispanic White ($n = 19,194$), 26.4% identified as non-Hispanic Black (7,673), 5.4% identified as non-Hispanic Asian ($n = 1,561$), and 2.1% identified as multiracial (which may include individuals who are Hispanic or non-Hispanic; $n = 598$). In the present sample, 43.6% were male ($n = 12,661$), while 56.4% were female ($n = 16,365$), with 22.4% of the sample between ages 18-29 ($n = 8,126$), 19.0% between ages 30-39 ($n = 6,900$), 18.0% between ages 40-49 ($n = 6,545$), 17.6% between ages 50-59 ($n = 6,371$), 12.4% between ages 60-69 ($n = 4,502$), and 10.6% were age 70 or older ($n = 3,865$).

Measures

All measures were collected as a part of the Alcohol Use Disorder and Associated Disabilities Interview Schedule (AUDADIS-5), a survey that collects

information on alcohol and substance use, demographic information, and related risk and protective factors.

Demographics: Participant age, sex (male versus female), and ethnicity (Hispanic versus non-Hispanic) were reported.

Racial Identity: Participants were instructed to select one or more categories to describe their racial identity. Options included White, Black or African American, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander. Data were coded such that those who selected more than one of the five options were included as multiracial, while all others were considered monoracial.

Perceived Racial Discrimination: Six questions were used to assess the amount of perceived discrimination participants experienced because of their race in the preceding 12 months. Questions included discrimination in restaurants or for a job, as well as being called a racist name, or hit or threatened because of their race. All questions were measured on a 5-point Likert scale, ranging from “never” to “very often” and were summed for a total score (range: 6–27; in the present sample $M = 6.57$, $SD = 1.64$). Reliability in the present sample was good, Cronbach’s $\alpha = 0.80$.

Racial Identity Affiliation: Eight questions were used to assess the strength with which participants affiliate with their racial identity. Questions included having a strong sense of self as a member of their racial group and pride/importance of their race in their lives. All questions were measured on a 6-point Likert scale, ranging from “strongly disagree” to “strongly agree” and were summed for a total score (range: 8–48; in the present sample $M = 34.97$, $SD = 7.89$). Reliability in the present sample was good, Cronbach’s $\alpha = 0.88$.

Heavy Alcohol Use: Participants were asked one question regarding quantity and frequency of their alcohol use. The questions assessed, for males “during the last 12 months, about how often did you drink five or more drinks in a period of two hours or less?” and for females “during the last 12 months, about how often did you drink four or more drinks in a period of two hours or less?” Participants chose from 11 possible responses ranging from “never in the last year” to “every day.” Individuals who reported “once a week” or more, were considered heavy alcohol users and coded as “1.” Those that did not meet that threshold were coded as “0.” These criteria were chosen because they are most similar to NIAAA criteria, which defines heavy alcohol use as having a binge drinking episode five or more times in the past month (National Institute on Alcohol Abuse and Alcoholism).

Procedure

The present study conducted secondary data analyses on the National Epidemiologic Survey on Alcohol and Related Conditions-III (NESARC-III) dataset. Extensive information about the methodology of data collection, procedures, and participant information for the NESARC-III is published online (Grant et al., n.d.). This cross-sectional survey was sponsored by NIAAA and is considered limited access data (i.e. IRB approval and a written request must be approved prior to data sharing). A request was made providing rationale and agreeing to terms of use and was granted to access data for the present study. Data were de-identified prior to sharing to protect subject confidentiality.

These data are considered nationally representative of all non-incarcerated adults (i.e., over the age of 18) in the United States. Prior to data collection, an extensive field test was conducted from May to June 2011 to test feasibility,

reliability, and validity of measures. Participants were chosen using a multistage probability selection and were stratified by geography and percentage of the population that were Hispanic, Asian, or Black, which were oversampled in order to have a uniform sample size across segments. From the randomly selected segments of the sampling frame, 71,052 addresses were chosen to be included in the study. The authors note that due to limitations in finding addresses of rural-route and post-office box addresses, some individuals living in rural areas, including American Indians on or near reservations, may not be well represented in the sample (Grant et al., n.d.). In addition, those with severe mental or physical disabilities or those who were actively serving in the military were not eligible for the study.

From April 2012 through June 2013, study staff interviewers, who were trained to ensure inter-rater consistency, visited the sampled addresses and attempted to conduct in-person interviews. Informed consent was obtained prior to any data collection, and a signed copy of the consent form was mailed back to participants. The team made attempts to inform people prior to arrival and to reach those who were missed. A total of 36,309 adults were interviewed and administered the AUDADIS-5 (84.0% response rate), and participants were paid \$45 at the start of the AUDADIS-5 and another \$45 upon successful completion of the survey.

Data Analytic Strategy

Prior to obtaining data for the present study, missing and inconsistent data were imputed from the same participant's record based on other responses (assignment) or derived from other respondents with similar characteristics (allocation) as described in the published data notes (National Institute on Alcohol Abuse and Alcoholism). All analyses for the present study were conducted in IBM

SPSS Statistics v.25. First, descriptive statistics, frequencies, and bivariate correlations (i.e., Pearson product-moment correlations among continuous variables and point-biserial correlations among dichotomous and continuous variables) were examined to assess for assumptions of normality, homoscedasticity, and multicollinearity (Harlow, 2014; Tabachnick, Fidell, & Ullman, 2007) and to determine whether any data transformations were required.

To test the first hypotheses, racial identity variables were dummy coded so that monoracial White, Black, and Asian individuals (coded as 0) could be compared to the multiracial participants (coded as 1) as a reference group while controlling for sex. Logistic regression analysis was utilized to compare status of heavy alcohol use, while two linear regression analyses were utilized to compare scores on perceived racial discrimination and racial identity affiliation across multiracial and monoracial individuals.

To test the second hypothesis multiracial participants were selected from the entire sample. Binary logistic regression analysis, controlling for sex, explored whether perceived racial discrimination and racial identity affiliation were related to heavy alcohol use among multiracial individuals.

To test the third hypothesis, perceived racial discrimination and racial identity affiliation were mean-centered and a product term was created. To address the question of whether the two-way interaction of perceived racial discrimination by racial identity affiliation is associated with heavy alcohol use, moderation analyses were conducted with model one of the PROCESS SPSS macro as recommended by Hayes (2012, 2017). The PROCESS procedures use bootstrapping and logistic regression for binary outcomes but ordinary least squares (OLS) regression to estimate

the model coefficients. These methods confer more statistical power than do standard approaches to statistical inference and do not rely on distributional assumptions (Hayes, 2012, 2017). Bootstrapping was done with 1,000 random samples generated from the observed covariance matrix to estimate bias-corrected 95% confidence intervals (CIs) and significance values.

To test the fourth hypothesis, perceived racial discrimination and racial identity affiliation were mean-centered and product terms were created for all the two-way interactions (perceived racial discrimination by racial identity affiliation, perceived racial discrimination by sex, and racial identity affiliation by sex) and three-way interactions (perceived racial discrimination by racial identity affiliation by sex). To address the question of whether the three-way interaction of perceived racial discrimination by racial identity affiliation by sex is associated with heavy alcohol use, moderation analyses were conducted with model three of the PROCESS SPSS macro as recommended by Hayes (2012, 2017).

CHAPTER 3.

RESULTS

Descriptive Statistics

Of the total sample, 88.2% ($n = 25,602$) reported having had at least one alcoholic drink in their lifetime. By racial group, 91.4% ($n = 17,543$) of White individuals, 83.1% ($n = 6,376$) of Black individuals, 72.5% ($n = 1,132$) of Asian individuals, and 92.1% ($n = 551$) of multiracial individuals reported having at least one drink in their lifetime. Further, 3.5% ($n = 1,009$) of the total sample reported heavy alcohol use in the past year. By racial group, 3.1% ($n = 578$) of White individuals, 5.0% ($n = 373$) of Black individuals, 1.8% ($n = 28$) of Asian individuals, and 5.1% ($n = 30$) of multiracial individuals reported heavy alcohol use. Regarding discrimination, 29.2% of the total sample reported perceiving any racial discrimination in the past 12 months. By racial group, 19.2% of White individuals, 51.1% of Black individuals, 41.3% of Asian individuals, and 46.4% of multiracial individuals reported perceiving any amount of racial discrimination. See Table 1 for demographic information for the total sample and by racial group.

Bivariate Correlations

Pearson product-moment and point-biserial correlations were examined within multiracial individuals ($n = 598$). Results revealed a significant positive correlation between racial identity affiliation and perceived racial discrimination ($r = 0.18$, $p < .001$). There were no significant correlations between perceived racial discrimination and heavy alcohol use ($r = 0.07$, $p = .142$), or between racial identity affiliation and

heavy alcohol use ($r = -0.05$, $p = .292$). See Table 2 for Pearson product-moment and point-biserial correlations among all variables of interest in multiracial individuals.

Primary Analyses

Hypothesis 1:

a) Binary logistic regression was used to compare dummy coded monoracial groups to the multiracial group on past year heavy alcohol use while controlling for sex; results are presented in Table 3. The overall model ($n = 28,533$) was significant, $\chi^2(4) = 200.98$, $p < .001$, Nagelkerke $R^2 = 0.027$. Multiracial people were significantly more likely to report heavy alcohol use than non-Hispanic White ($p = .006$, $OR = 1.69$, 95%CI [1.16, 2.47]) and non-Hispanic Asian individuals ($p < .001$, $OR = 2.94$, 95%CI [1.74, 4.96]). There was no significant difference between the multiracial group and the non-Hispanic Black group ($p = .950$, $OR = 0.99$, 95%CI [0.67, 1.45]).

b) Multiple linear regression analysis was used to compare dummy coded monoracial groups to the multiracial group on perceived racial discrimination while controlling for sex; results are presented in Table 4. The overall model ($n = 28,618$) was significant, $F(4, 28614) = 787.29$, $p < .001$, $R^2 = 0.099$. Multiracial people reported greater levels of perceived racial discrimination than non-Hispanic White ($b = 1.37$, $\beta = .27$, $p < .001$) and non-Hispanic Asian individuals ($b = 0.38$, $\beta = .04$, $p = .002$); however, they reported significantly lower levels of perceived racial discrimination than the non-Hispanic Black group ($b = -0.31$, $\beta = -.06$, $p = .004$).

c) Multiple linear regression analysis was used to compare dummy coded monoracial groups to the multiracial group on racial identity affiliation while controlling for sex; results are presented in Table 5. The overall model ($n = 27,574$) was significant, $F(4, 27570) = 731.78$, $p < .001$, $R^2 = 0.096$. Multiracial people

reported lower levels of racial identity affiliation than non-Hispanic Black ($b = -5.29$, $\beta = -.30$, $p < .001$) and non-Hispanic Asian individuals ($b = -3.63$, $\beta = -.11$, $p < .001$). There was no significant difference between the multiracial group and the non-Hispanic White group ($b = -0.04$, $\beta = .00$, $p = .919$).

Hypothesis 2: Binary logistic regression analysis was conducted to examine whether perceived racial discrimination and racial identity affiliation were associated with a greater likelihood of reporting heavy alcohol use in multiracial individuals, while controlling for sex. The overall model ($n = 439$) was significant, $\chi^2(3) = 13.95$, $p = .003$, Nagelkerke $R^2 = 0.095$. Higher levels of perceived racial discrimination were significantly related to a greater likelihood of past-year heavy alcohol use among multiracial individuals ($p = .034$, $OR = 1.13$, 95%CI [1.00, 1.27]), while racial identity affiliation was not significantly related to heavy alcohol use ($p = .152$, $OR = 0.96$). See Table 6 for all binary logistic regression results.

Hypothesis 3: To examine whether racial identity affiliation moderated the relationship between perceived racial discrimination and heavy alcohol use among multiracial individuals, an interaction term was entered into a binary logistic regression, while controlling for sex. Results are presented in Table 7. The overall model ($n = 439$) was significant, $\chi^2(4) = 16.74$, $p = .002$, Nagelkerke $R^2 = 0.114$. The interaction of racial discrimination by racial identity affiliation was not significantly related to heavy alcohol use among multiracial individuals ($b = -0.02$, $p = .127$).

Hypothesis 4: A three-way perceived racial discrimination by racial identity affiliation by sex interaction term, along with all two-way interactions, was entered into a binary logistic regression model for heavy alcohol use in multiracial individuals, while controlling for sex. The overall model ($n = 439$) was significant, $\chi^2(7) = 18.61$, p

= .009, Nagelkerke $R^2 = 0.126$. The three-way interaction term was not significantly related to heavy alcohol use ($b = 0.01, p = .580$). The two-way interaction terms were also nonsignificant, including perceived racial discrimination by racial identity affiliation ($b = -0.02, p = .089$), perceived racial discrimination by sex ($b = -0.11, p = .461$), and sex by racial identity affiliation ($b = -0.50, p = .464$). OLS regression results for heavy alcohol use among multiracial individuals are presented in Table 8.

CHAPTER 4.

DISCUSSION

Multiracial individuals, as a highly heterogeneous group, report disproportionately high levels of heavy alcohol use (Chavez & Sanchez, 2010; Sakai et al., 2010; Substance Abuse and Mental Health Services Administration, 2018). Despite this alarming finding, there is a dearth of research examining factors related to heavy alcohol use among multiracial individuals. Due to mixed findings in existing literature, it is necessary to further compare rates of discrimination, racial identity affiliation, and heavy alcohol use among multiracial individuals as compared to those who are monoracial. This study is among the first to explore factors related to heavy alcohol use among multiracial individuals, particularly examining the interactions between perceived racial discrimination, racial identity affiliation, and sex. Importantly, this study adds to the existing literature as it compares multiracial individuals with other racial groups on measures of perceived racial discrimination, racial identity affiliation, and heavy alcohol use.

The present study found in all analyses that multiracial males were more likely to report heavy drinking than females, which is consistent with the literature among monoracial populations (Wilsnack et al., 2018). Our results further indicated that multiracial individuals were more likely to report heavy alcohol use than White and Asian monoracial individuals and had no significant differences compared to Black individuals. This is inconsistent with our first hypothesis (1a) and previous nationally representative datasets that found White individuals have the highest rates of heavy alcohol use, followed by multiracial individuals, with Black individuals reporting

lower rates of heavy alcohol use (Substance Abuse and Mental Health Services Administration, 2018). One reason for the discrepant findings may be due to our more stringent definition of heavy alcohol use used in the current study (i.e., one binge drinking occurrence per week over the course of a year, which over a typical month would include four binges and this level must be consistent for a full year). The NIAAA definition requires five binge drinking episodes over the course of a month (National Institute on Alcohol Abuse and Alcoholism). Because the NIAAA-defined heavy alcohol use and binge drinking in the past month were not collected in the present dataset, our results may be indicative of even more problematic alcohol use than other studies of heavy alcohol use using the typical NIAAA criteria. Further, our stringent criteria may lead to a lower frequency of reporting heavy alcohol use (because it is more difficult to meet the criteria) and these lower frequencies may lead to smaller effect sizes and, therefore, decrease statistical power. Importantly, the finding that multiracial people are high in heavy drinking compared to White and Asian individuals highlights the need for researchers to explore beyond indices of drinker status (e.g. examine heavy alcohol use), as heavy alcohol use combined with other factors are more likely to lead to health-related problems and disparities in minoritized populations (Galvan & Caetano, 2003). Our findings highlight the need to pay special attention to this at-risk group by over-sampling for multiracial individuals.

Consistent with our first hypothesis (1b), multiracial individuals reported greater levels of perceived racial discrimination than White and Asian individuals; however, they reported less perceived racial discrimination than Black individuals. This finding is consistent with literature that finds multiracial people experience high levels of perceived racial discrimination overall (Greig, 2014) but is inconsistent with

research by Brackett and colleagues (2006), who found multiracial individuals may experience more racial discrimination than Black individuals. However, their sample consisted of people only from one small Southern university, so it is possible their sample did not represent the experiences of racial discrimination across all multiracial and/or Black people, especially given the vast heterogeneity across racial groups. It may also be that multiracial people are experiencing unique types of racial discrimination (Franco & O'Brien, 2018; Greig, 2014; Sanchez & Bonam, 2009) and the measures used for the present study do not accurately capture the experiences of multiracial individuals. For example, the racial discrimination commonly experienced by multiracial people may occur when their racial identity is invalidated (Franco & O'Brien, 2018), and that experience may not be captured by current measures.

In our sample, multiracial individuals reported less affiliation with their racial identities than Black or Asian individuals, a finding that is consistent with our first hypothesis (1c) and the extant literature. Research suggests that multiracial identity development may be complex in ways we do not completely understand (Hud-Aleem & Countryman, 2008; Poston, 1990; Renn, 2008). Scholars have suggested that many measures of identity conceptualize either identifying strongly with your group or the assumed “other” (Poston, 1990); however, multiracial individuals may have difficulty deciding which one of multiple racial groups the questions inquire about. That is, existing measures of racial identity affiliation do not accurately capture identity of multiracial people. Research has suggested an integrated racial identity (incorporating all racial groups one belongs to) may be healthy (Renn, 2008), and current measures of identity affiliation may not capture integrated identity. Interestingly, there were no significant differences in racial identity affiliation between multiracial and White

individuals. The theory proposed by Helms (1990) may help explain these findings. This theory posits that White individuals may not see themselves as racial beings and may be socialized to see their race as the norm. Therefore, they do not spend meaningful time thinking about their racial identity. Perhaps multiracial individuals, similar to White individuals, do not develop a strong sense of racial identity compared to monoracial minoritized individuals. This explanation may be particularly true if a multiracial individual identifies (in part) as White. However, identity affiliation may be different among multiracial people in that, instead of seeing themselves as the norm and therefore not seeing themselves as racial beings, multiracial individuals are hyper aware of their racial status and struggle to define to which group they belong. This is problematic, given that a strong sense of racial identity may serve as a protective factor for multiracial and minoritized individuals against heavy alcohol use and other negative outcomes related to substance use more generally (Coleman & Carter, 2007; Fisher et al., 2017; Lusk et al., 2010; Renn, 2008; Smith & Silva, 2011; Varvil-Weld Cullen, 2015).

We found partial support for our second hypothesis. Interestingly, perceived racial discrimination and heavy alcohol use were not related at the bivariate level; however, when entered into the logistic regression for heavy alcohol use along with racial identity affiliation and sex, they were significantly positively associated. This may be due to a collider bias (Cole et al., 2010), such that an association between perceived racial discrimination and heavy alcohol use may have been induced even though neither are causally related. Alternatively, it may be that there is a true relationship between perceived racial discrimination and heavy alcohol use in multiracial individuals and that the multivariate logistic regression analyses correctly

conditioned on a confounding variable that was incidentally cancelled out in the bivariate correlation. In order to assess the true relationship between perceived racial discrimination and heavy alcohol use in multiracial individuals, this association should be further explored in other samples. However, the finding that perceived racial discrimination and heavy alcohol use may be related in multiracial individuals (in the multivariate analysis) is consistent with research on other substances that has shown a robust relationship between racial discrimination and frequency of substance use (a combined measure of multiple substances including alcohol) in multiracial individuals (Choi, Harachi, & Catalano, 2006). On the other hand, racial identity affiliation was not significantly related to heavy alcohol use, which is consistent with literature that reports mixed findings for the relationship between racial identity and alcohol use among multiracial individuals (Gale, 2018; Joseph, 2017; Zapolski et al., 2017). Our study contributes importantly to the literature on perceived racial discrimination and racial identity affiliation in multiracial individuals in that it extends beyond the research focused on racial identity grouping only; the present study includes the strength of one's affiliation with their race, which captures more information pertinent to their character.

Surprisingly, we did not find support for our third and fourth hypotheses. The interaction of perceived racial discrimination by racial identity affiliation, and their three-way interaction with sex were not significantly related to heavy alcohol use in multiracial individuals. Other researchers have found that stronger racial identity affiliation significantly moderated the relationship between perceived racial discrimination and psychological adjustment in multiracial individuals (Jackson et al., 2012). While psychological adjustment is likely related to heavy alcohol use, they are

distinct concepts. These nonsignificant findings may also have a number of other explanations. First, there was a small total number of multiracial individuals who reported heavy alcohol use based on our definition of heavy alcohol use ($n = 30$) and therefore, they may not be representative of all multiracial people who engage in heavy alcohol use. It may also be that since our criteria assessed for heavy alcohol use throughout an entire year instead of in the past month (as consistent with NIAAA criteria), our criteria were overly restrictive. This may especially be true given that the relation between racial identity affiliation and heavy alcohol use was approaching significance ($p = .089$) and it is possible that this was a power issue. Furthermore, the sample captures adults at all ages, and scholars have posited that younger individuals are particularly affected by constructs such as lack of a strong racial identity affiliation (Phinney, 1992), while older adults may have developed coping strategies for these problems. Moreover, because racial identity may be unique in multiracial individuals (e.g. they must learn about multiple racial backgrounds or choose only one), perhaps the scales included in this study are not accurately capturing identity affiliation as it exists. Current measures of identity affiliation ask about racial and ethnic background with the assumption that they are singular. Several researchers have concluded that perhaps scales of racial identity affiliation are not accurately capturing what is intended in multiracial individuals (Choi, Harachi, Gillmore, et al., 2006; Joseph, 2017; Zapolski et al., 2017) because the integration of multiple identities, which may be most protective (Renn, 2008), is not gathered by the current measures.

Limitations

While the present study adds important information to the literature by examining differences in rates of perceived racial discrimination, racial identity

affiliation, and heavy alcohol use among multiracial individuals, results should be considered within the context of their limitations. First, multiracial individuals comprise a highly heterogeneous group and could be any combination of different races (Udry et al., 2003). It may be that some individuals do not identify as multiracial or others may appear White phenotypically, which may affect their perceptions of racial discrimination and racial identity affiliation. Second, due to relative low rates of heavy alcohol use, the multiracial people engaging in heavy alcohol use in this sample may not be a representative sample of all multiracial individuals who engage in heavy alcohol use. Third, data were collected in 2011 and may not reflect potential changes in the way constructs of racial discrimination and racial identity may have evolved in present years or changes in national trends of heavy alcohol use. Finally, data are self-report and dependent on individuals' understanding and perception of relevant constructs (e.g. discrimination, identity).

Implications and Future Directions

This study was among the first to compare rates of perceived racial discrimination, racial identity affiliation, and heavy alcohol use among multiracial individuals. It further explored factors related to heavy alcohol use among this population. Future research should consider investigating the best way to measure the constructs in this study (e.g. perceived racial discrimination and racial identity affiliation) specifically within multiracial individuals and also account for other potentially related variables (e.g. socioeconomic status, education level, etc.). Due to our discrepant findings at the bivariate and multivariate analyses, results should be confirmed for whether or not perceived racial discrimination is related to heavy alcohol use among multiracial individuals. Furthermore, future studies should begin

with a ground-up methodology to explore causes of heavy alcohol use among multiracial individuals to account for the population's own understanding of factors related to the high rates of alcohol use. This may be particularly effective in young adults, who may be more affected by difficulties with identity development and discrimination as they may be beginning jobs or college, or may be moving away from their homes for the first time and therefore at a particularly vulnerable time in their lives.

Although perceived racial discrimination was the only significant factor related to heavy alcohol use in this sample, results confirm that multiracial individuals are experiencing high levels of racial discrimination and heavy alcohol use and that racial identity affiliation is relatively low. Racial identity affiliation was not related to heavy alcohol use in this sample, yet it still may be related to other factors such as psychological adjustment and health (Hud-Aleem & Countryman, 2008; Jackson et al., 2012), and therefore, mentorship may be beneficial for multiracial youth, who may be struggling with identity development and with obtaining a strong racial identity affiliation, as it may have important protective benefits for overall mental health and adjustment. Furthermore, it is important for educators and researchers to include information about multiracial individuals in their discussions and explorations of racial discrimination. Due to the high rates of heavy alcohol use in this sample, further investigation is necessary to explore what unique factors are related to multiracial alcohol use and targeted interventions need to be developed to help ameliorate this concern.

Table 1. Descriptive characteristics for the total sample and by racial group.

	Total sample (<i>n</i> =29,026)	White (<i>n</i> =19,194)	Black (<i>n</i> =7,673)	Asian (<i>n</i> =1,561)	Multiracial (<i>n</i> =598)
	<i>N</i>				
	(%)				
Sex					
Male	12,661 (43.6%)	8,555 (44.6%)	3,113 (40.6%)	721 (46.2%)	272 (45.5%)
Female	16,365 (56.4%)	10,639 (55.4%)	4,560 (59.4%)	840 (53.8%)	326 (54.4%)
Past year perceived racial discrimination					
No	20,252 (70.8%)	15,402 (80.8%)	3,692 (48.9%)	907 (58.7%)	251 (53.6%)
Yes	8,367 (29.5%)	3,649 (19.2%)	3,863 (51.1%)	638 (41.3%)	217 (46.4%)
Ever drink alcohol					
No	3,424 (11.8%)	1,651 (8.6%)	1,297 (16.9%)	429 (27.5%)	47 (7.9%)
Yes	25,602 (88.2%)	17,543 (91.4%)	6,376 (83.1%)	1,132 (72.5%)	551 (92.1%)
Past year heavy alcohol use					

No	27,524 (96.5%)	18,328 (96.9%)	7,116 (95.0%)	1,521 (98.2%)	559 (94.9%)
Yes	1,009 (3.5%)	578 (3.1%)	373 (5.0%)	28 (1.8%)	30 (5.1%)

Table 2. Correlations of relevant constructs among multiracial individuals.

	1	2	3	4
1. Sex (female) ¹	-	-.003	.010	-.157*
2. Perceived racial discrimination		-	.177*	.068
3. Racial identity affiliation			-	-.050
4. Heavy alcohol use ²				-

Note: * $p < .001$ (two-tailed); ¹Sex is coded as a binary variable where 1=male and 2=female; ²Heavy alcohol use is coded as a binary variable where 0=no and 1=yes.

Table 3. Binary logistic regression model for racial identity and past year heavy alcohol use.

	<i>b</i>	<i>SE</i>	<i>p</i>	<i>OR</i>	95% CI
Constant	-4.18	.43	<.001	0.02	
<i>Race</i>					
Non-Hispanic White	0.53	.19	.006	1.69	[1.16, 2.47]
Non-Hispanic Black	-0.01	.20	.950	0.99	[0.67, 1.45]
Non-Hispanic Asian	1.08	.27	<.001	2.94	[1.74, 4.96]
<i>Multiracial</i>					
Sex (female)	-0.73	.07	<.001	0.48	[0.42, 0.55]
<i>Male</i>					

Note. *OR* = odds ratio. *ORs* are exponential parameter estimates (*b*'s). Bolded typeface indicates significance at the $p < .05$ level.

Table 4. Multiple linear regression model for racial identity and perceived racial discrimination.

	<i>b</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>	95% CI
Constant	6.63	.22		30.12	<.001	[6.20, 7.06]
<i>Race</i>						
Non-Hispanic White	1.37	.11	.27	12.92	<.001	[1.16, 1.58]
Non-Hispanic Black	-0.31	.11	-.06	-2.84	.004	[-0.52, -0.10]
Non-Hispanic Asian	0.38	.12	.04	3.15	.002	[0.14, 0.61]
<i>Multiracial</i>						
Sex (female)	-0.23	.03	-.05	-8.54	<.001	[-0.28, -0.18]
<i>Male</i>						

Note. Bolded typeface indicates significance at the $p < .05$ level.

Table 5. Multiple linear regression model for racial identity and racial identity affiliation.

	<i>b</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>	95% CI
Constant	43.47	.73		59.25	<.001	[42.03, 44.91]
<i>Race</i>						
Non-Hispanic White	-0.04	.35	.00	-0.10	.919	[-0.73, 0.66]
Non-Hispanic Black	-5.29	.36	-.30	-14.70	<.001	[-6.00, -4.58]
Non-Hispanic Asian	-3.63	.40	-.11	-9.13	<.001	[-4.41, -2.85]
<i>Multiracial</i>						
Sex (female)	0.76	.09	.05	8.49	<.001	[0.59, 0.94]
<i>Male</i>						

Note. Bolded typeface indicates significance at the $p < .05$ level.

Table 6. Binary logistic regression model for heavy alcohol use among multiracial individuals.

	<i>b</i>	<i>SE</i>	<i>p</i>	<i>OR</i>	95% CI
Constant	-3.49	1.09	.001	0.03	
Racial Identity Affiliation	-0.04	0.03	.152	0.96	[0.91, 1.02]
Perceived Racial Discrimination	0.12	0.06	.034	1.13	[1.00, 1.27]
Sex (female)	-1.49	0.53	.005	0.23	[0.08, 0.63]
<i>Male</i>					

Note. *OR* = odds ratio. *ORs* are exponential parameter estimates (*b*'s). Bolded typeface indicates significance at the $p < .05$ level.

Table 7. Two-way interaction model for heavy alcohol use among multiracial individuals.

	<i>b</i>	<i>SE</i>	<i>z</i>	<i>p</i>	95% CI
Constant	-2.40	.26	-9.12	<.001	[-2.92, -1.89]
Perceived racial discrimination	0.12	.06	1.97	.049	[0.00, 0.24]
Racial identity affiliation	-0.04	.03	-1.17	.243	[-0.10, 0.02]
Sex (female)	-1.57	.54	-2.91	.004	[-2.63, -0.51]
<i>Male</i>					
Discrimination X identity	-0.02	.01	-1.53	.127	[-0.04, 0.00]

Note. Bolded typeface indicates significance at the $p < .05$ level.

Table 8. Three-way interaction model for heavy alcohol use among multiracial individuals.

	<i>b</i>	<i>SE</i>	<i>z</i>	<i>p</i>	95% CI
Constant	-2.42	.27	-8.97	<.001	[-2.95, -1.89]
Perceived racial discrimination	0.17	.08	2.13	.033	[0.01, 0.33]
Racial identity affiliation	-0.02	.04	-0.61	.543	[-0.09, 0.05]
Sex (female)	-1.54	.58	-2.68	.007	[-2.67, -0.41]
<i>Male</i>					
Discrimination X identity	-0.02	.01	-1.70	.089	[-0.05, 0.00]
Discrimination X sex	-0.11	.15	-0.74	.461	[-0.40, 0.18]
Identity X sex	-0.50	.07	-0.73	.464	[-0.18, 0.08]
Discrimination X identity X sex	0.01	.02	0.55	.580	[-0.03, 0.06]

Note. Bolded typeface indicates significance at the $p < .05$ level.

APPENDICES

Appendix A

Demographic Questions

Instructions: *These first few questions are about your background.*

How old are you as of today? _____Age

What is your sex? _____Male _____Female

Are you of Hispanic or Latino origin? _____Yes _____No

On Card 1 is a list of racial categories. Please select 1 or more categories to describe your race.

Card 1 shows:

_____White _____Black or African American

_____Asian _____Native Hawaiian or Other Pacific Islander

_____American Indian or Alaska Native

Appendix B

Heavy Alcohol Use Questions

Instructions: *The next questions are about drinking alcohol. This includes coolers; beer; wine; champagne; liquor such as whiskey, rum, gin, vodka, bourbon, tequila, scotch, brandy, cognac, cordials, or liqueurs; and also any other type of alcohol.*

In your entire life, have you had at least 1 drink of any kind of alcohol, not counting small tastes or sips?

___ Yes ___ No

And during the last 12 months, about how often did you drink FOUR OR MORE drinks in a period of TWO HOURS OR LESS?

___ Every day	___ Nearly every day
___ 3 to 4 times a week	___ 2 times a week
___ Once a week	___ 2 to 3 times a month
___ Once a month	___ 7 to 11 times in the last year
___ 3 to 6 times in the last year	___ 1 or 2 times in the last year
___ Never in the last year	

And during the last 12 months, about how often did you drink FIVE OR MORE drinks in a period of TWO HOURS OR LESS?

___ Every day	___ Nearly every day
___ 3 to 4 times a week	___ 2 times a week
___ Once a week	___ 2 to 3 times a month
___ Once a month	___ 7 to 11 times in the last year
___ 3 to 6 times in the last year	___ 1 or 2 times in the last year
___ Never in the last year	

Appendix C

Perceived Racial Discrimination Questions

Instructions: *Now I'd like to know about how often you have experienced discrimination, been prevented from doing something, or been hassled or made to feel inferior in any of the following situations because of your race or ethnicity.*

During the last 12 months, about how often did you experience discrimination in your ability to obtain health care or health insurance coverage because of your race or ethnicity?

___ Never ___ Almost never ___ Sometimes
___ Fairly often ___ Very often

During the last 12 months, about how often did you experience discrimination in how you were treated when you got care because of your race or ethnicity?

___ Never ___ Almost never ___ Sometimes
___ Fairly often ___ Very often

During the last 12 months, about how often did you experience discrimination in public, like on the street, in stores, or in restaurants, because of your race or ethnicity?

___ Never ___ Almost never ___ Sometimes
___ Fairly often ___ Very often

During the last 12 months, about how often did you experience discrimination because of your race or ethnicity in ANY other situation, like obtaining a job or on the job, getting admitted to a school or training program, in the courts or by the police, or obtaining housing?

___ Never ___ Almost never ___ Sometimes
___ Fairly often ___ Very often

During the last 12 months, about how often were you called a racist name because of your race or ethnicity?

___ Never ___ Almost never ___ Sometimes
___ Fairly often ___ Very often

During the last 12 months, about how often were you made fun of, picked on, pushed, shoved, hit or threatened with harm because of your race or ethnicity?

___ Never ___ Almost never ___ Sometimes
___ Fairly often ___ Very often

Appendix D

Racial Identity Affiliation Questions

Instructions: Looking at the card, please tell me what category best describes your level of agreement with each of the following statements.

You have a strong sense of yourself as a member of your race/ethnic group.

___ Strongly Agree ___ Agree ___ Somewhat Agree
___ Somewhat Disagree ___ Disagree ___ Strongly Disagree

You identify with other people from your race/ethnic group.

___ Strongly Agree ___ Agree ___ Somewhat Agree
___ Somewhat Disagree ___ Disagree ___ Strongly Disagree

Most of your close friends are from your race/ethnic group.

___ Strongly Agree ___ Agree ___ Somewhat Agree
___ Somewhat Disagree ___ Disagree ___ Strongly Disagree

Your race/ethnic heritage is important in your life.

___ Strongly Agree ___ Agree ___ Somewhat Agree
___ Somewhat Disagree ___ Disagree ___ Strongly Disagree

You are more comfortable in social situations where others are present from your racial/ethnic group.

___ Strongly Agree ___ Agree ___ Somewhat Agree
___ Somewhat Disagree ___ Disagree ___ Strongly Disagree

You are proud of your race/ethnic heritage.

___ Strongly Agree ___ Agree ___ Somewhat Agree
___ Somewhat Disagree ___ Disagree ___ Strongly Disagree

Your race/ethnic background plays a big part in how you interact with others.

___ Strongly Agree

___ Agree

___ Somewhat Agree

___ Somewhat Disagree

___ Disagree

___ Strongly Disagree

Your values, attitudes and behaviors are shared by most members of your race/ethnic group.

___ Strongly Agree

___ Agree

___ Somewhat Agree

___ Somewhat Disagree

___ Disagree

___ Strongly Disagree

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