

**Alcohol Use and Related Consequences for Monoracial and Multiracial Native
American/American Indian College students**

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Abstract

Native American/American Indian (NA/AI) and Multiracial people (those who claim multiple racial groups) report notably high alcohol use compared to other racial groups in the United States. Nearly half of the NA/AI population is also Multiracial, yet NA/AI and Multiracial college students report different motivations for drinking alcohol. Therefore, it remains unclear if NA/AI individuals who are also Multiracial are at different risk for alcohol use and negative alcohol-related consequences, and if there are distinct patterns of risk factors in these understudied populations. Because college-aged students are at risk for high levels of alcohol use, this exploratory study used the AlcoholEdu for College™ survey to compare the association between initial drinking age, college location (urban versus rural), and alcohol use motivations and consequences between monoracial NA/AI ($N = 2,363$) and Multiracial NA/AI college-aged students ($N = 6,172$). Monoracial NA/AI students reported higher incidences of alcohol use and alcohol-related problems such as blacking out and missing class, compared to Multiracial NA/AI students. Risk factors like earlier age of drinking onset were more strongly associated with negative consequences for monoracial NA/AI students compared to Multiracial NA/AI students. Despite similar levels of Internal Coping motivations for drinking (e.g., to feel more confident or sure of yourself), monoracial NA/AI students reported drinking more than Multiracial students and experienced more negative drinking-related outcomes. These results suggest Multiracial NA/AI students may draw on protective factors not accessible to monoracial NA/AI students, highlighting the need for interventions tailored to students at highest risk.

Keywords: alcohol use, racial identity, motivations, outcomes

Public Significance Statement: This study suggests that monoracial and Multiracial Native American/American Indian college students differ in their motivations to drink alcohol and their experience of negative drinking-related outcomes. The relationship between established risk factors, such as age at alcohol use onset, and drinking outcomes varied, indicating that alcohol-related prevention and intervention efforts should be tailored to specific racial groups to be most effective.

Alcohol Use and Related Consequences for Monoracial and Multiracial Native American/American Indian College students

In the United States, Native American/American Indian (NA/AI) and Multiracial¹ people (those who claim more than one racial identity) report notably high alcohol use compared to other racial groups, while endorsing distinct motivations for drinking (Spear et al., 2005; Straka et al., 2019). Alcohol abuse is often initiated and is highly prevalent during adolescence and young adulthood (Brown et al., 2008; Monti et al., 2005). In fact, alcohol use during those developmental periods is associated with elevated health risks, including liability of future alcohol use and abuse (Kosterman et al., 2000), accidents, and death (Chassin et al., 2002). Despite high drinking rates reported by both NA/AI and Multiracial individuals, there is a paucity of evidence related to the patterns of risk factors and motivations in these young adult populations. Thus, the present study explores racial group differences in the associations between several risk factors and alcohol use motivations on alcohol use consequences in a national sample of monoracial and Multiracial NA/AI college students. Though a large body of literature has examined risk factors for monoracial NA/AI college students' alcohol use, by comparing monoracial NA/AI to understudied Multiracial NA/AI samples, the present study will elucidate different patterns of motivations and outcomes that can help college administrators and practitioners better understand and serve these students. Further, this will help social scientists understand the way racial positionality may contribute differently to alcohol use outcomes (Hunt et al., 2018).

Monoracial and Multiracial Native American Alcohol Use

¹ Multiracial is capitalized to denote its status as a racialized group (see Sanchez et al., 2020).

Alcohol use is a persistent public health problem that disparately affects racial groups (O'Malley & Johnston, 2002; Witbrodt et al., 2014). According to the theory of Indigenous Historical Trauma, intergenerational trauma and grief resulting from a history of colonialism and displacement can influence substance use among NA/AIs today (Brave Heart, 1998; Ehlers et al., 2013). Spillane and Smith (2007) propose a separate theory of alcohol use among reservation-dwelling NA/AIs that highlights the contextual association between drinking and life reinforcers such as housing, education, and employment. Yet, because this theory asserts that life reinforcers are universally available or universally unavailable, it has been criticized as lacking cultural context in its conceptualization of life reinforcers (Beals et al., 2009). Other researchers have called for further theoretical development on racial group differences in alcohol use (Zemore et al., 2019). Though NA/AIs demonstrate higher rates of heavy alcohol use and binge drinking than most other racial groups, they also show the highest rates of alcohol abstinence (Chartier & Caetano, 2010). Nationally representative data suggest a bipolar distribution and high variability within the group, as most NA/AIs (59.9%) reported abstaining from alcohol use in the past month, and 25.6% were categorized as heavy or binge drinkers (Cunningham et al., 2016). Further, it is important to note the wide variation in alcohol use rates across tribes (Beals et al., 2003; Spicer et al., 2003).

The patterns of alcohol use among Multiracial people are less known. Because large-scale surveys have only recently changed data collection practices to allow respondents to select multiple racial groups, alcohol use rates among Multiracial people remains understudied. For example, the National Epidemiologic Survey on Alcohol and Related Conditions survey allows respondents to select multiple racial identities, but recodes responses into a single racial category, thus obfuscating potential racial group differences among Multiracial people (Chen et

al., 2016). Yet, some evidence suggests Multiracial people demonstrate higher rates of alcohol use compared to other racial groups (Chavez & Sanchez, 2010; Chen et al., 2012; Goings et al., 2018; Jackson & LeCroy, 2009).

Comparing Monoracial and Multiracial Native Americans/ American Indians

Multiracial adolescents report higher rates of alcohol use initiation compared to monoracial adolescents (Choi et al., 2006; Choi et al., 2012). Similarly, Multiracial Native Hawaiians, other Pacific Islanders, and Asian Americans reported higher lifetime alcohol use than their respective monoracial groups (Sakai et al., 2010). In support of the intermediate hypothesis, other work suggests Biracial groups report alcohol use rates in between the rates of their monoracial groups. For example, rates of substance use among Black-White Biracial youth were lower than those of monoracial White youth, and higher than those of monoracial Black youth (Goings et al., 2016). Similarly, Black-American Indian Biracial youth and Black-Hispanic Biracial youth reported lifetime alcohol use rates in between their monoracial counterparts (though this pattern was not evident for Black-White Biracial youth; Goings et al., 2020). Moreover, research employing longitudinal methodologies paints a more complex picture. Several studies report a catch-up effect, wherein Black-White adolescents report lower alcohol use than White adolescents but more than Whites as young adults (Clark et al., 2013). Similarly, Black-American Indian adolescents demonstrated a within-group catch-up effect as they were the most likely to report abstaining from alcohol as adolescents but more likely to be drinkers than all other racial groups except Whites as adults (Clark et al., 2013). Though some work suggests Black-American Indian youth are at higher risk for alcohol use problems (Goings et al., 2020), no work to date has compared monoracial NA/AI to Multiracial NA/AI young adults.

Further, much of the existing research on alcohol use of Multiracial populations reports rates of use, but does not consider differences in risk factors and motivations.

One could hypothesize that Multiracial NA/AI individuals would be at greater risk for negative alcohol use consequences, consistent with previous findings indicating that Multiracial people, across various racial groups, are at greater risk (Chavez & Sanchez, 2010; Straka et al., 2019). Multiracial people may be at increased risk because they experience discrimination not only as marginalized members of society, but also from family members who do not share their racial identity (Salahuddin & O'Brien, 2011). Indeed, experiencing discrimination from family members was associated with greater alcohol use among a sample of Multiracial participants (Franco & Carter, 2019). Alternatively, Multiracial NA/AIs may be at lower risk for heavy alcohol drinking and consequences from drinking due to added social or cultural influences at odds with those that give rise to heavy drinking in the NA/AI population (Fischer et al., 2017). Given that alcohol use rates are often higher for NA/AI and White populations compared to other racial groups (Hagler et al., 2017), cultural and social influences may motivate lower alcohol use, especially for those Multiracial NA/AI students who have ties with other racial groups.

Risk Factors

Across racial groups, heavy alcohol consumption is prevalent during the college years (18-25 years; Chassin et al., 2002; Maggs & Schulenberg, 2005), with a majority of college students (60%) reporting alcohol use in the past month, and up to 40% of students classified as binge drinkers in the past month (SAMHSA, 2014). Higher rates of drinking are associated with negative physiological outcomes like blacking out and getting injured, as well as social consequences such as straining relationships and experiencing unwanted sexual encounters (Rinker et al., 2016; Wechsler et al., 1994; White et al., 2002). These effects may contribute to

increased risk for certain medical and psychological problems (Mostofsky et al., 2016; SAMSHA, 2014). Additionally, college drinking is also associated with engagement in risky behaviors such as impaired driving, as well as negative academic consequences including missing classes (Chou et al., 2006; Lewis et al., 2010). NA/AI students graduate college at a lower rate (23%) than other racial groups (U.S. Department of Education, 2015), but is unclear whether they also experience other negative outcomes related to the college experience, to what extent those might correlate with alcohol use, and whether Multiracial NA/AI students share similar alcohol-related risks. Given these serious alcohol use consequences, we examined risk factors and motivations for alcohol use.

Age at Alcohol Use Onset

Previous work has investigated risk factors that influence college students' alcohol use, including the age at which people begin drinking. Several large-scale studies have linked alcohol-related problems in adulthood with early onset drinking (Dawson et al., 2008; DeWit et al., 2000). Data from the National Longitudinal Alcohol Epidemiologic survey indicate that for each year of earlier alcohol use onset, the risk of lifetime alcohol dependence increased by 14% (Grant & Dawson, 1997). Among NA/AI populations specifically, similar studies reported an association between early onset of drinking and later alcohol dependence, above and beyond additional risk factors such as gender and externalizing diagnoses (Ehlers et al., 2004; Sittner, 2016). Both quantitative and qualitative studies have found that early onset drinking is prevalent among NA/AIs (though rates of early onset are not necessarily higher than those among other racial groups), suggesting this may be a key risk factor for later alcohol-related problems within this group (Ehlers et al., 2013; Hesselbrock et al., 2000; Willmon-Haque, 2010). To our knowledge, previous work has not examined age at onset specifically among Multiracial

populations. This is a critical gap because Multiracial youth represent the fastest growing youth group in the U.S. (Saulny, 2011). This population grew by nearly 50% between the 2000 and 2010 censuses, and approximately 46% of Multiracial people are under 18 years old (Parker et al., 2015). Thus, understanding the developmental process of alcohol use onset is especially important for the growing Multiracial youth population.

College Location

For college students, the developmental period of early adulthood is marked by greater independence, as many students leave home for the first time and encounter new environments. Thus, college students may experience greater risk factors for alcohol use with fewer protective factors such as family and community support (Kwan et al., 2016). While previous studies have examined alcohol use rates of NA/AI college students in urban (Greenfield et al., 2018; Pokhrel & Herzog, 2014) and rural areas (Ward & Ridolfo, 2011), no previous work has directly compared university location. Some work suggests urban NA/AIs report less alcohol consumption per drinking event, but more frequent drinking events, than NA/AIs on reservations (O'Connell et al., 2005). Further, urban-reared NA/AI youth reported lower rates of discrimination than reservation-reared NA/AI youth (Freedenthal & Stiffman, 2004). Because discrimination is associated with alcohol use among NA/AIs (Whitbeck et al., 2001), these differences may also be reflected in alcohol use and consequences among NA/AI college students. Whether these differences in urban versus reservation/rural drinking characteristics among NA/AI individuals are manifested among NA/AI college students on urban versus rural campuses is not clear, though such information would be of high immediate value to college health educators and clinicians. Although, to our knowledge, no previous research has examined differences in alcohol use between Multiracial college students in urban versus rural settings,

past work suggests that Multiracial people experience less discrimination when they live in racially diverse settings compared to homogenously White environments (Meyers et al., 2020). Given that urban areas are more racially diverse than rural areas (Parker et al., 2018), and that discrimination is associated with greater alcohol use (Franco & Carter, 2019), Multiracial students' alcohol use may also differ between urban and rural campuses.

Motivations for Alcohol Use

The college transition period often reduces students' sense of belonging, which may motivate students to use alcohol (Kwan et al., 2016). Indeed, past work with the AlcoholEdu dataset showed that college students' need to belong was associated with both Internal Coping motivations (relating to alleviating negative mood) and External Conformity motivations to drink (regarding elevated mood and social rewards; Straka et al., 2019)². Between all included racial/ethnic groups, only monoracial NA/AI and Multiracial students (of various mixed backgrounds) reported similar rates of Internal Coping motivations for drinking. Yet, Multiracial students endorsed External Conformity motivations for alcohol use more than monoracial NA/AI students. Thus, the existing literature has demonstrated a difference in drinking motivations between monoracial and Multiracial students more broadly. The present study will explore this between specific racial groups and examine how these different motivational patterns relate to alcohol use consequences. Understanding how motivations differ by group will allow college administrators to protect students who may be more likely to use alcohol, and design more targeted interventions. Further, this will advance current understanding of how the unique

² The items in AlcoholEdu were based on Cooper (1994), who identified four main drinking motivations. However, as AlcoholEdu has been adapted as a tool for educational purposes, the items included to measure drinking motivation have been altered over the years, making it difficult to directly compare these items to existing literature on drinking motivation types. Thus, we rely on the factor analysis by Straka et al. (2019) which labeled these modified AlcoholEdu motivation types in line with the Cooper (1994) taxonomy while also testing them on a more modern participant sample.

experiences of Multiracial people may be associated with motivations and outcomes related to alcohol use.

The Present Study

Given competing findings in the literature regarding monoracial NA/AI and Multiracial alcohol use (Hagler et al., 2017; Straka et al., 2019), the present exploratory study compares the alcohol use risk factors, motivations, and consequences between monoracial and Multiracial NA/AI college students. Specifically, we compare the role of risk factors, including age at onset of alcohol use, college location, and drinking motivation types on the average rates of negative alcohol-related outcomes, such as physiological, interpersonal, academic, and driving consequences, and rates of alcohol use. Further, we examine whether the association between these risk factors and drinking outcomes varies by racial group. We did not hold *a priori* hypotheses regarding these exploratory analyses. Additional exploratory analyses examining abstaining motivations are reported in the supplemental materials.

Methods

Participants

Data in this study were obtained from AlcoholEdu for College™, an interactive web-based alcohol-prevention program for college students (e.g., Lovecchio et al., 2010; Wyatt et al., 2013). Institutional review board approval was not required for secondary analysis of de-identified data. We examined data from the 2016-17 school year, as this was the first year that AlcoholEdu allowed the selection of more than one racial option, which allowed us to account for Biracial/Multiracial participants in the sample. Students were asked to indicate their race with the following instructions and options: *Select one or more of the following options that best describes your race: American Indian or Alaskan Native, Asian, Black or African American,*

Hispanic or Latino/a, Native Hawaiian or Pacific Islander, White/Caucasian, Not Listed, Other (free-response).

Racial groups were coded in two phases. First, group memberships were identified through automated coding of the racial options selected from the given list (selections of more than one listed group were categorized as Multiracial). Second, free response entries were coded using the open source program OpenRefine (Version 3.0), which allowed additional monoracial and Multiracial individuals to be identified and counted (for additional details, see Straka et al., 2019). Taken together, monoracial Native American students were identified by a single selection of the *American Indian* demographic option, while Multiracial Native American students were identified by: a) selection of more than one racial label from the options provided that included the *American Indian* option (but not including *Not Listed* option as a unique group); or by: b) free-response entries that indicated Multiracial identity (e.g., “mixed”). A trained coder (the third author) then reviewed these possible Multiracial groups, identified inconsistencies and coded for specific Multiracial group memberships (e.g., American Indian/Asian). Responses that could not be clearly classified as a race by either the racial option selected (e.g., *Not Listed* or *Other*) or the free response provided (e.g., “human”) were excluded from further analysis. Responses that reflected unreliable respondents were also excluded (e.g., non-relevant responses to the racial identification question). Finally, all students over 24 years-old were excluded in consideration of typical neurological development and in-line with previous work examining the AlcoholEdu dataset (Giedd et al., 1999; Gogtay et al., 2004; Straka et al. 2019; Tupler et al., 2017).

The final sample consisted of 8,535 first-year undergraduate Native American students ($M_{age} = 18.1$, $SD = 0.8$, $Mode_{age} = 18$; 2,363 monoracial, 6,172 Multiracial). Specific tribal

affiliation was not determinable. However, 20 different Multiracial groups were identified (see Figure 1), and of these groups, 76.5% were White-Multiracial (one of their racial identities was White) and 23.5% were Multi-Minority (none of their racial identities were White). Furthermore, these students were 50.7% female, 45.3% male, 3.6% other, and 0.4% did not report gender³. They represented 377 public and private universities from 46 U.S. states and the District of Columbia, and 67.9% of students completed the survey before they matriculated on campus for the fall semester.

Measures

Drinking Motivations

In AlcoholEdu, students were asked, “*How important to you is each of the following reasons for drinking alcoholic beverages?*”, followed by several items related to their drinking motivations. All options were rated on a 7-point Likert scale (1 = *Not at all*; 7 = *Very important*) and composite scores were made for each motivation type. In the current study, students’ motivations for drinking were assessed using the two factors identified in previous research with the AlcoholEdu dataset (e.g., Straka et al., 2019). Internal Coping drinking motivations relate to alleviation of negative mood and were comprised of 8 items ($\alpha = .89$): *Feel more attractive, Feel more confident or sure of yourself, Feel comfortable pursuing an opportunity to have sex, To decrease inhibitions, Feel happy, To relieve stress, Feel connected with people around you, To experiment*. External Conformity drinking motivations relate to elevated mood and social

³ It has been widely documented that men report higher drinking rates and alcohol-related consequences than women (SAMHSA, 2014). Additionally, research suggests that these gender differences emerge around 18-years old (Young et al., 2002). In recognition of the highly documented differences in alcohol-related outcomes by gender, we included gender as a covariate in the following analyses. However, due to unequal samples sizes between the non-binary gender group and male and female groups and unequal variances between groups (Levene’s $F(2, 3020) = 38.33, p < .001$), only male and female participants were included in the covariate gender category.

rewards and were comprised of 3 items ($\alpha = .82$): *To have a good time with friends*, *To celebrate*, *To get drunk*.

Age

The age at which students began drinking was assessed by the following item: “*How old were you when you first started drinking, not counting small sips or tastes of alcohol?*” The fourteen answer options for this item included single age options for 10 through 20 years old as well as *9 years or younger*, *21 years or older*, and *Never did this*. For analysis, the lower and upper anchoring options were coded as 9 and 21-years-old, respectively, and this variable was treated as continuous with thirteen points (excluding participants that selected *Never did this*). Overall, the average drinking onset age was 15.9 years ($SD = 2.1$).

Urbanicity/ Rurality

The U.S. Census Bureau defines “rural” as areas not considered urban. For the 2010 Census data, 486 urbanized areas (populations over 50,000) and 3,087 urbanized clusters (population of at least 2,500 and less than 50,000) were identified in the U.S. These urban areas and clusters account for 80.7% of the population. The default rural areas account for 19.3% of the population and 97% of the land area of the country (Ratcliffe et al., 2016). A team of trained coders (2 Biracial females, 1 Asian male, 1 Latino male, and 1 White female) searched for the location of each university and coded the university for being located in a rural or urban area according to the 2010 Census designations. Only one designated Tribal College or University (TCU) was a participating school (Salish Kootenai College). Of the students in the sample, 87.4% of monoracial NA/AI students were enrolled in urban located schools and 12.6% were enrolled in rurally located schools. Similarly, 90.6% of Multiracial students were enrolled in urban located schools and 9.4% were enrolled in rurally located schools.

Physiological, Interpersonal, Academic, and Driving Outcomes

Students' negative alcohol-related consequences (NARCs) were assessed by the following question and 21 options on a 7-point Likert scale (1 = *Never*; 7 = *Always*): “*During the past two weeks, to what degree did the following happen to you when drinking or as a result of your drinking?*” We computed the mean score across the 21 NARC items. Further, specific NARC categories were identified within the given items. The first and third authors coded the items into categories created in-line with previous work on thematic groups of alcohol-related problems (e.g., Lee et al., 2012) and for AlcoholEdu (e.g., Paschall et al., 2011; Saltz et al., 2010; White & Labouvie, 1989). Physiological consequences included five items: *Got a hangover*, *Passed out*, *Forgot where you were*, *Felt sick to your stomach*, and *Injured yourself* ($\alpha = .83$). Interpersonal/Behavioral outcomes included nine items: *Did something you regretted*, *Got involved in a physical fight or injured another person*, *Damaged property*, *Strained a relationship with a friend*, *Was argumentative*, *Got into trouble with the authorities*, *Deliberately vomited to continue drinking*, *Embarrassed yourself*, *Taken advantage of someone sexually* ($\alpha = .92$). Academic-related outcomes included three items: *Performed poorly on an assignment or got behind in schoolwork/ assignment in school*, *Missed a class*, *Missed going to work* ($\alpha = .91$). Finally, driving under the influence (DUI) included three items: *Drove after 4 or more drinks*, *Drove after 5 or more drinks*, *rode with a driver who had been drinking* ($\alpha = .91$).

Quantity of Drinks. Participants self-reported the number of daily drinks consumed during the two-weeks preceding the program. Individuals who reported total drinks exceeding 160 were excluded from further data analysis (e.g., NIAAA, 2015), as this exceeds the maximum drinks that would be identified by AlcoholEdu as Problematic Drinking (e.g., Lovecchio et al.,

2010; Wyatt et al., 2013). Overall, the average number of drinks consumed in a two-week period was 11.3 ($SD = 15.4$).

Analytic Plan

We conducted three series of analyses. First, we tested group differences in each variable between monoracial and Multiracial NA/AIs. Second, we explored whether racial group (monoracial versus Multiracial) moderated the association between risk factors (age of drinking onset, the urbanicity of the attending college) and negative drinking outcomes (total NARCs, Physiological, Interpersonal, Academic, and DUI outcomes). We tested a moderated regression model for i) age at onset (mean-centered), and ii) college urbanicity (rural or urban) across the five negative drinking outcome variables and the rate of drinks consumed in two weeks in PROCESS (Hayes, 2017). Third, we explored whether racial group (monoracial versus Multiracial) moderated the association between drinking motivation and drinking outcomes. We tested a moderated regression model for each of the two drinking motivation variables, predicting the negative drinking outcome variables in PROCESS (Hayes, 2017). Multicollinearity was not a concern across outcome variables (Tolerances = 0.99–1.00, VIFs = 1.00–1.01) and residuals were uncorrelated (Durbin-Watson = 1.77–2.02). To account for heteroskedasticity in the data, the Davidson-MacKinnon estimator (e.g., HC3) was used (Hayes & Cai, 2007). No outliers were identified for any variables using interquartile range of 2.2 or Mahalanobis distance (Hoaglin et al., 1986; Hoaglin & Iglewicz, 1987). To correct for the multiple comparisons performed in each of these analyses, the alpha level was adjusted following a Bonferroni correction, $\alpha = .008$. The following sections describe significant main effects and interactions across the motivation and negative consequence variables.

Results

Main Effects

A one-way ANCOVA, covarying gender, demonstrated no significant difference between racial groups on the age at alcohol use onset, $b = 0.13$, $t(5165) = 1.83$, $p = .068$. Monoracial students started drinking at similar ages ($M = 15.9$, $SD = 2.4$) compared to Multiracial students ($M = 16.0$, $SD = 1.9$). A chi-squared test indicated a significant difference in the rurality of college location by racial group, $\chi^2(1, N = 8518) = 19.40$, $p < .001$. More monoracial students (12.6%) than Multiracial students (9.3%) attended rural colleges, while more Multiracial students (90.6%) than monoracial students (87.4%) attended urban colleges.

There was no difference between racial groups on Internal Coping motivations, $b = -0.01$, $t(5191) = -0.24$, $p = .810$. However, Multiracial students reported more External Conformity motivations ($M = 4.1$, $SD = 1.6$) than monoracial students ($M = 3.9$, $SD = 1.8$), $b = 0.23$, $t(5199) = 3.86$, $p < .001$.

For negative alcohol use outcomes overall, monoracial students reported more negative consequences ($M = 1.7$, $SD = 1.0$) than Multiracial students ($M = 1.4$, $SD = 0.7$), $b = -0.29$, $t(2921) = -8.71$, $p < .001$. More specifically, monoracial students reported more physiological consequences ($M = 2.0$, $SD = 1.3$) than Multiracial students ($M = 1.7$, $SD = 1.0$), $b = -0.30$, $t(2921) = -6.76$, $p < .001$. Monoracial students also reported more interpersonal consequences ($M = 1.6$, $SD = 1.1$) than Multiracial students ($M = 1.3$, $SD = 0.7$), $b = -0.27$, $t(2919) = -7.95$, $p < .001$ and more academic consequences ($M = 1.5$, $SD = 1.1$) than Multiracial students ($M = 1.2$, $SD = 0.7$), $b = -0.32$, $t(2905) = -9.07$, $p < .001$. Lastly, monoracial students reported higher rates of driving under the influence ($M = 1.6$, $SD = 1.2$) and higher rates of alcohol consumed in a two-week period ($M = 12.6$, $SD = 18.4$) than Multiracial

students ($M_{DUI} = 1.3$, $SD = 0.8$, $b = -0.33$, $t(2899) = -8.36$, $p < .001$; $M_{Drinks} = 10.6$, $SD = 13.5$, $b = -1.78$, $t(2780) = -2.81$, $p = .005$).

Main Effects Summary

Monoracial NA/AI students were more likely to attend rural colleges and reported more NARCs overall, including instances of negative physiological, interpersonal, academic, and impaired driving outcomes, and more alcohol consumption, than Multiracial NA/AI students. Further, Multiracial students reported greater External Conformity drinking motivations than monoracial students. There were no group differences in Internal Coping drinking motivations. Next, we examined whether age at alcohol use onset and urbanicity of college were associated with each alcohol use outcome, and whether these associations varied by racial group.

Moderation Analyses

Risk Factors Predicting Negative Alcohol Use Outcomes

Racial Group and Age at Alcohol Use Onset. We explored if racial group moderated the relationship between drinking age onset and the total number of negative alcohol outcomes and each type of outcome. Drinking age onset and racial group significantly predicted total NARCs, $F(4, 2659) = 22.96$, $p < .001$, $R^2 = .07$, physiological outcomes (passing out), $F(4, 2659) = 20.17$, $p < .001$, $R^2 = .04$, interpersonal outcomes (straining a friendship), $F(4, 2658) = 18.19$, $p < .001$, $R^2 = .05$, academic outcomes (missing class), $F(4, 2652) = 17.15$, $p < .001$, $R^2 = .05$, rates of DUI, $F(4, 2648) = 18.78$, $p < .001$, $R^2 = .06$, and the rate of drinks consumed in a two-week period, $F(4, 2564) = 25.00$, $p < .001$, $R^2 = .07$.

There were significant main effects of drinking age onset, $ps < .001$, and racial group, $ps < .001$, that predicted total NARCs, physiological, interpersonal, and driving outcomes (see Table 1 for full model). Students who began drinking at younger ages reported more negative

alcohol-related consequences overall, including more negative physiological, interpersonal, and driving outcomes compared to those who started drinking when they were older. These associations did not vary by racial group. Additionally, monoracial students reported higher rates of these outcomes than Multiracial students. The covariate was only significant for DUIs, $p < .001$, such that men reported higher rates of impaired driving than women.

There was a marginal interaction between racial group and drinking age onset on academic outcomes, $b = -0.07$, $t(2652) = -2.59$, $p = .010$, 95% CI [-0.13, -0.02]. Specifically, among students who began drinking when they were older, there was no difference in academic outcomes, $p = .125$ (see Table 1 for conditional effects). However, among students who began drinking at the average drinking onset age or earlier, monoracial students reported significantly more negative academic outcomes than Multiracial students, $ps < .001$ (see Figure 2).

Furthermore, men reported higher rates of negative academic outcomes than women, $p = .002$.

Finally, there was a significant main effect of drinking age onset on number of drinks consumed, $b = -1.57$, $t(2564) = -7.01$, $p < .001$, 95% CI [-2.02, -1.14], such that students who began drinking at older ages reported drinking fewer drinks in a two-week period than students who began drinking at earlier ages. Additionally, men reported drinking more than women, $p < .001$.

Racial Group and College Urbanicity/Rurality. Racial group and college urbanicity/rurality significantly predicted total number of NARCs, $F(4, 2914) = 14.73$, $p < .001$, $R^2 = .03$, physiological outcomes (passing out), $F(4, 2914) = 11.25$, $p < .001$, $R^2 = .02$, interpersonal outcomes (straining a friendship), $F(4, 2912) = 12.56$, $p < .001$, $R^2 = .02$, academic outcomes (missing class), $F(4, 2898) = 17.98$, $p < .001$, $R^2 = .03$, rates of DUI, $F(4, 2892) =$

15.68, $p < .001$, $R^2 = .03$, and the rate of drinks consumed in a two-week period, $F(4, 2776) = 16.77$, $p < .001$, $R^2 = .02$.

There was a significant main effect of race on total NARCs, physiological outcomes, and interpersonal outcomes, $ps < .002$ (see Table 2 for full model). Across these outcomes, monoracial students reported higher total rates of NARCs, including physiological, and interpersonal outcomes, compared to Multiracial students, regardless of college location. Additionally, the covariate of gender was not significant, $ps > .174$.

There was a marginal main effect of race, $p = .009$, on negative academic outcomes, and no main effect of race, $ps > .022$, or college urbanicity/rurality, $ps > .176$, on DUI rates or quantity of drinks consumed. However, the covariate of gender was significant, $ps < .002$, such that men reported higher rates of negative academic outcomes, DUI, and number of drinks consumed.

Risk Factors Summary

Monoracial students reported more total experiences of NARCs, including physiological drinking consequences (passed out), and interpersonal consequences (strained a relationship) than Multiracial students. Moreover, the association between some risk factors and drinking outcomes differed between monoracial and Multiracial students. For instance, monoracial students that began drinking at a younger age reported having marginally more academic problems than Multiracial students that began drinking at a younger age. Yet, the rate of NARCs did not vary by college urbanicity/rurality, as monoracial NA/AI students reported higher rates of total NARCs, including physiological and interpersonal outcomes, than Multiracial NA/AI students regardless of college location. Further, drinking onset age predicted self-reported drinks

consumed in two weeks, but college location was not predictive of the quantity of consumed drinks.

Lastly, to further explore how monoracial and Multiracial NA/AI alcohol-related experiences may differ, we tested whether the association between alcohol drinking motivation type (Internal Coping and External Conformity) and negative consequences from drinking (total NARCs, Physiological, Interpersonal, Academic, and DUI) were moderated by racial group. Additionally, we investigated whether the association between drinking motivations and number of drinks consumed in the preceding two weeks was also moderated by racial group. Gender was again included as a covariate in the models.

Drinking Motivations Predicting Negative Drinking Outcomes

Internal Coping

Internal Coping and racial group significantly predicted total number of NARCs, $F(4, 2915) = 70.89, p < .001, R^2 = .19$, physiological outcomes (passing out), $F(4, 2915) = 83.28, p < .001, R^2 = .17$, interpersonal outcomes (straining a friendship), $F(4, 2913) = 57.63, p < .001, R^2 = .16$, academic outcomes (missing class), $F(4, 2901) = 45.21, p < .001, R^2 = .13$, rates of DUI, $F(4, 2986) = 40.32, p < .001, R^2 = .12$, and the rate of drinks consumed in a two-week period, $F(4, 2776) = 25.65, p < .001, R^2 = .06$.

There was a significant interaction between Internal Coping motivations and racial group on total NARCs, including physiological, interpersonal, academic outcomes, and DUI rates, $ps < .002$ (see Table 3 for full model). Monoracial and Multiracial students who reported lower Internal Coping motivations did not differ in their reported incidence of NARCs. However, when Internal Coping motivations were higher, monoracial students reported more NARCs than Multiracial students (see Figure 3). The covariate gender was not significant for total NARCs,

physiological, and interpersonal outcomes, $ps > .084$. However, men reported more academic outcomes and DUIs than women, $ps < .003$.

Finally, there was a main effect of Internal Coping that predicted quantity of drinks consumed, $p < .001$, such that students with higher rates of Internal Coping motivations reported drinking more alcohol. The covariate gender was also significant, $p < .001$, such that men reported drinking more than women.

External Conformity

External Conformity (e.g., to celebrate) and racial group significantly predicted total NARCs, $F(4, 2919) = 41.81, p < .001, R^2 = .07$, physiological outcomes (passing out), $F(4, 2919) = 67.90, p < .001, R^2 = .10$, interpersonal outcomes (straining a friendship), $F(4, 2917) = 30.74, p < .001, R^2 = .05$, academic outcomes (missing class), $F(4, 2904) = 21.96, p < .001, R^2 = .04$, rates of DUI, $F(4, 2899) = 24.29, p < .001, R^2 = .04$, and the rate of drinks consumed in a two-week period, $F(4, 2780) = 43.26, p < .001, R^2 = .07$.

There were significant main effects of both External Conformity, $ps < .004$, and racial group, $ps < .002$, on all outcomes: total NARCs, physiological, interpersonal and academic outcomes, DUI rates, and quantity of drinks. Monoracial students reported more negative outcomes than Multiracial students, and students with higher External Conformity reported more negative outcomes than students with lower External Conformity motivations. Additionally, the covariate gender was significant in predicting negative academic outcomes, DUIs, and drinks consumed, $ps < .003$, such that men reported more of these negative outcomes than women.

Drinking Motivations Summary

Racial group and drinking motivations predicted negative drinking-related outcomes. Further, some drinking motivations led to disparate outcomes for monoracial and Multiracial

students. Monoracial and Multiracial students with low Internal Coping drinking motivations (to feel more confident) did not differ in their rates of negative alcohol-related consequences. However, at both average and high rates of Internal Coping motivations, monoracial students experienced more total NARCs, including higher rates of negative physiological (passed out), interpersonal (strained a friendship), academic (did poorly on an exam), and impaired driving outcomes. However, External Conformity motivations predicted higher rates of negative alcohol-related consequences overall, and this did not differ between monoracial and Multiracial NA/AI students.

Discussion

The present study compared alcohol use risk factors, motivations, and consequences between monoracial and Multiracial NA/AI college-aged students. In the first set of analyses, we demonstrated that monoracial and Multiracial students differed in their patterns of endorsement for drinking. Moreover, monoracial students reported more negative alcohol use consequences than Multiracial students. This is consistent with previous research comparing alcohol use between monoracial NA/AI and Black youth and Biracial NA/AI-Black youth (Goings et al., 2020). In the second set of analyses, we demonstrated that the association between the risk factors and drinking outcomes differed between monoracial and Multiracial students. Lastly, the third set of analyses indicated that the association between drinking motivations and alcohol use consequences also differed between monoracial and Multiracial students (see interim summaries, above, for detailed discussion of the results).

The present study included large samples of monoracial and Multiracial NA/AIs during a developmental period that is critical in alcohol use (Chassin et al., 2002; Maggs & Schulenberg, 2005). While a growing literature has begun to examine group-level differences between

monoracial and Multiracial populations (e.g., Goings et al., 2016, 2020), this work is among the first to also examine differences in processes associated with negative alcohol related consequences. The results demonstrate that risk factors operate differently among monoracial and Multiracial NA/AI students, depending on the age they start drinking but not their college location. These differences may be due to variations in cultural norms (from both home-cultures and school-cultures) surrounding drinking, or proximity and access to support systems either from a student's hometown or from their surrounding peers (Greenfield et al., 2018). Further, because the majority of the Multiracial sample had White ancestry, these students may have been able to claim a higher status identity and have access to greater privilege in society not accessible to the monoracial NA/AI students (see Supplemental Materials). Indeed, previous research suggests that NA/AI-Black biracial youth are among the most vulnerable to alcohol use, perhaps because they face additional marginalization (Goings et al., 2020).

Results also demonstrated that Internal Coping drinking motivations are particularly important for monoracial NA/AI students and are associated with many negative outcomes. These findings are consistent with past work demonstrating that certain coping motives for alcohol may reflect elevated anxiety and negative self-views (Kuntsche et al., 2006). For example, Internal Coping motivations may be a proxy for other psychological stressors, as this motivation type is strongly related to students' fundamental belonging needs, perceived social fit, and general and race-based rejection and exclusion (Straka et al., 2019). Though acceptance and belonging can be a frequent challenge for Multiracial people (Albuja et al., 2019), Internal Coping motivations are common for monoracial NA/AI students within college contexts where they are severely underrepresented (Hussar et al., 2020). Thus, monoracial NA/AI students facing belonging threats and discrimination may be especially vulnerable to psychologically

challenging coping motivations and negative alcohol-related outcomes. Consequently, the level of social fit, belonging, and acceptance that each university offers their students may be particularly important for monoracial students in mitigating their negative alcohol-related outcomes (Mallet et al., 2013). Documenting these differences can spur future researchers to consider the social context of students' identity and college location when examining alcohol use risk factors, motivations, and consequences.

Despite these strengths, the conclusions drawn from this research are tempered by several limitations. Because the data were collected through self-reported measures of alcohol use motivations and consequences, it could be altered by social demand or self-presentational concerns. Despite the large sample sizes, not every tribe was represented (the dataset included only one TCU), making the current work underpowered to test systematic differences between tribes. Thus, the findings reported here may not generalize to all NA/AI college students. Similarly, the cross-sectional nature of the data inhibits causal conclusions. Future research would benefit from examining the social circumstances that may lead to varying motivations between monoracial and Multiracial NA/AIs. For example, how central is being NA/AI to students' identity, and to what extent are they able to engage in cultural practices in college? Cultural practices have been credited with lower the risk of alcohol abuse among NA/AI adults, suggesting this may be an especially relevant social factor to study in relation to drinking motivations (Whitbeck et al., 2004). Similarly, accounting for other variables related to alcohol use among NA/AI and Multiracial people, such as exposure to stress (Whitesell et al., 2013), experiences of discrimination (Franco & Carter, 2019), and socioeconomic status (Chavez & Sanchez, 2010) may help future research better understand causal associations.

Implications

This study holds important implications for college administrators, health educators, and clinicians. The findings suggest monoracial and Multiracial NA/AI college students may benefit from distinct alcohol use interventions to prevent negative consequences of drinking. In particular, interventions may be more effective if they identify students who began drinking at younger ages and address Internal Coping motivations to drink. These motivations are associated with a greater need to belong (Straka et al., 2019), indicating that belongingness interventions may improve drinking outcomes for students who began drinking younger. This work also highlights the need for greater alcohol use research attending to within-group variation, as Multiracial NA/AI students are often analyzed as members of their monoracial groups rather than as an independent racial group (Goings et al., 2020). Lastly, this work identifies different patterns predicting the high alcohol use rates among monoracial and Multiracial NA/AIs, and different alcohol use outcomes, thus furthering our understanding of how social factors such as racial group alter public health outcomes.

Conclusions

In sum, this exploratory study used large samples of college-aged students to examine differences in the alcohol use risk factors, motivations, and outcomes between monoracial and Multiracial NA/AIs. Monoracial NA/AI students reported more negative alcohol use consequences, and showed stronger associations between certain risk factors, internal motivations, and alcohol use consequences than Multiracial NA/AI students. These findings shed light on the need for researchers, college administrators, and practitioners to consider the interaction between racial group identities, motivations, and risk factors when studying alcohol use and designing subsequent interventions.

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Table 1*Racial Group and Age at Alcohol Use Onset Predicting Negative Alcohol-Related Outcomes*

Outcome	Predictor	β	SE	t	p	LLCI	ULCI
Total NARC	Racial Group**	0.23	0.04	6.30	<.001	0.16	0.31
	Age**	-0.05	0.01	-4.94	<.001	-0.07	-0.03
	Race x Age [†]	-0.05	0.03	-2.15	.031	-0.10	-0.00
	Gender	0.02	0.03	0.89	.372	-0.03	0.08
Condition effects at the value of the moderator (Drinking Age)							
	-1 SD**	0.34	0.06	5.36	<.001	0.22	0.47
	Mean**	0.23	0.04	6.30	<.001	0.16	0.31
	+1 SD [†]	0.13	0.06	2.10	.036	0.01	0.25
Physiological	Racial Group**	0.28	0.05	5.75	<.001	0.19	0.38
	Age**	-0.06	0.01	-4.94	<.001	-0.09	-0.04
	Race x Age	-0.05	0.03	-1.52	.128	-0.10	0.01
	Gender	-0.06	0.04	-1.45	.147	-0.13	0.02
Interpersonal	Racial Group**	0.21	0.04	5.39	<.001	0.13	0.28
	Age**	-0.05	0.01	-4.51	<.001	-0.07	-0.03
	Race x Age	-0.05	0.03	-2.00	.046	-0.10	-0.00
	Gender	0.03	0.03	1.26	.209	-0.02	0.09
Academic	Racial Group**	0.24	0.04	5.90	<.001	0.16	0.32
	Age*	-0.03	0.01	-2.79	.005	-0.05	-0.01
	Race x Age [†]	-0.07	0.03	-2.59	.010	-0.13	-0.02
	Gender*	0.09	0.03	3.12	.002	0.03	0.14

Conditional effects at the values of the moderator (Drinking Age)							
	-1 <i>SD</i> **	0.38	0.07	5.49	< .001	0.25	0.52
	Mean**	0.24	0.04	5.90	< .001	0.16	0.32
	+1 <i>SD</i>	0.10	0.07	1.53	.125	-0.03	0.23
DUI	Racial Group**	0.27	0.05	5.78	<.001	0.18	0.36
	Age**	-0.05	0.01	-4.01	< .001	-0.08	-0.03
	Race x Age [†]	-0.07	0.03	-2.06	.039	-0.12	-0.00
	Gender**	0.12	0.03	3.48	<.001	0.05	0.18
Conditional effects at the values of the moderator (Drinking Age)							
	-1 <i>SD</i> **	0.39	0.08	4.75	<.001	0.23	0.56
	Mean**	0.27	0.05	5.78	< .001	0.18	0.36
	+1 <i>SD</i>	0.14	0.07	2.02	.043	0.00	0.28
Quantity of Drinks	Racial Group	1.25	0.71	1.75	.080	-0.15	2.65
	Age**	-1.57	0.22	-7.01	< .001	-2.02	-1.13
	Race x Age	0.05	0.45	0.09	.928	-0.85	0.93
	Gender**	4.23	0.56	7.60	<.001	3.14	5.32

Note. DUI = driving under the influence. *SD* = standard deviation.

[†]*p* < .042, **p* < .008, ***p* < .001 Critical alphas adjusted for Bonferroni correction. Difference between significance levels based on distance between commonly reported alpha levels of .05, .01, and .001.

Table 2*Racial Group and Urbanity/Rurality Predicting Negative Alcohol-Related Outcomes*

Outcome	Predictor	β	SE	t	p	LLCI	ULCI
Total NARC	Racial Group**	0.41	0.11	3.84	<.001	0.20	0.62
	Urban/Rural	0.06	0.05	1.27	.204	-0.03	0.15
	Race x U/R	-0.13	0.11	-1.17	.241	-0.36	0.09
	Gender	0.03	0.03	1.05	.293	-0.03	0.09
Physiological	Racial Group**	0.63	0.15	4.32	<.001	0.35	0.92
	Urban/Rural	0.09	0.06	1.48	.140	-0.03	0.22
	Race x U/R [†]	-0.38	0.16	-2.41	.016	-0.68	-0.07
	Gender	-0.05	0.04	-1.16	.247	-0.12	0.03
Conditional effects at the values of the moderator (Urban/Rural)							
	Rural**	0.63	0.15	4.32	<.001	0.35	0.92
	Urban**	0.26	0.05	5.02	<.001	0.16	0.36
Interpersonal	Racial Group*	0.35	0.11	3.11	.002	0.13	0.56
	Urban/Rural	0.07	0.05	1.49	.137	-0.02	0.16
	Race x U/R	-0.08	0.12	-0.68	.494	-0.32	0.15
	Gender	0.04	0.03	1.35	.176	-0.02	0.10
Academic	Racial Group [†]	0.31	0.12	2.61	.009	0.08	0.54
	Urban/Rural	0.01	0.05	0.11	.916	-0.10	0.11
	Race x U/R	0.01	0.13	0.09	.926	-0.24	0.26
	Gender*	0.10	0.03	3.19	.002	0.04	0.16
DUI	Racial Group [†]	0.30	0.13	2.27	.023	0.04	0.56

	Urban/Rural	0.00	0.06	0.05	.961	-0.12	0.13
	Race x U/R	0.04	0.14	0.32	.752	-0.23	0.32
	Gender**	0.13	0.04	3.56	<.001	0.06	0.20
Quantity of Drinks	Racial Group [†]	4.68	2.12	2.21	.027	0.52	8.83
	Urban/Rural	1.27	0.94	1.35	.177	-0.57	3.11
	Race x U/R	-3.23	2.25	-1.44	.151	-7.64	1.18
	Gender**	4.19	0.56	7.51	<.001	3.09	5.28

Note. DUI = driving under the influence. *SD* = standard deviation.

[†] $p < .042$, * $p < .008$, ** $p < .001$ Critical alphas adjusted for Bonferroni correction. Difference between significance levels based on distance between commonly reported alpha levels of .05, .01, and .001.

Table 3*Racial Group and Internal Coping Predicting Negative Alcohol-Related Outcomes*

Outcome	Predictor	β	SE	t	p	LLCI	ULCI
Total NARC	Racial Group**	0.26	0.03	7.68	<.001	0.20	0.33
	Internal**	0.19	0.02	11.82	<.001	0.15	0.22
	Race x Internal**	0.13	0.04	3.65	<.001	0.06	0.21
	Gender	0.02	0.03	0.70	.483	-0.03	0.07
Conditional effects at the values of the moderator (Internal Coping)							
	-1 <i>SD</i> [†]	0.08	0.04	2.18	.030	0.01	0.16
	Mean**	0.26	0.03	7.68	<.001	0.20	0.33
	+1 <i>SD</i> **	0.45	0.08	5.81	<.001	0.29	0.60
Physiological	Racial Group**	0.27	0.04	6.24	<.001	0.18	0.35
	Internal**	0.26	0.02	13.44	<.001	0.22	0.30
	Race x Internal*	0.13	0.04	3.17	.002	0.05	0.21
	Gender	-0.06	0.04	-1.72	.085	-0.13	0.01
Conditional effects at the values of the moderator (Internal Coping)							
	-1 <i>SD</i>	0.09	0.05	1.85	.065	-0.01	0.19
	Mean**	0.27	0.04	6.24	<.001	0.18	0.35
	+1 <i>SD</i> **	0.44	0.09	5.20	<.001	0.28	0.61
Interpersonal	Racial Group**	0.25	0.04	6.92	<.001	0.18	0.32
	Internal**	0.18	0.02	10.69	<.001	0.14	0.21
	Race x Internal**	0.13	0.04	3.31	<.001	0.05	0.20
	Gender	0.03	0.03	1.05	.294	-0.03	0.08

Conditional effects at the values of the moderator (Internal Coping)

	-1 <i>SD</i>	0.07	0.04	1.88	.060	-0.00	0.15
	Mean**	0.25	0.04	6.92	<.001	0.18	0.32
	+1 <i>SD</i> **	0.42	0.08	5.22	<.001	0.26	0.58
Academic	Racial Group**	0.29	0.04	7.61	<.001	0.22	0.37
	Internal**	0.14	0.02	7.89	<.001	0.11	0.18
	Race x Internal**	0.13	0.04	3.35	<.001	0.06	0.21
	Gender*	0.09	0.03	3.06	.002	0.03	0.15

Conditional effects at the values of the moderator (Internal Coping)

	-1 <i>SD</i> *	0.11	0.04	2.74	.006	0.03	0.19
	Mean**	0.29	0.04	7.61	<.001	0.22	0.37
	+1 <i>SD</i> **	0.47	0.08	5.58	<.001	0.31	0.64
DUI	Racial Group**	0.31	0.04	7.20	<.001	0.22	0.39
	Internal**	0.15	0.02	7.51	<.001	0.11	0.19
	Race x Internal**	0.17	0.04	3.82	<.001	0.08	0.26
	Gender**	0.12	0.03	3.42	<.001	0.05	0.18

Conditional effects at the values of the moderator (Internal Coping)

	-1 <i>SD</i>	0.07	0.05	1.58	.114	-0.02	0.17
	Mean**	0.31	0.04	7.20	<.001	0.22	0.39
	+1 <i>SD</i> **	0.54	0.09	5.75	<.001	0.35	0.72
Quantity of Drinks	Racial Group [†]	1.53	0.69	2.20	.028	0.17	2.89
	Internal**	1.56	0.26	6.01	<.001	1.05	2.07
	Race x Internal [†]	1.60	0.71	2.24	.025	0.20	2.99

Gender**	4.03	0.55	7.37	<.001	2.96	5.10
Conditional effects at the values of the moderator (Internal Coping)						
-1 <i>SD</i>	-0.61	0.98	-0.62	.534	-2.54	1.31
Mean [†]	1.53	0.69	2.20	.028	0.17	2.89
+1 <i>SD</i> *	3.67	1.35	2.72	.007	1.03	6.31

Note. DUI = driving under the influence. *SD* = standard deviation.

[†]*p* < .042, **p* < .008, ***p* < .001 Critical alphas adjusted for Bonferroni correction. Difference between significance levels based on distance between commonly reported alpha levels of .05, .01, and .001.

Table 4

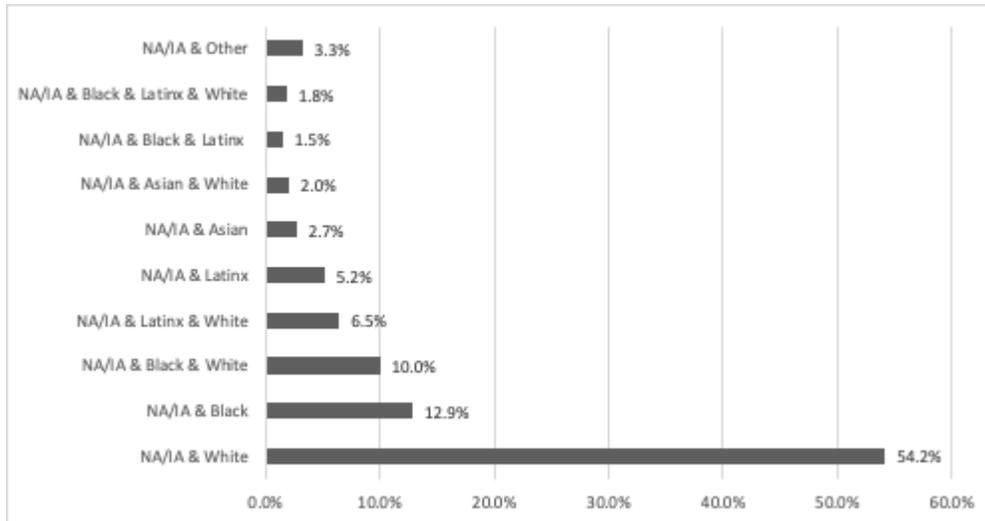
Racial Group and External Conformity Predicting Negative Alcohol-Related Outcomes

Outcome	Predictor	β	SE	t	<i>p</i>	LLCI	ULCI
Total NARC	Racial Group**	0.32	0.04	7.96	<.001	0.24	0.40
	External**	0.09	0.01	8.99	<.001	0.07	0.11
	Race x External	0.03	0.02	1.40	.163	-0.01	0.08
	Gender	0.01	0.03	0.42	.673	-0.04	0.07
Physiological	Racial Group**	0.36	0.05	7.43	<.001	0.26	0.45
	External**	0.17	0.01	12.35	<.001	0.14	0.19
	Race x External [†]	0.07	0.03	2.57	.010	0.02	0.13
	Gender [†]	-0.08	0.04	-2.16	.031	-0.15	-0.01
Conditional effects at the values of the moderator (External Conformity)							
	-1 <i>SD</i> **	0.24	0.05	5.21	<.001	0.15	0.33

	Mean**	0.36	0.05	7.43	<.001	0.26	0.45
	+1 <i>SD</i> **	0.47	0.08	5.87	<.001	0.32	0.63
Interpersonal	Racial Group**	0.30	0.04	7.13	<.001	0.22	0.38
	External**	0.08	0.01	7.41	<.001	0.06	0.10
	Race x External	0.02	0.02	0.83	.407	-0.03	0.07
	Gender	0.03	0.03	0.84	.402	-0.03	0.08
Academic	Racial Group**	0.33	0.04	7.51	<.001	0.24	0.41
	External*	0.03	0.01	2.95	.003	0.01	0.05
	Race x External	0.00	0.03	0.147	.884	-0.05	0.06
	Gender*	0.10	0.03	2.98	.003	0.03	0.16
DUI	Racial Group**	0.35	0.05	7.27	<.001	0.26	0.45
	External**	0.05	0.01	4.39	<.001	0.03	0.08
	Race x External	0.03	0.03	1.04	.300	-0.03	0.09
	Gender*	0.12	0.04	3.25	.001	0.05	0.18
Quantity of Drinks	Racial Group*	2.29	0.73	3.15	.002	0.87	3.72
	External**	2.14	0.21	10.41	<.001	1.74	2.55
	Race x External	0.07	0.48	0.15	.881	-0.88	1.02
	Gender**	3.75	0.54	6.98	<.001	2.69	4.80

Note. DUI = driving under the influence. *SD* = standard deviation.

†*p* < .042, **p* < .008, ***p* < .001 Critical alphas adjusted for Bonferroni correction. Difference between significance levels based on distance between commonly reported alpha levels of .05, .01, and .001.

Figure 1*Multiracial NA/IA Group Demographics*

Note. “Other” indicates belonging to specific groups (e.g., NA/IA & Asian & Black) that individually accounted for less than 1% of the overall Multiracial group demographic.

Figure 2

Total negative alcohol-related consequences (NARCs) as a function of internal coping motivation and participant race

