



## Perceived racial discrimination, heavy episodic drinking, and alcohol abstinence among African American and White college students

Jeannette Wade & Robert L. Peralta

To cite this article: Jeannette Wade & Robert L. Peralta (2017) Perceived racial discrimination, heavy episodic drinking, and alcohol abstinence among African American and White college students, *Journal of Ethnicity in Substance Abuse*, 16:2, 165-180, DOI: 10.1080/15332640.2015.1113152

To link to this article: <http://dx.doi.org/10.1080/15332640.2015.1113152>



Published online: 15 Mar 2016.



Submit your article to this journal [↗](#)



Article views: 133



View related articles [↗](#)



View Crossmark data [↗](#)

## Perceived racial discrimination, heavy episodic drinking, and alcohol abstinence among African American and White college students

Jeannette Wade and Robert L. Peralta

Department of Sociology, The University of Akron, Akron, Ohio, USA

### ABSTRACT

Previous research has demonstrated that White college students are more likely to drink alcohol at a greater frequency and quantity compared to their African American counterparts. Examining race-related factors that structure alcohol use among college students remains an important area of research. In this study, we specifically examine perceived discrimination and its association with both heavy episodic drinking (HED) and alcohol abstinence among college students. Items that measured perceived racial discrimination in alcohol use contexts and demographic characteristics were used as independent and control variables. African American students were more likely to abstain from alcohol and less likely to engage in HED compared to their White counterparts. Results also suggest that students who believe their drinking will solicit race-based police bias have lower odds of engaging in HED and greater odds of alcohol abstinence. We conclude that unsolicited policing, experienced by African Americans generally, and White Americans on campuses, explains effect sizes.

### KEYWORDS

African American; alcohol; college campus; health and inequalities; policing; social control

## Introduction

Heavy episodic drinking (HED) is associated with an array of preventable diseases and injuries as well as premature deaths (White & Hingson, 2014). HED poses a substantial public health threat with 38 million adults reporting binge drinking an average of four times a month and 2,200 alcohol poisoning deaths occurring each year (Centers for Disease Control [CDC], 2015). College students continue to be an especially high-risk population for HED behavior. Among college students, HED co-occurs with other health-risk behaviors and experiences including physical violence and risky sexual behavior with intercorrelated outcomes that include a range of inter alia (e.g., HIV, suicide, trauma, sexual assault, and academic problems).

Differing patterns of alcohol use within the college population are associated with racial and ethnic status. In general, White college students are more likely to engage in HED (defined as imbibing 4–5 drinks in a row, in one

---

**CONTACT** Jeannette Wade  [jmg126@zips.uakron.edu](mailto:jmg126@zips.uakron.edu)  The University of Akron, Department of Sociology, Olin Hall 277c, Akron, OH 44325.

A version of this study was presented at the North Central Sociological Association 2015 meeting.

© 2017 Taylor & Francis

sitting, for women and men, respectively, during the past 2 weeks) compared to their racial and ethnic minority counterparts (Wechsler & Kuo, 2003). We know little about whether race-related social conditions among college students may be affecting decisions to engage in HED or abstain from alcohol use altogether. It is therefore important to understand how the place of college students—that is, the contextual conditions of students within the college campus—are associated with drinking behavior and decisions not to drink. The purpose of this article is to (1) determine whether there is a disparity in alcohol use behavior by race and (2) examine a sociostructural aspect of alcohol use: perceived racial discrimination. We specifically study the association between perceived racial discrimination, HED, and alcohol abstinence among college students.

## Background

Despite decades of research, college students continue to be at particularly high risk for HED, which is consistently associated with physical and sexual violence, poor academic performance, injury, memory loss, blackouts, impaired brain function, overdose, and death (White & Hingson, 2014). College students also have high rates of risky sexual behavior (American College Health Association, 2006) and physical violence involvement relative to the general population (Johnston, O'Malley, Miech, Bachman, & Schulenberg, 2014; Kelly-Weeder, 2011). HED is strongly linked with physical violence—especially in dating contexts (Shorey, Stuart, & Cornelius, 2011)—as well as with sexual risk behavior among college students in particular (Cooper, 2002). Thus, considerable individual and social harm is rooted in HED behavior. Among college students, males have significantly higher rates of frequent HED. White males in particular engage in more HED than females, African American males, and above all females of color (Johnston et al., 2010). Research on sociostructural factors that may underlie alcohol use disparities is needed for prevention and intervention purposes.

Alcohol use is a health behavior that is strongly influenced by social and environmental patterns (Link & Phelan, 1995). Although alcohol dependence and alcohol abuse rates mirror stratification trends, and are most prevalent among African Americans, heavy varying drinking patterns in emerging adulthood do not (Zapolski, McCarthy, Pedersen, & Smith, 2014). College students' varying drinking patterns, by race, are perhaps an example of a counter-veiling mechanism known as status pursuit (e.g., where pressures to pursue a status may compromise health; see Lutfey & Freese, 2005). In this case, despite the health-related privilege that comes with White race and male sex, the potential social costs of abstinence that White men face may buffer against what White men know about the dangers of consumption (Courtenay, 2000).

Not only might White male college students consume alcohol for status pursuit (Peralta, 2007), they also may consume alcohol because they are the least concerned with health consequences in the developmental stage of emerging adulthood. Finucane, Slovic, Mertz, Flynn, and Satterfield (2000) coined the term “White male effect” (WME) after establishing that across all intersections of race and sex, White men were the least sensitive to risk. In addition, there may be a sense of invulnerability (Hornberger, 2006) that occurs during college years. During this stage, emerging adults struggle to connect today’s choice to tomorrow’s consequence (Hornberger, 2006; Peralta, 2007). Thus, the culmination of social pressures to engage in HED and a muted sense of risk may influence drinking patterns on campus. Although evidence pointing to motivation for White student drinking is mounting, there is little research that explores the sociostructural mechanisms in place that limit consumption by college students (see Korte, Pieterse, Postel, & Van Hoof, 2012; Weitzman, Folkman, Folkman, & Wechsler, 2003; White & Hingson, 2014).

### ***The meaning and relevance of being African American in drinking contexts***

A limited number of studies seek to understand the meaning of race and its effect on drinking behavior among college students (Keeling, 2000; Peralta, 2010; Wallace, 1998). Wallace (1998) posited that race differences in drug and alcohol use can be attributed to racially based ideologies in the social structure and culture of the United States. Although statistics indicate that Whites use alcohol and illegal drugs more frequently, most Americans associate drug use with African Americans (Peralta, 2010). Keeling (2000) indicated that “binge drinking is rooted in the inertia of social and economic forces that reinforce class differences and level out the dynamics of privilege” (p. 196). Keeling (2000) related the relative absence of binge drinking among minorities to the surrendering of power and status to the dominant group.

Although a few studies have linked African American alcohol abstinence to structural inequality (Galvan & Caetano, 2003; Keeling, 2000), one study in particular, grounded in interview data, documented how race relations might be structuring alcohol use. Using in-depth qualitative interviews, Peralta (2005) found that attitudes, drinking practices, and drinking experiences differ for African Americans in comparison to their White counterparts. African American students reported the drinking culture of their campus was composed primarily of “white space” and that they felt disconnected from this space (Peralta, 2005, p. 128). This qualitative study provided three potential theoretical explanations—grounded in interview data—for why African American students are less likely to partake in the drinking culture and more likely to abstain compared to their White counterparts. First, African American students avoid contributing to negative stereotypes regarding their

race by not partaking in or by avoiding heavy drinking practices. Second, African American students avoid drinking contexts where explicit racism is likely to emerge. The loss of inhibitions among Whites during parties is thought to be a context where explicit racism is likely to come out. Third, African Americans expect unequal reactions and sanctions from the university in the form of pronounced campus police surveillance and campus police intervention.

Peralta and Steele (2009) used the qualitative results to create the six-item Drinking Styles and Race (DSAR) scale. In a study based on survey responses by college students, some quantitative support was found for the qualitative results previously discussed. Respondents who indicated yes to “Are your racial/ethnic minority (e.g., African American, Hispanic) university peers likely to be criticized for drinking four or more drinks in a row in one setting?” were more likely to abstain from binge drinking. In more recent work, Zapolski et al. (2014) argued that African Americans’ drinking patterns are shaped by cultural (e.g., group norms prohibiting heavy drinking) and societal (e.g., greater likelihood of police involvement) mechanisms. We know that significant race differences might exist in HED behavior among college students, but little research has explained why racial identities are associated with heavy alcohol use or alcohol abstinence. To address this gap in the literature, we analyzed college student responses to questions tapping into perceived racial discrimination. This analysis will determine whether associations exist between perceived race-based discrimination and drinking behavior.

## **Hypotheses**

Consistent with previous research, we hypothesize that African American students will consume less alcohol than their White counterparts. In testing theories emerging from qualitative findings (Peralta, 2005) and confirming previous quantitative results (Peralta & Steele, 2009), we further hypothesize that there are sociostructural factors (i.e., the fear of contributing to negative stereotypes, expectations of criticism and racism from peers, and expectations of sanctions from the university) that will help us understand, at least in part, the relationship between race and drinking patterns on campus. Below are our specific hypotheses.

Hypothesis 1a: African American students will be more likely to abstain from alcohol than their White American counterparts.

Hypothesis 1b: African American students will be less likely to report HED compared to their White counterparts.

Hypotheses 2a and 2b: Students who increasingly report positively on the DSAR will be (H2a) less likely to engage in HED and (H2b) more likely to abstain. Specifically, those that (1) fear contributing to negative stereotypes about their race/ethnicity for using alcohol with their university peers, (2) avoid the use of alcohol

as a university student for fear of police bias based on their race/ethnicity, (3) think that university police are more likely to respond negatively to their alcohol use because of their race/ethnicity, (4) avoid alcohol use with their university peers because they feel that they “represent their race,” and (5) believe their minority peers are criticized for binge drinking will be less likely to engage in HED and more likely to abstain from alcohol use.

## Data and methods

This quantitative analysis is derived from a larger study whose purpose was to collect epidemiological data on social determinants of health-risk behavior. Institutional Review Board (IRB) approval was granted for this study, which is based upon a convenience sample of college students. Participants were recruited through advertising to Introduction to Sociology students at a mid-sized Midwestern public university from fall 2013 to spring 2014. Students were offered extra credit for taking part in the survey: Students turned in to their instructor a copy of a thank you letter that concluded the survey as evidence of having taken part in the survey. Respondents completed the survey online with full confidentiality (names or student IDs were not collected). The survey took about 50 minutes to fill out. A total of 1,026 students participated in the survey; 841 participants met the age-related eligibility requirements (18–24) detailed in the informed consent notice. This study utilizes an analytical subsample consisting of 752 participants. For comparison purposes, to limit our analysis to the African American experience, and because the number of other minorities (e.g., Hispanics) was very low, this study was limited to African American and White respondents only.

## Measures

The dependent variables are HED and alcohol abstinence. We measured HED in accordance with the standard measurement procedures in the published literature. HED among undergraduates was dichotomized such that females who consumed four or more drinks and males who consumed five or more drinks in one setting in the past two weeks were coded 1; those who did not engage in HED were coded 0. We also measured alcohol abstinence dichotomously as consumption versus no consumption (see Reed, Prado, Matsumoto, & Amaro, 2010). We coded responses to the question “Do you drink alcohol?” as abstainers = 1 or nonabstainers = 0.

The independent variable is the Drinking Styles and Race (DSAR) scale, which measures perceptions of racial discrimination associated with alcohol consumption (Peralta & Steele, 2009). The five questions in the DSAR scale were coded as follows: 0 = *very unlikely*, 1 = *unlikely*, 2 = *likely*, and 3 = *very unlikely*. The specific questions are as follows: (1) “Are your racial/ethnic

minority (e.g., African American, Hispanic) university peers likely to be criticized for drinking four or more drinks in a row in one setting?” (2) “Are you likely to fear contributing to negative stereotypes about your race/ethnicity if you use alcohol with your university or college peers?” (3) “Are you likely to avoid the use of alcohol as a university or college student for fear of police bias based on your race/ethnicity?” (4) “Do you think that the university or college police are more likely to respond negatively to your alcohol use because of your race/ethnicity?” (5) “Do you avoid alcohol use with your university or college peers because you feel that you represent your race?”

Additional control variables include sociodemographic items that have been linked to consumption patterns in prior studies; namely, age, sex, race, mother’s education, suicidal ideation, marijuana use, student employment status, campus housing, and ethnic belonging. Responses to “what is your age” were coded on a 7-point scale ranging from age 18 to age 24. To measure sex, we recoded into a dummy variable where *male* = 0 and *female* = 1. Previous research shows female undergraduates are less likely to have had a drink in the past 30 days (Talbot et al., 2008) and less likely to binge drink (Peralta & Steele, 2009).

It is well established in the literature that African American college students consume less alcohol than their White American counterparts (Wechsler & Kuo, 2003). Students were coded 1 = *African American* or 0 = *White*. We included mother’s education as a proxy for social class. Mother’s education has been shown to predict familial conversations around risk reduction and prevention (Raffaelli & Green, 2004) and to have an inverse relationship with alcohol consumption among young adults (Piko, Varga, & Wills, 2015). In this study, respondents were asked to indicate their mother’s highest level of education. Response options were 0 = *did not finish high school*, 1 = *graduated high school*, 2 = *some college*, 3 = *graduated from college*, or 4 = *graduate or professional school*. Suicidal ideation, which has been connected to alcohol use (Gonzalez & Hewell, 2012), was measured via the question “Have you ever thought about committing suicide?” Responses were coded as 0 = *no*, 1 = *yes*, or 2 = *prefer not to answer*.

Wechsler, Dowdall, Davenport, and Castillo (1995) tested a gamut of social determinants of binge drinking among undergraduates and found several risk behaviors, including marijuana use, to be significant predictors. Self-reported marijuana use was analyzed categorically as 0–40+ occasions over the past 30 days. Average hours worked was coded 0 = 0, 1 = 1–20 hours, 2 = 21–39 hours, and 3 = 40 or more hours. Students’ campus housing was captured from responses to “Do you live on campus?” coded as 0 = *yes* or 1 = *no*. For minority students, living off campus often means being closer to their culture, whose norms and beliefs around consumption are likely more conservative than the norms found on campus (Cacciola & Nevid, 2014).

Finally, the ethnic belonging component of the Multi-Group Ethnic Identity Measure (MEIM) developed by Phinney (1992) was used to assess ethnic

belonging in our sample of participants. Phinney and Ong (2007) recommend this scale for use in studies of divergent race groups. They claim that ethnic identity is fluid, contextual, and key in guiding group-specific behaviors. Our four-item measure of ethnic belonging consisted of the following statements: “I feel a strong attachment toward my own ethnic group,” “I feel strongly about my culture or ethnic group,” “I feel a lot of pride in my ethnic group and its accomplishments,” and “I have a strong sense of belonging in my ethnic group.” Participants rated each item on a 5-point scale ranging from *strongly disagree* to *strongly agree*.

### **Analytical strategy**

In this study, correlation analysis, cross tabulation, and logistic regression were used to test our hypotheses (H1a–H2b). Prior to analysis, we used the STATA imputation program ICE to address missing data concerns. ICE works by creating predicted scores for missing values based on the student’s responses to other questions on the survey. Because the data have been enhanced using imputation, STATA reported on model fit using *F*-test scores. Correlation analysis was the first step in our analytical procedure, which we needed to understand relationships among the variables. Second, we ran cross tabulations to determine bivariate associations between race and drinking patterns. Finally, we used logistic regression to uncover how changes in each independent variable affect the odds of alcohol abstention and HED among students. Two models were used to predict the odds of abstention and HED. For each set of analyses, model 1 tested the effects of demographic variables on drinking behaviors and model 2 tested the effects of both demographic variables and the DSAR scale.

### **Results**

Distributions for all measurements can be found in Table 1. Our sample consisted of mostly females (60%). The mean age was 19, and 73% of the sample was White. In regard to mother’s education, the mean level was some college education. Over half of our sample lived off campus and worked at least part-time. About one fourth of our sample reported they do not drink alcohol, which is roughly equivalent to national figures (National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2014). Among drinkers, 42% reported having engaged in HED within the past two weeks. This rate is also commensurate with national data (White & Hingson, 2014).

Results from correlation analyses of alcohol abstention, HED over the past two weeks, the DSAR measures, and controls are shown in Table 2. Alcohol abstention has a weak negative correlation with race ( $-.09$ ,  $p$  value  $< .05$ ) and a positive moderate correlation with “Are you likely to avoid the use of alcohol

**Table 1.** Descriptive statistics for all analysis variables ( $N = 752$ ).

	Mean or % coded 1	Standard deviation	Range
<b>Dependent variables</b>			
HED (0 = 0 instances of HED, 1 = 1 or more instances)	42%	0.49	0–1
Abstinence (Do you drink? <i>yes</i> = 0, <i>no</i> = 1)	23%	0.42	0–1
<b>Control variables</b>			
Sex (1 = <i>female</i> )	60%	0.49	0–1
Average hours work/week (0 = <i>none</i> , 1 = <i>up to 20 hours</i> , 2 = <i>21 to 39 hours</i> , 3 = <i>full-time</i> )	0.93	0.87	0–3
Do you live on campus? (0 = <i>yes</i> , 1 = <i>no</i> )	61%	0.49	0–1
Mother's education (0 = <i>&lt;high school</i> , 1 = <i>high school</i> , 2 = <i>some college</i> , 3 = <i>college</i> , 4 = <i>college+</i> )	2.30	1.08	0–4
Tetrahydrocannabinol use / last 30 days? (0 = 0 occasions, 1 = 1–2, 2 = 3–5, 3 = 6–9, 4 = 10–19, 5 = 20–39, 6 = 40+)	0.76	1.55	0–6
Have you ever thought about committing suicide? (0 = <i>no</i> , 1 = <i>yes</i> , 2 = <i>prefer not to answer</i> )	0.41	0.59	0–2
Age (0 = 18, 1 = 19, 2 = 20, 3 = 21, 4 = 22, 5 = 23, 6 = 24, 7 = 25)	1.63	1.70	0–7
<b>Ethnic Belonging Scale (0 = strongly disagree, 1 = disagree, 2 = neutral, 3 = agree, 4 = strongly agree)</b>			
I feel a sense of ethnic attachment	2.31	0.97	0–4
I feel strongly about my culture	2.41	0.95	0–4
I feel pride in my ethnic group	2.41	0.96	0–4
I feel a strong sense of belonging in my ethnic group	2.42	0.94	0–4
<b>Independent variables</b>			
Race (1 = <i>African American</i> , 0 = <i>White</i> )	0.17	0.38	0–1
<b>Race relations (0 = very unlikely, 1 = unlikely, 2 = likely, 3 = very likely)</b>			
1. Are your racial/ethnic minority (e.g., African American, Hispanic) university peers likely to be criticized for drinking four or more drinks in a row in one setting?	0.53	0.67	0–3
2. Are you likely to fear contributing to negative stereotypes about your race/ethnicity if you use alcohol with your university or college peers?	0.46	0.67	0–3
3. Are you likely to avoid the use of alcohol as a university or college student for fear of police bias based on your race/ethnicity?	0.47	0.71	0–3
4. Do you think that the university or college police are more likely to respond negatively to your alcohol use because of your race/ethnicity?	0.53	0.71	0–3
5. Do you avoid alcohol use with your university or college peers because you feel that you represent your race?	0.31	0.60	0–3

as a university student for fear of police bias based on your race/ethnicity?" (.09,  $p$  value < .05). HED has a moderate negative correlation with "Are your racial/ethnic minority (e.g., African American, Hispanic) university peers likely to be criticized for drinking four or more drinks in a row in one setting?" (–.13,  $p$  value < .05) and "Are you likely to avoid the use of alcohol as a university or college student for fear of police bias based on your race/ethnicity?" (–.12,  $p$  value < .05).

Drinking patterns by race are displayed in Table 3. Twenty-three percent of students reported abstaining from alcohol, and 42% of nonabstainers reported engaging in HED within the past two weeks. We found significance in both race x drinking behavior cross tabulations, which fully supported H1a and H1b. Compared to their White counterparts, African American students were significantly more likely to abstain (31% versus 22%) and less likely to engage in HED (33% versus 44%).

**Table 2.** Bivariate correlations ( $n = 752$ ).

	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
1. Abstain																			
2. Heavy episodic drinking	-.45*	-.19*	-.01	0.09*	-.01	-.03*	-.14*	-.03	-.20*	.03*	-.01	.03	0	0.01	0.02	.09*	-.01	.03*	
3. Age		.15*	-.10*	-.08*	-.07*	0.01	.03*	-.005*	.28*	-.05*	-.07*	0.02	-.01	.07*	-.04*	-.06*	-.00	.03*	
4. Sex, <i>female</i> = 1			-.11*	-.10	.40	-.04*	.41*	.04*	.12*	-.05*	-.06*	-.05*	-.07*	.05*	-.08*	-.12*	-.02	-.04*	
5. Race, <i>Black</i> = 1				.00	.03*	-.04*	0.01	.05*	-.15*	-.07*	-.07*	-.06*	-.09*	.09*	.03*	0.01	-.03*	-.04*	
6. Live on campus, <i>no</i> = 1					-.08*	-.01	-.04*	-.08*	.06*	.17*	.22*	.22*	.12*	.13*	.20*	.30*	.40*	.30*	
7. Mother's education						-.13*	.37*	.09*	.04*	-.03*	-.05*	-.09*	-.04*	0.00	-.07*	-.09*	-.08*	-.02	
8. Average hours work							-.12*	.02*	-.03*	-.03*	.03*	.02*	.03*	0.00	.08*	.05*	.04*	0.00	
9. Suicidal ideation								.03*	.09*	-.02	-.06*	-.04*	-.02*	0.02	-.03*	-.08*	-.06*	-.03*	
10. Tetrahydrocannabinol use									.14*	-.06*	-.09*	-.12*	-.06*	0.02	-.01	-.05*	-.05*	-.07*	
11. Ethnic attachment										-.08*	-.12*	-.07*	-.06*	-.03*	-.03*	-.03*	.02*	0.02	
12. Strong sense of culture											.80*		.70*	.03*	.08*	.13*	.19*	.11*	
13. Ethnic pride													.73*	.04*	.10*	.15*	.21*	.13*	
14. Ethnic belonging														.04*	.10*	.14*	.20*	0.09*	
15. DSAR minority peers														-.01	.08*	.10*	.13*	.07*	
16. DSAR stereotypes															.48*	.39*	.37*	.37*	
17. DSAR police bias																.59*	.53*	.57*	
18. DSAR negative police reaction																	.61*	.67*	
19. DSAR represent race																		.56*	

\*Correlation is significant at the .05 level.

**Table 3.** Abstainers versus HED by race ( $N = 752$ ).

Population	Abstainers		HED (past 2 weeks)	
	Frequency	% of population	Frequency	% of population
Total sample	170	23.16%	296	42%
White American students	131*	22%	257*	44%
African American students	39*	31%	39*	33%
Pearson $\chi^2$ (1)		5.19*		4.74*

\* $p < .05$ .

Regression results for the odds of HED are displayed in Table 4. In model 1, we tested the effects of sociodemographic variables on engaging in HED over the past two weeks. Model 1 was significant with an  $F$  score of 6.81 ( $p$  value = 0.00). Several control variables showed significant effects on HED. African Americans ( $\beta = -.76$ ,  $p$  value  $< .01$ ), those who considered suicide ( $\beta = .51$ ,  $p$  value  $< .01$ ), and those who lived off campus ( $\beta = -.67$ ,  $p$  value  $< .01$ ) were significantly less likely to report HED. Marijuana smokers ( $\beta = .51$ ,  $p$  value  $< .01$ ), those with ethnic pride ( $\beta = .37$ ,  $p$  value  $< .05$ ), and older students ( $\beta = .26$ ,  $p$  value  $< .01$ ) were more likely to report HED.

Model 2 in Table 4 included the sociodemographic variables as well as the main effects of the DSAR measures (Peralta, 2005; Peralta & Steele, 2009). This model was also significant with an  $F$  score of 5.01 ( $p$  value = 0.00). In terms of the scale itself, fear of race-based police bias significantly decreased

**Table 4.** Logistic Regression Predicting Odds of HED ( $N = 752$ ).

	Model 1		Model 2	
	$\beta$ (SE)	Odds ratio	$\beta$ (SE)	Odds ratio
Control and independent variables				
Sex ( <i>female</i> = 1)	-.11 (.17)	0.90	-.07 (.18)	0.93
Employment	-.07 (.11)	0.93	-.05 (.11)	0.95
Do you live on campus? (1 = <i>no</i> )	-.67** (.20)	0.51	-.70** (.20)	0.50
Mother's education	-.02 (.08)	0.98	.02 (.08)	1.02
Marijuana use	.43** (.06)	1.54	.42** (.07)	1.52
Suicidal ideation (1 = <i>yes</i> )	-.34* (.15)	0.71	-.30* (.15)	0.74
Age	.26** (.06)	1.30	.26** (.06)	1.30
Race ( <i>African American</i> = 1)	-.76** (.24)	0.47	-.86** (.28)	0.42
Ethnic attachment	-.17 (.15)	0.84	-.20 (.15)	0.82
Strong sense of culture	-.25 (.17)	0.78	-.28 (.17)	0.76
Ethnic pride	.37* (.15)	1.45	.42** (.16)	1.52
Ethnic belonging	.10 (.15)	1.11	.12 (.15)	1.13
Race relations				
DSAR-police bias			-.33* (.16)	0.72
DSAR-minority peers			-.20 (.14)	0.82
DSAR-negative police response			.08 (.13)	1.08
DSAR-fear stereotypes			-.07 (.16)	0.93
DSAR-represent race			.53** (.20)	1.70
Constant	-.41 (.38)	0.66	-.40 (.38)	0.67
$F$	6.81		5.01	
Prob > $F$	0.00		0.00	

\* $p < .05$ ; \*\* $p < .01$ .

**Table 5.** Logistic regression predicting odds of abstinence ( $N = 752$ ).

	Model 1		Model 2	
	$\beta$ (SE)	Odds ratio	$\beta$ (SE)	Odds ratio
Control and independent variables				
Sex ( <i>female</i> = 1)	-.35** (.07)	0.70	-.33** (.08)	0.72
Employment	-.37* (.20)	0.69	-.29* (.13)	0.75
Do you live on campus? (1 = <i>no</i> )	.57** (.22)	1.77	.57** (.22)	1.77
Mother's education	-.08 (.09)	0.92	-.08 (.09)	0.92
Marijuana use	-.58** (.13)	0.56	-.57** (.13)	0.57
Suicidal ideation	-.01 (.17)	0.99	-.01 (.17)	0.99
Age	-.35** (.08)	0.70	-.33** (.08)	0.72
Race ( <i>African American</i> = 1)	.86** (.25)	2.36	.92** (.27)	2.51
Ethnic attachment	.30 (.17)	1.35	.30 (.17)	1.35
Strong sense of culture	-.31 (.19)	0.73	-.30 (.19)	0.74
Ethnic pride	-.25 (.16)	0.78	-.24 (.17)	0.79
Ethnic belonging	.07 (.17)	1.07	.06 (.17)	1.06
Race relations				
DSAR-police bias			.38* (.19)	1.46
DSAR-minority peers			.07 (.17)	1.07
DSAR-negative police response			-.26 (.19)	0.77
DSAR-fear stereotypes			-.07 (.20)	0.93
DSAR-represent race			-.13 (.22)	0.88
Constant	.16 (.42)	1.17	.12 (.43)	1.13
<i>F</i>	5.35		4.03	
Prob > <i>F</i>	0.00		0.00	

\* $p < .05$ ; \*\* $p < .01$ .

the likelihood of HED ( $\beta = -.33$ ,  $p$  value  $< .05$ ). One surprising finding emerged: Students who reported they “feel like a racial representative” were more likely to engage in HED ( $\beta = .53$ ,  $p$  value  $< .01$ ). It is important to note that the frequency of students who reported engaging in HED who also reported they were *likely* (6%) or *very likely* (1%) to feel like a racial representative was quite low and should be interpreted with caution.

Table 5 shows results from the logistic regression modeling predictors of alcohol abstinence. In model 1 we tested the effects of sociodemographic variables on the odds of abstaining from alcohol use. Model 1 was significant with an  $F$  score of 5.35 ( $p$  value = 0.00). Several control variables showed significant effects on the odds of abstinence. Respondents' average hours worked ( $\beta = -.28$ ,  $p$  value  $< .05$ ), marijuana use ( $\beta = -.58$ ,  $p$  value  $< .01$ ), and age ( $\beta = -.35$ ,  $p$  value  $< .01$ ) decreased odds of abstinence; living off campus ( $\beta = .57$ ,  $p$  value  $< .01$ ) and being African American ( $\beta = .85$ ,  $p$  value  $< .01$ ) increased odds of abstinence.

Model 2 included the sociodemographic variables and the main effects of the DSAR measures (Peralta, 2005; Peralta & Steele, 2009). This model was also significant with an  $F$  score of 4.03 ( $p$  value = 0.00). In model 2, the same sociodemographic measure showed a significant effect on the odds of abstinence. The DSAR results show further support that fear of race-based police bias is associated with drinking behavior among undergraduates. Those who fear police bias have higher odds of abstinence ( $\beta = .38$ ,  $p$  value  $< .05$ ).

## Conclusion and discussion

This study contributes to the literature by looking into a timely manifestation of racial privilege; namely, lower degrees of perceived external social control in connection with drinking behavior among White students. We sought to determine whether perceived race-based forms of bias were associated with two distinct alcohol behaviors: HED and alcohol abstinence. We found support for H1a and H1b (see Table 3 and model 1 within Tables 4 and 5). African American students were significantly less likely to engage in HED and more likely to abstain from alcohol consumption compared to their White counterparts. We thus find support for findings regarding national trends in race differences in drinking.

We found mixed results for H2a and H2b. The inclusion of DSAR measures in both regression models provided partial support for both H2a and H2b. Members of both racial groups who gave affirmative responses to “Are you likely to avoid the use of alcohol as a college student for fear of police bias based on your race/ethnicity?” were more likely to abstain and less likely to engage in HED. This finding provides empirical evidence for race-based social structuring of drinking behavior on campus. However, we did not find support for the remaining DSAR variables. It is critical to note that the inclusion of DSAR measures in both models decreased the likelihood of HED among African Americans and increased the rate at which African Americans abstained from alcohol. It is also important to note that our outcome variable for Table 5 (abstinence) is rather stringent: Previous research combined those who abstained with those who drank but did not engage in HED (Peralta & Steele, 2009).

This finding perhaps generated more questions than answers. Foremost, why are White Americans affected by race-based policing? Peralta (2005) described undergraduate settings as unique in that White Americans, who typically model prosocial behaviors, are known for deviant drinking patterns. With this in mind, it makes intuitive sense that both White and African American students would feel overpoliced in this sample. Future research should examine attitudes about and relationships between White college students and police officers. In terms of African American undergraduates, the question becomes what is it about college policing that affects students’ drinking behaviors so substantially? Although social scientists have explored relationships between African American youth and the police in detail (see Rios, 2011), college students’ relations with police remain understudied.

The inclusion of the ethnic belonging scale showed one surprising result: Students with a strong sense of ethnic pride are more likely to engage in HED. A cross-tabulation of ethnic pride scores and respondents’ race shows that 37% of white students agreed or strongly agreed with the statement,

while a much larger 70% of African American students did. Despite African American students being statistically less likely to drink, there is a potential sociological explanation for this finding. According to the medical sociological literature, the nature of social stratification leaves minorities with little health autonomy (Williams & Sternthal, 2010) and normalizes subcultural alcohol use as a coping mechanism (Courtenay, 2000; Geronimus, 1991). Thus, for African American students, racial pride may come with a hypersensitivity to daily instances of racism and a greater need to call on culturally acceptable ways to cope. Although one would presume that ethnic pride is a protective factor for individual health, socioeconomic disadvantage and instances of race-based discrimination might in effect be undermining ethnic pride's ability to promote abstinence or safer levels of drinking. Future researchers should examine African American students and White students separately, through quantitative interactions or qualitative interviews, to explore ethnic pride as a predictor of undergraduates' drinking behaviors.

Our study has several methodological limitations. First, our sample is a convenience sample, which significantly limits generalizations. Thus, interpretations of the data must be made with caution. A representative sample is needed to maximize the generalizability of findings. Second, our sample is substantially White American. A comparable sample of African American students is necessary. The final potential limitation is that this survey was conducted at an urban university with both campus and local police involvement. This means our sample might not match the drinking practices of undergraduates in more rural settings or settings with a less pervasive police presence.

Limitations aside, this study fills an important gap in the literature: the structuring effects of perceived racial bias on drinking behavior (measured in two ways: HED and abstinence from alcohol use). Another strength of the study is that our data match national college alcohol use data. Finally, our study is timely and provides new insights into the effect of race-related social controls on drinking behaviors. Given the current focus on questions of (White) police brutality against ethnic minority groups (especially African Americans) and damaged police/community relations (Perez-Pena, 2015), we wonder about the relationship between campus police and minority students. Do negative or positive perceptions of campus police affect other forms of health behavior among Black and White students? This work shows a tendency among students to expect unfair treatment from the police. Such a finding is a call for social research on the ways in which police bias affects drinking behavior. Are students citing first-hand experiences with perceived unfair treatment, perceptions of unfair treatment among their friends, or the tumultuous relationship between police and youth that is depicted by media? There is also a call for a closer examination into local relations among students and police. Although there is no doubt that social control can be

deemed protective, fear of bias resounds of injustice, and that is a social problem.

## Acknowledgement

The authors acknowledge the assistance of Dr. Jim Anthony in supporting the endeavors of the research and Dr. Carlos Rios, Dr. Peter Barr, Courtney Blue, Marcella Mulhollem, Racheal Pesta, and Breanna Stewart for assistance with preparing the data for analysis.

## Funding

This study is supported by NIDA R25DA030310 (R.L. Peralta); K05DA015799 (J.C. Anthony, sponsor).

## References

- American College Health Association. (2006). National college health assessment: Reference group data. *Journal of American College Health, 55*(1).
- Cacciola, E. E., & Nevid, J. S. (2014). Alcohol consumption in relation to residence status and ethnicity in college students. *Psychology of Addictive Behaviors, 28*(4), 1278–1283. doi:10.1037/a0038362
- Centers for Disease Control and Prevention. (2015). Alcohol poisoning deaths A deadly consequence of binge drinking. Retrieved from <http://www.cdc.gov/vitalsigns/alcohol-poisoning-deaths/>
- Cooper, M. L. (2002). Alcohol use and risky sexual behavior among college students and youth: Evaluating the evidence. *Journal of Studies on Alcohol, Supplement*(14), 101–117. doi:10.15288/jsas.2002.s14.101
- Courtenay, W. H. (2000). Constructions of masculinity and their influence on men's well-being: A theory of gender and health. *Social Science & Medicine, 50*(10), 1385–1401. doi:10.1016/s0277-9536(99)00390-1
- Finucane, M. L., Slovic, P., Mertz, C. K., Flynn, J., & Satterfield, T. A. (2000). Gender, race, and perceived risk: The 'white male' effect. *Health, Risk & Society, 2*(2), 159–172. doi:10.1080/713670162
- Galvan, F. H., & Caetano, R. (2003). Alcohol use and related problems among ethnic minorities in the United States. *Alcohol Research & Health, 27*(1), 87–94.
- Geronimus, A. T. (1991). The weathering hypothesis and the health of African-American women and infants: Evidence and speculations. *Ethnicity & Disease, 2*(3), 207–221.
- Gonzalez, V. M., & Hewell, V. M. (2012). Suicidal ideation and drinking to cope among college binge drinkers. *Addictive Behaviors, 37*(8), 994–997. doi:10.1016/j.addbeh.2012.03.027
- Hornberger, L. L. (2006). Adolescent psychosocial growth and development. *Journal of Pediatric and Adolescent Gynecology, 19*(3), 243–246. doi:10.1016/j.jpjag.2006.02.013
- Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2010). *Monitoring the future: National survey results on drug use, 1975–2009. volume I: Secondary school students*. NIH publication no. 10–7584. Bethesda, MD: National Institute on Drug Abuse (NIDA).
- Johnston, L. D. (2010). *Monitoring the future: National survey results on drug use, 1975–2008: Volume II: College students and adults ages 19–50*. DIANE Publishing.
- Johnston, L., O'Malley, P., Miech, R., Bachman, J., & Schulenberg, J. (2014). *Monitoring the future: National results on drug use—2013 overview: Key findings on adolescent drug use*. Ann Arbor, MI: The University of Michigan Institute for Social Research.

- Keeling, R. P. (2000). The political, social, and public health problems of binge drinking in college.
- Kelly-Weeder, S. (2011). Binge drinking and disordered eating in college students. *Journal of the American Academy of Nurse Practitioners*, 23(1), 33–41. doi:10.1111/j.1745-7599.2010.00568.x
- Korte, J., Pieterse, M. E., Postel, M. G., & Van Hoof, J. J. (2012). Private peer group settings as an environmental determinant of alcohol use in Dutch adolescents: Results from a representative survey in the region of twente. *Health & Place*, 18(4), 892–897. doi:10.1016/j.healthplace.2012.02.010
- Link, B. G., & Phelan, J. (1995). Social conditions as fundamental causes of disease. *Journal of Health and Social Behavior*, 80–94. doi:10.2307/2626958
- Lutfey, K., & Freese, J. (2005). Toward some fundamentals of fundamental causality: Socioeconomic status and health in the routine clinic visit for Diabetes1. *American Journal of Sociology*, 110(5), 1326–1372. doi:10.1086/428914
- National Institute on Alcohol Abuse and Alcoholism. (2014). *College drinking*. Washington, DC: National Institutes of Health.
- Peralta, R. L. (2005). Race and the culture of college drinking: An analysis of white privilege on a college campus. *Cocktails & Dreams: An Interpretive Perspective on Substance use*, 127–141.
- Peralta, R. L. (2007). College alcohol use and the embodiment of hegemonic masculinity among European American men. *Sex Roles*, 56(11–12), 741–756. doi:10.1007/s11199-007-9233-1
- Peralta, R. L., & Steele, J. L. (2009). On drinking styles and race: A consideration of the socio-structural determinants of alcohol use behavior. *Journal of Ethnicity in Substance Abuse*, 8(2), 146–162. doi:10.1080/15332640902897024
- Peralta, R. L. (2010). Raced and gendered reactions to the deviance of drunkenness: A sociological analysis of race and gender disparities in alcohol use. *Contemporary Drug Problems*, 37, 381.
- Perez-Pena, R. (2015, April 8). *Fatal police shootings: Accounts since Ferguson*. The New York Times.
- Phinney, J. S. (1992). The multigroup ethnic identity measure a new scale for use with diverse groups. *Journal of Adolescent Research*, 7(2), 156–176. doi:10.1177/074355489272003
- Phinney, J. S., & Ong, A. D. (2007). Conceptualization and measurement of ethnic identity: Current status and future directions. *Journal of Counseling Psychology*, 54(3), 271–281. doi:10.1037/0022-0167.54.3.271
- Raffaelli, M., & Green, S. (2004). Parent-adolescent communication about sex: Retrospective reports by latino college students. *Journal of Marriage and Family*, 65(2), 474. Retrieved from OLinks Citation Formatter database.
- Reed, E., Prado, G., Matsumoto, A., & Amaro, H. (2010). Alcohol and drug use and related consequences among gay, lesbian and bisexual college students: Role of experiencing violence, feeling safe on campus, and perceived stress. *Addictive Behaviors*, 35(2), 168–171. doi:10.1016/j.addbeh.2009.09.005
- Rios, V. M. (2011). *Punished: Policing the lives of black and Latino boys*. NYU Press.
- Shorey, R. C., Stuart, G. L., & Cornelius, T. L. (2011). Dating violence and substance use in college students: A review of the literature. *Aggression and Violent Behavior*, 16(6), 541–550. doi:10.1016/j.avb.2011.08.003
- Talbot, L. L., Martin, R. J., Usdan, S. L., Leeper, J. D., Umstattd, M. R., Cromeens, J. L., & Geiger, B. F. (2008). Drinking likelihood, alcohol problems, and peer influence among first-year college students. *American Journal of Drug & Alcohol Abuse*, 34(4), 433–440. doi:10.1080/00952990802122655

- Wallace, J. M., Jr. (1998). Explaining race differences in adolescent and young adult drug use: The role of racialized social systems. *Drugs & Society, 14*(1–2), 21–36. doi:[10.1300/j023v14n01\\_03](https://doi.org/10.1300/j023v14n01_03)
- Wechsler, H., & Kuo, M. (2003). Watering down the drinks: The moderating effect of college demographics on alcohol use of high-risk groups. *American Journal of Public Health, 93*(11), 1929–1933. doi:[10.2105/ajph.93.11.1929](https://doi.org/10.2105/ajph.93.11.1929)
- Wechsler, H., Dowdall, G. W., Davenport, A., & Castillo, S. (1995). Correlates of college student binge drinking. *American Journal of Public Health, 85*(7), 921–926. doi:[10.2105/ajph.85.7.921](https://doi.org/10.2105/ajph.85.7.921)
- Weitzman, E. R., Folkman, A., Folkman, M. K. L., & Wechsler, H. (2003). The relationship of alcohol outlet density to heavy and frequent drinking and drinking-related problems among college students at eight universities. *Health & Place, 9*(1), 1–6. doi:[10.1016/s1353-8292\(02\)00014-x](https://doi.org/10.1016/s1353-8292(02)00014-x)
- White, A., & Hingson, R. (2014). The burden of alcohol use: Excessive alcohol consumption and related consequences among college students. *Alcohol Research: Current Reviews, 35*(2), 201.
- Williams, D. R., & Sternthal, M. (2010). Understanding racial-ethnic disparities in health: Sociological contributions. *Journal of Health and Social Behavior, 51*(Suppl), S15–S27. doi:[10.1177/0022146510383838](https://doi.org/10.1177/0022146510383838)
- Zapolski, T. C., Pedersen, S. L., McCarthy, D. M., & Smith, G. T. (2014). Less drinking, yet more problems: Understanding African American drinking and related problems. *Psychological Bulletin, 140*(1), 188.