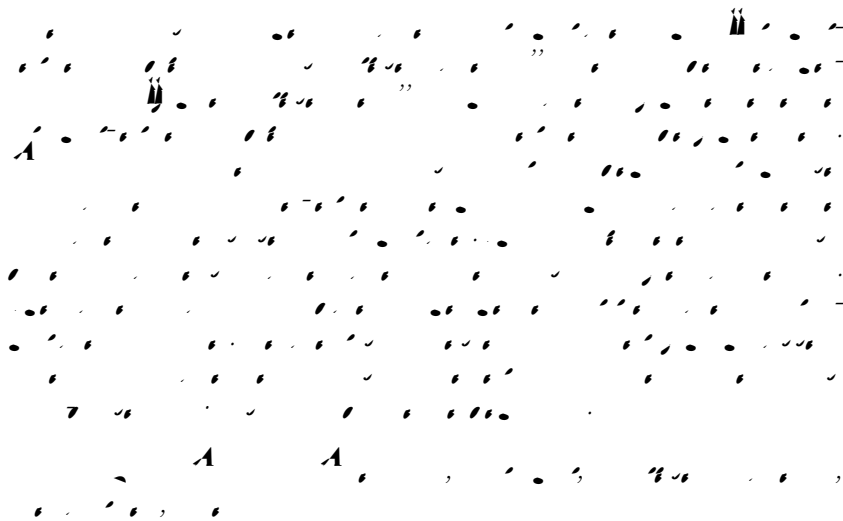


On Drinking Styles and Race: A Consideration of the Socio-Structural Determinants of Alcohol Use Behavior

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INTRODUCTION

For more than a decade, binge drinking among collegeco4(to)hascollegd

has been an increase in binge drinking behavior (Keeling, 2002). White students have been found to engage in excessive alcohol use compared to minority students, who are more likely to abstain or engage in lower levels of alcohol use (Wechsler, Dowdall, Maenner, Gledhill-Hoyt, & Lee, 1998). African American students in particular report lower levels of alcohol use in terms of frequency and quantity (Caetano; 1998; Strada & Donohue, 2006). There is an absence of research on the sociological mechanisms and

Demographic Characteristics of Alcohol Use Among College Students

The literature consistently demonstrates that excessive alcohol use by college students follow social patterns influenced in particular by race. White students consume larger amounts of alcohol and report more problems associated with their alcohol use than racial minorities: Hispanics, African Americans, and Asians have lower rates of alcohol use and related problems compared to their White counterparts (Cranford et al., 2006; Dowdall et al., 1998; Keeling, 2000). African Americans (16%) for example were the least likely to drink, followed by Asians/Pacific Islanders (23%) in one study (Wechsler et al., 2000). In an examination of 2- and 4-year colleges, Paschall et al. (2005) found that attending a 4-year college increased the likelihood of binge drinking for Whites but decreased the likelihood of heavy alcohol use among African Americans (Paschall et al., 2005). Additionally, African Americans reported having fewer friends who engaged in heavy drinking than Whites (Paschall et al., 2005). Finally, alcohol use at historically Black universities have significantly lower levels of alcohol use (less than half) than universities composed of predominately White students (Meilman et al., 1995).

Although research has shown that race is an important determinant of drinking behavior, there are a limited number of studies that seek to understand the social structural conditions pertaining to race and its implication for drinking behavior. Keeling (2000) suggested that “binge drinking is rooted in the inertia of social and economic forces that reinforce class differences and delineate the dynamics of privilege” (p. 196). Keeling (2000) links the absence of binge drinking among minorities to be equated with surrendering

of drug and alcohol use were more apparent in the neighborhoods of African American juveniles; therefore, African Americans may abstain from alcohol use because of experience with first hand consequences of alcohol abuse.

Furthermore, parenting practices of African American families (Sampson & Laub, 1994) have been implicated as a protective factor. African American families provide less opportunity for their children to engage in substance abuse because of the perceived dangerousness and heightened awareness of the formal and informal consequences associated with drug use. Additionally, African American parents may promote abstinence practices to encou-

use. We posit that students who are concerned about race-based issues (e.g. expect racism in drunken contexts; expect unequal university sanctions) will have a greater probability of abstaining or engaging in non-binging behavior.

DATA AND METHODS

Data from this study came from a fall 2007 survey of undergraduate students at a midsize Midwestern University. Data were collected using a self-administered anonymous questionnaire distributed to students in classes permitted to be surveyed by instructors in the College of Arts and Sciences. Informed consent was provided and the study was approved by the Institutional Review Board of the authors' home institution. Past research has shown that obtaining data on drug and drinking behavior through self-reporting questionnaires is both reliable and valid (Harrison, 1997; Johnston & O'Malley, 1997). Students 18 years and older were invited to participate in the study. Potential respondents were informed of their rights as study participants and about the voluntary and anonymous nature of the study. In total, 422 students completed the questionnaire.

Of those individuals who reported their demographic characteristics, 161 (38%) were male and 259 (62%) were female. A majority of respondents ($n = 324$; 77%) reported that they were White. Seventy (17%) respondents indicated that they were African American, 10 (2%) were Asian/Pacific Islander, 11 (3%) identified themselves as being "other," and 5 (1%) were Hispanic. According to the Institution Research Department, 13% of the undergraduates enrolled were African American in the fall of 2007. Only African Americans and Whites were included in the current analysis because of insufficient data on other racial and ethnic groups.

The mean age of respondents was between 19 and 20 years old. This mean is slightly younger than the mean age at this particular university (23 years old). These mean age differences may be due to the classes surveyed. A majority of the classes surveyed were large introductory classes, which are more likely to be composed of younger students. Of respondents, 186 (44%) reported that they were freshmen, 106 (25%) were sophomores, 71 (17%) were juniors, and 59 (14%) were seniors. The distribution of respondents in the survey relatively matched the distributed of students at the university in which the study occurred (freshmen = 40%, sophomore = 18%, juniors = 16%, seniors = 20%). Most respondents were full-time university (23

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Parental income was relatively dispersed (see Table 1). The rates of Greek

and family income (Dowdall et al., 1998; Galvin & Caetano, 2003; Paschall et al., 1995; Wechsler et al., 2000).

RESULTS

Overall, the binge drinking rate in this study was relatively high; 87 (21%) participants were classified as frequent binge drinkers, 105 (25%) were occasional binge drinkers, and 225 (54%) were non-bingers/abstainers in the past 2 weeks. Among women, 35 (14%) were classified as frequent binge drinkers, 74 (29%) were occasional binge drinkers, and 148 (58%) were non-bingers/abstainers in the past 2 weeks. Among male binge drinkers, 52 (33%) were classified as frequent binge drinkers, 31 (20%) were occasional binge drinkers, and 75 (48%) were non-bingers/abstainers in the past 2 weeks (see Table 2). These differences between alcohol use and gender were examined using chi square analysis and were significant at the .001 level.

Previous research has demonstrated that African American students drink less than White students. Similar patterns were found in the current study. Of White participants, 75 (23%) were frequent binge drinkers, 83 (26%) were occasional binge drinkers, and 162 (51%) were non-bingers/abstainers. Only 7 (10%) African Americans were frequent binge drinkers, 19 (28%) were occasional binge drinkers, and 42 (62%) were non-bingers/abstainers. These differences between race and alcohol use were examined using chi square analysis and were significant at the .05 level.

Using logistic regression, we tested for the main effects of race, gender, and other factors on drinking styles. The results for the dichotomous outcome, frequent binge drinkers versus non-bingers/abstainers, are demonstrated

TABLE 2 Non-Bingers Abstainers vs. Frequent Binge Drinkers By Demographic Characteristics

| Variables | Non-bingers and abstainers | | Frequent binge drinkers | |
|-------------------------|----------------------------|----|-------------------------|-------|
| | No. | % | No. | % |
| Gender | | | | |
| Male | 75 | 59 | 52 | 41*** |
| Female | 148 | 81 | 35 | 19 |
| Race | | | | |
| White | 163 | 69 | 75 | 32* |
| African American | 42 | 86 | 7 | 14 |
| Race and gender | | | | |
| White female | 106 | 76 | 33 | 24* |
| African American female | 26 | 96 | 1 | 4 |
| White male | 56 | 57 | 42 | 43 |
| African American male | 15 | 71 | 6 | 29 |

* < .05; ** < .01; *** < .001.

(Cranford et al., 2006; Wechsler et al., 2000). The odds of females similarly drinking less in the past 2 weeks were also statistically higher compared to males (OR = 2.28, $p < .05$). This is also relatively consistent with previous research by Paschall et al. (2005).

The results of model one indicate that two control variables were significant as well: living arrangement and personal income.¹ Those respondents living with a spouse, parent, or other relative had greater odds of non-binge drinking/abstaining from alcohol (OR = 3.64, $p < .001$). Furthermore, respondents with a personal income less than \$12,001 had significantly greater odds of non-binge drinking/abstaining in the past 2 weeks.²

In the second regression model, we added questions on race relations and alcohol use (Peralta, 2005). A significant regression model was obtained ($X^2 = 60.745$ [17], $p < .001$), with a $-2\log$ likelihood of 196.182 and a Pseudo R^2 of .25. Consistent with model one, in model two, two control variables demonstrated a significant effect on non-binge drinking/abstaining. Those respondents that had an income less than \$12,001 and those living with a spouse, parent, or other relative had statistically higher odds of non-binge drinking/abstaining. As demonstrated in model two, the significance of being African American disappeared when race relation questions were entered into the model. Thus, these questions appeared to have a mediating effect on race. The presence of mediation in the current study is important because it demonstrates that race-related factors explain the relationship between race and non-binge drinking/abstinence. Therefore, being criticized for engaging in binge drinking helps to explain why African American students drink less.³

We then ran an ordinary least squares linear regression on race and the six questions on race relations and alcohol use (not shown). It was confirmed that question one had a mediating effect on race ($p < .001$) and was significant in the logistic regression model. The significant question was "Are your Non-European American University peers likely to be criticized for drinking

TABLE 4 Predicted Probabilities for Non-Binging/Abstinence

| Scale | White | n | African American | n |
|-------------------|-------|-----|------------------|----|
| 0 (Very Unlikely) | 0.60 | 111 | 0.76 | 16 |
| 1 | 0.65 | 38 | 0.80 | 5 |
| 2 | 0.70 | 53 | 0.84 | 5 |
| 3 | 0.75 | 37 | 0.86 | 16 |
| 4 | 0.79 | 40 | 0.89 | 12 |
| 5 | 0.83 | 12 | 0.91 | 1 |
| 6 | 0.86 | 9 | 0.93 | 4 |
| 7 (Very Likely) | 0.88 | 3 | 0.94 | 4 |
| Total | 0.69 | 303 | 0.85 | 63 |

Question asked participants: Are your Non-European American University peers likely to be criticized for drinking 4 or more drinks in a row in one setting?

4 or more drinks in a row in one setting?” Respondents who agreed with this statement had a greater likelihood of non-binge drinking/abstaining in the past 2 weeks (OR = 1.27, < .05). Furthermore, on average, African American respondents were more likely to state that they agreed with question one compared to White respondents (see Table 4).

Due to the small distribution of respondents on the far end of the scale (very likely) for the race-relation questions, another logistic regression model was conducted with a condensed scale (see Table 5). The 0 to 7 scale was changed

TABLE 5 Logistic Regression Predicting Non-Binge Drinking/Abstinence (Condensed Race-Relation Scale)

| Variables | Model 1 | | Model 2 | |
|---|---|------------|---------|------------|
| | b | Odds ratio | b | Odds ratio |
| Control and Independent Variables | | | | |
| African American | 1.37 | 3.92* | 1.04 | 2.83 |
| Female | 0.82 | 2.28* | 0.71 | 2.03 |
| School year | -0.13 | 0.88 | -0.06 | 0.94 |
| Living with spouse parent other relative | 1.29 | 3.64*** | 1.03 | 2.80* |
| Part-time/full-time employment | 0.74 | 2.09 | 0.62 | 1.86 |
| Grade point average | 0.34 | 1.40 | 0.40 | 1.48 |
| Number of credit hours | -0.13 | 0.88 | -0.13 | 0.88 |
| Married or cohabitating | 20.73 | 1.01 | 21.07 | 1.41 |
| Age | -0.20 | 0.82 | -0.23 | 0.80 |
| Personal income | -0.27 | 0.39* | -1.01 | 0.37* |
| Parent's income | -0.95 | 0.76 | -0.20 | 0.82 |
| Race Relations Variables | | | | |
| 1) Are your non-European American University peers likely to be criticized for drinking 4 or more drinks in a row in one setting? | | | 0.56 | 1.74* |
| 2) Are you likely to fear contributing negative stereotypes about your race if you use alcohol with stere | (ro.72122/F7175112.2193TD[(0.56)-2963.2(1.74)]TJ/F71292.365262006.2762427.8046322.2 | | | |

often than Whites: (1) African American students avoid contributing to negative stereotypes regarding their race by not abusing alcohol; (2) African Americans avoid exposure to explicit racism due to the possibility of “disinhibition” among drunken Whites; (3) and finally, African Americans were found to expect unequal reactions and sanctions from the university (e.g., pronounced police surveillance and intervention). This research moves beyond quantitative descriptive findings and theory-building qualitative research by quantitatively attempting to understand why African Americans engage in less alcohol consumption compared to Whites using survey methodology to test grounded theories pertaining to racial differences in alcohol use.

In examining our dichotomous outcome using logistic regression, frequent binge drinkers versus abstainers and non-bingers, we found some support for hypothesis one and partial support for hypothesis two. Consistent with previous research, the odds of African Americans non-binge drinking/abstaining are greater than that of Whites (Cranford et al., 2006; Wechsler et al., 2000). Additionally, the questions on race relations and alcohol use, which stemmed from Peralta (2005), helped to explain racial differences in alcohol use (e.g. African American respondents were more likely to agree that they would be criticized for their drinking compared to White respondents).

Respondents who agreed with the first race-relations question had greater odds of non-binge drinking/abstaining in the past 2 weeks. This finding on the significance of being criticized for drinking was also found when the scale was condensed. Furthermore, the condensed scale produced a new significant question “Are you likely to fear contributing negative stereotypes about your race if you use alcohol with University peers?” Respondents who feared contributing negative stereotypes had greater odds of engaging in frequent binge drinking. This finding is inconsistent with what was expected.

Two important points should be acknowledged concerning our results. First, the questions that were significant in the regression model represented internalizing features. The fact that respondents feel that they will be criticized for their alcohol use or contribute to negative racial stereotypes could be more important in abstaining from alcohol than the fear of racist remarks from alcohol-using peers because it concerns personal identity and actions. For example, racist remarks from peers may not threaten one’s personal identity because potential targets for discrimination may not feel that it was directed at them. Additionally, an individual may not feel like they have control over the thoughts and remarks of others, but they do have control over their own actions. Therefore, minorities can not be personally criticized for their alcohol use by avoiding alcohol use.

Second, the results indicate that respondents who feared contributing to negative stereotypes about their race by using alcohol were almost twice as likely to engage in frequent binge drinking. This result can be interpreted in several different ways. Some African American students may

feel that they have to negotiate “white space” and engage in binge drinking behavior to paradoxically challenge negative stereotypes that are often associated with African Americans. Also not all African Americans experiences are the same. Some African American students may refrain from frequent binge drinking because they wish to avoid race-based criticism. However, others may acknowledge the possibility of contributing to negative racial stereotypes but still engage in the behavior because they have not yet been exposed to negative sanctions from their White peers. The third possibility deals with a potential data limitation. African American respondents were less likely to answer the second race-relations question (i.e. contributing to negative stereotypes) than other questions; therefore, there may have not been enough African American respondents to affect the direction of the regression coefficient when compared to White respondents. Relatedly, the survey questions may need to be refined to better capture the intent of the question. It is also important to recognize the composition of the sample. The sample size is relatively small and is cross-sectional. Therefore, it is not possible to generalize the findings from this study to other colleges and universities. Additionally, we are unable to determine whether these attitudes about race and alcohol use developed before or during college. This study serves as a starting point for further analysis and theory building on the structuring effects of race and race relations on alcohol use behavior. More research on how socio-structural aspects of race and ethnicity impact alcohol use is needed.

One of the driving factors of this research was to gain a more nuanced

NOTES

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