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The Cost of Minority Stress: Risky Alcohol Use and Coping Motivated Drinking Behavior in African American College Students

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Abstract

Objective—A motivational drinking framework (Cooper, 1994) is utilized to understand the relationship between minority stressors (e.g., race related stress and acculturative stress) and alcohol use behaviors (risky alcohol use and coping motivate drinking) among a large sample of Black American college students.

Method—649 Black college students from 8 colleges and universities in the US were recruited as part of a large, multiwave, cross-sectional study investigating the stress and coping experiences of Black emerging adults.

Results—Results from the current investigation provide support for the independent contributions of acculturative stress and race-related stress to the risky alcohol use behavior of Black college students, while acculturative stress significantly predicted coping motivated drinking behaviors in the sample.

Conclusion—Findings underscore the need to better understand the unique relationships between minority stress and risky alcohol use behaviors of Black college students; namely relationships not shared by their non-minority peers that increase their risk of problem drinking.

Keywords

alcohol use; Black/African American; college students; racism; acculturative stress; coping

Black Americans are at increased risk of exposure to high levels of life-stress (Mays, Cochran, & Barnes, 2007); race-related stress often compounds general life-stress for this population. Minority stress models (Meyer, 1995; Meyer, Schwartz, & Frost, 2008; Thoits, 1995) have underscored the detrimental effects of stress stemming from racial group membership and discrimination (e.g., race-related stress) and stress stemming from intercultural contact (e.g., acculturative stress) —above and beyond universal stressors (e.g., general life stress). Furthermore, minority stress has been linked to negative behavioral and health outcomes, like alcohol consumption and high-risk drinking behaviors (Mulia &

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Zemore, 2012). For Black college students, general life stress combines with race-related stress and acculturative stress to exacerbate a life stage that carries its own unique stressors (e.g., academic stress, living away from home, and balancing the demands of new found autonomy and independence); a cumulative stress experience unique to minority students and Black college students more specifically.

Little is known about the relationship between these minority stressors and the drinking behaviors of Black college students (O'Hara et al., 2014). Blacks continue to be underrepresented in research investigating risky alcohol use and related problems, while much of the existing research on Black college students is conducted with a subset of students attending predominantly White institutions (PWIs). Risky drinking is often measured by the cumulative impacts of quantity of alcohol consumed, frequency of consumption and related negative consequences (Broman, 2007). It is well documented that Black college students drink relatively less than their White peers (Dennhardt & Murphy, 2011; Finlay, White, Mun, Cronley, & Lee, 2012; O'Malley & Johnston, 2002), though much remains to be known about *why* Black students choose to drink or abstain. Despite lower consumption rates, risky alcohol use is still prevalent among this group and with more negative consequences when they reach adulthood (Galvan & Caetano, 2003; SAMHSA, 2010; Siebert, Wilke, Delva, Smith, & Howell, 2003).

Experiences of discrimination have detrimental effects on one's ability to engage in effortful control and effective regulation of negative emotions, which may lead to impulsive risk-taking behaviors, including alcohol use (Utsey, Ponterotto, Reynolds & Cancelli, 2000). This growing body of research has largely focused on the role of ethnic identity; however, research is mixed on the contributions of ethnic identity development, particularly in relation to risk stratified by gender differences and alcohol-related expectancies (Gibbons et al., 2012). This has made establishing consensus in our understanding of the role that such factors play in the drinking behaviors of Black students difficult. The variable risk among Black college student's risky alcohol use coupled with support for the development of problematic drinking behaviors later in the lifespan, underscore the need for models that reflect Black college students' experiences and motivations related to alcohol use during critical developmental periods, like emerging adulthood. The current study seeks to expand our understanding of the development of risky drinking behavior in response to stressors in Black emerging adult college students in both predominately white and predominately black residential college environments.

Coping Motivated Alcohol Use

College student alcohol use is consistently linked to coping behavior, supporting theories of substance-induced affect modulation (Cooper, 1994; Kassel, Jackson, & Unrod, 2000; Park & Levenson, 2002; Patrick, Lee, & Larimer, 2011). Several such theories (e.g., tension reduction models, self-medication theories) exist to explain how individuals cope with the psychological distress resulting from experienced stressors (see, Brondolo, Brady ver Halen, Pencille, Beatty, & Contrada, 2009, for review). The notion that individuals consume alcohol to regulate emotional experiences is a commonly held belief (Cooper, Frone, Russell, & Mudar, 1995; Simons, Gaher, Correia, Hansen, & Christopher, 2005). However, quantity and

frequency alone do not account for alcohol-related problems, suggesting other factors influence this relationship. The motivation for use, particularly as a coping mechanism aimed at decreasing negative affect (i.e., psychological distress), is a better predictor of alcohol-related problems even when controlling for level of consumption (Cooper, 1994; Cooper, et al., 1995). Cooper's (1994) motivational model of substance use puts forth that individuals' motivations to consume substances fall into two broad categories: external and internal. External reasons for drinking are further divided into two types of motivation: drinking for social enhancement and drinking to socially conform. In contrast, internal drinking motive subtypes emphasize drinking to cope with negative mood states or enhance positive mood states; internal motives more strongly correlate with risky alcohol consumption (e.g., binge drinking, heavy alcohol use) (Carpenter & Hasin, 1998; Kassel et al., 2000; Patrick et al., 2011; Simons et al., 2005). Black Americans display a greater tendency toward internal drinking motives or alcohol use as a means for coping (Livingston, 1993). Researchers have described this pattern of drinking in Black communities as "heavy weekend drinking", or escapist drinking—the tendency to use alcohol to modify negative affect (Boume & Light, 1979). Heavy weekend drinking is also characteristic of college student drinking behavior (SAMHSA, 2014; Wechsler, Dowdall, Maenner, Gledhill-Hoyt, & Lee, 1998).

Motivational alcohol use models may be particularly beneficial in the conceptualization of risky drinking behaviors in Black college students. Evidence suggests that coping-motivated alcohol behaviors interact with the cumulative experience of stressors to result in an escalation of substance use in emerging adulthood for this population (Gerrard, et al., 2012). Black college students may engage in risky drinking behaviors to cope with the chronic exposure to stressors, such as environmental challenges, threats, and race-related stressors (Mulia, Ye, Zemore, & Greenfield, 2008; Mulia & Zemore, 2012). Coping-motivated drinking may provide insights about why Black college students drink and more specifically, the relationship between minority stress and their drinking behaviors. Collectively, this underscores the need to expand our conceptualizations of risky alcohol use and coping research in this population.

Race-related Stress and Risky Drinking

Researchers suggest that Black young adults report a higher frequency of negative life events and daily hassles than their white counterparts (Jung & Khalsa, 1989), including experiences of race-related stress—a byproduct of interethnic contact. Race-related stress has been described as a unique predictor of psychological distress in Black Americans (Pieterse & Carter, 2007). The experience of discrimination has been shown to predict risky alcohol use in Black college students above and beyond general life stressors (Pittman, Cho Kim, Hunter, & Obasi, 2017), such as academic or work-related stress, financial stress, and environmental stress. The result is a positive linear relationship in the role perceived discrimination plays in the alcohol use behaviors of Blacks (Broman, 2007; Tran, Lee, & Burgess, 2010). College graduates, Black and White alike, have higher drinking rates than any other age demographic (Meilman, Presley, & Cashin, 1995; Siebert et al., 2003), with Blacks bearing the greatest burden of alcohol related health and social consequences later in the lifespan (Rehm et al., 2003; Lee, Mun, White, & Rutgers, 2010; Williams &

Mohammed, 2009; Zapolski, Pedersen, McCarthy, & Smith, 2014). These disparities highlight the need for more focused research on Black college students' risky drinking behaviors that may be priming them for adverse health and life outcomes later.

Acculturative Stress and Alcohol Use

Another way of understanding the impact of interethnic contact on the culture and health of Black Americans is by examining acculturative experiences within this group. Acculturation “comprehends those phenomena which result when groups of individuals having different cultures come into continuous firsthand contact, with subsequent changes in the original culture patterns of either or both groups” (Redfield, Linton, & Herskovits, 1936, p. 149). The long-term effects of social and cultural change due to acculturation have not been recognized as a significant source of stress for Black Americans (see Yoon, Langrehr, & Ong, 2011 for review). Despite shared nationality and language with members of the dominant culture, Blacks retain largely separate cultural experiences, thus initiating a host-mother culture negotiation for Blacks (Anderson, 1991). Some experience this constant negotiation as *acculturative stress*. Acculturative stress reflects both the positive (e.g., new opportunities) and negative (e.g., discrimination) aspects of prolonged intergroup contact while emphasizing that this contact is producing the experienced stress (Berry, 2005). Acculturative stress maintains an inverse relationship with psychological and physical well-being (Berry, 1997; 2003).

Cano and colleagues (2015) demonstrate that acculturative stress exerts its influence on risky alcohol use behaviors through ethnic discrimination and intragroup marginalization. It has been further linked to poorer health outcomes for racial/ethnic minority groups including increased risk of psychological problems (Knipscheer, De Jong, Eleonore, Kleber, & Lamptey, 2000; Park, 2009), suicide (Walker, 2007), and alcohol and substance use disorders (Johnson, VanGeest, & Ik Cho, 2002; Torres Stone & Meyler, 2007). Increased alcohol use and problem drinking behaviors in racial/ethnic minorities are evidenced, especially in response to managing the tension and anxieties of acculturative stress (Cano, et al., 2015; Gil, Wagner, & Vega, 2000, Johnson et al., 2002; Torres Stone & Meyler, 2007).

Risky Alcohol Use in Black College Students

Several factors have been linked to the drinking behaviors of Black emerging adults including peers, discrimination, Greek life involvement and university environment (Meilman et al., 1995; Presley, Meilman, & Leichter, 2002). Much of the data on the alcohol use behaviors of Black emerging adults is conducted on students attending predominantly white institutions (Ames & Bennett, 2011; Babb, Stewart, & Bachman, 2012; Pedersen & McCarthy, 2013; Zapolski et al, 2014); Black students attending historically Black colleges and universities (HBCUs) are a nontrivial demographic often overlooked in our understanding risky alcohol use behaviors and related problems. While HBCUs make up 3% of all higher education institutions in the country, they enroll over 10% of all Black college students and award 15% of all undergraduate degrees awarded to Black college students (NCES, 2013; Rhodes, Peters, Perrino, & Bryant, 2008). Data suggests that Black (and White students) attending HBCUs have lower alcohol consumption rates than national

averages (Fowler, 2001; Meilman et al., 1995). It would be expected then, that Black college students attending HBCUs evidence a different stress-drinking relationship than Black students at predominantly White institutions (PWIs). Furthermore, Black students at PWIs would likely experience greater race-related and acculturative stress and related distress compared to their HBCU counterparts, stemming from underrepresentation and hypervisibility. If it holds that these two stressors lead to increases in risky drinking behavior, then it would stand to reason that attending a PWI places Black students at greater risk than their HBCU attending peers.

Current Study

The current study examines the relationships between minority stressors and alcohol use behaviors in a large sample of Black college students. More specifically, we were interested in the impact of two forms of minority stress; race-related stress and acculturative stress on the drinking behaviors of Black college students. We investigate the relationships between these stressors and risky drinking behavior and coping-motivated alcohol use. That is, drinking to modify negative affect. Specifically, we expected to see a positive linear relationship between minority stressors and the risky alcohol use and coping-motivated drinking behavior of Black college students [Hypothesis 1] and also, that when both types of minority stressors were considered in a hierarchical fashion, each would contribute significantly to variance in both risky drinking behavior and coping-motivated alcohol use behaviors [Hypothesis 2]. Furthermore, we expected that given the maladjustment evidenced by coping-motivated alcohol use behavior, that it would serve as a significant predictor of risky drinking behaviors in this sample [Hypothesis 3].

Methods

Participants

Participants were 649 self-identified Black undergraduate students between the ages of 18 to 30 ($M_{age} = 20.42$ years; $SD = 2.32$ years). Study participants were drawn from 2 Historically Black Colleges and Universities ($n = 183$) and 6 Predominantly White Institutions ($n = 466$) in the United States, as part of a large, online, multi-wave study examining alcohol use behaviors in Black college students in the U.S. For the purposes of this study, only participants who identified as Black/African American were included, removing participants who identified as Biracial or failed to report race. Most participants were in their 3rd or 4th (26.7 and 24.7 percent, respectively) year of study and more than 72 percent identified at least monthly alcohol use. Sample demographics are presented in Table 1.

Procedures

To reduce sampling bias, all degree-seeking undergraduates who met study inclusion criterion (self-identify as Black/African/African American, between ages 18–30, currently enrolled in a 4-year college/university) were invited to participate in this online study via email distributed to their university affiliated email address. Participation in the study was voluntary with an average completion time of 45 minutes. Participants were compensated for their time with \$5 electronic gift cards to a local retailer.

Measures

A *Demographics Questionnaire* was used to collect participant basic demographic information (e.g., age, race, ethnicity, institution, academic standing, etc.).

Minority Stress

Acculturative stress: The Social, Attitudinal, Familial, and Environmental Acculturative Stress–Revised scale (SAFE-R) (Mena, Padilla, & Maldonado, 1987) was used to assess stress resulting from prolonged contact with other racial/ethnic groups. Example items include, “In looking for a job, I sometimes feel my ethnicity is a limitation,” and “It is hard to express to my friends how I really feel.” Responses are rated on a 6-point Likert scale ranging from “*have not experienced*” (0) to “*extremely stressful*” (5). Total scores on the SAFE-R range from 0 to 120, with higher scores indicating greater acculturative stress. The SAFE has shown to be reliable and valid for use with Black college students (.87, Joiner & Walker, 2002; .87, Perez, Voelz, Pettit & Joiner, 2002). The SAFE-R demonstrated adequate reliability in this sample ($\alpha = .91$).

Race related stress: The Index of Race Related Stress – Brief form (IRRS-B; Utsey & Ponterotto, 1996) was used to assess experiences of race-related stress in this sample. The IRRS-B is a 22-item inventory designed to assess race-related stress across 3 domains: Cultural Racism, Institutional Racism, and Individual Racism. Additionally, the IRRS-B produces a Global Racism scale score designed to reflect cumulative exposure and distress of the 3 forms of measured race-related stress. Sample scale items include, “You seldom hear or read anything positive about Black people on radio, TV, in newspapers, or history books,” and “You have observed situations where other Blacks were treated harshly or unfairly by Whites/non-Blacks due to their race.” Subscale scores on the IRRS-B are indicative of both the quantity of negative race-related events as well as an appraisal of the level of distress experienced by the individual. Subscale scores range from 0 to 40 (Cultural Racism), and from 0 to 24 on both the Individual and Institutional Racism subscales. Higher scores on all subscales are indicative of experiences of racism and greater distress in the respective subscale. The Global Racism score is computed by adding together standardized (using a z-score transformation) subscale scores due to the unequal number of items in each subscale. Given the varied form of discrimination faced by Black college students (e.g., microaggressions, everyday racism, institutional racism, individual racism), we use the Global Racism subscale as a cumulative indicator of race-related stresses. Overall, the IRRS-B demonstrated better reliability in this sample than previously reported reliability parameters (Utsey, 1999): Cultural Racism ($\alpha = .86$), Institutional Racism ($\alpha = .75$) and Individual Racism ($\alpha = .83$), and Global Racism ($\alpha = .90$).

Risky Alcohol Use Behavior: The Alcohol Use Disorders Identification Test (AUDIT) (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001) was used to assess risky drinking behaviors as measured by the cumulative effects of frequency, quantity, and negative alcohol-related consequences. AUDIT items include “How often do you have six or more drinks on one occasion?” and “How often during the last year have you been unable to remember what happened the night before because you had been drinking?” Higher scores on the AUDIT are indicative of risky drinking behavior with scores ≥ 8 indicative of risky

drinking in men (Kokotailo, 2004) and 5 in women (Bradley et al., 2003). The mean AUDIT score in the sample was 4.14 (SD = 4.30). Additionally, within group mean scores were: $M_{\text{male}} = 4.86$ (SD = 5.08), $M_{\text{female}} = 3.89$ (SD = 3.99), $M_{\text{PWI}} = 4.22$ (SD = 4.48) and $M_{\text{HBCU}} = 3.95$ (SD = 3.82). More than one-third of participants ($n = 294$) endorsed some level of risky drinking behaviors (score ≥ 5). The AUDIT has been shown to be more effective in identifying risky drinking behaviors in college students than diagnostic criteria for alcohol use or dependence (Fleming, Barry, & Macdonald, 1991). Researchers (Conley & O'Hare, 2006; Kokotailo, 2004; Shields, Guttmanova, & Caruso, 2004) have demonstrated success with using the AUDIT to identify high risk and hazardous drinking behavior in similar sample demographics with adequate reliability ($\alpha = .79-.82$). The AUDIT produced adequate reliability coefficients in this sample ($\alpha = .82$).

Coping Motivated Use Behavior: The Brief COPE (Carver, 1997) is a 28-item instrument measuring fourteen conceptually different adaptive and problematic coping reactions: 1) active coping, 2) planning, 3) using instrumental support, 4) using emotional support, 5) venting, 6) behavioral disengagement, 7) self-distraction, 8) self-blame, 9) positive reframing, 10) humor, 11) denial, 12) acceptance, 13) religion, and 14) substance use. The response format is a 4-point Likert scale ranging from “*I haven’t been doing this at all*” (0) to “*I’ve been doing this a lot*” (3). Subscale scores range from 0–8, with higher scores reflecting greater engagement of a given coping reaction. The substance use subscale was used to assess participants’ alcohol use behaviors as a means of coping with negative affect, otherwise referred to as coping motivated drinking. Subscale items include “I’ve been using alcohol or other drugs to make myself feel better,” and “I’ve been using alcohol or other drugs to help me get through it.” Cronbach’s alpha for this subscale was 0.89.

Data Analytic Plan

Analyses were conducted using SPSS 22.0. Cronbach’s alphas were run to assess scale reliabilities. Preliminary analyses were conducted to assess whether our variables of interest differed significantly by sociodemographic variables (i.e., age and gender) or institutional affiliation (PWIs and HBCUs) using independent samples *t* tests. Partial correlations (controlling for age) determined associations between the variables of interest (hypothesis 1). Second, hierarchical multiple regression was used to evaluate the contributions of race-related stress and acculturative stress to the risky alcohol use behaviors and coping-motivated alcohol use behaviors of Black college students (hypothesis 2). Finally, a regression analysis tested the relationship between acculturative stress and risky alcohol use behavior through coping motivated drinking behavior (hypothesis 3). Bootstrap estimates based on 1,000 resamples were generated for each indirect pathway using the SPSS PROCESS Macro (Hayes, 2013). Bootstrapping was conducted for its superiority to the Sobel Test and causal step approach for its higher power, better control over the Type I error, and does not impose the assumption of normality of the sampling distribution (Preacher & Hayes, 2008).

Results

Preliminary Analyses

We examined potential gender differences in minority stress experiences, risky alcohol use behaviors, and coping-motivated drinking behaviors. First, males experienced significantly more acculturative stress ($M = 43.70$; $t(640) = 5.138$, $p < .001$; $d = .63$) but not race-related stress ($M_{zscore} = .093$; $t(633) = .274$, $p = .78$) than females ($M = 35.00$ and $M_{zscore} = .029$). Males also reported significantly more risky alcohol use behaviors, $t(220) = 2.167$, $p = .03$; $d = .29$. No significant differences emerged for coping-motivated drinking behaviors between male ($M = 2.62$; $SD = 1.28$) and female ($M = 2.52$; $SD = 1.14$) students, $t(641) = .890$, $p = .37$. Next, we examined potential differences in risky alcohol use and coping-motivated alcohol use behavior between minors (ages 18–20) and those of legal drinking age (21–30) in the sample. There were no significant group differences in either risky drinking behaviors ($t(635) = 1.186$, $p = .24$) or coping-motivated alcohol use behaviors ($t(647) = .750$, $p = .45$) between the age groups. However, significant age differences emerged for race-related stress, $t(639) = 2.00$, $p = .05$; $d = .18$, such that those who were at least legal drinking age (e.g., older) endorsed more race-related stress than those students between the age of 18–20. No significant age differences were evidenced for self-reported experience of acculturative stress ($t(646) = .531$, $p = .60$). Because age and gender significantly contributed to the drinking behavior and minority stressor experiences in Black students, these sociodemographic variables are treated as covariates for all regression analyses.

Finally, we assessed whether the experience of minority stress, risky alcohol use behaviors and coping-motivated drinking behaviors differed between Black college students attending PWIs and HBCUs. No significant differences emerged for race-related stress ($t(639) = .902$, $p = .08$) or coping motivated drinking behaviors ($t(647) = .200$, $p = .84$) between students attending PWIs versus HBCUs. A Levene's test for equality of variances revealed that the assumption of homogeneity of variances was violated for acculturative stress ($p = .01$) and risky alcohol use behavior ($p = .02$); a Welch's t-test determined that there were no statistically significant differences in experiences of acculturative stress ($p = .06$) or risky alcohol use behaviors ($p = .44$).

Main Analyses

Table 2 shows that minority stressors, both acculturative stress ($r = .21$, $p < .001$) and race-related stress ($r = .20$, $p < .001$), were significantly and positively associated with risky alcohol use behavior when considered independently. Similarly, coping-motivated drinking was significantly and positively associated with acculturative stress ($r = .16$, $p < .001$) and race-related stress ($r = .14$, $p = .01$) providing support for hypothesis one.

Hypothesis 2 examined whether minority stresses would contribute to the prediction of risky alcohol use behavior and coping-motivated drinking behaviors in Black college students when considered in the same model. Table 3 presents the results of the first regression analysis; minority stress regressed on risky alcohol use behavior. Age and gender were entered in Step 1 as covariates to account for within group differences noted above. Neither age ($\beta = .036$, $p = .36$) nor gender ($\beta = .076$, $p = .06$) were significant predictors of risky

alcohol use behavior in the model. The addition of acculturative stress in Step 2 led to a statistically significant increase in R^2 of .043, $F(3, 624) = 11.00$, $p < .001$ and determined that acculturative stress improved the prediction of risky drinking behavior in Black college students ($\beta = .212$, $p < .001$). Finally, the addition of race-related stress to the prediction of risky alcohol use behavior (Step 3) produced a significant, though small, increase in R^2 , $R^2 = .01$, significantly predicting risky drinking behavior in the sample ($\beta = .118$, $p = .01$). The full model, with both acculturative stress and race-related stress predicting risky alcohol use behavior in Black college students (Model 1), when controlling for gender and age differences, was statistically significant, $R^2 = .060$, $F(4, 623) = 9.98$, $p < .001$. A second hierarchical multiple regression determined the relative contributions of acculturative stress and race-related stress to the prediction of coping-motivated drinking behavior in the sample. Table 4 shows that age ($\beta = .026$, $p = .51$) and gender ($\beta = .038$, $p = .34$) were not significant predictors of coping-motivated drinking behavior (Step 1). However, the addition of acculturative stress to the prediction of coping-motivated drinking behavior (Step 2) led to a statistically significant increase in R^2 of .031, $F(3, 631) = 7.115$, $p < .001$. The addition of race-related stress, however, did not significantly improve the prediction of coping-motivated drinking behavior (Step 3), $R^2 = .00$, $F(1, 630) = .200$, $p = .66$. Despite a non-significant contribution of race-related stress, the full model of acculturative stress and race-related stress to predict coping-motivated drinking behavior (Model 2) was statistically significant, $R^2 = .033$, $F(4, 630) = 5.379$, $p < .001$; adjusted $R^2 = .027$. Finally, a regression analysis tested the effects of coping motivated drinking behavior (M) on the relationship between acculturative stress (X) and risky alcohol use behavior (Y) (hypothesis 3, Figure 1). Results indicated that acculturative stress was a significant predictor of coping motivated drinking behavior, $b = .01$, $t(633) = 4.42$, $p < .01$, and that coping motivated drinking was a significant predictor of risky alcohol use, $b = 1.70$, $t(632) = 13.41$, $p < .01$. These results support the mediational hypothesis. The relationship between acculturative stress and risky alcohol use was lessened after controlling for the mediator, coping motivated drinking behavior, $b = .02$, $t(632) = 3.02$, $p < .01$, consistent with partial mediation. The predictors accounted for 26% of the variance in risky alcohol use ($R^2 = .26$). The indirect effect was tested using a bootstrap estimation approach with 1000 samples (Hayes, 2013). These results indicated the indirect coefficient was significant, $b = .02$, 95% CI [.01, .03]. Path coefficients are presented in Figure 1.

Discussion

The relationship between stressors and coping behavior, especially as they relate to alcohol use behaviors in college student populations have been widely studied (Hingson, Heeren, Winter, & Wechsler, 2005; O'Malley & Johnston, 2002; Slutske, 2005) however, Black college students have been largely underrepresented in these studies and until recently, few have studied the impact of minority stressors on the coping behaviors in this population (O'Hara et al., 2014). When included, the drinking behaviors of Black college students are examined in comparison to their white peer groups (Meilman et al., 1995; Siebert et al., 2003), often minimizing the impact of Black college students' drinking behaviors on studied consequences. Furthermore, these samples often focus on traditional college student populations ages 18–22, despite research evidence that suggests that Black students are more

likely to both begin college later and be older than traditional degree seeking undergraduates upon completion (Astin & Osequera, 2005). The current study addressed these gaps and extends our understanding of the impact of minority stress experiences and drinking behaviors of 649 Black college students between the ages of 18–30.

Consistent with the findings of Abdullah and Brown (2012) and Witbrodt, Mulia, Zemore, & Kerr (2014), this study provides additional evidence of the deleterious relationships between racism, discrimination, and acculturative stress on negative health behaviors (Dion, 2001; Harrell, Merritt, & Kalu, 1998; Krieger, 1999; Rollock & Gordon, 2000; Williams & Williams-Morris, 2000); extending this work to include risky alcohol use behaviors among Black college students. When considered independently, both race-related stress and acculturative stressors were positively associated with risky alcohol use and coping motivated drinking behaviors in Black college students. Both forms of minority stress made unique contributions to predicting risky alcohol use, such that as distress associated with race-based and acculturative stress increased, so too did Black college students' risky drinking behavior. A similar pattern was evidenced for coping-motivated drinking behavior, when considering the role of acculturative distress.

Much of the research in this area examines the acculturative experience of Latino and Asian students (Cano, et al., 2015; Gil, Wagner, & Vega, 2000), nearly excluding Black students from dialogues about acculturative stress. It is implied that US born Blacks have an acculturative experience similar to their white counterparts. Consequently, Black students may mislabel an experience of acculturative stress as another form of criticism or individual skill deficit. Among the implications of mislabeling the experience of acculturative stress are ineffective service delivery and continued obscurity of this form of stress for Black college students. When considering the stress experiences of racial/ethnic minority students that may impact their academic journeys, a multidimensional assessment of stressors inclusive of minority stressors, or those beyond academic, financial and general stressors is advantageous, especially the more insidious acculturative and race-related stressors.

Our findings build on the growing body of research highlighting the individual effects of racism on poor mental health outcomes, including risky drinking (Zapolski et al., 2014). Personal experiences of racism predispose Black college students to negative mental health outcomes, one of which is problem drinking (Martin, Tuch, & Roman, 2003). For Black students, the likelihood of experiencing minority stressors not experienced by their non-Black peers, when coupled with permissive campus drinking cultures, may be priming them for the development of maladaptive coping behaviors like risky alcohol use and coping motivated drinking.

Coping motivated drinking, or drinking to reduce negative affect associated with an experience (i.e., discrimination) has been shown to significantly predict both drinking frequency and risky drinking in college students (Bradizza, Reifman, & Barnes, 1999; Ham & Hope, 2003; Jessor, Carman, & Grossman, 1968; Reifman & Windle, 1995) while simultaneously serving as a better indicator of risky drinking behavior than quantity and frequency (Cooper, 1994). Black college students, who drink to manage negative affect, may be more susceptible to the negative consequences associated with alcohol use beyond

college than their non-Black peers who do not share their experiences of minority stress and ‘age-out’ of the drinking behaviors of their college years (Brennan, Walfish, & AuBuchon, 1986). Stated differently, Black college students who rely on alcohol to help navigate negative emotional states are more likely to engage in risky alcohol use behaviors than their peers who do not endorse this relationship to alcohol. This relationship may, in part, be the result of low distress tolerance and an inability to self-regulate, both of which have been linked to adverse consequences like college dropout (Dennhardt and Murphy, 2011). Researchers have suggested greater emotional sensitivity and lower distress tolerance in millennials (individuals born early 1980s-early 2000s) than seen in previous generations (Benton, Robertson, Tseng, Newton, & Benton, 2003). Not only do millennials exhibit ineffective coping behaviors, these same coping behaviors may be setting them up for low distress tolerance (Bland, Melton, Welle, & Bigham, 2012). While not the focus of the current study, personality factors may help further explain the relationship that emerged between coping motivated drinking behavior and risky alcohol use in Black college students, particularly those who are millennials.

Future Directions and Limitations

Given that 1:3 Black college students in the sample endorsed risky alcohol use behavior, future research will benefit from examining other well documented risk and resilience factors including family history, personality, and social affiliation (see Baer, 2002 for review).

Second, racial/ethnic identity development and racial socialization are often assessed when examining stress experience and coping behaviors of Black college students (Bynum, Burton & Best, 2007; Hughes et al., 2006). Future research may benefit from consideration of these constructs to better understand the impact of minority stress on Black college students’ self-efficacy and their ability to moderate drinking behaviors. Finally, future research should continue to include a more nuanced assessment of stress, including the assessment of acculturative stress in Black college students. The field of Black Psychology has long established the uniqueness of African descended people living in western contexts, underscoring its contribution to the psychological misalignment seen in African Americans. However, African Americans continue to be regarded as a racial group rather than as a distinct cultural group with established value and belief systems that exist independent of the dominant western (European) value system, despite anthropological evidence of well-established cultural values and traditions (Glazer, 1997). The small body of studies within the broader psychological literature examining the experiences of acculturation and acculturative stress in African Americans is further evidence of the disregard of the unique cultural group differences among African Americans.

Despite important contributions to the study of drinking behaviors of Black students, several methodological considerations should be noted. The results of the present study are reflective of some of the challenges associated with attempting to assess the impact of racism-related distress and acculturative stress as distinct from other sources of life stress. Future research will benefit from multidimensional and repeated assessment of stressors, and contextual factors affecting appraisal of stress experiences.

In relation to the research methodology, correlation studies have been critiqued for their inability to establish causality (Campbell & Stanley, 1963). While evidence suggests that current risky alcohol use and coping-motivated drinking behaviors may indicate future alcohol problems, causation cannot be inferred. Future longitudinal investigations would advance our understanding of the impact of risky alcohol use behavior and coping-motivated drinking behavior across the lifespan among Black adults. Furthermore, while the web-based survey design allowed for cost-effective data collection across six institutions, it could also be subject to selection bias (Gosling, Vazire, Srivastava, & John, 2004), which may have contributed to the marginal representation of Black men in the study. Caution should be used when generalizing these findings to the experiences of minority stress, risky alcohol use, and coping-motivated drinking behaviors with Black emerging adults beyond the sample. It is not clear to what extent the current sample is representative of broader Black college student demographics. Finally, extant literature has highlighted the protective benefits of education with regard to substance use in Blacks, thus substance use trends in college samples are not likely representative of substance use behavior in community samples (Center for Behavioral Health Statistics and Quality, 2015). Despite the above limitations, the unique contributions of race-related stress and acculturative stress to increases in risky alcohol use and coping motivated drinking behaviors in Black college students are noteworthy.

Conclusion

The current study documents the role of race-related stress and acculturative stress in understanding the drinking behaviors of Black college students. More specifically, race-related and acculturative stressors were particularly important for understanding risky alcohol use and to a lesser degree, coping motivated drinking behaviors in this population. The inclusion of acculturative stress as a predictor of these behaviors in Black college students adds to a very small body of literature on the acculturative experience of Black Americans, while study findings continue to underscore important associations in the extant literature about the insidious outcomes of racism on individuals. Continued efforts are needed to understand both individual level (life stress, race-related stress) and group level (e.g., acculturative stress) stressors on the health behavior and health outcomes of Black emerging adults. This research is well poised to help close disparities in overall health later in the lifespan.

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Figure 1. Proposed Mediation Model

Note: Results of the path analysis delineating those paths found to be significant. All numbers represent standardized beta weights. ** $p < .01$

Table 1

Descriptive Statistics of the Participants

Demographic Characteristics	Descriptive Statistics
Age (mean, SD)	20.42, 2.32
Female (<i>n</i> , %)	485, 74.7
<i>Academic Standing (n, %)</i>	
1 st year	116, 17.9
2 nd year	144, 22.2
3 rd year	173, 26.7
4 th year	160, 24.7
5 th year+	58, 8.6
<i>Institutional Affiliation (n, %)</i>	
PWIs	466, 72
HBCUs	183, 28
<i>Risky Drinking Behavior (mean, SD)</i>	
Full Sample	4.14, 4.30
Men	4.86, 5.08
Women	3.89, 3.99
PWIs	4.22, 4.48
HBCUs	3.95, 3.82

Note. *N* = 649. PWIs: Predominantly White Institutions; HBCUs: Historically Black Colleges and Universities.

Table 2Cronbach's α and Pearson's Correlations between Study Variables

	<i>M</i>	α	1	2	3	4
1. Acculturative Stress	38.01	.91	--			
2. Race-Related Stress	-.0429	.90	.53**	--		
3. Risky Drinking Behavior	4.37	.82	.21**	.20**	--	
4. Coping Motivated Drinking	2.61	.89	.16**	.14**	.48**	--

Note. n = 628.**
 $p < .01$.

Acculturative stress was measured by the Social, Familial, Attitudinal, and Environmental Acculturative Stress; Race-Related Stress was measured by the Index of Race Related Stress; Risky Drinking Behavior was measured by the Alcohol Use Disorders Identification Test; and Coping Motivated Drinking was measured using a modified form of the Brief COPE Inventory--Substance Use subscale.

Table 3

Hierarchical Multiple Regression Predicting Risky Alcohol Use from Acculturative Stress and Race Related Stress (Model 1).

Variable	Risky Alcohol Use					
	Step 1		Step 2		Step 3	
	B	β	B	β	B	β
Constant	3.025 ^{***}		1.781 ^{**}		2.195 ^{***}	
Sex	.744	.076	.312	.032	.449	.046
Age	.315	.036	.343	.040	.242	.028
Acculturative Stress			.048 ^{**}	.212	.034 ^{**}	.149
Race-Related Stress					.202 ^{***}	.118
R^2	.007		.050		.060	
F	2.231		10.999 ^{**}		9.984 ^{**}	
R^2	.007		.043		.010	
F	2.231		28.340 ^{**}		6.639 ^{**}	

Note. n = 628.

* $p < .05$

*** $p < .01$;

B = unstandardized regression coefficient; β = standardized coefficient.

Table 4

Hierarchical Multiple Regression Predicting Coping Motivated Drinking from Acculturative Stress and Race Related Stress (Model 2).

Variable	Coping Motivated Drinking					
	Step 1		Step 2		Step 3	
	B	β	B	β	B	β
Constant	2.395**		2.095**		2.074**	
Sex	.105	.070	.009	.003	.002	.001
Age	.64	.025	.077	.032	.082	.034
Acculturative Stress			.011**	.178	.012**	.190
Race-Related Stress					-.010	-.021
R^2	.002		.033		.033	
F	.690		7.115**		5.379	
R^2	.002		.031		.000	
F	.690		19.923**		.200	

Note. n = 635.

* $p < .05$

** $p < .01$;

B = unstandardized regression coefficient; β = standardized coefficient.