11-1-2012

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Digital Object Identifier (DOI)
https://doi.org/10.1177/0095798412438395

Notes/Citation Information
Published in *The Journal of Black Psychology*, v. 38, issue 4, p. 471-496.

Published in final edited form as:
J Black Psychol. 2012 November 1; 38(4): 471–496. doi:10.1177/0095798412438395.

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Abstract

Though recent evidence indicates that rates of illicit drug use among African American women are now higher than the national average, little is known about the etiology of substance use in this population. In addition, the effects of racism and other cultural factors are understudied and may be unique amongst African American women. This cross-sectional study explores risk and protective factors for drug use among 204 African American women. More specifically, associations between racism experiences and drug use are investigated in the context of potential moderating influences (i.e., psychosocial resources, social safety net variables, and cultural identity and practices). Findings suggest that racism is associated with drug use, but that its effects diminish with age. In addition, results suggest that psychosocial resources, social safety net factors and culturally specific factors like ethnic community membership and engagement in cultural practices afford African American women some protection against the detrimental effects of racism.

According to the National Survey of Drug Use and Health (NSDUH 2010), the current rate of illicit substance use among African American women (6.2%) is higher than the national average (5.7%), and has increased in the past decade. Participation in a drug culture increases vulnerability to serious illness, death, incarceration, and child welfare involvement, all of which threaten long-term socioeconomic wellbeing and family cohesion in African American communities (Beatty, 2003; Buka, 2002; Galea & Vlahov, 2002). In addition, drug use may be particularly problematic for African American women, many of whom struggle to raise their children in the face of single motherhood, poverty, and racial discrimination (Curtis-Boles & Jenkins-Monroe 2000).

Historically, African American women have seldom been the focus of drug use studies because of their overall lower rates of use compared to African American men and White men and women. Consequently, we know relatively little about factors unique to African American women regarding the etiology of drug use in this population. This cross-sectional study of African American women from an urban southern city examines associations and

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interactions between racism, psychosocial resources, the social safety net, and culture and ethnic identity on illicit drug use.

The impact of racism on African American drug use

Broadly, there is considerable empirical evidence for the association between stressful events and subsequent negative health outcomes, including substance abuse (Brown & Gary, 1987; Williams, 1996). Though largely neglected in the broader mental health literature, race scholars argue that racism is a source of chronic strain and psychological distress for African Americans (Brown & Keith, 2003; Landrine & Klonoff, 1996). Moreover, though not addressing illicit drug use directly, research suggests that higher levels of perceived racial discrimination are associated with increased rates of tobacco use and alcohol abuse (Kwate, Valdimarsdottir, Guevarra & Bovbjerg, 2003; Martin, Tuch, & Roman, 2003). While there is little empirical evidence linking racism to drug use among African American women, this relationship has been theorized (Amaro, Larson, Gampel, Richardson et al., 2005). Researchers speculate that African American women who must contend with the chronic stressors of racism, sexism, and economic oppression may turn to drugs to escape feelings of marginalization and alienation (Beatty, 2003; Rhodes, 1997).

In subjective accounts of their experiences, African American women underscore a link between racism and drug use. For instance, findings from a structured support group intervention for African American women in recovery suggest that racism is often cited as a contributing factor in alcohol and drug use (Saulnier, 1996). In a qualitative study of substance-dependent African American women, Ehrmin (2002) identified the “pain of prejudice” as a shared force in the experiences of her participants. She concluded that the stress and pain associated with racism may contribute to the development of substance use disorders (SUDs) among African American women.

Additionally, as the above research implies, there may be strong overlaps between the roles of racism and poverty in the etiology of SUDs, but little is currently known about these processes. Individual and institutional racism can constrain economic opportunities, leading to lower SES and unhealthy levels of stress that promote substance abuse (Ehrmin, 2002; Saulnier, 1996). Conversely, being in disadvantaged social statuses and contexts associated with poverty (e.g., poor neighborhoods) can increase African Americans’ vulnerability to racism and exposure to various social stressors and opportunities for drug use (Curtis-Boles & Jenkins-Monroe, 2000; Galea & Vlahov, 2002). The current study provides an opportunity to further examine the independent effects of racism experiences and socioeconomic status on substance use.

Coping with racism: Psychosocial resources and the social safety net

Traditionally, the protective factors examined in stress pathways include coping mechanisms like psychosocial resources and social support (Pearlin, 1989). These have been shown to buffer stress and to have direct effects on health outcomes, including substance use (El-Bassel, Chen, & Cooper 1998). Thus, factors like existential well-being, active coping, self-esteem, and social support may moderate the negative effects of racism on African Americans’ substance use.

Psychosocial resources

In classic social stress theory, protective factors allow individuals to effectively neutralize their emotional response to stress before it affects health (Pearlin, 1999). Along these lines, existential well-being, or feelings of life satisfaction and purpose, has been theorized to reduce the impact of discrimination and other stressors among minority groups (Ryff,

Keyes, & Hughes, 2003). Of direct relevance for the current study, research suggests that high levels of existential well-being are associated with decreased risk for alcohol, drug, and tobacco dependence, as well as a number of other physical and mental health outcomes (Tsuang, Simpson, Koenen, Kremen et al., 2007). Though existential wellbeing has not been linked to drug use among African Americans specifically, Coleman (2004) found that existential well-being was protective against depression among HIV infected African Americans.

Self-esteem has also been implicated as an important resource in coping with stress. Research suggests that low self-esteem increases the risk of drug use in some groups (Engs & Hanson 1989; Yanish & Battle, 1985). Likewise, self-esteem has been found to moderate the relationship between racism and mental health outcomes (Fischer & Shaw, 1999). Thus, scholars argue that positive self-esteem among African Americans may serve to activate and sustain protective behaviors in the face of stressful circumstances (Twenge & Crocker, 2002).

Similarly, active coping is defined as a strong behavioral disposition to directly manage an environmental stressor through hard work and determination, and has been linked to positive health outcomes (Boehmer, Luszczunska, & Schwarzer, 2007; Fernander & Schumacher, 2008). Yet, studies of African Americans suggest that an active orientation toward coping with racism may result in negative health outcomes for this group (Bennett, Merritt, Sollers, Ewards, et al., 2004; Dressler, Bindon, & Neggers, 1998). That is, African Americans with high active coping experience a strong desire to take action coupled with repeated failure to do so due to persistent socioeconomic disadvantage or other barriers. Over time, this may lead to frustration and negative health behaviors such as substance use (Fernander & Schumacher, 2008). Studies specifically examining African American women have found that not utilizing an active coping strategy is often preferred. For instance, Thomas, Witherspoon, and Speight (2008) found that the link between racism and psychological distress was partially mediated by an avoidant coping style, which is opposite of an active coping style. Similarly, Shorter-Gooden (2004) found that avoidant coping is generally preferred over active coping in managing racism.

The social safety net

The social safety net refers broadly to social relationships and networks that afford access to resources that may be used to promote health and avoid illness. People benefit from emotional support, advice, and affirmation provided by their personal networks, and social support has been linked to a variety of positive health outcomes in the presence and absence of stress (Cohen & Syme, 1985; Lin & Peek, 1999; Shorter, 2004). With respect to drug use, high levels of social support are associated with lower rates of drug initiation, illicit drug use, and substance dependence, as well as better drug treatment retention and outcomes (Dobkin et al., 2002; El-Bassel, Chen, & Cooper, 1998). Among African American women specifically, longitudinal research suggests that low perceived social support is predictive of drug use (Brown & Riley, 2005), though other studies have failed to replicate this (Riehman, et al., 2008). However, more broadly, there is evidence that cultural norms and support systems may moderate the negative effects of racial discrimination in African American communities (Snowden, 1998; Vega & Rumbaut, 1991).

Connectedness to individuals and social groups may also reduce the likelihood of drug use because social integration is associated with regulation of group members and a sense of responsibility to others (Cohen, 2004). For example, among African Americans, the decline in marriage rates and increase in female-headed households has been cited as a mechanism underlying persistent poverty and other problems in this community (Tucker & Mitchell-Kearnan, 1995). Research suggests that women who are unmarried, divorced, or separated

are two to three times more likely to engage in substance use than women who are currently married (NSDUH, 2004), making marriage an important protective factor among African American women.

Likewise, being connected to a religious community is also posited to be a stress-buffering resource for African Americans. Research suggests that individuals embedded in religious institutions are regulated and supported by strong social norms and social networks (Stack & Wasserman, 1992), which are likely to discourage illicit drug use. More specifically, empirical findings indicate that church attendance and religiosity reduce the likelihood of drug use, even among those coping with stress (Gorsuch, 1995; Klein, Elifson & Sterk, 2006). Additionally, Shorter-Gooden found that African American women cope with racism and sexism by "resting on faith," including relying on prayer, spiritual beliefs, and a relationship with God (p. 416; 2004). In another qualitative study, African American women who had abused cocaine reported that church attendance evoked positive feelings, reduced depression, and helped them temporarily and sometimes permanently quit using drugs (Brown, 2006).

Culturally specific protective factors: The role of ethnic identity, values, and practices

Race scholars argue that by virtue of being brought to America against their will and forced to assimilate, African Americans had to create a unique set of ethnic and cultural practices that are neither European nor African (Sellers et al., 1998). Thus, there are numerous protective factors that may be uniquely relevant to the experiences of African Americans, and African American women more specifically, that have received scant attention in the substance abuse literature. This is particularly likely to be the case when the stressor being examined (i.e., racism) is directly relevant to African Americans' racial and ethnic identity.

Possessing a strong ethnic identity may neutralize African Americans' feelings of marginalization and devaluation, as well as the effects of pervasive and repeated mistreatment (Outten, Schmitt, Garcia, & Branscombe, 2009; Tajfel & Turner 1979; Verkuyten, 2010). Phinney (1992) identifies ethnic behaviors and practices, affirmation and belonging, and ethnic identity achievement as critical components of ethnic identity development. Ethnic behaviors and practices include involvement in social activities with members of one's ethnic group and participation in cultural traditions, while ethnic affirmation and belonging refers to ethnic pride and feelings of belonging and attachment to one's ethic group. Likewise, ethnic identity achievement is conceptualized as more of a developmental process on a continuum ranging from lack of exploration and commitment concerning ethnic identity to exploring and commitment to one's ethnicity (Phinney, 1992).

Empirical research provides some evidence that ethnic identity and cultural practices influence coping processes and mental health outcomes among African Americans. Shorter-Gooden (2004) identified a theme of "standing on shoulders" (p. 416) to describe how African American women rely on their connection to their heritage, culture, and ancestors as a way of coping with racism and sexism-related stress. Similarly, quantitative research has demonstrated that possessing a strong ethnic identity protects against psychological distress (Sellers, Caldwell, Schmeelk-Cone & Zimmerman, 2003) and reduces the risk of drug use (Brook et al. 1998) and high levels of alcohol consumption (Caldwell et al. 2004).

In sum, there is a need for additional research on the role of culturally-specific protective factors in buffering against the deleterious effects of racism, particularly for adult African American women. The majority of research of this nature has examined adolescent and young adult populations. However, the adverse consequences of racism are not limited to the

early life course, and these experiences can have cumulative negative effects on African American women (Thompson-Miller & Feagin, 2007). Thus, it is critical to increase our understanding of culturally relevant protective factors within adult populations.

Using a sample of African American women from an urban area, this study examines the impact of racism on use of illicit drugs other than marijuana, focusing on potential stress buffering resources. Specifically, the following research questions are addressed: 1) How do racist life events affect the likelihood of illicit drug use among African American women? 2) Do traditional protective factors (i.e., psychosocial resources and the social safety net) moderate the impact of racist life events on illicit drug use? 3) Do culturally specific factors that capture ethnic identity and behavior moderate the influence of racist life events on illicit drug use?

METHODS

Sample

The current study was based on data from the first wave of B-WISE (Black Women in a Study of Epidemics). The purpose of B-WISE is to identify risk and protective factors for mental and physical health problems, as well as health service utilization patterns, and to compare these across criminal justice status. The current study utilized a sample of 206 African American women who were not involved in the criminal justice system. Study participants were recruited in a moderately-large urban area in Kentucky through flyers and newspaper advertisements posted in areas of the city that have a large African American population (based on census data). Women who called the toll free study hotline were screened by trained African American female interviewers. Criteria for eligibility included: (1) self-identifying as an African American woman; (2) being at least 18 years of age; and (3) not currently being involved in the criminal justice system as a perpetrator of criminal activity. During the screening process, women were placed into one of two groups based on self-reported past-year illicit drug use. Recruitment in the community continued until the sample contained at least 100 drug users, some of whom only used marijuana, and 100 non-drug users. All data were collected by trained African American female interviewers using Computer Assisted Personal Interviewing (CAPI) software. Interviews were conducted face-to-face in private locations, with an average interview taking three hours. Participants received $20 for participating.

After a case-wise deletion of missing data on income (two cases), the final sample contains 204 African American women. The African American women in this sample reported an average of 12.75 years of education (where 12 years equals a high school diploma or equivalent), an average age of 36.39 years, and a mean annual household income of $20,850. Additionally, 13% of the women in this sample reported being married at the time of the interview. Finally, about 56% of respondents reported working full-time or part-time, while 44% are unemployed.

Due to the oversampling of drug users, who were recruited largely in racially segregated and socioeconomically disadvantaged communities, this sample is not representative of African American women as a whole. Non-institutionalized drug users have been termed a “hidden population” (Braunstein, 1993). Thus, while probability samples that permit generalization are preferred, the realities of recruiting hard-to-reach respondents (i.e., African-American female drug users) posed serious barriers. Along these lines, substantial socio-demographic differences between drug users and non-users in the sample were evident. Drug users were significantly younger than non-drug users (33.61 versus 39.22; $t=2.88$; $p<.01$). In addition, the mean annual household income among drug users was $14,515 compared to $27,302 among non-users ($t=4.50$; $p<.001$). Finally, drug users were much more likely to be

unemployed than non-users (53% versus 35%; X^2=8.63; p<.01), and were also more likely to be unmarried (71% versus 55%; X^2=7.04; p<.05). Thus, though these analyses can identify potential mechanisms of drug abuse among African American women, findings should be confirmed with a representative probability sample.

Measures

Socio-demographic variables—Age and education were coded in years. Annual household income was coded in thousands of dollars. Finally, work status was captured using a series of three dummy variables measuring full-time work, part-time work, and unemployed (including unemployed and looking for work, unemployed due to disability, and retired).

Racism—The Schedule of Racist Events (SRE) was employed to measure lifetime experiences of racism (Landrine & Klonoff, 1996). This additive scale contains 17 items. Respondents were asked whether they experienced a series of events "because you are Black." Items include false accusation of wrongdoing, being called a racist name, and being mistreated by friends, employers, and coworkers. Possible responses ranged from 0 (respondent has never experienced this type of racism) to 5 (respondent experiences this type of racism more than 70% of the time). Responses to all 17 items were summed with higher scores indicating more lifetime racist experiences. Using the current sample, the racism scale has an alpha reliability of 0.92.

Psychosocial resources—Psychosocial resources were measured as existential well-being, self-esteem, and active coping. Existential well-being was measured using a 12-item subscale of the Spiritual Well-being scale (Staton, Webster, & Hiller et al., 2003). It measures sense of well-being based on life purpose and life satisfaction. Respondent's answers to each item ranged from 1 (strongly disagree) to 7 (strongly agree) and negatively worded statements were reverse coded. Sample items include "life is a positive experience", "I believe there is some real purpose for my life", and "I understand my place in the world." Individual items were summed such that higher scores indicate greater existential well-being and the scale has an alpha reliability of 0.85 in the current sample.

Self-esteem was measured using Rosenberg's Self-Esteem Scale (1979). This 10-item scale assesses self-esteem by asking respondents how much they agree with statements such as "I am able to do things as well as most people", "On the whole, I am satisfied with myself", and "I take a positive attitude towards myself". Negatively worded statements were reverse scored. Response categories ranged from 1 (strongly disagree) to 4 (strongly agree). Responses to all items were summed such that higher values correspond to more positive levels of self-esteem. Using the current sample, the self-esteem scale has an alpha reliability of 0.87.

The John Henryism Scale for Active Coping (James, 1996) was utilized to measure an individual's propensity to actively cope with psychosocial stressors in their environment. The 12-item scale, designed particularly for African American populations, emphasizes three constructs: efficacious mental and physical vigor; a commitment to hard work; and, a single-minded determination to achieve one's goals (James, 1996). Respondents were asked to indicate how true each statement is in relation to their own views and behaviors. Responses ranged from 1 (completely true) to 5 (completely false). Higher scores indicated a greater propensity to cope with stressors actively rather than passively. Responses to all items were summed and the coping scale has an alpha reliability of 0.76 in the current sample.

Social safety net—Measures of the social safety net include marital status, membership in a religious community, and social support from friends and family. Marital status was separated into three dummy variables – currently married, divorced/widowed/separated, and never married. Religious community membership is a binary variable measuring whether respondents had been an official member of a church or other place of worship in the past year (yes=1; no=0).

Zimet and colleagues' 8-item Multidimensional Scale of Social Support (1988) was utilized to measure perceptions of social support from various sources. It contains 4 items in each of two subscales – family support and friend support. Respondents' answers to each item range from 1 (strongly disagree) to 7 (strongly agree). Sample items include "my family really tries to help me", "I can count on my friends when things go wrong", and "my family is willing to help me make decisions." Individual items are summed such that higher scores indicate greater perceived social support. The subscales were used because friends and family members may provide distinct types and amounts of support (Wellman & Wortley, 1990). Both scales have an alpha reliability of 0.94 in the B-WISE sample.

Culture and Ethnicity—The culture and ethnicity variables — ethnic affirmation, ethnic identity achievement, cultural practices and ethnic community membership — are assessed using sub-scales of Phinney's Multigroup Ethnic Identity Measure (1992). The scales were designed to measure aspects of ethnic identity that are common to members of minority groups. The ethnic affirmation sub-scale measures one's sense of attachment or belonging to an ethnic group, and is comprised of 5 items, including statements such as "I am happy that I am a member of the group I belong to." The ethnic identity achievement sub-scale captures commitment to an ethnic identity. It includes 5 items, including "I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs." Response categories for individual items ranged from 1 (strongly disagree) to 4 (strongly agree). These were summed to create each scale such that higher values indicate a stronger sense of affirmation or identity achievement. The ethnic affirmation scale has an alpha reliability of 0.91 and the ethnic identity achievement scale has an alpha reliability of 0.73 in the current sample. A third variable measuring cultural practices is computed using the following item: "I participate in cultural practices of my own group, such as special food, music, or customs." Because the distribution on this item is heavily skewed toward agree and strongly agree, it is coded as a dummy variable measuring strong cultural practices, where 1=strongly agree and 0=agree, disagree, or strongly disagree. Finally, to assess *ethnic* community membership, respondents are asked whether or not they are active in organizations or social groups that include mostly members of their own ethnic group (yes=1; no=0).

Illicit Drug Use—The measure of illicit drug use was computed using a series of items asking about use of individual drugs in the past year. These include: inhalants, hallucinogens, amphetamines, crack/freebase, powder cocaine, heroin, heroin and cocaine mixed, opiates, club drugs, sedatives, and tranquilizers. A binary variable is equal to 1 if the respondent reported using any of these drugs in the past year, and 0 otherwise. Marijuana is excluded from this measure. While marijuana can certainly have negative consequences, the social, economic, and health implications of marijuana use differ from those of the "harder" and more physically addictive drugs. Furthermore, some researchers have speculated that marijuana use may be considered normative in African American communities (Wei, Loeber, & White, 2004). Initially, parallel analyses were conducted with an outcome variable measuring any illicit drug use (including marjiuana use), but these produced few significant results and are not included.

Analysis

Analyses presented here explore relationships between racism experiences, psychosocial resources, social safety net variables, culture and ethnicity, and illicit drug use. To understand the characteristics of the sample, descriptive statistics are presented on all variables. Measures of association (e.g., zero-order correlations) between all variables in these analyses were calculated to assess relationships between covariates and potential for multicollinearity in regression models. Collinearity diagnostics were also performed.

To determine the extent to which racism predicts illicit drug use, binary logistic regression models were computed using Stata 9. A baseline model examined the effects of the racist life events scale on illicit drug use. Then, a series of models were computed that add four socio-demographic control variables, then three additional groups of variables (i.e., psychosocial resources, social safety net variables, and culture and ethnicity), one group at a time in a stepwise fashion. If measures of association suggest potential multicollinearity, regression models were also conducted with and without collinear variables. Where applicable, these findings are presented in the text.

To identify potential moderating (i.e., protective) effects of covariates, a multiplicativeterm (racist life events*covariate) was added to the previous models. These determine whether racism has unique effects at different levels of each covariate. Interaction terms were created by multiplying the continuous racist life events scale by one or more dummy variables computed using a covariate. Scalar covariates were divided into three dummy variables representing low, medium, and high levels (cut points are tertiles on the frequency distribution) on a given scale. The presence of group differences in the effect of racist life events was determined by the significance of one or more interaction terms, not by the significance of the constitutive (i.e., main-effect) terms (Allison, 1999). In interaction models, the effect of racism in the omitted group is simply the odds ratio for racist life events, while the effect of racism in the included groups were calculated by multiplying the odds ratio for racist life events by the odds ratio associated with the interaction term. The results from regression output are presented in tables, while group-specific odds ratios are presented in the text for the purposes of interpretation.

Also, in logit models, Chow-type tests of the equality of coefficients across groups (e.g., testing if the coefficient for racist life events is the same for church members versus non-members) may be unreliable since they confound the magnitude of the effect for each group with group differences in residual variation (Allison, 1999). To facilitate interpretation, figures of predicted probabilities were generated for select models with interaction terms. Only models with significant interactions are presented in tables and text.

RESULTS

Table 1 presents descriptive statistics on independent and dependent variables. African American women reported experiencing a mean of 15.04 racist events in their lifetime. These women possessed a moderately high degree of psychosocial resources: Mean existential wellbeing was 55.56; self-esteem was 32.46; and active coping was 50.84. With respect to social safety net variables, only 13% of these women were married, 24% were divorced, separated, or widowed, and 63% were never married. Moreover, 68% reported being members of a religious community. Finally, mean social support from family was 5.39, and 5.40 from friends, which indicated high perceived support. With respect to culture and ethnicity variables, ethnic affirmation (mean=3.43) and identity achievement (mean=3.12) were strong. About 44% of the sample reported strong engagement in cultural practices, and 54% considered themselves members of an ethnic community. Lastly, about

21% of these African American women reported having used illicit drugs, excluding marijuana, in the past year.

Table 2 presents correlations between independent variables. The racist life events scale was positively associated with age and ethnic identity achievement, and negatively associated with existential well-being and social support from friends (See Table 2). Household income was positively associated with age and years of education. Moreover, individuals working full-time and part-time had significantly higher incomes and more schooling, on average ($F=13.05$; $p<.001$ and $F=8.55$; $p<.001$). All of the variables measuring psychosocial resources were positively correlated (See Table 2), as were ethnic affirmation and identity achievement. Moreover, those who reported being community members and strong cultural practices had significantly higher levels of ethnic affirmation ($t=2.26$; $p<.05$ and $t=2.41$; $p<.05$, respectfully) and ethnic identity achievement ($t=9.90$; $p<.001$ and $t=5.59$; $p<.001$, respectfully). Finally, individuals who reported being members of an ethnic community were more likely to report strong cultural practices ($X^2=.14$; $p<.05$). However, despite significant and sometimes strong associations between covariates, collinearity diagnostics did not reveal any Variance Inflation Factors (VIFs) above 2.5, suggesting that multicollinearity was not problematic.

The first research question asked whether racist life events affect the likelihood of illicit drug use among African American women. Table 3 presents results from the logistic regression of racism and socio-demographic variables on illicit drug use. According to Models 1 and 3, racism did not have a significant overall effect on the odds of drug use, and this was unchanged by the addition of measures of social class and age. As shown in Model 2, women who worked full-time were significantly less likely to have used illicit drugs relative to those who were unemployed ($OR=0.28$; $p<.01$). As would be expected given associations between measures of social class, household income is predictive in a model that excludes work status ($OR=0.97$; $p<.05$).

The second research question assesses whether traditional protective factors moderate the impact of racist life events on illicit drug use. Table 4, Model 1 presents results from the regression of illicit drug use on racist life events, socio-demographic controls, and psychosocial resources. Higher levels of existential wellbeing were associated with a lower likelihood of illicit drug use ($OR=0.93$; $p<.05$), while self-esteem and active coping had no significant effect in the full model. However, as seen in Table 2, existential well-being and self-esteem were highly correlated, suggesting that these variables explain shared variance. Self-esteem was predictive of drug use in a regression model excluding well-being ($OR=0.90$; $p<.05$). Also, there were no significant interactions between racist life events and levels of psychosocial resources (results not shown).

According to Table 4, Model 2, being integrated in a religious ($OR=0.35$; $p<.01$) community was associated with a strong reduction in the odds of engaging in illicit drug userelative to those who are not community members. However, there is evidence of a significant interaction between membership in a religious community and vulnerability to racism. Specifically, as shown in Table 4, Model 3, higher levels of racism were associated with modest increases in the predicted probability of drug use among those embedded in a religious community ($OR=1.02$). Alternatively, among those who did not report being a member of a religious community, risk for drug use decreased dramatically with additional racist life events ($OR=0.95$; $p<.05$). Here, examining changes in predicted probabilities of drug use across levels of racist events in the two groups is instructive. Figure 1 illustrates that risk for illicit drug use was much higher overall in the group without ties to a religious community, as reflected by the effect of community membership on the odds of drug use in the baseline model where racism experiences are held constant at their mean. However, at

moderate to high levels of racism, individuals who are not religious community members had lower predicted probabilities of drug use that are similar to those of their peers with ties to religious communities.

The third research question asks whether culturally specific factors that capture ethnic identity and behavior moderate the influence of racist life events on illicit drug use. Results in Table 5 indicate that none of the culture and ethnicity variables measured here directly affect the likelihood of illicit drug use in the full model (See Model 1). However, as noted above, all of these variables are significantly associated. Modeled separately, findings indicate that being a member of an ethnic community did have a significant direct effect on the likelihood of drug use when other cultural variables are omitted (OR=0.45; $p<.05$; results not shown in tables).

Remarkably, though few direct effects are noted, these cultural factors did have a strong moderating effect on the influence of racism, as indicated by the significance of interaction terms in Models 2–4. As shown in Model 2, for those with a low level of ethnic affirmation, increased racist life events were associated with increased odds of illicit drug use (OR=1.04). In contrast, racism experiences had little effect on drug use (OR=0.998) or were associated with decreased odds of drug use (OR=0.96; $p\leq.05$) among those with high and medium levels of ethnic affirmation, respectively. Likewise, according to Model 3, racism experiences were positively related to the odds of illicit drug use for those with low levels of ethnic identity achievement (OR=1.05), but were associated with slight or moderate decreases in the likelihood of drug use among those with medium and high levels (OR=0.998 and OR=0.96, respectively; $p<.05$). These relationships are also depicted in Figure 2 using changes in predicted probabilities. Finally, as shown in Model 5, for African American women with medium to low participation in cultural practices, increased racist life events led to higher probabilities of illicit drug use (OR=1.02). However, for those with high participation, racist life events had a negative relationship to odds of drug use (OR=0.95; $p<.05$).

DISCUSSION

These results constitute a significant contribution to the literature on risk and protective factors for drug use among African American women. Broadly, we found that racism was associated with illicit drug use among some groups of African American women in our sample, increasing the likelihood of using crack, heroin, amphetamines, and other hard drugs. However, intervening mechanisms were shown to reduce the impact of racism on African American women in the study.

Despite the potential confounding relationship between racism and socioeconomic status, we found that these social forces have independent effects on drug use in this analysis. While lower SES directly increased the risk of drug use, racism operated only among certain vulnerable groups, as discussed below. However, when racist life events demonstrated an effect, this was above and beyond the influence of socioeconomic status, indicating that the adverse effects of racism cannot be attributed solely to economic disadvantage.

Also findings indicate that existential well being, ethnic community membership, and having ties to religious communities had direct ameliorative effects on the likelihood of drug use, which is consistent with previous literature (Curtis-Boles & Jenkins-Monroe, 2000; Gorsuch, 1995). However, findings also reveal an unexpected interaction between experiences of racism and religious community membership. That is, increasing levels of racist life events were associated with a modest increase in risk for illicit drug use among members of religious communities, suggesting that religious integration substantially

reduces the likelihood of drug use overall, but may not effectively buffer the effects of racism. In contrast, for those who were not members of a church, the predicted odds of drug use *decreased* as perceived racism experiences increased. In other words, women who perceived low levels of racist life events and were not members of a church had very high predicted probabilities of illicit drug use.

It is unlikely that experiencing racism causes low levels of drug use among women without ties to a religious community. This pattern is difficult to explain, but may be related to reverse causation and patterns of church attendance among drug users. In an ethnographic study of rural African American women drug users, Brown (2006) found that attendance at religious services and social integration into a religious community were not effective protections against substance use because of the stigma faced by women who were already using drugs. Specifically, the women in the study reported being uncomfortable attending church due to fears of what others would think of them. Likewise, heavy drug users are unlikely to be church members and perhaps also less perceptive of racial discrimination, instead attributing negative life events to their drug user status or low SES. Both of these alternative explanations would lead to the patterns observed in our data.

The most remarkable findings to emerge from this study pertained to culturally-specific moderating factors. That is, stronger identification with and participation in African American culture protected women from the harmful effects of racism on illicit drug use. Specifically, only women with low levels of ethnic identity achievement, ethnic affirmation, and engagement in African American cultural practices were adversely affected by higher levels of racist life events. There are several potential explanations for these results. First, shared experiences and a sense of collective identity with other African Americans lead to feelings of belonging and acceptance. These positive emotions may minimize the impact of racial oppression, particularly if these negative experiences promote bonding and a common understanding among members of a disadvantaged group. Second, strong affirmation of one's ethnicity may facilitate the externalization of racist slights and humiliations, reducing the likelihood that these events will have a negative impact on self-concept. If a person has invested time and cognitive resources in strengthening a valued identity, occasional devaluation of that identity by others may have minimal effects. Third, high levels of engagement in cultural practices, such as cooking ethnic foods or reading African American literature, may constitute a positive coping mechanism. Leisure activities, particularly if shared with friends and family, may provide a respite from the stress associated with racial oppression and minimize the likelihood of maladaptive coping.

Limitations and future directions

The data used here do not constitute a nationally representative sample of African American women. Specifically, women were recruited in socioeconomically disadvantaged neighborhoods with a high proportion of African Americans. In addition, because the community sample was constructed to make comparisons to a prison sample, half of the women had used any illicit drugs in the past year, and about 20% had used illicit drugs other than marijuana. Though socio-demographic factors are included in models as controls, readers should use caution when interpreting results. In particular, findings likely do not extend to African American women in the higher socioeconomic strata or in integrated communities with low proportions of African Americans. In the future, this research should be replicated using nationally-representative data.

Additionally, the study design was cross-sectional and precludes our ability to determine directionality with regard to predicting drug use among African American women. Furthermore, it has been noted by researchers that African Americans are more likely than other groups to underreport on surveys when responding to sensitive topics such as drug use

(Mensch & Kandel, 1988). As a result, the data obtained on drug use status may contain self-report bias. Despite the limitations, this study is novel in that it examines ethnic identity as it relates to racism and drug use outcomes. Findings from this study contribute to the literature on the importance of ethnic identity and cultural practices and their protective effects against illicit drug use in the face of racism for African Americans.

Implications for theory, policy, and practice

In sum, these findings support existing theoretical frameworks that highlight the protective aspects of ethnic identity on health (Tajfel & Turner, 1979; Verkuyten, 2010). However, this research also makes two important novel contributions: First, it expands the current literature to include drug use outcomes. These are a natural fit for a culturally-informed stress framework due to the increasing incidence of substance use among African American women and the potential for drug use to become a maladaptive coping strategy. Second, this study evaluates the influence of protective cultural factors in the context of racism — a stressor that is directly relevant to African Americans' racial and ethnic identity. In all, this research addresses all aspects of the stress process, providing a clear and culturally-specific theoretical link between the source of stress, moderating factors, and outcomes.

These findings also have important implications for substance abuse prevention. Specifically, reinforcing ethnic group identification and participation in cultural activities may serve as an effective drug prevention strategy for African American women. It is important for teachers and counselors to encourage African American women and girls to have pride in their ethnic identity and for parents to involve their young daughters in organizations that focus on African American customs and traditions. These practices may help to build a strong sense of belonging and social integration, enhancing their ability to cope proactively with the stress of racism. Indeed, culturally relevant practices may serve as primary interventions and hold the potential to reduce the effects of racism experienced within the broader and more hostile social environment. For adult African American women who have already established a history of substance abuse, culturally relevant interventions that incorporate aspects of Afro-centricity, as described by Roberts, Jackson, & Carlton-Laney (2000), have the potential to significantly impact treatment success.

Acknowledgments

This research was funded by a grant from the National Institute on Drug Abuse (R01-DA022967, PI Oser). First authorship is shared between Danelle Stevens-Watkins and Brea Perry.

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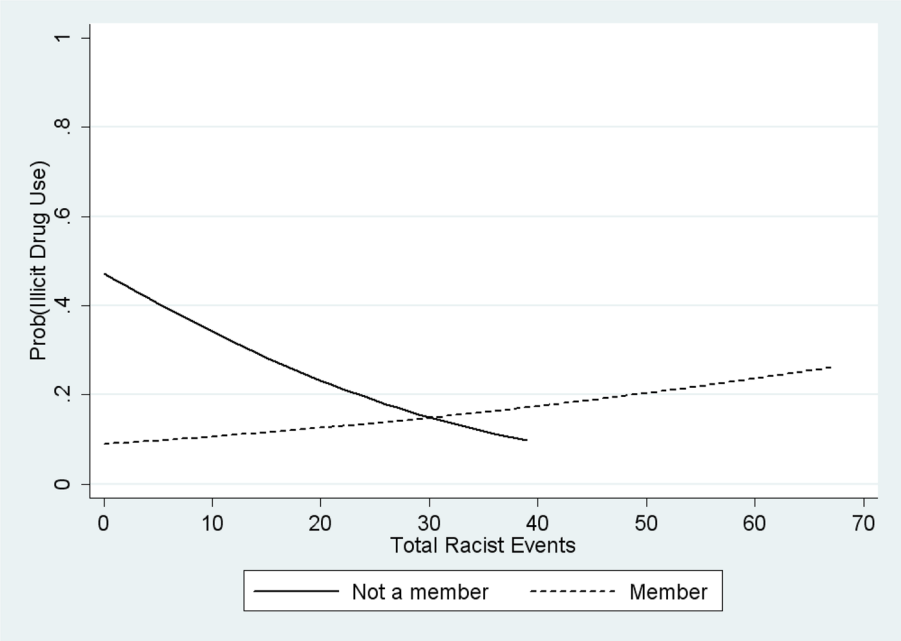

Figure 1.
Predicted probability of illicit drug use as a function of number of racist life events by membership in a religious community

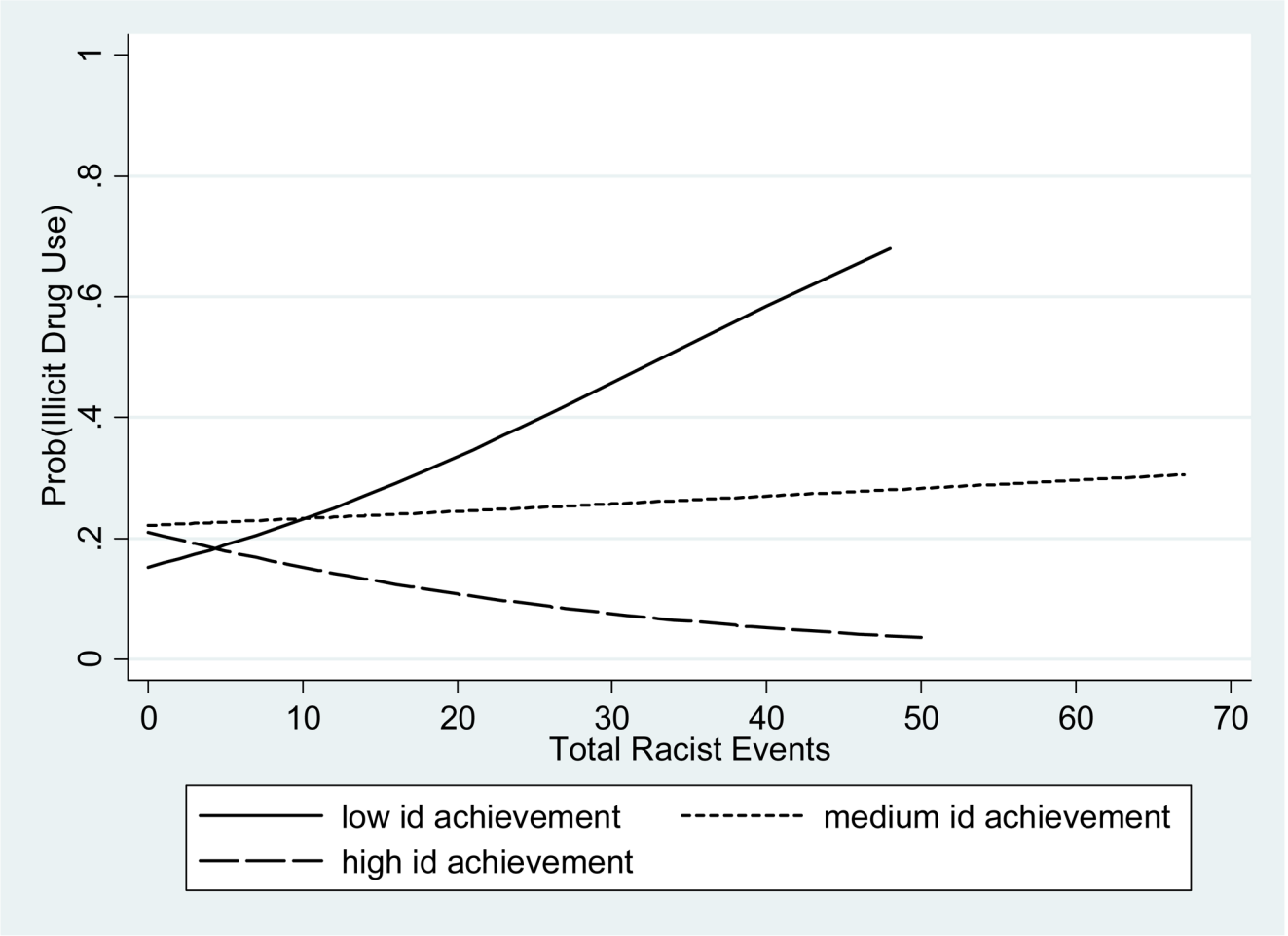

Figure 2.
Predicted probability of illicit drug use as a function of number of racist life events by level of ethnic identity achievement

Table 1

Descriptive sample characteristics (B-WISE Community Sample, N=204)

	%	Mean	SD	Range
Racist life events		15.04	12.31	0.00–67.00
Socio-demographics				
Age (years)		36.39	14.19	18.00–68.00
Education (years)		12.75	2.26	3.00–20.00
Household income (thousands)		20.85	21.24	2.50–87.50
Work status				
Full-time	30			
Part-time	26			
Unemployed	44			
Psychosocial resources				
Existential wellbeing		55.56	9.45	22.00–72.00
Self-esteem		32.46	5.22	21.00–40.00
Active coping		50.84	5.89	33.00–60.00
Social safety net				
Marital status				
Currently married	13			
Div/wid/sep	24			
Never married	63			
Religious community				
Member	68			
Not a member	32			
Perceived social support – family		5.39	1.62	1.00–7.00
Perceived social support – friends		5.40	1.48	1.00–7.00
Culture and ethnicity				
Ethnic affirmation		3.43	0.54	1.00–4.00
Ethnic identity achievement		3.12	0.49	1.20–4.00
Cultural practices				
Low to moderate engagement	56			
Strong engagement	44			
Ethnic community				
Member	54			
Not a member	46			
Illicit drug use (not including marijuana)				
Yes	21			
No	79			

Table 2

Zero-order correlations among continuous independent variables.

	1	2	3	4	5	6	7	8	9	10
1) Racist life events										
2)Age	0.21**									
3)Education	0.08	0.08								
4)Household inc.	−0.07	0.15*	0.30***							
5)Well-being	−0.15*	−0.06	0.22**	0.22**						
6)Self-esteem	−0.11	−0.14*	0.29***	0.19**	0.72***					
7)Active coping	−0.01	−0.14	0.01	0.11	0.46***	0.45***				
8)Support – family	−0.08	−0.02	0.19**	0.18**	0.37***	0.32***	0.20**			
9)Support – friends	−0.15*	−0.01	0.17*	0.21**	0.44***	0.35***	0.15*	0.50***		
10) Ethnic affirmation	0.01	0.05	0.20**	0.20**	0.18**	0.19**	0.08	0.13	0.04	
11) Ethnic ID achiev.	0.16**	0.15*	0.19**	0.17*	0.13	0.11	0.14	0.04	0.08	0.69***

* = p <.05;

** = p <.01;

*** = p <.001 (two-tailed tests)

Table 3

Logistic regression of illicit drug use on racist life events and socio-demographics

	Model 1	Model 2	Model 3
Racist life events (RLE)	1.01 (0.01)		1.00 (0.01)
Socio-demographics			
Age (ten years)		1.21 (0.16)	1.20 (0.16)
Education (years)		0.89 (0.08)	0.89 (0.08)
Household income ($K)		0.98 (0.01)	0.98 (0.01)
Work status[1]			
Full-time		0.28 (0.15)**	0.28 (0.15)**
Part-time		0.75 (0.33)	0.74 (0.33)
Pseudo R^2	0.001	0.10	0.10
BIC	217.83	219.64	224.95
LR X^2	0.26	19.72***	19.73***

[1] Omitted category is “unemployed”

[2] Omitted category is “18–25”

* = p <.05;

** = p <.01;

*** = p <.001 (two-tailed tests)

Note: Odds ratios are presented, standard errors in parentheses

Table 4

Logistic regression of illicit drug use on racist life events, socio-demographics, psychosocial resources and social safety net variables

	Model 1	Model 2	Model 3
Racist life events (RLE)	0.99 (0.02)	1.00 (0.02)	0.95 (0.03)
Socio-demographics			
Age (ten years)	1.13 (0.16)	1.24 (0.21)	1.28 (0.18)
Education (years)	0.96 (0.10)	0.90 (0.09)	0.91 (0.09)
Household income ($K)	0.99 (0.01)	0.98 (0.01)	0.97 (0.01)
Work status[1]			
Full-time	0.27 (0.16)*	0.31 (0.18)*	0.31 (0.17)*
Part-time	0.70 (0.33)	0.78 (0.36)	0.78 (0.36)
Psychosocial resources			
Existential wellbeing	0.93 (0.03)*		
Self-esteem	1.00 (0.06)		
Active coping	0.99 (0.04)		
Social safety net			
Marital status[2]			
Div/wid/sep		2.48 (1.93)	
Never married		2.05 (1.52)	
Religious community[3]		0.35 (0.13)**	0.12 (0.08)***
Perceived social support – family		0.95 (0.12)	
Perceived social support – friends		0.91 (0.13)	
Interaction terms			
Religious community * RLE			1.07 (0.04)*
Pseudo R^2	0.16	0.15	0.15
BIC	227.26	240.73	223.34
LR X^2	33.37***	30.53***	31.97***

[1] Omitted category is “unemployed”

[2] Omitted category is “currently married”

[3] Omitted category is “not a member of a community”

* = p <.05;

** = p <.01;

*** = p <.001 (two-tailed tests)

Note: Odds ratios are presented, standard errors in parentheses

Table 5

Logistic regression of illicit drug use on racist life events, socio-demographics, and culture and ethnicity variables

	Model 1	Model 2	Model 3	Model 4
Racist life events (RLE)	1.00 (0.01)	1.04 (0.02)	1.05 (0.03)	1.02 (0.02)
Socio-demographics				
Age (ten years)	1.25 (0.17)	1.30 (0.18)	1.26 (0.17)	1.31 (0.18)
Education (years)	0.92 (0.09)	0.85 (0.08)	0.90 (0.09)	0.89 (0.08)
Household income ($K)	0.98 (0.01)	0.98 (0.01)	0.98 (0.01)	0.98 (0.01)
Work status[1]				
Full-time	0.28 (0.16)*	0.31 (0.17)*	0.27 (0.15)*	0.28 (0.16)*
Part-time	0.76 (0.35)	0.80 (0.37)	0.77 (0.36)	0.82 (0.37)
Culture and ethnicity				
Ethnic affirmation	1.20 (0.65)			
Ethnic identity achievement	0.73 (0.43)			
Ethnic community member	0.50 (0.21)			
Strong cultural practices[2]	0.85 (0.39)			2.21 (1.32)
Interaction terms				
Categorical ethnic affirm[3]				
Medium		2.20 (1.61)		
High		1.38 (1.00)		
Ethnic affirmation * RLE				
Medium * RLE		0.92 (0.04)*		
High * RLE		0.96 (0.03)		
Categorical ethnic identity[2]				
Medium			1.97 (1.34)	
High			1.82 (1.48)	
Ethnic identity * RLE				
Medium * RLE			0.95 (0.03)	
High * RLE			0.91 (0.04)*	
Cultural practices * RLE				0.93 (0.03)*
Pseudo R^2	0.12	0.12	0.14	0.12
BIC	241.18	240.93	237.81	229.70
LR X^2	24.77**	25.02**	28.13**	25.62**

[1] Omitted category is “unemployed”

[2] Omitted category is “low to moderate engagement in cultural practices”

[3] Distribution divided into thirds; Omitted category is “low”

* = p <.05;

** = p <.01;

*** = p <.001 (two-tailed tests)

Note: Odds ratios are presented, standard errors in parentheses