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ETHNIC IDENTITY AND SUBSTANCE USE AMONG AFRICAN AMERICAN WOMEN: THE MEDIATING INFLUENCE OF GENDER ROLES

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Abstract

Ethnic identity is protective against substance use and other problem behaviors; however, some studies have implicated ethnic identity as a contributor to substance use. We hypothesized that the relationship between ethnic identity and substance use would be fully mediated by gender role orientation. Participants included 562 African American women in the south-eastern region of the United States. Participants completed the Multigroup Ethnic Identity Measure (MEIM) and the Personal Attributes Questionnaire and reported past 30-day drug use. We employed structural equation modeling. The composite model displayed acceptable global fit. Ethnic Identity predicted African American females' identification with male gender roles. Identification with male gender roles was positively linked to perceptions of drug risk and past 30-day drug use. Perceptions of drug risk was negatively linked to past 30-day drug use. Identification with masculine gender roles as a significant drug risk factor suggests some implications for prevention programming.

INTRODUCTION

Drug use and abuse continues to be of serious concern in this country and is a major contributor to accidents, crime, disability, and death. African Americans do not consume more drugs than other ethnic groups but face worse health, legal, social, and personal consequences from use (Beatty, Jones, & Doctor, 2005). African American women also face more negative consequences from drug use than women in other ethnic groups. For example, impaired judgment and decisions arising from drug use contribute to the disproportionate higher rates of HIV among African American women (Maisto et al., 2004; Wingood & Diclemente, 1998).

There are ethnic differences in overall drug use prevalence and the prevalence of specific drugs. For example, Whites have a higher prevalence of alcohol consumption and binge drinking than African Americans, Latinos, and Asians. African Americans have a higher prevalence of marijuana use than White, Latinos, and Asians. Drug use behaviors including drug use selection is also influenced by socioeconomic, geographical, family, community,

and cultural factors (Brook, Brook, Rats, Arencibia-Mireles, Finch, 2009; Corneille & Belgrave, 2007; Lambert, Brown, Phillips, & Ialongo, 2004). In this study, we sought to understand the conditions under which ethnic identity is linked to drug use for African American women. We discuss ethnic identity next, followed by a discussion of gender role beliefs, which were tested as a mediator of ethnic identity and drug use.

ETHNIC IDENTITY

Ethnic identity is the awareness and knowledge of an individual's ethnic membership that may be combined with shared values and attitudes of other members of one's ethnic group (Phinney & Chavira, 1992). In general, research suggests that ethnic identity plays a role in promoting healthy practices while protecting against risky health behaviors among ethnic minority populations. Studies show that ethnic identity can protect ethnic minority individuals from tobacco, alcohol, and marijuana use (Belgrave et al., 1997; Brook, Duan Brook, & Ning, 2007; Love, Yin, Codina, & Zapata, 2006). However, the findings from these studies are not unequivocal, and some studies have suggested that ethnic identity is linked to negative outcomes with higher levels of ethnic identity associated with higher levels of drug use (Zamboanga, Raffaelli, & Horton, 2006; Zamboanga, Schwartz, Jarvis, & Van Tyne, 2009). One study by Marsiglia, Kulis, Hecht, and Sills (2004) found that a strong sense of ethnic identity predicted lower drug use for White respondents but higher drug use for Mexican American, American Indian, and African American respondents. Espinosa-Hernandez and Lefkowitz (2009) also found that African American men with high levels of ethnic identity consumed more alcohol before or during sexual intercourse in comparison to men with low levels of ethnic identity. This research suggests that at least in some cases, ethnic identity is associated with increased risky behaviors. One explanation for the positive link between ethnic identity and drug use is that ethnic minority individuals may be exposed to stereotypes about their own ethnic groups and in turn, act out on these stereotypes (Marsiglia, Kulis, & Hecht, 2001; Stephens & Few, 2007). This explanation assumes that individuals value risky behaviors such as drug use and internalize them as part of their ethnic identification; we do not believe that to be the case. We believe that the relationship between ethnic identity and drug use is better understood within a gender role framework.

GENDER ROLE BELIEFS

It is important to recognize that the constructs of gender, gender identity, and gender roles have evolved much in the past few decades. Gender is distinct from sex as sex is biologically determined, while gender is socially constructed and changes over time (Lipman-Blumen & Tickamyer, 1975). The transition to the preference of the term *gender* instead of *sex* freed women from limitations associated with physical traits (Bernard, 1971). Still, not all women are oppressed in the same ways and gender, race, and class intersect to produce different experiences for women, even creating socioeconomic subdivisions within women (Andersen & Collins, 2009). For instance, Bell Hooks (1981) asserted that sexism operates independently of and simultaneously with racism to oppress African American women.

Gender roles are shared beliefs about individuals on the basis of their sex (Eagly, 1987). These beliefs can be both descriptive and prescriptive as they dictate what men and women

should do and what they commonly do. Traditional measures of gender roles and gender identity categorize individuals into “masculine,” “feminine,” or “androgynous” based on which psychological traits they endorse (Littlefield, 2003). Measures of gender role orientation have been developed with neglect to ethnic minority populations (Bem, 1974; Spence, Helmreich, & Stapp, 1974). This makes gender role measures difficult to generalize to African American female populations, especially given that research has suggested that African American women endorse gender roles that differ from traditional conceptualizations (Collins, 2004; Zinn & Dill, 1996). For example, African American women are more likely to ascribe to traditionally masculine traits of assertiveness, competitiveness, independence, and self-confidence compared to White women (Harris, 1994; Harris, 1996; Lewis, 1975). The literature also suggests that African Americans do not engage in differential sex-role stereotyping (assigning specific traits and attributes to a gender) (Dade & Sloan, 2000; Harris, 1994), or if they do, they do it much less than Whites (Durik, Hyde, Marks, Roy, Anaya, & Schultz, 2006)

The reasons for these cultural differences in conceptualizations of gender roles may have historical and socio-political roots: gendered divisions of labor are experienced differently for African Americans than Whites. Gender role beliefs of African American women are based, in part, on historical experiences of enslavement oppression, and discrimination as these “masculine” traits may have contributed to the success of African American women at work or at home (Ashcraft & Belgrave, 2005). In contrast, White women have had a history of lower participation in the general work force, and consequentially, higher economic dependency on men relative to African American women (Sorenson & McLanahan, 1987).

Collins (1998) focusing on the intersection of race, culture, and class argued that it is impossible to disentangle one from the rest as these constructs do not exist in separate vacuums. For example, she argued that capitalist development may have influenced household structures in African American households by giving rise to female-headed households. Currently, a greater percentage of African American households are likely to be single female-headed (51%) in comparison to White households (16%; U.S. Census Bureau, 2006). All of these factors may engender divergent normative gender roles for African American women at the workplace and at home. West and Zimmerman (1987) discussed the concept of “doing gender,” and argued that gender is not something an individual possesses, but rather “does” in interaction with others. Consequently, in every interaction an individual is accepting or rejecting gendered norms. Supporting research has found that women report acting in more stereotypically masculine ways in the employment context compared to the home context (Smith, Noll, & Bryant, 1999).

By necessity, African American women’s labor (in historical and modern context) has been imperative for the African American family’s survival. As a result, the conceptualization of womanhood for African American women goes beyond the scope of traditional feminine values to also include hard work perseverance, and self-reliance (Collins, 2004). In addition, female-headed households are matriarchal in nature, and the role of female leadership is unusual and perceived, at times, as problematic from an outside vantage point (Collins, 1998).

DOES HIGH ETHNIC IDENTITY INFLUENCE GENDER ROLE ORIENTATION AMONG AFRICAN AMERICANS?

How might high levels of ethnic identity exaggerate divergent beliefs about gender roles for African American women? Franklin (1984) posited that for African American males, certain masculine behaviors may be in response to an oppressive socio-political environment. These responses include behaviors that Franklin calls “compulsory masculinity,” “exaggerated masculinity,” and “cool pose.” Abreu and colleagues (2000) found that for African American males, ethnic identity strongly predicted the endorsement of masculine gender roles. These studies suggest that masculine-typed roles may be used as a vehicle of status and respect and the projection of a tough image for African American men who may experience denigration and prejudice in other domains.

The same processes may also be true for African American females. One study examined the interplay among racial identity, gender role orientation, and self’ esteem, and the results indicated that girls with either an androgynous or masculine gender role orientation had higher levels of self-esteem in comparison to girls that did not. More importantly, androgyny and ethnic identity were positively related (Buckley & Carter, 2005). Research often shows that ethnic identity leads to positive health outcomes, but is there a mediating factor that can explain why ethnic identity is also linked to increased drug use?

THE ROLE OF GENDER ROLE ORIENTATION AND DRUG USE BEHAVIORS

In gender-themed discussions of alcohol and other drug use, the focus is often limited on differences between male or female populations in substance use behaviors (Room, 1996). In general, males typically engage in higher rates of drug use in comparison to women; these differences are found for tobacco, alcohol, and marijuana use (Substance Abuse and Mental Health Services Administration [SAMHSA], 2011). However, we believe these differences should not simply be attributed to gender. There is some initial evidence that suggests that specific gender role orientations may be linked to higher levels of drug use. Kulis, Mafsiglia, and Hurdle (2003) found that while gender was a weak predictor of drug use, gender identity was a better predictor. The authors found that masculinity predicted increased alcohol, cigarette, and marijuana use for both Mexican American male and female students. In understanding the positive association between masculine gender roles and drug use among minority women, a model by Romo, Marcos, Rodriguez, Cabrera, & Beman (2009) suggests that women may use recreational drugs as a form of empowerment to take on new situations concerning their sexuality; in a way, drug use is a strategy to identify with the empowering values and roles traditionally associated with men. However, there is little research that examines the role of gender role orientation and drug use among African American women, so it is difficult to ascertain whether this model is applicable for this group.

THE ROLE OF PERCEIVED DRUG RISK AND DRUG USE BEHAVIORS

There is Some evidence for the relationship between cognitive factors (such as perception of drug use) and actual use (Acock & DeFleur, 1972; Andrews & Kandel, 1979; Kahle & Berman, 1979). A person’s evaluation of danger and risk can ultimately impact behavior. For example, Plancherel and colleagues (2005) examined perceptions of harm of substance use

and compared beliefs among current users and occasional or never users of marijuana. The study's findings indicated that current regular marijuana users perceived less risk or danger from marijuana use compared to occasional or never and past users. Other studies that have examined ethnic minority's perceptions of risks associated with different tobacco products may help to explain ethnic preferences in tobacco products (Richter, Pederson, & O'Hegarty, 2006). In the Richter and colleagues study, 24% of the Hispanic college smokers preferred mentholated cigarettes and were twice as likely as non-Hispanic White participants to rate menthol cigarettes as safer than light cigarettes. We believe that increased perceptions of drug risk will be associated with lower levels of substance use among our sample.

In addition, it is possible that the relationship between gender role orientation and drug use behavior is mediated by perceived drug risk. Gender role stereotypes suggest that men, equipped with strong and assertive attributes, should indicate a greater willingness to behave boldly when placed in potentially risky and dangerous situations. Gender role stereotypes of women (as needing more protection) are believed to lead to heightened perceptions of risk, paving way for more caution. Indeed, research by Harris and Miller (2000) confirmed that women believed themselves to be at greater risk in potentially dangerous situations. The authors attribute the heightened perceptions of risk to socialization and stereotypical gender roles. In turn, we believe that internalized feminine gender roles should lead to increased perceptions of drug risk while masculine gender roles should lead to decreased perceptions of drug risk in the current study.

The purpose of the current study was to test a model that could shed light on why sometimes ethnic identity leads to increased drug use among African American women. Though not a variable of central focus, we added drug risk perception in the model as research shows that perceived risk also influences drug behavior (SAMHSA, 2006). If masculine and feminine gender role orientation can impact drug use, perhaps a small portion of the variance can also be explained through the mediating role of perceived drug risk. However, drug risk was proposed to serve as a partial mediator as we expected gender role orientation to directly impact drug use among our sample. We hypothesized:

1. Higher levels of ethnic identity will lead to higher levels of traditionally masculine gender role orientation and lower levels of traditionally feminine gender roles orientation;
2. Higher levels of female gender role orientation will lead to a higher perception of drug risk while higher levels of male gender role orientation will lead to a lower perception of drug risk;
3. Higher levels of perception of drug risk will lead to lower levels of drug use;
4. Higher levels of female gender role orientation will lead to lower levels of past 30-day drug use while higher levels of male gender role orientation will lead to higher levels of past 30-day drug use;
5. Higher levels of a female gender role orientation will lead to increased perceptions of drug risk while higher levels of male gender role orientation will lead to lower perceptions of drug risk; and

6. The impact of ethnic identity on perceptions of drug risk and past 30-day drug use will be fully mediated by gender role orientation, that is, ethnic identity will not directly affect drug use.

METHODS

PARTICIPANTS

Participants included 562 African American women who were recruited from an urban city in the south-eastern region of the U.S. Participants were recruited to participate in an HIV and substance abuse prevention intervention. Participants were recruited from churches, community organizations, and two predominantly African American universities and one predominately White university. Participants completed the measures used in this study prior to participating in the intervention sessions. The current sample includes participants whose ages ranged from 18 to 45 with a mean age of 22.15 ($SD = 6.28$). Most participants (78%) were between the ages of 18 and 23.

Seventy-seven percent of participants were recruited from universities and 23% were recruited, from churches and community organizations. Thirty-nine percent reported their highest level of education as having completed high school/GED or less; 61% reported that they attended “some college” or received a college or graduate degree. With regards to employment status, 54% reported being currently unemployed, 33% reported having part-time employment, and 13% report being employed full-time.

MEASURES

Ethnic identity was assessed using an abbreviated version of Phinney’s (1992) Multigroup Ethnic Identity Measure (MEIM). The 7-item scale taps into an individual’s sense of ethnic identification. Examples of items are “I have a strong sense of belonging into my own ethnic group,” and “I feel a strong attachment towards my own ethnic group.” The items are rated on a 4-point scale (1 = *Strongly Disagree* to 4 = *Strongly Agree*). For the current study, Cronbachs $\alpha = .94$. Refer to the Appendix for all measure items.

Gender role orientation was assessed using the Personal Attributes Questionnaire (PAQ; Spence & Helmreich, 1978), which consists of 24 descriptive statements that assess masculine and feminine personality attributes. The items are rated on a 5-point scale that has an adjective at one end with its presumed opposite at the other end (*Very passive-very active*) or with its divergent adjective at the opposite pole (*Not at all competitive-Very competitive*). Expressive traits (e.g., *being emotional* or *aware of other feelings*) are conceptualized as feminine traits while instrumental traits (e.g., *stands up well under pressure* or *being competitive*) are conceptualized as masculine traits. For the current study, Cronbachs $\alpha = .78$ (feminine attributes) and Cronbachs $\alpha = .69$ (masculine attributes). Refer to the Appendix for all measure items.

Perception of drug risk was measured using an adapted version of the Perceived Drug Risk Scale from the National Survey on Drug Use and Health (SAMHSA, 2006). The scale consists of 8 items that assess the degree of perceived risk associated with certain drug-

related behaviors. An example of an item is “How much do people risk harming themselves when they smoke marijuana once a month?” Participants respond to these items on a 4 point scale (1 = *No Risk* to 4 = *Great Risk*). For the current study, Cronbachs $\alpha = .72$. Refer to the Appendix for all measure items.

Past 30-day drug use was measured using items from the National Survey on Drug Use and Health (SAMHSA, 2006). The scale consisted of 3 items that assessed how often participants had smoked cigarettes, drank alcohol, and smoked marijuana in the past 30 days. An example of an item is “Estimate the number of days you used marijuana or hashish in the last 30 days.” Participants respond to these items on a 7-point scale (1 = 0 days; 2 = 1–2 days, 3 = 3–5 days; 4 = 6–9 days; 5 = 10–19 days; 6 = 20–29 days; 7 = All 30 days). Refer to the Appendix for all measure items.

PROCEDURE

The study was approved by the university’s Institutional Review Board. Participants were recruited for participation via flyers at universities, churches, clinics, and community centers. The Byers invited African American women to participate in a group on healthy relationships and healthy behavior. After participants arrived, facilitators introduced themselves and gave a brief description of the program. Informed consent was obtained, and participant questions were answered. Participants were reminded that participation was voluntary, and confidential. After consent forms were collected, a research assistant administered the pencil-and-paper surveys. Participants were provided with a gift card after completing the survey.

DATA ANALYTIC STRATEGY

Preliminary analyses were conducted to screen data for violations of assumptions. For descriptives of the study variables, refer to Table 1. In order to test the study’s hypotheses, factor analysis and structural equation modeling (SEM) were utilized. Partial aggregation or parceling was used because of disadvantages of total disaggregation, including lower reliability of single items, increased violation of distributional assumptions, increased shared specific variance among items, and a larger covariance matrix that inflates the model chi-square value. (Sass & Smith, 2006). Factor analysis was employed to create three parcels for each of the latent variables (ethnic identity, female gender roles, male gender roles, perception of drug risk, and past 30-day drug use) used in the study. Specifically, item-to-construct balance (or factorial algorithm) was employed for parcel construction following guidelines by Little, Cunningham, Shahar, and Widaman (2002) and Rogers and Schmitt (2004). In this method, all items that measure the latent variable are forced to load onto one factor. Then, the items with the three highest standardized factor loadings serve as the first items in each parcel. Items with the fourth, fifth, and sixth highest loadings are assigned to the parcels in inverted order, and this strategy continues until there are no more remaining parcels. Past 30-day drug use did not employ the use of parcels. Instead, single-item measures each for tobacco, alcohol, and marijuana use served as indicators for the latent variable, Past 30-day Drug Use.

To examine the mediating role of gender roles and perceptions of drug risk in the link between ethnic identity and past 30-day drug use, structural equation modeling (SEM) analysis with latent variables was conducted. First a measurement model was tested (confirmatory factor analysis using SEM), and then the hypothesized structural model was examined. In addition, we compared the hypothesized model to two alternative models: (1) the structural null model that only retains the measurement model; and (2) the saturated model that included the direct effect of ethnic identity on past-30 day drug use. Each comparison was conducted separately, allowing comparisons of nested models using the chi-square difference test. LISREL 8.80 was used to test all models.

The hypotheses are presented schematically in Figure 1. The structural model specified that ethnic identity would lead to lower levels of feminine gender role orientation and higher levels of masculine gender role orientation. It was also hypothesized that increased feminine gender role orientation would predict higher perceptions of drug risk and lower past 30-day drug use while a masculine gender role orientation would predict lower perceptions of drug risk and higher past-30 day drug use. The model also specified a negative relationship between perceptions of drug risk to past 30-day drug use, therefore making perceptions of drug risk a mediator for gender role orientation and past 30-day drug use. It is important to note that we believe that the relationship between ethnic identity and past 30-day drug use would be fully mediated by gender role orientation as we did not believe that ethnic identity directly impacts drug use behaviors.

RESULTS

Overall, the composite model displayed acceptable global fit, $\chi^2 (83, N = 560) = 378.48, p = 0.08$. The Root Mean Square Error of Approximation (RMSEA) was .07, indicating acceptable fit, and RMSEA's 90% confidence interval was .07 to .08. The Comparative Fit Index (CFI) was .91, indicating acceptable fit.

MEASUREMENT MODEL

In examining the measurement model, all indicators loaded significantly on their latent constructs, supporting the measurement model's adequacy. All loadings of manifest indicators on corresponding latent constructs were significant at $\alpha = .05$. See Table 2 and 3. Overall, the squared multiple correlations for y variables and for x variables ranged from .17 to .84. All parameters in the *theta delta* and *theta epsilon* matrix were significant at the .05 level.

STRUCTURAL MODEL

The structural model provides some support for the study's hypotheses. Ethnic identity was positively associated with identification with male gender role beliefs. Identification with male gender role beliefs was positively linked to perceptions of drug risk and past 30-day drug use. Lastly, perceptions of drug risk was negatively linked to past 30-day drug use. See Figure 2 below. The squared multiple correlations for structural equations are presented in smallest to greatest: female gender roles (.00), perceptions of drug risk (.02), past 30-day drug use (.09), and male gender roles (.12).

In examining factor correlations, ethnic identity was not strongly correlated with perceptions of drug risk or with past 30-day drug use. Instead, it has a stronger association with male gender roles, which in turn, have strong associations with perceptions of drug risk and past 30-day drug use, providing evidence for a full mediating effect of male gender roles. This relationship was not observed with female gender role beliefs (See Table 4).

ALTERNATIVE MODELS

The theoretical model was compared to a structural null model using a chi-square difference test. Results showed that the theoretical model provided better model fit from the structural null model: $\chi^2(7) = 85.41$.

In addition, the theoretical model was compared to a saturated structural model that included three additional direct paths: (1) from ethnic identity to perceptions of drug risk; (2) from ethnic identity to past-30 day drug use; and (3) from female gender roles to male gender roles. The theoretical model and the saturated structural model were compared using a chi-square difference test for nested models. Results showed that the direct paths of the saturated model did improve the model fit: $\chi^2(3) = 17.457$. However, the direct paths that linked ethnic identity to perceptions of drug risk and ethnic identity to past 30-day drug use were not significantly different from zero, so the theoretical model was retained and providing support for the full mediation model.

DISCUSSION

The present study sought to understand the relationships between ethnic identity, gender role orientation, and drug use among African American females. We predicted that gender role orientation would fully mediate the relationship between ethnic identity and drug use, such that higher levels of masculine gender role orientation would lead to higher drug use while lower levels of feminine gender role orientation would lead to lower drug use. The results of the study provided support for the mediating role of masculine gender orientation but not for feminine gender role orientation.

The model showed a positive association between ethnic identity and masculine gender role orientation similar to studies by Abreu and colleagues (2000) and Buckley and Carter (2005). The results of the study also showed a positive relationship between a masculine gender role orientation and past 30-day drug use indicating that as African American female participants identified more with a male gender role orientation, they were more likely to engage in past 30-day drug use. It is possible that African American females who identify with traditionally male attributes experience gender role conflict and this distress may lead to higher drug use. However, this explanation is inconsistent with the findings of a study by Korcusa and Thombs (2003). In this study, undergraduate participants completed a measure that assessed perceived gender role conflict; the authors found that perceptions of how much individuals violate gender-appropriate expectations were unrelated to drinking behavior.

The model provided support for the fully mediating role of a masculine gender orientation in the relationship between ethnic identity and drug use as the results of an alternative model indicated that the direct path from masculine gender role orientation to drug use was not

significant. Identification with masculine gender roles as a significant drug risk factor suggests some implications for prevention programming. Programs that promote assertiveness training may need to be tailored within a framework that will help African American females use these skills in making decisions to refuse drugs rather than to use drugs as a source of empowerment. These programs might find ways to incorporate assertiveness training with exercises that will promote drug refusal efficacy along with independence and empowerment.

The study's results indicate that increasing levels of perceptions of drug risk predicted lower past 30-day drug use among the sample. These results support the findings from previous literature, findings that suggest that a heightened sense of risk can prevent individuals from engaging in substance use (Plancherel et al., 2005; Richter, Pederson, & O'Hegarty, 2006). However, we did not find support for the mediating role of perception of drug risk for the relationship between gender role orientation and past 30-day drug use. It is interesting that the endorsement of masculine traits was positively linked to higher perceptions of drug risk while endorsement of feminine traits was not. Male gender role stereotypes shape injunctive norms that influence men to behave boldly when placed in potentially risky and dangerous situations while influencing women to behave more cautiously (Harris & Miller, 2000). We predicted that the internalization of masculine gender role orientations would lead women to view substance use as less risky, though the exact opposite was found. The results also indicate that feminine gender role orientation was not necessarily protective against drug-related outcomes. This finding suggests that normative expectations of gender roles may not cleanly align with African American populations, and more research is needed to define what is "normative" for ethnic minority samples.

The results of this study also showed that having a masculine gender role orientation was positively linked to perception of drug risk. This may appear counter-intuitive, but research has shown that men, on the whole, tend to assess risk at lower levels than women (Finucane, Slovic, Mertz, Flynn, Satterfield, 2000), and our sample consisted solely of women. Although masculine gender orientation was linked to higher perceptions of drug risk, higher perception of drug risk was negatively linked to past 30-day drug use. While puzzling at first, research has shown that attitudes, particularly towards drug use, are often poor predictors of actual behavior (Vener, Kmpka, Climo, 1982). As Ajzen and Fishbein's Theory of Planned Behavior (TPB, 1980; Ajzen, 1991) proposed, intention to engage in a behavior is a much stronger predictor of behavior. If the model had included a mediator variable that measured intention, a clearer picture between attitudes and drug behavior might have emerged.

This study has some limitations concerning the measures and the sample. The items used to measure gender roles came from a traditional gender role measure, the Personal Attributes Questionnaire (PAQ; Spence, Helmreich, & Stapp, 1974). As discussed, these conceptualizations may not serve as the best indicators for gender roles among African Americans. Future studies should devise better measures of gender roles that are specific for ethnic minority populations as research indicates that African American women do not adhere to normative gender role beliefs.

The theoretical model's lack of control variables also serves as a limitation. Fletcher, Selgrade, & Germano (2006) examined the explicit use of control variables in empirical articles that relied on either SEM or hierarchical regression and found that articles with regression techniques used controlling variables almost twice as often as those relying on SEM. The authors propose two reasons as to why few researchers use controlling variables in SEM techniques including (1) theoretical reasons such as the model to be tested does not require control variables, or (2) methodological reasons such as the difficulty in modeling variables that contribute little to the overall model. The latter reason is largely due to the use of latent variables in a model. For the current study, we have potential controlling items for participants' age, educational attainment, and monthly income. However, these were all single item measures, and CFA techniques would have produced a weak latent variable using the mentioned items as indicators. Future studies should incorporate multiple item measures of demographic traits to allow for the creation of latent variables as covariates in SEM techniques.

Another limitation is that the majority of participants were recruited from colleges and universities, and the findings may be less applicable to those outside of a college setting. Future studies should investigate whether norms endorsed by African Americans in college differ from an older and more diverse African American female population. Lastly, the sample population was recruited from a southeastern region in the U.S., and regional differences may influence the desirability of gender roles. For example, Konrad and Harris (2002) found that African American participants from the urban Northeast were more traditional in their views of the desirability of feminine attributes for women than African American participants in the south. The data used in this paper were collected in the southeastern part of the U.S. and participants' endorsement of gender roles and identities may differ from other African American females who reside in other regions.

With these limitations noted, this research contributes to the literature by shedding light on the relationship between ethnic identity, gender role orientation, and drug use among African American females. The study provided support to the claims that ethnic identity does not directly impact and foster increased drug use, but that there are underlying processes involved with the construction of gendered values and traits that may be acting on drug use behaviors. Overall, this research is important as it offers an alternative explanation to the relationship between ethnic identity and drug use. Taken together, it illustrates that the socialized construct of gender role orientation is often imbued with influences of race and culture, and these variables can not be studied in isolation.

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APPENDIX (SPENCE & HELMREICH, 1978)

Personal Attributes Questionnaire (PAQ; Spence & Helmreich, 1978)

I.	Not at all aggressive	A.....B.....C.....D.....E	Very aggressive
2.	Not at all independent	A.....B.....C.....D.....E	Very independent
3.	Not at all emotional	A.....B.....C.....D.....E	Very emotional
4.	Very submissive	A.....B.....C.....D.....E	Very dominant
5.	Not at all excitable in a major crisis*	A.....B.....C.....D.....E	Very excitable in a major crisis
6.	Very passive	A.....B.....C.....D.....E	Very active
7.	Not at all able to devote self completely to others	A.....B.....C.....D.....E	Able to devote self completely to others
8.	Very rough	A.....B.....C.....D.....E	Very gentle
9.	Not at all helpful to others	A.....B.....C.....D.....E	Very helpful to others
10.	Not at all competitive	A.....B.....C.....D.....E	Very competitive
II.	Very home oriented	A.....B.....C.....D.....E	Very worldly
12.	Not at all kind	A.....B.....C.....D.....E	Very kind
13.	Indifferent to others= approval*	A.....B.....C.....D.....E	Highly needful of others' approval
14.	Feelings not easily hurt*	A.....B.....C.....D.....E	Feelings easily hurt
15.	Not at all aware of feelings of others	A.....B.....C.....D.....E	Very aware of feelings of others
16.	Can make decisions easily*	A.....B.....C.....D.....E	Has difficulty making decisions
17.	Gives up very easily	A.....B.....C.....D.....E	Never gives up easily
18.	Never cries*	A.....B.....C.....D.....E	Cries very easily
19.	Not at all self-confident	A.....B.....C.....D.....E	Very self-confident
20.	Feels very inferior	A.....B.....C.....D.....E	Feels very superior
21.	Not at all understanding of others	A.....B.....C.....D.....E	Very understanding of others
22.	Very cold in relations with others	A.....B.....C.....D.....E	Very warm in relations with others
23.	Very little need for security*	A.....B.....C.....D.....E	Very strong need for security
24.	Goes to pieces under pressure	A.....B.....C.....D.....E	Stands up well under pressure

Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992)

1. I have a clear sense of my ethnic background and what it means for me.
2. I am happy that I am a member of the group I belong to.
3. I have a strong sense of belonging to my own ethnic group.
4. I understand pretty well what my ethnic group membership means to me.
5. I have a lot of pride in my ethnic group
6. I feel a strong attachment towards my own ethnic group.
7. I feel good about my cultural or ethnic background.

Drug Use Items from the National Survey on Drug Use and Health (SAMHSA, 2006)

1. Estimate of the number of days you smoked all or part of a cigarette in last 30 days.
2. Estimate of the number of days you drank alcohol in last 30 days.
3. Estimate of the number of days you used marijuana or hashish in last 30 days.

Perceived Drug Risk Scale from the National Survey on Drug Use and Health (SAMHSA, 2006)

1. How much do people risk harming themselves when they smoke one or more packs of cigarettes per day?
2. How much do people risk harming themselves when they smoke marijuana once a month?
- 3a. How much do people risk harming themselves when they have 4 or 5 drinks of alcohol nearly every day?
- 3b. How much do people risk harming themselves when they have 5 or more drinks of alcohol once or twice a week?
4. How do you feel about adults smoking one or more packs of cigarettes per day?
5. How do you feel about adults trying marijuana or hashish once or twice?
6. How do you feel about adults having one or two drinks of alcohol nearly every day?
7. How do you feel about adults driving a car after having one or two drinks of alcohol?

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Figure 1.
STRUCTURAL MOOEL OF THE RELATIONSHIP BETWEEN ETHNIC IDENTITY AND DRUG OUTCOMES

FIGURE 2.
STANDARDIZED PATH COEFFICIENTS AMONG LATENT VARIABLES

Table 1.

DESCRIPTIVES ON VARIABLES OF INTEREST

Variable	mean	s.d.	min	max
Ethnic Identity	24.70	3.92	7.00	28.00
PAQ Masculine	29.23	3.80	18.00	37.00
PAQ Feminine	31.39	4.42	11.00	40.00
Perceptions of Drug Risk	13.82	2.08	4.00	16.00

Table 2.

STANDARDIZED LAMBDA-Y FACTOR LOADINGS

	Endogenous Latent Variables			
	Female Gender Roles	Male Gender Roles	Drug Risk	Drug use
Female1	0.82	--	--	--
Female2	0.79	--	--	--
Female3	0.67	--	--	--
Male1	--	0.68	--	--
Male2	--	0.69	--	--
Male3	--	0.63	--	--
DrugRisk1	--	--	0.61	--
DrugRisk2	--	--	0.61	--
DrugRisk3	--	--	0.89	--
DrugUse1	--	--	--	0.51
DrugUse2	--	--	--	0.42
DrugUse3	--	--	--	0.78

Table 3.

STANDARDIZED LAMBDA-X FACTOR LOADINGS

Exogenous Latent Variable	
Ethnic Identity	
Ethnic1	0.91
Ethnic2	0.86
Ethnic3	0.91

Table 4.

SUMMARY TABLE OF LATENT VARIABLE RESIDUALS AND PATH COEFFICIENTS

Causal Variable	η_1			η_2			η_3			η_4		
	Factor Correlation	Residual Factor Correlation	Standardized Path Correlation	Factor Correlation	Residual Factor Correlation	Standardized Path Correlation	Factor Correlation	Residual Factor Correlation	Standardized Path Correlation	Factor Correlation	Residual Factor Correlation	Standardized Path Correlation
ξ_1	0.05	-	0.05	0.35	-	0.34	0.05	-	0.34	-0.02	-0.08	-
η_1	-	-	-	0.15	0.13	-	0.11	0.02	0.1	0.07	0.02	0.08
η_2	-	-	-	-	-	-	0.13	0.01	0.11	0.16	0.01	0.18
η_3	-	-	-	-	-	-	-	-	-	-0.23	0.00	-0.26
η_4	-	-	-	-	-	-	-	-	-	-	-	-