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The Influence of Community Disadvantage and Masculinity Ideology on Number of Sexual Partners: A Prospective Analysis of Young Adult, Rural Black Men

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Abstract

Young, rural Black men are disproportionately affected by sexually transmitted infections, a consequence, in part, of multiple sexual partnerships. We conducted a prospective study that examined the influence of masculinity ideology on changes in numbers of sexual partners in this population. We focused on a set of high-risk attitudes termed “reputational masculinity.” Community disadvantage during young adulthood was examined as a risk factor for reputational masculinity ideology, and vocational commitment was examined as a potential protective factor. The sample included 505 African American men ages 19–22 from high-poverty rural communities. Men reported their numbers of sexual partners during the past 3 months, masculinity ideology, community disadvantage, and vocational commitment. Follow-up data were collected 18 months after the baseline assessment. Negative binomial modeling was used to test study hypotheses. Results indicated that community disadvantage was associated with increases in reputational masculinity during early adulthood, which in turn were linked to increases in numbers of sexual partners. Vocational commitment interacted with reputational masculinity to forecast numbers of sexual partners, attenuating the influence of reputational masculinity. Reputational masculinity and promotion of engagement with the workplace may be important targets for interventions designed to reduce sexual risk behavior.

Keywords

African Americans; males; sexual partners; masculinity

Sexually transmitted infections (STIs) disproportionately affect young adult Black men (Centers for Disease Control and Prevention, 2014). Rural Black men and their partners are particularly susceptible to outbreaks given densely interconnected social networks and a restricted pool of dating partners (Adimora, Schoenbach, & Doherty, 2006; Chesson, Owusu-Edusei, Kent, & Aral, 2011). When condom use is inconsistent and men engage in multiple sexual partnerships, sexual pathogens may spread particularly rapidly in rural areas. Data reveal that multiple sexual partnerships are elevated among young Black men in general (Adimora, Schoenbach, & Doherty, 2007), and among rural Black men in particular (Kogan, Cho, Barnum, & Brown, 2015); in a context of densely interconnected social networks, multiple partnerships contribute to heightened rates of STIs (Laumann & Youm, 1999).

These data underscore the need to understand the contextual and psychosocial processes that forecast involvement with multiple sexual partners among young Black men, particularly those from resource-poor rural environments. A factor often cited in the health promotion literature (Dworkin, 2015) is *masculinity ideology*; men's perceptions of and adherence to conventional masculinity norms (Evans, Frank, Oliffe, & Gregory, 2011). Masculinity ideologies that celebrate sexual conquest and the objectification of women have been hypothesized to influence proximally men's risky sexual behavior in general, and that of low socioeconomic status (SES) Black men in particular (Bowleg, 2004). Empirical investigations of the influence of Black men's masculinity ideology on multiple sexual partnerships, however, are surprisingly limited; the majority of studies use cross-sectional and qualitative methods (Bowleg, 2004; Corneille, Tademy, Reid, Belgrave, & Nasim, 2008; Senn, Scott-Sheldon, Seward, Wright, & Carey, 2011). We thus investigated the influence of community disadvantage and men's masculinity ideology on increases during early adulthood in men's numbers of sexual partners in the past 3 months. Importantly, we investigated the influence of a malleable protective process, vocational commitment, which we hypothesized would reduce (a) the influence of contextual disadvantage on masculinity ideology and (b) the influence of masculinity ideology on men's numbers of sexual partners.

Our conceptualization of masculinity ideology was informed by Whitehead's (1997) anthropological research with Black men in the US and the West Indies. Whitehead found that these men adopted different forms of masculine attributes to maintain and express masculine self-esteem. *Reputation-based* attributes included sexual prowess, masculine "gamesmanship" skills (e.g., toughness and ability to seduce women), fathering numerous children, and "street smarts." In contrast, masculine *respectability* attributes include marriage, economic provision for one's family, and satisfactory possessions and accomplishments such as a home, higher education, and economic independence. When men from economically disadvantaged backgrounds experience barriers to respect-based pathways to masculinity, they become more likely to identify with and express reputation-based attributes to achieve a sense of masculine self-esteem (Roy & Dyson, 2010;

Whitehead, 1997). Masculinity attitudes characterized by endorsement of reputation-based assets, hereafter termed *reputational masculinity*, are hypothesized to place men at risk for multiple sexual partnerships.

We hypothesized that *community disadvantage* would be associated with reputational masculinity. Whitehead (1997) proposed that reputational masculinity would predominate among young men when inadequate resources are available to allow them to express their masculinity through more conventional means, such as success in education or employment. Several lines of research have implicated community disadvantage in the formation of Black men's identities and their means of expressing masculine self-esteem. Anderson's (1999) ethnographic research with urban Black men suggested that the stressors of living in disorganized and often chaotic environments fostered perceptions of interpersonal relationships as dangerous and beliefs that one must present a tough, hypermasculine image lest they be disrespected. Barr and colleagues (2013) have linked internalization of street code values to negative consequences for romantic relationships. Majors and Billson (1993) discussed similar findings in describing "cool pose," a hypermasculine demonstration that is hypothesized to be a response to a lack of conventional resources for expressing masculine self-esteem. We thus expect community disadvantage to be linked to increases in reputational masculinity.

We further hypothesized that not all men exposed to community disadvantage would develop reputational masculinity ideologies, and that men who did develop such ideologies would vary in the extent to which they act on their attitudes by forming multiple sexual partnerships. We investigated the potential protective influence of *vocational commitment*, one's involvement with and connection to work. Per social bonding theory, in young adulthood commitment to conventional institutions, such as work or family, deter high-risk behavior and facilitate internalization of conventional norms. For young Black men in rural areas, this can be a challenge because poor preparation for work, a lack of available jobs, and discriminatory hiring practices can make finding meaningful work a challenge. For those young men who are able to connect to the workplace and develop strong work commitments, we hypothesize that the potential protective effects will be extensive. Past research links vocational commitment in early adulthood to reduced involvement with risky behavior (Skorikov & Vondracek, 2007; Spruijt, De Goede, Iedema, Maas, & Duindam, 1999). According to Whitehead's research (Aronson, Whitehead, & Baber, 2003; Whitehead, 1997), men who evince a commitment to the workplace should derive masculine self-esteem that can obviate their perceived need for sexual conquests. Men who develop a positive orientation towards work thus may be buffered from the influence of community disadvantage on their endorsement of reputational masculinity.

It is also apparent that, for some young men, adopting a reputational masculinity ideology may be more of a stylistic choice than a behavioral influence. For example, a young man may espouse reputational masculinity attitudes to fit in with his male peers, with no emotional or behavior commitment to act on these attitudes. Giordano and colleagues (Giordano, Longmore, Manning, & Northcutt, 2009) reported that many young Black men self-identified as "playas," men who use gamesmanship skills to encourage women to engage in sexual activity. Men who identified as playas, however, varied considerably in

their actual sexual behavior. It is thus possible that men may identify with reputational masculinity without necessarily acting on it. For men who endorse reputational masculinity, deriving meaning from work may provide a secondary source of self-esteem that obviates the need to act on those attitudes (Aseltine & Gore, 2005; Davis, 2006). We thus hypothesize that identification with reputational masculinity will have little influence on men's numbers of sexual partners when men's vocational commitment is high, whereas the converse will be true for men who are not vocationally engaged.

Methods

Hypotheses were tested using data from the African American Men's Project (AMP). AMP included 505 African American men who were recruited from 11 counties in rural Georgia. These communities were selected on the basis of demographics representative of the southern Coastal Plain, a geographic concentration of rural poverty that coincides with the nation's worst economic and health disparities by race, including STIs (Wimberly & Morris, 1997). Men were ages 19–22 ($M = 20.29$; $SD = 1.10$) at the baseline interview. Participants were recruited using Respondent-Driven Sampling (RDS; Heckathorn, 1997), a referral-based method that avoids the bias inherent in typical chain-referral methods. Community liaisons recruited 45 initial “seed” participants from targeted counties to complete a baseline survey. Some of the seed participants were members of the liaisons' own personal networks; others responded to advertisements and outreach efforts at technical colleges. Participants were then asked to identify three other Black men in their community. Project staff contacted the referred participants, and the referring participant received \$25 per person who completed the survey. After the referred participants completed the survey, they in turn were asked to refer three more men in their networks.

Participants completed the survey in their homes or at a convenient location in the community. The survey was taken on a laptop computer using an audio computer-assisted self-interview. This allowed participants to navigate the survey with the help of voice and video enhancements, eliminating literacy concerns. Approximately 18.30 ($SD = 4.19$) months after the baseline survey, when men's mean age was 21.86 ($SD = 1.24$) a follow-up data collection visit was conducted in the same manner. Of the 505 men who participated at baseline (Time 1, or T1), 83.8% completed the follow-up survey (Time 2, or T2). Retention status was not associated with any study variables. Participants received \$100 for completing the survey at each time point. Participants provided written informed consent; all study protocols were approved by the University Human Subjects Review Board.

Measures

Number of sexual partners in the past 3 months.

At both T1 and T2, participants were provided with the following definition of sex: “Having sex can mean sexual intercourse (your penis in a woman's vagina), oral sex (a blow job), or anal sex (your penis in a woman's butt). Men were subsequently asked, “In the past 3 months, how many different women or girls have you had sex with?” In a later section of the survey, men were asked a similar set of questions regarding male partners. A male partner was defined on the basis of having either penetrative or receptive oral or anal sex.

Reputational masculinity ideology.

At T1 and T2, men completed the *reputation-based* attributes subscale of the Masculine Attributes Questionnaire (Kogan et al., 2015). The directions for the 9-item subscale read, “Being a ‘man’ means different things to different people. Below are some statements that men may believe shows that someone is a ‘real man.’” Each item began with the stem “A real man...” that was followed by a particular behavior. Men responded to the items on a scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Example items included, “can handle himself in a fight,” “has sex with a lot of different women,” and “has children by many different women.” Cronbach’s alpha for the scale was .83 at T1 and .88 at T2.

Vocational commitment.

At T2, men reported their connection to and involvement with the workplace on a 10-item scale drawn from a survey that Aseltine and colleagues (Aseltine & Gore, 2005) developed. Men responded to the items on a scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Example items included, “I am a dependable employee,” “I enjoy working,” and “I am often late to work” (reverse coded). Cronbach’s alpha for the scale was .82. Per past research on scoring protective processes (Arthur et al., 2007), the score was coded dichotomously at the 75th percentile (0 = *low vocational commitment*, 1 = *high vocational commitment*).

Community disadvantage.

At T1, men completed the Community Resources and Problems Scales (Forehand et al., 2000). Participants were asked, “How good is your community in terms of ...”, followed by 12 potential resources (e.g., finding full-time jobs, transportation, agencies to help with money problems). The response set ranged from 0 (*very poor*) to 5 (*very good*). Cronbach’s alpha for the scale was .94. The second part of the measure asked, “How much of a problem does your community have in terms of ...”, followed by 18 items indicative of community problems (e.g., no places to get jobs, no places to get a college education, vacant and run-down buildings, trash and abandoned cars). These were rated on a scale ranging from 1 (*not a problem in my community*) to 3 (*a big problem in my community*). Cronbach’s alpha was .91. Per past research (Forehand et al., 2000), we standardized the scales and developed a community disadvantage measure based on the ratio of problems to resources.

Demographic controls.

Age at baseline was assessed as a continuous variable ranging from 19–22. Employment status was assessed with the item, “Are you currently employed at a job where you receive a paycheck?” The responses were coded as 0 (*not employed*) and 1 (*employed*).

Plan of Analysis

Initial analyses examined the effectiveness of the RDS sampling procedure. Per RDS theory (Heckathorn, 1997), sufficient waves of peer recruitment will overcome bias induced by the nonrandom choice of seeds. This stable sample composition is termed “equilibrium” and should occur within four recruitment waves. This was examined with the RDSAT software tool using the RDSAT software (Volz, Wejnert, Degani, & Heckathorn, 2007). A second

RDS analysis calculates post-stratification population weights for the outcome variable (Heckathorn, Semaan, Broadhead, & Hughes, 2002).

RDS analyses on all study variables indicated that recruited participants were not biased by the initial seeds' characteristics; sample equilibrium on all study variables was achieved within three waves of recruitment. *T*-tests comparing, across all study variables, seed participants and participants who were part of networked referral chains were nonsignificant, supporting the acceptability of testing hypotheses with data combined from seeds and recruited participants. We developed an asymptotically unbiased population weight for the numbers of sexual partners outcome and compared the results using the weight and those without. Results were essentially identical. Unweighted estimates are provided in all results.

Numbers of sexual partners in the sample is an overdispersed count variable; thus, we tested our hypotheses with negative binomial modeling as implemented in Mplus (Muthén & Muthén, 1998–2010). Missing data were managed using full information likelihood estimation. We first tested the hypothesis that community disadvantage would be associated with reputational masculinity, which in turn would be linked to the number of sexual partners reported in the past 3 months. We controlled for baseline levels of reputational masculinity and sexual partnerships. We then developed interaction terms to model the potential moderating influence of vocational commitment on the association between community disadvantage and masculinity ideology and on the link between masculinity ideology and multiple sexual partnerships.

Results

Correlations among study variables and their means and standard deviations are presented in Table 1. At baseline, the median number of sexual partners in the past 3 months was 2; 12.5 % of men reported having 0 partners in the past 3 months, 57.0 % reported having 1 or 2 partners, and 30.5% reported having 3 or more partners. Numbers of sexual partners were significantly higher at T2 than at T1. Most of the men (96.8%) reported that their partners were female. Approximately one-half of the men reported that they were employed.

Figure 1 presents the results of the structural model excluding the vocational commitment moderator. Parameters representing regressions on masculinity are presented as standardized betas. Parameters associated with sexual partnerships are presented as incident rate ratios (IRR). We examined both masculinity and sexual partnerships with base line levels controlled, thus providing an analysis with evidence of change across time. Community disadvantage ($\beta = .09, p < .05$) was associated with increases in reputational masculinity, which, in turn, forecast increases in men's numbers of sexual partners ($IRR = 1.29, p < .01$). The indirect effects of community disadvantage ($b = .02, p < .05, 95\% CI = 0.01, .05$) on numbers of sexual partners via reputational masculinity was significant, suggesting mediation.

We next tested moderational hypotheses. No significant moderating effects of vocational commitment on the paths between community and masculinity emerged. The interaction of vocational commitment and reputational masculinity, however, was associated significantly

with sexual partnerships. This model is presented in Figure 2. We examined the simple slopes for high and low levels of vocational commitment to understand this effect. In the context of high levels of vocational commitment, reputational masculinity was not significantly associated with multiple sexual partnerships ($b = .06, p = .17$). When vocational commitment was low, however, a significant effect emerged ($b = .29, p < .01$).

Discussion

Despite considerable speculation, little empirical research has documented the influence of reputational masculinity ideology on Black men's involvement in multiple sexual partnerships during early adulthood (Dworkin, 2015). The present study used a short-term prospective design to examine the factors associated with increases, over an 18-month period, in young adults' endorsement of reputational masculinity ideology and in numbers of sexual partners in the past 3 months. Our findings suggest that increases in reputational masculinity during early adulthood are associated with increases in reported numbers of sexual partners in the past 3 months. Residence in a disadvantaged community was associated with increases in reputational masculinity during the 18-months between T1 and T2. Indirect effect analysis indicated that changes in masculinity mediated the influence of community disadvantage on increases in numbers of sexual partners. Reputational masculinity effects on sexual partnerships, however, were contingent on men's vocational commitment. For men with high levels of vocational commitment, reputational masculinity was not associated with numbers of sexual partners in the past 3 months.

The finding of a proximal association between changes in reputational masculinity and numbers of sexual partners is consistent with conjectures from the health promotion literature as well as with a number of exploratory qualitative studies suggesting this association (Bowleg, 2004; Corneille et al., 2008; Plummer, 2013; Senn et al., 2011). To our knowledge, however, this is the first prospective, quantitative study examining this link among young adult African American men. Importantly, the prospective design revealed the influence of reputational masculinity despite considerable stability in the numbers of recent sexual partners from baseline to follow-up, a rigorous test of the effect of reputational masculinity on increasing numbers of sexual partners during the early adult years.

Exposure to community disadvantage predicted increases in reputational masculinity during early adulthood. This is consistent with previous research that links challenging community environments to the development of forms of masculinity that celebrate dominance, aggression, and sexual conquest (Cunningham et al., 2013). These masculinity attitudes have been hypothesized to have adaptive value in some circumstances, as young men cope with the dangers inherent in disadvantaged communities. Similarly, Whitehead (1997) argued that, for young Black men in resource-poor communities, reputational masculinity may play an adaptive role in maintaining self-esteem when significant barriers to more conventional forms of success and development may exist. Although reputational masculinity may have short-term adaptive value in dealing with difficult environments, significant consequences arise from this ideology in terms of risk for STIs, as well as for other negative health and psychosocial outcomes such as violence and poor school performance (Evans et al., 2011).

Consistent with our hypotheses, men's vocational commitment buffered the influence of reputational masculinity on their numbers of sexual partners. This finding suggests that masculinity ideology will not uniformly predict sexual behavior. Men may report identification with a reputational masculinity ideology without necessarily acting on these values (Giordano et al., 2009). Men who simultaneously reported reputational masculinity beliefs and high levels of vocational commitment did not appear to act on those beliefs by having multiple sexual partners. This finding is consistent Whitehead's (1997) research, which suggests that, as men become engaged with conventional roles, the influence of reputational forms of masculinity should wane. with social developmental research, which documents the protective influence of engagement with conventional social institutions such as school and the workplace (Catalano, Kosterman, Hawkins, & Newcomb, 1996). During early adulthood, increases in involvement with and commitment to work are linked to reductions in deviant and risky behavior among men (Sampson & Laub, 1990). Alternatively, men who are highly committed to work may simply lack the time or energy with which to pursue multiple sexual partnerships.

Study findings confirm the utility of targeting masculinity ideology in programs designed to reduce sexual risk behavior. Despite multiple calls for inclusion of masculinity ideology in programming, to our knowledge no evidence-based interventions have demonstrated changes in reputational masculinity as a mechanism of intervention-targeted behaviors. Such experimental evidence is imperative to confirm the causal influence of masculinity ideology. Importantly, however, such interventions should consider that masculinity ideology per se will not inevitably lead to risky sexual behavior. Study findings point to the importance of meaningful work as a protective process to be considered in intervention development and policy recommendations. Assisting men from low-resource communities to connect to the workplace may in fact be a powerful target for reducing STIs in a community.

The present study used a prospective design to examine changes in reputational masculinity and numbers of sexual partners among a sample of young adult, rural Black men living in resource-poor rural communities. Several limitations, however, should be noted. The observational nature of the study prevents firm causal conclusions. Experimental studies in which reputational masculinity changes following an intervention are needed to establish more firmly its causal influence on sexual partnerships. The study focused on men living in rural communities; findings may not generalize to men living in urban settings. The use of self-report measures also may lead to biases related to subject recall and social desirability. Although RDS has been shown to reduce biases inherent in chain referral samples random sampling may have increased confidence in the generalizability of findings. Future research is warranted that examines the extensiveness of work (full time, part time) as a potential protective factor. Finally, studies using qualitative methods underscore the dynamic processes through which men negotiate their masculinity on a day-to-day and context-to-context basis (Wetherell & Edley, 1999). These studies suggest that masculinity may be more of a fluid and changing dynamic than a static "ideology" to which a man is committed. These limitations notwithstanding, the present research provides an empirical test of contextual factors and attendant masculinity attitudes among young Black men that place them at risk for involvement with multiple sexual partners, documenting both risk and protective processes.

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Figure 1. Indirect effect model. Standardized coefficients are shown. Target age and employment status were controlled. Incidence Rate Ratios are indicated for the predictors of the numbers of sexual partners outcome. * $p < .05$. ** $p < .01$.

Figure 2.

Final model with moderating effect of vocational commitment on the link between reputational masculinity and numbers of sexual partners. Standardized coefficients are shown. Incidence Rate Ratios are indicated for the predictors of the numbers of sexual partners outcome. Target age and employment status were controlled. * $p < .05$. ** $p < .01$.

Table 1:*Correlations among the Study Variables and their Means and Standard Deviations (N = 505)*

Variable	1	2	3	4	5	6	7	8
1. Target age	–							
2. Employment status	–.09	–						
3. Community disadvantage	.04	–.12 [*]	–					
4. Reputational masculinity T1	.03	–.07	.07	–				
5. Reputational masculinity T2	.07	–.01	.12 [*]	.44 ^{**}	–			
6. Sexual partner numbers T1	.03	.01	.05	.18 ^{**}	.07	–		
7. Sexual partner numbers T2	–.01	–.08	.03	.25 ^{**}	.23 ^{**}	.37 ^{**}	–	
8. Vocational commitment T2 ^a	–.11 [*]	.12 [*]	–.02	–.15 ^{**}	–.25 ^{**}	–.05	–.10 [*]	–
Mean	20.29	.51	–.06	18.29	18.35	3.01	2.64	.27
SD	1.10	.50	.52	4.63	5.67	5.37	4.09	.44

^a0 = low vocational commitment and 1 = high vocational commitment.^{*} $p < .05$.^{**} $p < .01$.