

Gender Ideologies, Socioeconomic Opportunities, and HIV/STI-related Vulnerability among Female, African-American Adolescents

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ABSTRACT *The importance of gender within HIV/STI prevention has become widely recognized. However, gender ideologies associated with vulnerability to HIV/STI are often examined and addressed without sufficient attention to the larger socioeconomic context within which they arise and evolve. We conducted a cross-sectional survey with 155 female, African-American adolescents recruited from two health clinics in Baltimore, Maryland. Multivariate logistic regression was utilized to assess the relationships between HIV/STI vulnerability resulting from male partner concurrency, adherence to traditional female gender norms, using a measure of hyperfemininity, and perceived socioeconomic opportunity structures. The likelihood of reported partner concurrency increased significantly among participants reporting higher levels of hyperfemininity (OR=2.08; 95% CI=1.01–4.30). Hyperfeminine thinking and behavior was significantly lower in the context of higher perceived socioeconomic opportunity structures (OR=0.87; 95% CI=0.79–0.95). Interventions seeking to promote gender equity and reduce HIV/STI may be more effective when the socioeconomic context of gender ideologies is assessed and addressed. Programs and policies to increase educational and professional opportunity structures, particularly among marginalized communities, should be actively integrated into HIV/STI prevention planning.*

KEYWORDS *Gender, Socioeconomic opportunity, HIV/STI, Adolescents, Partner concurrency, Sexual behavior*

INTRODUCTION

Gender or the “widely shared expectations and norms within a society about appropriate male and female behavior, characteristics, and roles” is becoming widely recognized as one of the most important social factors influencing vulnerability to sexually transmitted infections (STI), including the human immunodeficiency virus (HIV), worldwide.¹ A growing body of research has documented the ways in which gender ideologies or beliefs about what it means to be a man or a woman within a given cultural context present formidable challenges to the implementation of current HIV/STI prevention recommendations, including reductions in the number and concurrency of sexual partnerships and increases in consistent condom use, particularly among young people.^{2–4} In turn, many have

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concluded that there is a pressing need to reflect upon popular beliefs associated with gender or what is considered acceptable behavior for men and women, respectively, to reduce HIV/STI transmission. However, only a small number of interventions have demonstrated significant improvements in HIV/STI preventive behaviors as a result of programmatic actions encouraging individuals to reconsider commonly held and/or traditional beliefs regarding gender roles and norms.⁵

Culturally defined gender ideologies do not exist in a socioeconomic vacuum. Yet relatively little attention has been paid, in terms of either HIV/STI prevention research or program planning, to the surrounding socioeconomic context within which gender roles and norms associated with sexual behavior are produced, reproduced, and/or evolve over time. Select qualitative studies have documented the importance of structural factors such as poverty and racism in relation to the development of and adherence to masculine gender ideologies among men, including the perceived need to demonstrate sexual prowess with and aggressive behaviors toward women.⁶⁻⁷ Even fewer qualitative studies have explicitly sought to understand how contextual factors shape the development of female gender ideologies and their connection to women's behavior in sexual relationships and in turn their potential vulnerability for HIV/STI.⁸

In our prior qualitative research conducted among female, African-American adolescents in Baltimore, we found that most of the young women interviewed ($n=50$) desired a monogamous, sexual relationship from both an "ideal relationship" perspective and an HIV/STI prevention perspective. However, many participants reported not feeling confident that they could have or maintain a monogamous sexual relationship because of their male partner's sexual behavior, given the intense peer pressure that they perceived many young, African-American men face to have multiple sexual partners.⁸⁻⁹ Indeed, a considerable percentage (38.7) of male, African-American high school students reported having four or more lifetime sexual partners within the most recent Youth Risk Behavior Survey conducted by the Centers for Disease Control and Prevention, which was significantly higher than any other demographic group in terms of either race/ethnicity or gender.¹⁰ This finding indicates the increased vulnerability to HIV/STI of both young Black men as well as their sexual partners who are most often young, African-American women.

When interviewed about the issue of partner concurrency, African-American female adolescents, participating in a separate qualitative research project conducted with the same study population as our prior work in Baltimore, described the difficulties that they faced when deciding whether to leave a nonmonogamous partner given the competing emotions of disappointment and attachment associated with the relationship.¹¹ Our own prior qualitative work also revealed that among some of the female, African-American adolescents interviewed, a heightened desire for emotional intimacy appeared to be linked to the acceptance of their male partner's extradyadic sexual behavior. Study narratives suggested that the heightened desire for emotional intimacy in the domain of romantic relationships among some of the young women interviewed could not be easily disentangled from the larger social context of limited educational and professional opportunity structures available to themselves and their families and communities.⁸⁻⁹

These findings parallel the qualitative work of Eliza Sobo conducted among African-American women from inner-city Cleveland. Sobo found that study participants were often unable to clearly see and/or react to their male partners sexual risk behavior, particularly their lack of monogamy, because of the perceived social status afforded to them by maintaining a steady romantic relationship. Sobo's

work is of additional import in that it has stimulated the field to move beyond a conception of women's social vulnerability to HIV/STI solely in terms of their potential economic dependency upon men.¹² Instead, a more nuanced picture of how female gender ideologies place women at increased risk for HIV/STI has emerged. Whereas the ideal that women should always be in and maintain romantic relationships to feel socially validated is also a central aspect of women's vulnerability to HIV/STI, and this ideal may take on intensified meanings within settings of socioeconomic disadvantage. In turn, we seek herein to quantitatively assess the interconnections between socioeconomic opportunity structures, adherence to female gender ideologies, and HIV/STI-related risk resulting from partner concurrency among female, African-American adolescents living in Baltimore City, Maryland.

The present study focuses on female, African-American adolescents given their disproportionate vulnerability to HIV/AIDS in the United States. Young people or persons under age 25 account for more than half of all new HIV infections in the United States.¹³ However, young African-American women are among those most vulnerable to HIV/STI. Disparities related to the percentage of HIV/AIDS cases documented during the period 2001–2004 were the highest among African-American females aged 13–24 compared to any other demographic subgroup analyzed in terms of race, gender, and age. This same analysis found that over 70% of all new cases of HIV/AIDS documented in the United States from 2001 to 2004 among females between the ages of 13–24 years old were among African Americans.¹⁴ In contrast, African Americans comprised approximately 13% of the national population in the United States during that time period.¹⁵ In addition, a recent representative national study conducted among 838 young girls between the ages of 14 and 19 years in the United States found that almost one half (48%) of African-American teenage girls had at least one of the four most common STI (human papillomavirus, chlamydia, herpes simplex virus, and trichomoniasis) compared to 20% of young white women.¹⁶

METHODS

Study Setting, Design, and Procedures

This paper utilizes data from a 24-month follow-up survey within a longitudinal study conducted among male and female adolescents in Baltimore, Maryland entitled "Perceived Risk of Sexually Transmitted Diseases" (PRSTD). The data utilized for this manuscript was collected during the time period of July 2002 to July 2004. Study participants were recruited from two health clinics located within the East Baltimore section of Baltimore City. The surrounding area in which the two study clinics are located has almost all African-American residents (97.4%), whereas the city of Baltimore is approximately 64% African American overall.^{17–18} Close to half (47.2%) of the individuals in this residential area are not in the labor force. More than 60% of the households have an income of less than \$25,000 a year, and the majority earns considerably less than what is needed to sustain their family's basic needs. This is particularly the case among single-parent households, which represents the norm in this area,¹⁹ whereas 83% of such households do not meet self-sufficiency standards.¹⁸

The two study clinics included an adolescent, general medicine clinic at the Johns Hopkins University Hospital and a public sexually transmitted infections clinic. Potential participants were identified in the clinic waiting areas and assessed for eligibility by research assistants in a private setting within the clinic using a short,

structured screening questionnaire. Study eligibility criteria included: English-speakers, 14–19 years old, residents of the city of Baltimore, receiving reproductive health or STI care at the time of clinic visit, and having had vaginal or anal intercourse in the preceding 3 months.

Adolescents who met these eligibility criteria were provided with information about the study objectives, procedures, and potential risks and benefits to participation. Those who expressed interest in participating in the study after receiving this information were asked to provide written informed consent. Parental consent was not required of participants because of the fact that they were seeking confidential health services at the time of recruitment. The survey was conducted in a private office within the clinic and lasted approximately 1 h and included structured questions about participants' beliefs regarding female gender roles and norms, their sexual relationships and sexual behavior, opportunity structures within their neighborhoods, and sociodemographic characteristics. Participants were provided \$25 compensation for their participation in the survey.

Measures

Partner Concurrency The primary study outcome chosen was partner concurrency. Concurrency or sexual relationships that overlap in time has been shown to play a key role in increased risk for sexually transmitted infections among adolescents.²⁰ Male adolescents have been shown to report concurrency significantly more than their female partners, placing young women at risk vis-à-vis their male partner's sexual behavior.^{21,22} Partner concurrency was assessed by asking female study participants the following question in reference to their current main partner, defined as someone they have sex with and consider to be the person that they are serious about: "To the best of your knowledge, did he ever have other sex partners while you two were having a sexual relationship?"

Hyperfemininity To assess adherence to more traditional female gender ideologies, we utilized the "hyperfemininity" scale developed by Murnen and Byrne. We selected this measure because it is one of the few measures available which examines the issue of women defining themselves via their relationships with men and prioritizing their relationships with men over and above taking care of themselves, which we perceived to be particularly applicable to HIV/STI-related risk among this population prevention based on our prior formative research. The original scale included 26-items. Respondents are asked to select one of the two statements offered that was more characteristic of their thinking and behavior at the time of the interview. Murnen and Byrne indicate that the items included in the measure cover three broad categories of beliefs and behavioral characteristics associated with hyperfemininity among women: "(1) relationships with men are of primary importance; (2) physical attractiveness and/or sexuality can be 'used' to help secure or preserve a romantic relationship; (3) and preference for traditional patterns of sexual behavior in men." Examples of scale 'item pairs' where the participant would select the statement most representative of her thinking or behavior include: "Most women need a man in their lives" versus "I believe some women lead happy lives without male partners" and "Men need sex more than women do" versus "In general, there is no difference between the sexual needs of men and women."²³

The reliability of the original scale was found to be 0.76 among a sample of undergraduate women in the United States.²³ In our use of the measure, the 26-item

measure had an initial reliability of 0.64. Whereas all 26 of the items loaded well ($r_s < 0.30$) on one primary factor, as was the case with the original scale, there were several items which if deleted significantly improved the internal reliability of the scale. Hence, six of the original scale items were dropped raising the Cronbach's alpha to 0.70. The median for the revised 20-item measure was 4.0 with a range of 0 to 14. Given the nonnormal distribution of the measure, it was dichotomized at the median into low and high hyperfemininity for the purposes of regression analyses.

Socioeconomic Opportunity Structures Our assessment of socioeconomic opportunity structures focused on the perceived educational and occupational opportunities available to youth within participants' neighborhoods of residence. Questions came from the research of Short and colleagues which was utilized in their seminal work on the predictors of delinquency among adolescent boys in inner-city Chicago.²⁴ Our measure of perceived opportunity structures included five items, such as: "Most of the young people from this neighborhood graduate from high school" and "In this neighborhood it is hard for young people to make much money without doing something illegal." Participant response options included: strongly agree, agree, strongly disagree, and disagree. We found the measure to have a reliability of 0.68. The aggregate measure's median was 13.0 with a range of 5.0 to 20.0. The measure was found to be normally distributed and in turn was kept in its continuous form for the purposes of regression analyses.

Sociodemographic characteristics of the sample which were also assessed include: age, school attendance, maternal education, clinic of recruitment, and length of sexual relationship with participants' most recent main sexual partner.

Data Management and Analysis Univariate frequencies and medians of all single-item variables were first produced. Single-item continuous variables were examined for normalcy and dichotomized at the median in the case of skewed distributions. In the case of the two aggregate measures produced, factor analysis, using the principal components method with varimax rotation, and reliability analysis were conducted to ensure the unidimensionality and internal consistency of the respective measures. These aggregate continuous measures were then examined for normalcy and dichotomized at the median in the case of nonnormal, skewed distributions. Bivariate and multivariate binary, logistic regression analyses were conducted with both partner concurrency and hyperfemininity as the respective outcomes of interest. All independent variables described in the measurement section above were included in both the unadjusted and adjusted regression analyses conducted.

RESULTS

Demographic and Behavioral Characteristics of the Sample

A total of 268 male and female adolescents participated in the 24-month follow-up survey of the PRSTD study. However, only female study participants were included in the analyses presented herein given our focus on adherence to female gender norms, which was assessed only among female participants. We chose to focus the analyses further on female participants with main sexual partners so that we might gain a more accurate representation of reported partner concurrency given that individuals in ongoing relationships may have more insight into their sexual

partner's behavior over time. A total of 155 female, African-American participants reported having a main partner and provided fully complete data responses within the 24-month survey and in turn were included in the analyses that follow. Whereas race was not a study eligibility criterion, all of the female participants which met the analytical criteria described above were African American given the concentrated racial composition of the geographic area where the study was conducted.

The median age of study participants was 17.0 years (14–19 years). Sixty-seven percent were still in school at the time of the interview. Sixty-two percent were recruited from a public STD clinic and 38% from the Johns Hopkins Adolescent Medicine clinic. When asked whom they lived with for most of their lives, the majority reported having lived with their mothers (71.0%), whereas a minority reported having lived with their fathers (19.4%). Seventy-nine percent of participants reported that their mother had completed high school.

Most participants reported having sex with their current main partner for over a year at the time that they were interviewed with the median length of relationship being 15 months. Almost one third (31%) of the participants reported that their main sexual partner had another sexual partner during the course of their relationship. Female participants' self-reported concurrency was substantially less than that of their main male sexual partner, whereas 11.0% of the young women indicated that they had other sexual partners during the course of their relationship with their main partner.

Hyperfemininity and Partner Concurrency

A greater percentage of the young women (40.7%) reporting higher hyperfeminine thinking and behaviors reported that their main sexual partner had other sexual partners during the course of their relationship compared to those with lower hyperfeminine characteristics (25.0%; $p=0.040$). Higher hyperfemininity was significantly associated with partner concurrency in bivariate regression analysis (OR=2.06; 95% CI=1.03–4.12). Length of sexual relationship, more specifically being in a relationship for more than 15 months, was also significantly associated with partner concurrency in bivariate analysis (OR=2.51; 95% CI=1.24–5.09). Both hyperfemininity (OR=2.08; 95% CI=1.01–4.30) and being in a relationship for more than 15 months (OR=2.85; 95% CI=1.35–6.02) remained significantly associated with partner concurrency in multivariate analyses (Table 1).

None of the other sociodemographic variables examined such as age, education, maternal education, or clinic of recruitment were found to be significantly associated with reported partner concurrency in either bivariate or multivariate analyses. The final regression model for reported partner concurrency was statistically significant [$\chi^2(6)=14.92$; $p=0.021$]. Based on the model, 72.9% of women were correctly classified into their actual categories in terms of reported partner concurrency.

Hyperfemininity and Socioeconomic Opportunity Structures

With regard to the potential determinants of hyperfemininity, only perceived socioeconomic opportunity structures was found to be significantly associated with hyperfemininity among the factors examined herein. The likelihood of having higher hyperfeminine attitudes and behaviors decreased significantly (OR=0.87; 95% CI=0.79–0.95) with each increasing level of perceived educational and occupational opportunity, controlling for sociodemographic variables such as participant's age,

TABLE 1 Hyperfemininity and partner concurrency among female, African-American adolescents residing in Baltimore city ($n=155$)

Measure/variable	Unadjusted odds of partner concurrency (95%CI)	Adjusted odds of partner concurrency (95%CI)
Hyperfemininity		
Low (reference)		
High	2.06 (1.03–4.12)*	2.08 (1.01–4.30)*
Age in years		
14–17 (reference)		
18–19	0.91 (0.46–1.82)	0.69 (0.32–1.49)
School attendance		
In school (reference)		
Not in school	1.18 (0.57–2.41)	1.17 (0.53–2.56)
Maternal education		
Less than high school (reference)		
Completed high school	1.25 (0.53–2.95)	1.43 (.58–3.54)
Clinic of recruitment		
Public STD clinic (reference)		
Adolescent medicine clinic	0.57 (0.27–1.18)	0.53 (0.24–1.14)
Length of sexual relationship		
0–15 months (reference)		
15 months or more	2.51 (1.24–5.09)**	2.85 (1.35–6.02)**

* $p<0.05$; ** $p<0.01$

being in school, maternal education, clinic of recruitment, and length of relationship with main partner. The final regression model developed for perceived hyperfemininity was statistically significant [chi-square (5)=11.28; $p=0.046$]. Based on the model, 61.9% of women were correctly classified into their actual categories in terms of reported hyperfemininity (Table 2).

DISCUSSION

Our study findings point to two critical issues which should be considered when developing future HIV/STI prevention programs among young women from historically marginalized and/or underserved communities. The first issue is that the socialization process to which many women are exposed that emphasizes the prioritization and maintenance of sexual relationships with men to feel fulfilled or complete as women may come at an extremely high price in terms of personal and public health. As seen in this study, young women who are exposed to and adopt hyperfeminine thinking and behavior characterized by a sense of self-validation through their interactions and romantic relations with men are significantly more likely to tolerate the extradyadic sexual behavior of their steady male partners, in turn placing themselves at heightened risk for HIV/STI. The second issue of importance illuminated by our study findings is that adherence to hyperfeminine gender ideologies is intricately linked to the larger socioeconomic context within which such gender-related beliefs and behaviors arise, whereas the ability of young women to consider resisting traditional and/or limiting notions of what it means to

TABLE 2 Perceived socioeconomic opportunity structures and hyperfemininity among female, African-American adolescents residing in Baltimore city ($n=155$)

Measure/variable	Unadjusted odds of hyperfemininity (95%CI)	Adjusted odds of hyperfemininity (95%CI)
Perceived opportunity structures (continuous)	0.87 (0.79–0.95)**	0.87 (0.79–0.95)**
Age in years		
14–17 (reference)		
18–19	1.18 (0.62–2.27)	1.38 (0.67–2.86)
School attendance		
In school (reference)		
Not in school	1.08 (0.54–2.14)	0.96 (0.46–2.03)
Maternal education		
Less than high school (reference)		
Completed high school	0.80 (0.36–1.73)	0.97 (0.42–2.23)
Clinic of recruitment		
Public STD clinic (reference)		
Adolescent medicine clinic	0.67 (0.34–1.31)	0.73 (0.36–1.48)
Length of relationship		
0–15 months (reference)		
15 months or more	1.12 (0.59–2.15)	1.21 (0.61–2.41)

** $p < 0.01$

be a women is significantly increased when they are surrounded by greater educational and professional opportunities within their communities.

Prior research outside the field of public health and/or HIV/STI prevention also suggests the importance of social context in the adoption of gender-related beliefs and behaviors. For example, Smith et al. found that gender self-concept and in turn personal behavior varied significantly depending upon the types of social interactions and settings (e.g., friends vs. family and home vs. work vs. school) within which one moved among a sample of largely female, university students in the Southeast of the United States.²⁵ Such findings indicate the malleability and fluidity of gender-related beliefs and behaviors based on different types of social situations and interactions. Our study findings, however, point to the role of structural factors associated with gender norms, opening up a more critical lens which can be utilized to examine the social construction of self-concept in relation to gender, in addition to the use of a traditional symbolic interactionist perspective alone.²⁶ This complementary lens, as indicated by our findings, suggests that gender-related beliefs and behaviors are directly related to patterns of socioeconomic inequalities as seen in this study through variations in the level of perceived educational and professional opportunities available to young women vulnerable to HIV/STI.

In conclusion, in addition to important relational level interventions directed at improving communication and negotiation surrounding protective sexual behaviors, the field of HIV prevention must also consider and advocate for intensified investment in poor and/or marginalized communities in terms of socioeconomic development to maximize its potential effectiveness. Such a set of strategies would potentially serve to reduce HIV/STI-related vulnerability among both young women and men, given the interconnections documented herein between the larger

socioeconomic context, adherence to limiting notions of gender, and behavior in sexual relationships.

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