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African-American Sexual Minority Adolescents and Sexual Health Disparities: An Exploratory Cross-Sectional Study

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Abstract

Purpose.—To better understand sexual health disparities among African-American sexual minority adolescents.

Methods.—African-American adolescents ($N = 1,120$; mean age = 15.24 years) were recruited from 4 cities (Columbia, SC; Macon, GA; Providence, RI; Syracuse, NY) to a larger trial. The current analyses used data from the 18-month follow-up when adolescents reported on their sexual partnerships, condom use knowledge, self-efficacy and outcome expectancies for condom use, sexual risk behavior, and STI testing history.

Results.—Compared with heterosexual adolescents, sexual minority adolescents reported more concerns about potential relationship harms resulting from safer sex negotiation. Sexual minority adolescents were also more likely to engage in riskier sexual behaviors, with females reporting

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more sexual partners and drug use prior to sex, and males reporting inconsistent condom use and higher rates of HIV.

Conclusions.—African-American sexual minority adolescents evidence disparities in sexual risk behavior and STI history that appear to result from interpersonal and relationship concerns. These concerns need to be targeted in sexual health interventions for sexual minority adolescents.

Sexual minority adolescents (SMA; adolescents whose sexual attractions, behavior, or identities are not exclusively heterosexual) are more likely to be sexually active and, among those who are sexually active, less likely to engage in consistent condom use relative to same-age heterosexual peers. Not surprisingly then, SMA evidence higher rates of unintended pregnancy and STIs relative to heterosexual youth^{1,2} Sexual minority males evidence particularly high risk of STIs, but young women who have sex with women are also at increased risk for adverse sexual health behaviors and outcomes, including infrequent condom use³ and STIs.^{1,4}

Despite these sexual health disparities, SMA typically receive little guidance to prepare them for intimate relationships. Only 38% of U. S. high schools teach condom use skills,⁵ and “comprehensive” sexual health education often fails to address the unique needs of SMA.^{6,7} Similar to the relative paucity of sexual health education for SMA, there are also gaps in health and social service care for SMA. SMA often do not have health insurance or easy access to health care services and, among SMA who do, many avoid health care visits or disclosure to providers due to fears of discrimination.⁸ Stigma, and associated fears of rejection, might contribute to less knowledge about safer sex as well as deficits in the relational aspects of condom use (e.g., negotiation skills). These processes are likely compounded (i.e., intersectionality⁹) for individuals within racial minority groups (e.g., African-American SMA).

The purpose of this research is to explore whether sexual orientation is associated with the sexual knowledge, attitudes, and behaviors of African-American adolescents. Such research is needed because, compared to their White peers, young Black males are more likely to engage in same-sex behavior¹⁰ and young Black men who have sex with men (BMSM) have lower levels of HIV knowledge.¹¹ Further, young Black females and BMSM are at disproportionate risk for unwanted pregnancy and STIs.^{12,13} However, little research has examined safer sex attitudes and behaviors among SMA who are also racial minorities.

Two conceptual frameworks guided the current analyses. First, we drew upon social-cognitive models of sexual risk behavior^{14–17} to identify cognitive and emotional factors (e.g., attitudes, beliefs, perceptions) that were likely to influence behavioral practices. Fisher and Fisher’s¹⁶ model identifies health-related knowledge, motivation (e.g., risk perception), and behavioral skills (e.g., assertiveness, self-efficacy) as important determinants of sexual risk behavior. Therefore, in the present study, we explore a subset of the theoretical antecedents of sexual behavior as well as the behaviors themselves (e.g., condom use, number of partners, STI testing) and the health consequences of those behaviors (i.e., STIs).

Second, we drew upon the minority stress model^{18,19} to derive hypotheses regarding the expected differences between SMA and their heterosexual peers. Based on this model and

prior research, we hypothesized that, relative to heterosexual African-American adolescents, SMA would (1) report lower levels of condom use knowledge and condom use self-efficacy as well as more negative expectancies regarding condom negotiation with partners, (2) engage in more sexual risk behaviors (i.e., number of sexual partners, casual sex partners, condom non-use, substance use prior to sex), (3) evince lower HIV testing rates and more concerns about testing, and (4) have higher rates of STIs.

Method

This project recruited African-American adolescents aged 14 to 17 years from 4 U. S. cities (i.e., Macon, GA; Providence, RI; Columbia, SC; Syracuse, NY)²⁰. The current analysis used data from the 18-month follow-up because several of the constructs were only assessed at this time point and long-term follow-up afforded the most opportunities for sexual debut to occur.

1.1 Participants

Participants were 1,120 African-American adolescents from the larger trial who (a) reported 2 sexual partners by the 18-month assessment, and (b) consistently identified themselves as ‘male’ or ‘female’ over the study. The criterion of 2 partners was needed because engaging in sex with males and females required 2 partners, whereas exclusively same-sex experience required 1 partner; without this criterion, adolescents reporting both-sex behavior might appear riskier due to their greater number of partners. The criterion of stable gender identity was needed because sex of partners was used to classify SMA. Participants’ mean age was 15.24 years ($SD = 1.08$). Three-quarters (83%) reported eligibility for free or reduced-price school lunch, a proxy indicator of SES. The majority identified as female ($n = 597$; 53%). Adolescents provided written assent and parents/guardians provided informed consent.

1.2 Measures

All self-report assessments were conducted using audio computer-assisted self-interview.

1.2.1 Sexual minority classification.—Sexual minority classification was assessed via behaviorally operationalized items that assessed the sex of partners in specific sexual acts, which adolescents find clearer to answer than questions about sexual identity.²¹ Participants were categorized as having sex (1) exclusively with other-sex partners; (2) with partners of both sexes; or (3) exclusively with same-sex partners. Oral sex was defined for participants as: “[Have you ever put your mouth on a partner’s/Has a partner ever put their mouth on your] penis or vagina (some people call this ‘[giving/receiving] oral sex’)?” Vaginal sex assessed opposite-sex activity: “Have you ever had vaginal sex (that is, when a boy puts his penis in a girl’s vagina)?” Anal sex was defined as “[Have you ever put your penis in your partner’s/Has a male ever put his penis in your] bottom or anus (some people call this ‘[giving/receiving] anal sex’)?” Only ten adolescents reported exclusively same-sex partners across acts. Further, the survey assessed antecedents in the context of penile-vaginal sex acts. Thus, only adolescents reporting exclusively other-sex (heterosexual) or both-sex sexual experience were included in the analyses.

1.2.2 Theoretical antecedents of sexual risk behavior.—Consistent with leading conceptual models of sexual risk behavior, we assessed condom use knowledge, outcome expectancies, and self-efficacy.

1.2.2.1 Condom use knowledge.: Participants completed the Condom Use Skills Checklist,²² a 17-item series of statements that participants designate as being “correct” or “incorrect” (e.g., “Put the condom on any time before you ejaculate”). Participant responses were summed to yield a total score of condom use knowledge ($M = 11.6$, $SD = 2.2$; range: 5–17).

1.2.2.2 Outcome expectancies.: Participants completed the Condom Negotiation Outcome Expectancies Scale.²³ Seven items began with “If you talked to a potential sex partner about using condoms, he/she would...” Three items assessed positive expectancies (i.e., “respect you more”; “feel more affection for you”; “feel safer”) and four items assessed negative expectancies (i.e., “threaten to leave you”; “swear at you or call you ugly names”; “hit, push or kick you”; “threaten to break up with you”). Participants responded using a 6-point Likert-type scale (1 = *very unlikely*; 6 = *very likely*). Both subscales were reliable ($\alpha = .77$ and $.93$, respectively).

1.2.2.3 Self-efficacy.: Three dimensions of self-efficacy related to relational aspects of condom use were obtained. Single items assessed self-efficacy in response to (a) partner anger (i.e., “How sure are you that you would use a condom when you have vaginal sex if you think your partner might get angry”) and (b) relationship commitment (i.e., “...if you want your partner to know you are committed to your relationship”). For these two items, participants indicated whether they would or would not use a condom (dichotomous). Participants also completed four items assessing self-efficacy to (c) refuse sex under four conditions (“you have known the person for a few days or less”; “you want to date him or her again”; “you want the person to fall in love with you”; “the person is pressuring you to have sex”).²⁴ They indicated how sure they were that they could refuse sex in each instance using a 4-point scale (1 = *I definitely could not say no*; 4 = *I definitely could say no*). These four items were summed to create a total scale score ($\alpha = .85$).

1.2.3 Sexual risk behavior.—Participants reported their number of sexual partners for oral, vaginal, and anal sex acts over the last three months. Due to the infrequency of anal sex, anal sex was dichotomized (none / some). Participants also responded to a series of questions about their most recent vaginal sex episode, including whether or not they consumed alcohol or drugs prior to sex (dichotomous), whether sex occurred in the context of an ongoing “steady” relationship or with a “casual” partner (dichotomous), and whether or not they/their partner used a condom (dichotomous) or other form of birth control (dichotomous). Participants also reported on their condom use in the last 3 months: “In the last 3 months, how often would you say that you and your partner or partners used a condom from start to finish when you had vaginal sex?” (1 = *never*; 6 = *every time*).

1.2.4 HIV testing.—A single question assessed whether participants received HIV testing. For those who had not been tested for HIV, follow-up questions assessed whether they had not been tested due to perceived risk (“I have not been tested for HIV...because I

do not think I have been exposed to HIV”) or fears about confidentiality (“...because I worry that the HIV test results will not be confidential”; “...because I am worried that my name would be reported to the government if I tested positive”). Participants selected agree/disagree for each item (dichotomous).

1.2.5 STI rates.—Participants self-reported how many times a doctor had diagnosed them with an STI, and HIV specifically. They also provided biological specimens that were tested for gonorrhea, chlamydia, and trichomoniasis every 6 months during the 18-month study period. To obtain an estimate of overall prevalence of STIs, biological test results and self-report were collapsed over the study, respectively, and dichotomized to reflect any (1) lifetime self-reported STI, (2) lifetime self-reported HIV, and (3) biologically confirmed STI during the study.

In contrast to STI testing, which all participants received, HIV prevalence was calculated two ways: (1) restricted to those who reported being tested, and (2) among all participants recoding those who had not been tested as zeroes/not infected. This was done because seeking an HIV test might be higher among those with symptoms or reason to believe they have acquired HIV, thereby inflating any apparent association.

1.3 Data Analytic Plan

There are demonstrated gender differences in condom use rates²⁵ and skills,²⁶ and preliminary analyses revealed significant gender by sexual orientation interactions (e.g., condom use frequency differed by sexual orientation, but only for males). Therefore, analyses were stratified by gender. Intervention condition (in the larger trial; not reported here) did not differ by sexual orientation for males ($\chi^2(1) = 0.28, p = .60$) or females ($\chi^2(1) = 0.01, p = .94$).

Logistic regression analyses were used for binary outcomes, linear regression for continuous outcomes, and Poisson regression for the number of sexual partners.

Results & Discussion

Ninety-three females (10% of all females) and 37 males (6% of all males) reported sexual experience with male and female sexual partners.

Table 1 summarizes (a) the psychological antecedents of sexual risk behavior, (b) sexual risk behaviors, (c) HIV testing behaviors and concerns, and (d) STI diagnoses (self-reported and laboratory confirmed) as a function of sex and sexual minority status.

2.1 Hypothesis 1: Antecedents of Sexual Risk Behavior

Male SMA had less condom knowledge ($\beta = -0.16, p = .001$), anticipated fewer positive outcomes from condom negotiation ($\beta = -0.13, p < .01$), and reported they would be less likely to insist upon condom use when they wanted to demonstrate commitment to a partner (OR = 0.35, 95% CI [0.18, 0.71]) or when a partner was angry (OR = 0.49, 95% CI [0.24, 0.98]) compared to heterosexual males. Male SMA did not differ in anticipated negative

condom negotiation outcomes ($\beta = 0.08$, $p = .12$) or sexual refusal self-efficacy ($\beta = -0.01$, $p = .78$).

Compared to heterosexual females, female SMA anticipated more negative outcomes from discussing condoms ($\beta = .12$, $p < .01$), but they did not differ in anticipated positive outcomes ($\beta = -0.08$, $p = .06$), condom use knowledge ($\beta = 0.03$, $p = .56$), sexual refusal self-efficacy ($\beta = -0.04$, $p = .31$), or in their perceived ability to use a condom if a partner would get angry (OR = 1.08, 95% CI [0.59, 1.98]) or to demonstrate commitment (OR = 0.95, 95% CI [0.52, 1.76]).

2.2 Hypothesis 2: Sexual Risk Behaviors

Males did not differ in number of recent vaginal (IRR = 0.87, 95% CI [0.66, 1.14]) or oral sex partners (IRR = 1.16, 95% CI [0.88, 1.54]) based on sexual minority status; however, male SMA were more likely to report anal sex (OR = 4.32, 95% CI [2.02, 9.24]). Females did not differ in number of vaginal sex partners (IRR = 1.05, 95% CI [0.97, 1.15]) or odds of engaging in anal sex (OR = 0.81, 95% CI [0.40, 1.67]) by sexual minority status; however, female SMA reported more oral sex partners (IRR = 1.28, 95% CI [1.01, 1.63]).

Male SMA were less likely to use a condom in the last 3 months ($\beta = -0.25$, $p < .001$). During last vaginal sex, male SMA were more likely than heterosexual males to report condomless sex (OR = 4.58, 95% CI [1.86, 11.27]) or not using any birth control method (OR = 3.65, 95% CI [1.47, 9.06]). Females did not differ in their condom use over the last 3 months ($\beta = 0.00$, $p = .94$) or last sex (OR = 0.98, 95% CI [0.60, 1.62]), nor in use of pregnancy prevention method at last sex (OR = 1.06, 95% CI [0.61, 1.87]).

During their last vaginal sexual encounter, male (OR = 3.17, 95% CI [1.15, 8.78]) and female SMA (OR = 2.07, 95% CI [1.23, 3.50]) were more likely to have had sex with a non-steady sex partner. Males did not differ by sexual behavior in alcohol use (OR = 2.14, 95% CI [0.67, 6.83]) or drug use prior to last sex (OR = 0.42, 95% CI [0.10, 2.29]). Female SMA were more likely to have used drugs (OR = 3.05, 95% CI [1.61, 5.77]), but not alcohol (OR = 2.13, 95% CI [0.93, 4.88]), prior to their last sexual encounter than heterosexual females.

2.3 Hypothesis 3: HIV Testing Rates

HIV testing rates did not differ by sexual behavior for males (OR = 0.60, 95% CI [0.30, 1.21]) or females (OR = 0.77, 95% CI [0.48, 1.23]). Among those who had not sought testing, male SMA perceived themselves at greater risk for HIV (OR = 5.21, 95% CI [1.56, 17.09]) but reported more fears of HIV testing not being confidential (OR = 3.44, 95% CI [1.12, 10.57]) or having their name reported to the government (OR = 3.52, 95% CI [1.14, 10.81]); females did not differ on these factors (OR = 0.83, 95% CI [0.40, 2.74]; OR = 1.60, 95% CI [0.68, 3.78]; OR = 1.50, 95% CI [0.45, 4.93]).

2.4 Hypothesis 4: STI Rates

A greater proportion of male SMA endorsed lifetime prevalence of HIV (among those tested: OR = 5.16, 95% CI [1.75, 15.16]; full sample: OR = 5.28, 95% CI [1.89, 14.74]). There were no differences in positive STI results based on biological samples (males: OR =

1.56, 95% CI [0.63, 3.81]; females: OR = 1.32, 95% CI [0.83, 2.10]) or self-report based on sexual minority status (males: OR = 0.45, 95% CI [0.10, 1.95]; females: OR = 1.17, 95% CI [0.74, 1.86]).

2.5 Discussion

Prior research has established that SMA are more likely to experience STIs and unintended pregnancies relative to heterosexual youth. Results from the current study provide empirical information that helps to explain these disparities by demonstrating that levels of sexual health knowledge, expectancies, implementation self-efficacy, and sexual risk behaviors differ by sexual minority status among African-American adolescents.

The current findings highlight that, even among an at-risk population of adolescents, SMA evidence sexual health disparities relative to their heterosexual peers. In particular, SMA males and females both evidenced lower levels of self-efficacy relevant to safer sex negotiation. When coupled with their greater likelihood of having sex outside of a steady relationship, these relational concerns highlight their need for communication-specific sexual health education strategies.

The findings also highlight young African-American MSM as a particularly at-risk population for HIV acquisition and illuminate particular cognitive and behavioral factors that contribute to this risk. Structural inequalities in healthcare education and access⁷ likely contribute to the observed disparity in condom use knowledge, although it is unclear why this applied only to male SMA. A possible explanation is that females are more likely to seek out health-related information.²⁷ Coupled with females' greater overall likelihood of having an STI, perhaps females received and/or sought out information on contraceptive use and STIs that male SMA did not. Although male SMA who had not sought HIV testing perceived themselves to be at greater risk for acquiring HIV, they reported that concerns about disclosure and lack of confidentiality deterred them from testing. As testing is critical to disrupting HIV transmission, these findings highlight the importance of nonjudgmental testing options and clear communication from medical providers regarding confidentiality.

There were not significant differences in condom use or STI rates by female sexual orientation. These findings differ from some prior research,^{1,4} perhaps due to the restricted focus on youth with 2 or more sexual partners. More than one-third of females tested positive for gonorrhea, chlamydia, and/or trichomoniasis during the 18-month study period, regardless of sexual minority status, which represents a pronounced risk of infection compared to samples of adolescents who have been sexually active in their lifetime but is consistent with research demonstrating the marked risk of STIs among young Black females.²⁸ Thus, whereas these findings suggest that this sample of African-American sexually active female adolescents with multiple partners are at risk for STIs and risky sexual behavior as a whole, male African-American SMA demonstrate a markedly increased risk even within this high-risk sample.

The present study did not directly assess why SMA differ in these aspects of their sexual health. However, in addition to the lack of targeted sexual health education, it is likely that three social factors – stigma, greater fears of rejection from intimate partners, and avoidance

of STI testing due to fears of discrimination – might explain SMA’s riskier sexual behavior. Adolescence is a time during which individuals are particularly concerned with social rejection.²⁹ These fears are heightened for SMA due to identity exploration,³⁰ lack of other people with whom to discuss their sexual concerns,⁷ difficulty identifying potential partners,³¹ and stigma and bullying,³² consistent with the minority stress model.¹⁹ Relational fears might also be particularly pronounced for SMA for two reasons. First, they are more likely to engage in sex with casual partners, thus increasing the weight placed on sex as a means to form relationships; and, second, because they are sexual minorities, they have fewer potential partnerships and, thus, fewer options for replacement relationships if a relationship dissolves. Future qualitative and mixed methods research might help to explore these possible explanations.

2.6 Limitations

Our findings should be considered mindful of four study limitations.

First, by operationalizing vaginal and anal sexual acts as penile-vaginal or penile-anal acts, we provided a definition to participants to guide interpretability; however, this might have led to an underestimate of SMA, particularly those with only same-sex experience, who were excluded from analyses. For example, lesbian-identified girls are less likely to have engaged in penile sex acts.³³ Further, it is possible that we classified some youth as heterosexual who held non-heterosexual attractions or identities but had not acted on them.

Second, finding that female SMA did not differ in number of vaginal sex partners or rates of STIs contrasts with some prior work, which might reflect reliance on sexual behavior to define sexual orientation, or that our sample was younger with fewer sexual opportunities relative to older samples. By restricting our analyses to those reporting 2 partners, we restricted analyses to a higher-risk group of adolescents, which might have obscured differences detected in prior work assessing sexual identity.¹

Third, we assessed condom use and self-efficacy during vaginal sex episodes. Not assessing these constructs across other sex acts is a limitation considering SMA were more likely to have engaged in oral sex (females) and anal sex (males). Although SMA did not differ in their self-efficacy to refuse vaginal sex, future work should examine sex refusal self-efficacy across a range of sexual acts.

Finally, SMA are more likely to experience sexual assault and intimate partner violence.³⁴ It is possible that SMA expected more negative outcomes from condom negotiation in the face of relationship threat because of past experiences with coercion or abuse. Future research should clarify the nature of these associations.

2.7 Implications

Most sexual health promotion and education programs do not address the needs of SMA, who also lack supports and role models that could effectively fill these gaps.⁷ Moreover, they experience stigma that discourages open communication with healthcare and social service providers.⁸ These findings help to explain why SMA are vulnerable to risky sex behaviors and outcomes and suggest that sexual health education target sexual health

knowledge (especially for males), substance use before sex (especially for females), and condom negotiation and communication skills for all SMA. Importantly, SMA express a desire for such programming.³⁵ Future intervention research should expand the outreach of these programs, particularly to diverse samples due to evidence of health disparities at young ages.

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Table 1.

Unadjusted means or percentages by sex and sexual minority status limited to those participants reporting two or more sexual partners. Participants recruited from four cities (Columbia, SC; Macon, GA; Providence, RI; Syracuse, NY)

	<u>Males</u>		<u>Females</u>	
	Heterosexual (<i>n</i> = 444, 92%), <i>M</i> (sd) or %	Sexual Minority (<i>n</i> = 37, 8%), <i>M</i> (sd) or %	Heterosexual (<i>n</i> = 499, 84%), <i>M</i> (sd) or %	Sexual Minority (<i>n</i> = 93, 16%), <i>M</i> (sd) or %
<u>Psychological Antecedents of Condom Use</u>				
Knowledge (condom use)	11.94 (2.46)	10.35 (2.65) ***	11.66 (2.03)	11.84 (2.47)
Outcome Expectancies				
positive expectancies	4.53 (1.32)	3.86 (1.59) *	4.69 (1.28)	4.38 (1.42)
negative expectancies	1.92 (1.38)	2.30 (1.42)	1.44 (1.04)	1.78 (1.35) **
Self-efficacy				
sex refusal	2.69 (1.11)	2.59 (1.25)	3.54 (.92)	3.45 (.89)
angry partner	74%	60% *	83%	84%
commitment concern	77%	54% **	84%	84%
<u>Sexual Risk Behaviors</u>				
Vaginal sex, No. partners (3 months)	2.00 (1.85)	1.72 (2.16)	.99 (0.69)	.97 (0.75)
Oral sex, No. partners (3 months)	1.45 (1.55)	1.72 (1.61)	.75 (0.67)	.98 (0.76) *
Anal sex, dichotomous (3 months)	18%	50% ***	14%	11%
Condom use (3 months)	4.51 (1.91)	2.76 (2.21) ***	3.57 (2.10)	3.55 (2.04)
Condom use (last sex)	71%	39% ***	52%	51%
Birth control (last sex)	83%	61% **	76%	74%
Casual partner (last sex)	52%	78% *	23%	38% **
Alcohol (before last sex)	10%	17%	6%	12%
Drugs (before last sex)	20%	9%	9%	23% ***
<u>Testing</u>				
	41%			
HIV tested (lifetime)	50%	41%	56%	62%
Reason for no HIV test:				
do not perceive risk	66%	27% **	60%	54%
fear of government	15%	40% *	8%	11%
fear not confidential	15%	40% *	18%	26%
<u>Sexually Transmitted Infections</u>				
Biologically-confirmed (during study period)	12% 6% ^a	6% ^a	34%	38%
Self-report (lifetime)	17%	22% ^a	35%	42%
HIV self-report (lifetime)				
Among those tested:	6%	24% ^a ***	6%	5% ^a

	<u>Males</u>		<u>Females</u>	
	Heterosexual (<i>n</i> = 444, 92%), <i>M</i> (sd) or %	Sexual Minority (<i>n</i> = 37, 8%), <i>M</i> (sd) or %	Heterosexual (<i>n</i> = 499, 84%), <i>M</i> (sd) or %	Sexual Minority (<i>n</i> = 93, 16%), <i>M</i> (sd) or %
Among full sample:	4%	16% ^a **	4%	3% ^a

p .001.

**
p .01.

*
p .05.

^aInterpret with caution due to small number of positive screens (<10 cases within both-sex behavior subgroup). The significance of differences in means and prevalence rates determined by regression analyses. Logistic regression analyses were used for binary outcomes, linear regression for continuous outcomes, and Poisson regression for the number of sexual partners.