



Structures of Sexuality: Sexual Stigma, Disclosure, and HIV Risk with Primary Female Partners Among Behaviorally Bisexual Black Men

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Abstract

HIV continues to disproportionately impact bisexual Black men, as well as their female partners, in the U.S. There is a need to better understand how stigma and disclosure affect sexual risk for men and their female partners. This article describes the relationship between sexual stigma and HIV risk with primary female partners among a sample of 121 behaviorally bisexual Black men of mixed HIV status in the San Francisco Bay Area. Multivariate analyses tested to see if each of three stigma measures (bisexual stigma, internalized homophobia, difficulty with bisexual identity) would have any effect on participants' condom use. Quantitative analyses found that sexual stigma increased men's sexual risk through inhibiting disclosure of their sexual activity with men to their female partners. Men who reported higher levels of bisexual stigma and internalized homophobia reported that it was harder to disclose having sex with men to their primary female partner, which was significantly related to lower levels of condom use. Stigma reduction HIV prevention interventions are needed that address bisexual stigma experienced by Black men. HIV prevention interventions, including stigma reduction programs, must target both men and women to effectively reduce bisexual stigma and address the structural and relationship contexts of HIV.

Keywords African American · Bisexual · Stigma · HIV · Female partners · Sexual orientation

Introduction

Disproportionate rates of HIV infection have burdened Black communities since the epidemic's initial emergence, reflecting social disparities that are firmly entrenched but not inevitable. The highest rates of HIV infection in the U.S. are among young gay and bisexual Black men (Centers for Disease Control and Prevention, 2017). Almost one-third (28%) of Black men who have sex with men (MSM) in 21 major U.S. cities are currently living with HIV (compared to 16% of white men who have sex with men) (Hall et al., 2008), and fully 60% of Black MSM in the U.S. are predicted to be HIV positive by age 40 (Matthews et al., 2016). Researchers have found that behavioral risk factors alone do not explain higher rates of HIV infection in Black

men who have sex with men, including bisexual men, attributing their higher rates of HIV primarily to social/structural factors (Joseph et al., 2017; Millett & Peterson, 2007), lack of access to care and treatment (Forenza & Benoit, 2016), and the higher seroprevalence of STIs and higher rates of undiagnosed HIV status among Black men who have sex with men (Millett, Peterson, Wolitski, & Stall, 2006). Salient structural factors contributing to experiences of HIV among Black men who have sex with men and women include, in part, poverty, residential segregation and institutionalized racism, incarceration and unemployment (Adimora & Auerbach, 2010; Bowleg & Raj, 2012; Harawa & Adimora, 2008).

Men who have sex with men and women have been found to have more HIV-related health disparities than men who have sex with women exclusively and men who have sex with men only (Friedman et al., 2014b). Men who have sex with men and women who are racial/ethnic minorities experience a disparate HIV burden compared to white bisexual men (Friedman et al., 2014c). Black bisexual men have more condomless sex with their primary female partners than with casual female partners (Harawa, McCuller, Chavers, & Janson, 2013; Hubach et al., 2014) or with male partners (Dodge, Jeffries, & Sandfort, 2008). Among a sample of African American and

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Latina women who had one male sexual partner, that partner being behaviorally bisexual was strongly associated with HIV (Harawa et al., 2013). Type of sexual relationship also has an impact on sexual behavior, as men with non-primary female partners report the fewest sex acts, compared with men who have only primary female partners and men who have both primary and non-primary partners (Harawa, Obregon, & McCuller, 2014a).

Sexual stigma affects HIV risk and vulnerability among Black men who have sex with men and women (Ford, Whetten, Hall, Kaufman, & Thrasher, 2007; Harawa et al., 2014b; Malebranche, Arriola, Jenkins, Dauria, & Patel, 2010). Stigma involves stereotyping, labeling and discrimination enacted in contexts of power (Hatzenbuehler, Phelan, & Link, 2013: 814) and has been found to be a major determinant of population health (Hatzenbuehler et al., 2013) and to act as a social and structural determinant of HIV among Black men who have sex with men (Boone, Cook, & Wilson, 2016; Parker et al., 2017). Sexual stigma is a relational construct that plays out simultaneously at the individual and structural levels, involving interpersonal attitudes and actions as well as social conditions that impact the sexual relationships in particular of sexual minorities (Donald, DasGupta, Metzl, & Eckstrand, 2017; Feinstein et al., 2018; Feinstein & Dyar, 2017; Parker et al., 2017).

It is critical to understand the role of sexual stigma in behaviorally bisexual relationships for Black men. The fact that Black bisexual men have been found to be less likely to disclose their sexuality than Black gay men has been linked to their increased experiences of psychosocial health disparities (Friedman et al., 2018). Black bisexual men experience more internalized homophobia than white bisexual men (Dyer et al., 2018; LaPollo, Bond, & Lauby, 2014) and research has found that it is harder for these men to disclose sexual activity with men to female partners than to male partners (Dodge et al., 2008). Barriers to disclosure include stigma avoidance and fear of rejection (Reback, Kaplan, & Larkins, 2015; Schrimshaw, Downing, & Cohn, 2016). Men are more likely to disclose to female partners with whom they are in longer and more committed relationships (Benoit & Koken, 2012; Dodge et al., 2008), and have expressed that they do not disclose unless a female partner asks them specifically about their sexual activity with men (Malebranche et al., 2010).

Most women report finding out about their partners' same-sex activity after they have entered into a relationship (Harawa et al., 2014b; Mackenzie & Brooks, 2018), and, in one study, approximately half the women found out about their male partner's bisexual activity from another person (Harawa et al., 2014b). While early studies made an explicit connection between non-disclosure and lower condom use with female partners (Stokes, McKirnan, Doll, & Burzette, 1996), more recent work has indicated no link between disclosure and condom use (Malebranche et al., 2010; Shearer, Khosropour, Stephenson, & Sullivan, 2012). Recent research with Black women partnered

with behaviorally bisexual men finds that women describe the emotional and instrumental support from men as important dimensions of their relationships, leading women to continue their relationships and not increase protective behaviors, even after learning of their partner's bisexual relationships (Harawa et al., 2014b; Mackenzie & Brooks, 2018).

Gender norms play a critical role in sexual stigma for behaviorally bisexual Black men (Hubach et al., 2014; Malebranche, 2008; Metzl, 2013). Research has linked higher levels of adherence to the norms of hegemonic masculinity to increased HIV risk behaviors among Black men who have sex with men and women (Bond et al., 2009; Bowleg et al., 2011; Fields et al., 2015; LaPollo et al., 2014). Explicit narratives of masculinity that have been identified among Black men who have sex with men include preference for more masculine partners, the belief that Black men should have concurrent sex with multiple women and the role of masculinity in partner HIV risk assessment and risk behaviors (Fields et al., 2012, 2015), as well as the belief that Black men should not be gay or bisexual (Malebranche, Fields, Bryant, & Harper, 2009; Ward, 2005). Compared with white behaviorally bisexual men, Black behaviorally bisexual men have been found to have higher hyper-masculine gender norms, have more internalized homophobia and be more likely to say that not disclosing their sexual behavior with men is important to them (LaPollo et al., 2014). Behaviorally bisexual men who embrace hyper-masculine ideals have been found to have a greater number of male and female sexual partners (LaPollo et al., 2014), and men who have higher gender role conflict report less disclosure of same-sex behavior and more condomless sex with female partners (Bingham, Harawa, & Williams, 2013).

Researchers of sexuality have described the ways in which behaviorally bisexual Black men have been problematically misrepresented throughout the HIV epidemic by vilifying public health narratives, reflecting intersecting forms of sexual stigma, biphobia and racism (Arnold et al., 2017; Benoit & Koken, 2012; Dodge et al., 2008; Harawa et al., 2014b; Nelson et al., 2016). Given the persistence and specificity of experiences of bisexual stigma among Black bisexuals (Friedman et al., 2014a), there is an urgent need to further understand the role of stigma in conditioning HIV risk in Black bisexual men's relationships with their primary female partners.

This analysis explores the relationship between sexual stigma and HIV risk among a sample of 121 behaviorally bisexual Black men of mixed HIV status in the San Francisco Bay Area in the U.S. As of 2017, Black men comprised 9% of the people living with HIV, and Black MSM 5%, in San Francisco, and Black men made up 29% of the people living with HIV in Alameda County (Alameda County Public Health Department HIV Epidemiology and Surveillance Unit, 2018; San Francisco Department of Public Health Population Health Division, 2018).

Given these local contexts of continued HIV disparities, we set out to explore what the effect of sexual stigma is on condom use with primary female partners among a sample of behaviorally bisexual Black men.

This article is guided by two theoretical frameworks that guide our analyses of stigma and sexual risk. The article draws on the conceptual framing of stigma as a fundamental social cause of health inequities (Hatzenbuehler et al., 2013), acting as a social process that reflects and reproduces power and access to resources based on intersecting axes of social inequities (Bowleg, 2012; Crenshaw, 1995; Link & Phelan, 2001). Given its focus on sexual stigma in particular, the article draws on critical structural analyses of sexuality that consider how society creates the possibility of sexual interactions between people based on factors such as race and racism, homophobia, gender relationships and income inequalities (Parker, Easton, & Klein, 2000).

Method

Participants

This article presents data from analyses of 121 men who participated in a mixed methods HIV prevention research study with behaviorally bisexual Black men ($N = 121$) and their female partners ($N = 110$) in the San Francisco Bay Area, entitled Project WAMERU (Women and Men Expanding Relationship Understandings) (Mackenzie & Brooks, 2018). The study aimed to understand the cultural and relationship context of HIV among behaviorally bisexual Black men and the women in relationships with them. For eligibility, men had to report having at least one sexual contact with a man and at least one sexual contact with a woman in the past 6 months. Men had to self-identify as Black or African American and be over age 18. An exclusion criterion of self-identification as gay was included to ensure a non-gay-identified sample of behaviorally bisexual men after recruitment of behaviorally bisexual Black men into a prior study generated an initial sample of gay-identified, behaviorally bisexual men (Mackenzie, Rubin, & Gómez, 2016).

HIV-negative men were recruited through targeted active and passive outreach conducted by a research team with extensive experience living and working among the local Black gay, lesbian, bisexual, transgender, queer, and intersex communities in the San Francisco Bay Area. Men with HIV were recruited through targeted venue-based outreach at health organizations. Eligible men who agreed to participate went through informed consent procedures and came to the research interview at a downtown San Francisco State University office or one of two community field sites in Oakland. Participants completed self-administered computer

surveys containing validated measures of physical health, mental health, masculinity, relationship power, resilience, HIV, sexual behaviors, stigma and discrimination and lasting from 1 to 2 h. The study received Human Subjects Approval from the Institutional Review Boards at San Francisco State University and Santa Clara University.

Measures

Disclosure

We assessed disclosure through a measure of disclosure that was specific to men's relationships with their primary female partners, namely the question: "It's hard for me to tell my female partner that I'm sexually active with men." Rather than reporting on specific instances of disclosure or non-disclosure, which can be subject to recall and interview bias that may underestimate non-disclosure, men indicated their experience with disclosure in the context of their primary female relationship. We used this question based on formative data analysis with this population of men, indicating that disclosure of sexual behavior with men to female partners is sensitive (Mackenzie & Jenkins Barnes, 2014; Mackenzie & Brooks, 2018) and is a process that takes place over time (Grainger, 2017). We also wanted to address the potential for desirability bias for specific disclosure events as participants who engage in stigmatized sexual behaviors may over-report disclosure due to perceived desirability (Benoit, Pass, Randolph, Murray, & Downing, 2012). The question had a one to five Likert scale response option, with response categories as follows: 1 "Not at all true," 2 "A little true," 3 "Moderately true," 4 "Very true" and 5 "Extremely true," wherein a higher score reflected higher struggle with disclosure.

Sexual Risk

Condom use when having vaginal sex with primary female partner in past 6 months was used as a proxy for risky sexual behavior (0%, between 0 and 100%, 100%). We asked men to estimate the number of times they had vaginal sex with their primary female partner in the past 6 months. We then asked them to estimate the number of times they used condom barriers when they had vaginal sex with their primary female partner. We used these estimates to compute the percent of times they used condom barriers. This condom use outcome was grouped into three levels according to its distribution where 37 participants (35%) used condoms 0% of the time, 20 participants (19%) used condoms between 0 and 100% of the time, and 49 participants (46%) used condoms 100% of the time. Eight participants either did not have vaginal sex with a primary female partner in the past 6 months or had vaginal sex but did not enter the number of times a condom was used. Seven participants entered the number of times

having vaginal sex and condoms used, but their responses were inconsistent. Therefore, these fifteen participants were treated as missing data for the condom use outcome.

Stigma

We used three separate measures of stigma in this study to capture the varied dimensions of stigma experienced by behaviorally bisexual men—bisexual stigma, internalized homophobia and bisexual identity. Stigma assessment comprised the use of two measures validated for use in gay communities (internalized homophobia) and among bisexuals (bisexual identity), based on the dearth of stigma measures developed for use with a non-identified population of Black men. In addition, we used a measure, the Bisexual Stigma scale, developed by Black behaviorally bisexual men to allow for a measurement that tapped more specifically into the stigma consciousness of this particular group of men.

The Bisexual Stigma scale was designed based on formative in-depth qualitative interviews with 60 behaviorally bisexual Black men, to assess dimensions of stigma consciousness. Men were asked to describe their experiences as behaviorally bisexual Black men, and their responses were coded into domains of stigma. The four resultant domains cohered to the four questions that became the questions for the Bisexual Stigma measure.

The Bisexual Stigma measure (Cronbach's $\alpha = 0.77$, $M = 2.79$, median = 2.75, $SD = 0.97$) used the following question items: (1) "Men who have sex with both men and women transmit HIV to women," (2) "Men who have sex with both men and women transmit HIV to men," (3) "Female partners of men who have sex with both men and women are at more risk for HIV than women with heterosexual male partners," and (4) "Women don't trust a man who has sex with both men and women." The four questions for Bisexual Stigma had Likert scale response options ranging from (1) Not at all true to (5) Extremely true. The measurement's higher score reflected a higher level of stigma. The first two questions tapped into public stereotypes about Black bisexual men as vectors of HIV that men articulated. The third and fourth questions tapped into two partner-level dimensions of stigma consciousness that men articulated during the interviews, namely that female partners were more at risk for HIV and that they did not trust bisexual male partners. As such, the Bisexual Stigma measure drew closely from formative interviews with Black bisexual men.

The Bisexual Stigma measure aimed to develop questions that tapped into "stigma consciousness," or the perceptions of stereotypes about Black behaviorally bisexual men among this group (Pinel, 1999). This draws on work that defines stigma consciousness as "the perceived and actual experiences of stereotyping among targets of stereotypes" (Pinel, 1999: 115)—as compared with group identity and group

consciousness—among Black non-bisexual identified individuals. Given that group affiliation may range significantly among behaviorally bisexual men—and may be non-existent among men who are bisexually active but not identified as such—stigma among this group of non-identified men must be considered as distinct from group identity or consciousness. In particular, in light of persistent stereotypes concerning Black bisexual men as a "bisexual bridge" for HIV transmission between Black men and women (Dodge et al., 2008; Malebranche et al., 2010), the four questions of the Bisexual Stigma measure aim to tap into respondents' consciousness of these stereotypes' level. Thus, the Bisexual Stigma measure aims to capture a level of perceived stigma in addition to the internalized stigma captured by the Internalized Homophobia and Bisexual Identity measures.

Internalized homophobia was assessed through a nine-question Internalized Homophobia Scale that has been validated in prior research with men who have sex with men (Herek, Cogan, Gillis, & Glunt, 1998). This measure of internalized homophobia (Cronbach's $\alpha = 0.88$, $M = 2.42$, median = 2.55, $SD = 0.78$) had response categories ranging from 1 ("Often") to 4 ("Never"). All items were reverse coded so that a higher score reflects a higher level of internalized homophobia. Based on the prompt, "In the past year, how often have you...", the questions are: (1) "...felt it best to avoid personal or social involvement with other men who are having sex with men," (2) "tried to stop being attracted to men," (3) "felt that if someone offered you the chance to be completely heterosexual, you would have accepted the offer," (4) "wished you weren't a man who has sex with men," (5) "felt separate/isolated from yourself because you are a man who has sex with men," (6) "wished that you could develop more erotic feelings toward women," (7) "felt being a man who has sex with men is a personal shortcoming," (8) "felt that you would have liked to get professional help in order to change your sexual orientation from bisexual to straight," and (9) "tried to become more sexually attracted to women."

Bisexual identity was assessed through 10 of the 17 questions from the Lesbian, Gay, and Bisexual Identity Scale (Mohr & Kendra, 2011) that scaled with the project data. The Bisexual Identity measure (Cronbach's $\alpha = 0.83$, $M = 2.91$, median = 2.89, $SD = 0.76$) used the following question items where their response categories ranged from 1 ("Disagree strongly") to 5 ("Agree strongly"). The questions were: (1) "I prefer to keep my same-sex romantic relationships private," (2) "I am not totally sure what my sexual orientation is," (3) "I keep careful control over who knows about my same-sex relationships," (4) "I often wonder whether others judge me for my sexual orientation," (5) "I keep changing my mind about my sexual orientation," (6) "I can't feel comfortable knowing others judge me negatively for my sexual orientation," (7) "I can't decide whether I am bisexual or homosexual," (8) "I think a lot about how much

my sexual orientation affects way people see me,” (9) “My sexual orientation is a very personal and private matter,” and (10) “I get very confused when I try to figure out my sexual orientation.” A higher score on the measurement reflected a higher degree of difficulty with bisexual identity.

Data Analysis

We aimed to test the following questions: (1) what are the effects of bisexual stigma on men’s disclosure of bisexual sex with men to their primary female partner, and (2) what are the effects of stigma and the disclosure measure on sexual risk behaviors. For each measure of stigma related to participant’s bisexuality (bisexual stigma, internalized homophobia and bisexual identity), we tested correlations between the effects of stigma related to the participant’s bisexuality and their struggle to disclose bisexual activities to their primary female partner. We also tested correlations between the stigma measures and sexual risk behavior measure and between the struggle on disclosing measure and sexual risk behaviors measure. Spearman’s Rho was used to test these correlations.

For each measure of stigma related to participant’s bisexuality, employing Bowleg et al.’s analytic approach (Bowleg et al., 2014), we further tested each stigma measures’ effect on disclosure and on men’s condom use after controlling for participant’s age, education, HIV status and female partner’s HIV test result. We considered primary female partner’s HIV test result as a covariate in the models as the closest form of knowledge we had about HIV status, based on the potential for partner’s HIV status to affect disclosure of sexual activity with men. Education was assessed as a proxy for socioeconomic status. For each stigma measure, we ran multivariable ordinary least-square regression to further test its effect on the disclosure measure controlling for the covariates. We then ran multivariable regression to examine effect of each stigma measure with the disclosure measure together on the outcome of men’s condom use controlling for the effects of the four covariates. In each stigma measures’ multivariable regression models, we also assessed indirect effect of stigma on condom use mediated by the disclosure measure.

The mediated effect (also known as indirect effect) is a product of the regression coefficients from independent variable (IV; stigma) on mediator (disclosure) the mediator (disclosure) on dependent variable (DV; condom use). This product of coefficients reflects how much a one unit change in IV affects DV indirectly through mediator. Furthermore, in order for the product of two coefficients (the mediating effect) to have more meaningful interpretation, standardized regression coefficients are used (MacKinnon, 2008). For the present study, we report standardized coefficients from the multivariable regression analysis.

All analyses used SPSS statistical software (IBM SPSS Statistics for Windows, version 24). Indirect effects were

analyzed using SPSS macro INDIRECT which uses product of coefficients and bootstrapping methods controlling for the covariates (Preacher & Hayes, 2008). The macro INDIRECT uses bootstrapping, a nonparametric resampling strategy, to produce mean and its confidence intervals of the indirect effect that are obtained by repeated sampling from the data. We report the mean and 95% confidence interval derived from 1000 bias-corrected bootstrap estimates for the indirect effect of each stigma measures.

Results

Sample

This was a sample of sexually active primarily bisexually identified men, whose primary partners were predominantly women. Most men (90%) identified as bisexual or queer (87% identified as bisexual, and 3% as homosexual or queer), 9% of the men identified as heterosexual or straight, and 1% as “other” (Table 1). Most men also responded that they used other terms to describe their sexual orientation, with terms including “in the life,” “in the family,” “same gender loving,” “one of the children,” “down low,” “lo boy,” and several who stated “myself or me” designating resistance to a label for their sexual orientation.

Two-thirds (61%) of the men said they had a primary female partner in the past 6 months, and just over one-third (37%) of the men had a primary male partner. Men reported a range of 1–33 casual female sex partners in past 6 months (mean of 3). Men reported a range of 1–72 casual male sex partners in past 6 months (mean of 3). Over half (59%) of the men had been with their primary female partner for less than 3 years. The sexual partnerships of the men ranged from having 1 female partner to 33 female partners in the past 6 months, with an average of three female partners, and an average of four male partners in the past 6 months (with a range of 1–72). 20% of the men reported having one or more transgender female partners in the past 6 months (range of 1–14), and 12% reported having one or more transgender male partners (1–11).

Twenty percent of the men ($N = 34$) reported living with HIV. Sixty-four percent of the participants ($N = 77$) reported being HIV negative, while 8% ($N = 10$) responded that they did not know their HIV status. Fifty-nine percent ($N = 71$) of the men’s primary female partner’s most recent HIV test result was negative, and 41% of the men’s primary female partner’s HIV status was unknown or living with HIV. Seven percent, or $N = 9$ of men’s primary female partner’s most recent HIV test result was positive, 6% ($N = 7$) did not know their primary female partner’s most recent HIV test results, 7% ($N = 8$) reported that their primary female partner had never tested for HIV, and 22% ($N = 26$) did not know if their

Table 1 Demographic characteristics of Black behaviorally bisexual men ($N=121$)

Demographic characteristics	<i>N</i>	%
HIV status		
HIV+	34	28
HIV-/unknown	87	72
Sexuality		
Bisexual	105	87
Heterosexual/straight	11	9
Gay/homosexual/queer	4	3
Other	1	1
Relationship length—primary female partner		
1–3 years	71	59
4–5 years	20	16
6–10 years	17	14
More than 10 years	13	11
Age (Mean 51)		
21–40	27	22
41–60	74	61
61–80	20	17
Education		
Less than high school	15	12
High school diploma/equivalent	51	45
Some college/AA	44	34
College degree and above	11	9
Primary female partner's HIV status		
HIV negative	71	59
HIV positive/unknown	50	41

primary female partner had ever tested for HIV. We considered “not knowing partner’s test result,” “did not know if partner ever tested” and “partner never tested for HIV” as “risky” partner’s HIV status along with having a partner living with HIV. Therefore, we dichotomized primary female partner’s HIV status as risky (HIV positive and unknown HIV status, $n = 50$, 41%) vs. safe (HIV negative, $n = 71$, 59%).

Just over two-thirds of the sample (68.5%, or $n = 83$) lived in San Francisco, and the remaining one-third ($n = 38$) in Alameda County, at the time of the study. This is a primarily low SES sample of men. 12% ($N = 15$) of the men have less than a high school diploma, 45% ($N = 54$) of the men have a high school diploma or equivalent, 34% of the participants ($N = 44$) had some college education, and 9% ($N = 11$) had completed a college education. Over one-third (36%) consider themselves homeless, and 50% are living on \$900 or less/month. The mean age of our sample was 51 years (range, 23–72) (Table 1).

Bisexual stigma, internalized homophobia and bisexual identity (high score indicating difficulty with bisexual identity) were positively correlated with the disclosure measure (Spearman’s

Table 2 Bivariate analysis: Spearman’s rank Rho correlations between stigma, disclosure, and condom use of bisexual Black men with their primary female partner ($N = 121$)

	Disclosure	Condom use
Disclosure	–	–0.28 ($p = .003$)
Bisexual stigma	0.25 ($p = .005$)	–0.19 ($p = .044$)
Internalized homophobia	0.24 ($p = 0.006$)	0.05 ($p = .571$)
Bisexual identity	0.29 ($p = 0.001$)	–0.08 ($p = .398$)

Rho = 0.25 $p = .005$, Spearman’s Rho = 0.24 $p = .006$, Spearman’s Rho = 0.29 $p = .001$, respectively). Out of bisexual stigma, internalized homophobia and bisexual identity, only bisexual stigma was negatively correlated with condom use (Spearman’s Rho = –0.19 $p = .044$, Spearman’s Rho = 0.05 $p = .571$, Spearman’s Rho = –0.08 $p = .398$, respectively). The disclosure measure (difficulty of disclosing to primary female partner) was negatively correlated with condom use (Spearman’s Rho = –0.28, $p = .003$) (Table 2).

Bisexual Stigma

Participants with higher levels of bisexual stigma were found to have more difficulty with disclosure of sexual activity with men to their female partners (standardized regression coefficient = 0.279, p value = .003). The disclosure measure still had a negative effect on condom use when controlling for the effects of bisexual stigma and the four covariates (standardized regression coefficient = –0.223, p value = .027). Men who had more difficulty with disclosure had a lower frequency of condom use when having vaginal sex with their primary female partner. More importantly, bisexual stigma was found to have a negative indirect effect on condom use (indirect effect on condom use coefficient = –.073 with 95% confidence interval (–0.191, –0.012)). Men who had higher levels of bisexual stigma had a lower frequency of condom use, and this effect was mediated by the disclosure measure (Table 3).

Internalized Homophobia

Participants with higher level of internalized homophobia were found to have higher level of difficulty with disclosure (standardized regression coefficient = 0.234, p value = .011). The disclosure measure still had negative effect on condom use when controlled for the effects of internalized homophobia and the four covariates (standardized regression coefficient = –0.283, p value = .004). Participants with a higher level of difficulty with disclosure had a lower frequency of condom use when having vaginal sex with their primary female partner. More importantly, internalized homophobia was found to have negative

Table 3 Stigma, disclosure and condom use behavior of bisexual Black men with their primary female partner (reporting standardized regression coefficients; $N = 121$)

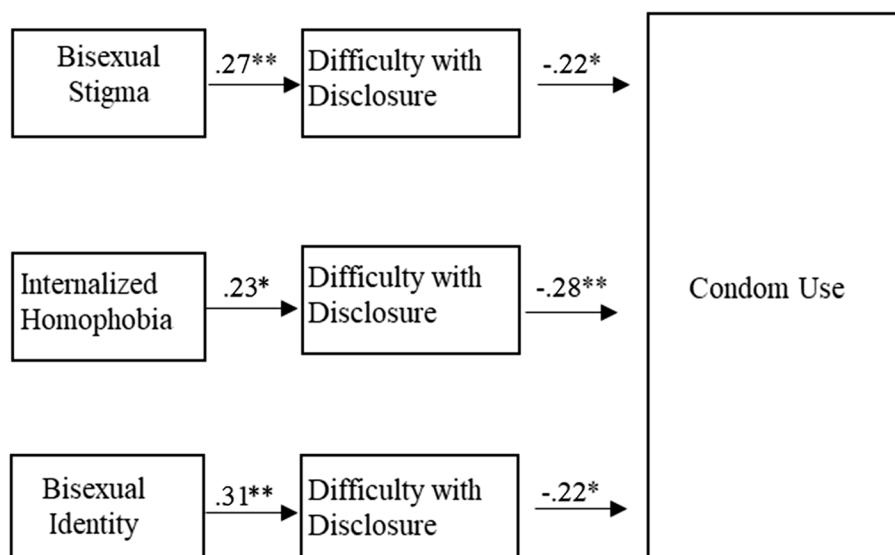
Predictor	Beta	SE	<i>p</i> value
Bisexual stigma: indirect effect on condom use = -0.073 , 95% CI ($-0.191, -0.012$)			
Model 1: Bisexual stigma on difficulty with disclosure ($R^2 = 0.105$, $F(5, 115) = 2.691$, $p = .024$)			
Bisexual stigma	0.279	0.127	.003
Age	0.143	0.011	.118
Education	0.015	0.150	.868
HIV status—self	0.066	0.287	.497
HIV status—partner	0.014	0.266	.887
Model 2: Difficulty with disclosure on condom use ($R^2 = 0.157$, $F(6, 99) = 3.063$, $p = .009$)			
Difficulty with disclosure	-0.223	0.069	.027
Bisexual stigma	-0.050	0.096	.615
Age	0.073	0.008	.441
Education	-0.209	0.110	.031
HIV status—self	-0.062	0.207	.529
HIV status—partner	-0.172	0.183	.089
Internalized homophobia: indirect effect on condom use = -0.094 , 95% CI ($-0.245, -0.022$)			
Model 1: Internalized homophobia on difficulty with disclosure ($R^2 = 0.086$, $F(5, 115) = 2.157$, $p = .64$)			
Internalized homophobia	0.234	0.155	.011
Age	0.102	0.011	.271
Education	0.086	0.147	.342
HIV status—self	0.026	0.289	.787
HIV status—partner	0.053	0.267	.593
Model 2: Difficulty with disclosure on condom use ($R^2 = 0.174$, $F(6, 99) = 3.473$, $p = .004$)			
Difficulty with disclosure	-0.283	0.067	.004
Internalized homophobia	0.149	0.111	.129
Age	0.051	0.008	.591
Education	-0.211	0.107	.026
HIV status—self	-0.070	0.205	.474
HIV status—partner	-0.166	0.181	.097
Bisexual identity: indirect effect on condom use = -0.081 , 95% CI ($-0.193, -0.006$)			
Model 1: Bisexual identity on difficulty with disclosure ($R^2 = 0.127$, $F(5, 115) = 3.335$, $p = .008$)			
Difficulty with bisexual identity	0.311	0.154	.001
Age	0.097	0.011	.283
Education	0.094	0.144	.288
HIV status—self	0.052	0.282	.582
HIV status—partner	0.070	0.262	.467
Model 2: Difficulty with disclosure on condom use ($R^2 = 0.156$, $F(6, 99) = 3.053$, $p = .009$)			
Difficulty with disclosure	-0.227	0.068	.023
Difficulty with bisexual identity	-0.044	0.113	.652
Age	0.077	0.008	.420
Education	-0.220	0.109	.022
HIV status—self	-0.061	0.207	.533
HIV status—partner	-0.178	0.183	.079

indirect effect on condom use (indirect effect on condom use coefficient = -0.094 with 95% confidence interval ($-0.245, -0.022$)). Participants with a higher level of internalized homophobia had a lower frequency of condom use, and this effect was mediated by the disclosure measure (Table 3).

Bisexual Identity

Participants with higher scores on bisexual identity (i.e., higher difficulty with bisexual identity) were found to have higher levels of difficulty with disclosure (beta standardized

Fig. 1 Mediation models predicting condom use with primary female partner in past 6 months. * $p < .05$, ** $p < .01$



regression coefficient = 0.311, p value = .001). The disclosure measure still had a negative effect on condom use when controlling for the effects of bisexual identity and the four covariates (beta standardized regression coefficient = -0.227 , p value = .023). Men with a higher level of difficulty with disclosure had a lower frequency of condom use when having vaginal sex with their primary female partner. More importantly, difficulty with bisexual identity was found to have a negative indirect effect on condom use (indirect effect on condom use coefficient = -0.081 with 95% confidence interval $(-0.193, -0.006)$). Participant's higher level of difficulty with bisexual identity negatively affected their condom use (as in, they had a lower frequency of condom use), and this effect was mediated by the disclosure measure (Table 3).

Stigma, Disclosure, and Condom Use

Controlling for education, age, participant's HIV status, partner's HIV status, men who reported higher constraints to disclosure had a lower frequency of condom use. Bisexual stigma, internalized homophobia and bisexual identity were all strongly inversely correlated to disclosure, which then was a predictor of condom use behavior. Bisexual stigma, internalized homophobia and bisexual identity are therefore all indirect predictors of condom use among this sample of Black bisexual men (Fig. 1).

Discussion

These findings indicate that sexual stigma increases HIV risk through inhibiting disclosure of sexual activity with men, echoing recent findings of the critical role of internalized homonegativity and silences around homosexuality

in impeding HIV disclosure among Black men who have sex with men, including bisexual men (Jeffries et al., 2017). Research with Black men who have sex with men and women has found both that sexual stigma plays a key role in sexual risk among this population and that there is a need for further studies about the social and structural contexts that inform individual sexual risk behaviors (Jeffries, Marks, Lauby, Murrill, & Millett, 2013; Joseph et al., 2017).

These analyses point to a specific pathway of disclosure inhibition through which stigma impacts sexual risk between behaviorally bisexual Black men and their female partners. Men who have higher levels of stigma with regard to their sexual relationships with men likely experience more challenges with disclosing these relationships due to their desire to maintain them in light of an anticipated negative response on the part of their female partners. Not using condoms, then, becomes a form of expressing the heteronormative parameters of men's sexual relationships with women in the context of internalized stigma and societal heteronormativity and biphobia. To use condoms could potentially present a challenge to the relationship that the man seeks to maintain. Through impacting men's ability to feel comfortable disclosing their sexual relationships with men with their female partners, sexual stigma serves as a threat to both men's and women's health.

By pointing to a pathway between structural conditions of stigma and HIV risk, findings indicate the need for HIV prevention efforts that address sexual stigma in order to promote sexual health among Black bisexual men. In order to address the social and structural contexts of stigma, these prevention efforts must be structurally competent to adequately address the larger societal forces conditioning Black bisexual men's risk. Structural competency is a framework that recognizes the role of systemic factors—including racism, economic

inequities, and stigma—in contributing to illness and the need to address these systemic factors to sustain health (Metzl & Hansen, 2014). There is growing work to address the health and prevention needs of LGBTQ communities, including Black gay and bisexual men, in a structurally competent manner (Donald et al., 2017). HIV prevention efforts must present structurally competent approaches to reducing sexual stigma in order to prevent HIV and promote the health and well-being of Black bisexual men and their partners.

While perceptions of white LGBTQ sexuality may have shifted through the gay marriage movement in the U.S. over the past decade (Reddy, 2016)—and the not insignificant shifts in legal recognition of LGBTQ partnerships through legalized marriage—these findings indicate the persistence of bisexual stigma, in particular for this sample of Black men. As such, it is even more critical to conduct anti-stigma work to address the sources of sexual stigma, and their intersections with racism, that impact Black bisexual men's sexual health and well-being (Bowleg, 2013; Mackenzie, 2013). These findings underscore but one avenue through which social and structural factors, in particular sexual stigma, condition risk environments for Black bisexual men and their female partners (Bowleg & Raj, 2012).

Limitations

This was a cross-sectional study, so we can only claim statistical associations, not causal inferences, between the predictors and outcomes. As a convenience sample, these findings do not reflect estimates of the population. While we collected data from behaviorally bisexual men and women who are partnered with them, men and women were recruited separately, so only a few participants in the study were in dyads (i.e., partners). Dyadic data would allow us to understand the actor-partner effect, meaning that we would be able to conduct analyses of the predictor with the outcome considering partner-specific data. As a result, we could not explore the female primary partner's knowledge and attitudes toward the participant's bisexuality and how these may have influenced (or did not influence) the couple's sexual behaviors. Future research to enhance relationship understandings of behaviorally bisexual men's sexual relationships with their female partners could generate a dyadic sample; however, issues of stigma and disclosure would likely affect the sampling and render it challenging to generate a sample of men and women together.

The use of the stigma measures validated in either gay populations (internalized homophobia) or in bisexual communities (bisexual identity) may have limited construct validity for a population of Black behaviorally bisexual men. While these scales were validated for use in gay and bisexual communities, this study sample comprises Black behaviorally bisexual men, for whom internalized homophobia may not be

as salient. Conversely, the bisexual identity questions may not be salient for a non-identified sample of behaviorally bisexual men. These measures do not assess experienced or anticipated stigma, but rather capture dimensions of internalized stigma. This research sought to develop measures specific to a sample of non-identified bisexual Black men to consider their stigma consciousness, and validated measures may have limited relevance for this population of men. An additional limitation of this research that understands the close relationship between experiences of sexual and racial stigma is that analyses did not use an intersectional approach in quantitative analyses and did not include assessments of racial stigma.

This article does not assess the difficulty that men may have disclosing opposite-sex partners to their male partners and the effects of this on condomless sex with male partners. Prior qualitative findings have indicated that gendered contexts of disclosure of opposite-sex partners to male partners, indicating that these constructs of disclosure may operate differently according to partner gender and that men may disclose opposite-sex partners to their male partners as an affirmation of their masculinity (Mackenzie, 2018).

Conclusion

This research aims to provide data necessary for culturally relevant HIV prevention interventions for behaviorally bisexual Black men and for the women who are partnered with them. This study provides increased evidence for the need for structural-level interventions that transform the social, economic and political contexts in which individual behaviors take place and that specifically address sexual stigma and its threat to the health and well-being of behaviorally bisexual Black men and their female partners. Focusing primarily on interpersonal disclosure of bisexual identity as a key to HIV prevention obscures the cultural and structural influences on these relationships and the sexual stigma that can present a barrier to disclosure. These findings point to the central role of bisexual stigma as the context for disclosure of sex with men and, further, the impact of this on sexual risk with primary female partners among Black behaviorally bisexual men.

In order to construct effective HIV prevention programs, we must understand—and address—the structural constraints on disclosure and condom use among Black behaviorally bisexual men. Structural interventions to address HIV among Black men include improving socioeconomic outcomes, increasing access to housing, building access to and utilization of stigma-free sexual health services, and developing safe spaces for Black MSM (Brewer et al., 2019). This article recommends addressing the structural inequalities that condition experiences of daily life in which HIV risk takes place, in particular by working to reduce sexual stigma in health and

institutional contexts for both bisexual men and their partners and thereby supporting the relational contexts of stigma.

Structural barriers to HIV prevention must be addressed through developing anti-stigma prevention campaigns that pro-actively work to acknowledge and reduce bisexual stigma. These findings are a call to apply the framework of structural competency to sexual health programs for behaviorally bisexual Black men as well as clinical contexts that support the health of sexual minorities. Further, HIV prevention interventions, including stigma reduction programs, must target both men and women to effectively address the relationship contexts of HIV, understanding that the impacts and health consequences of sexual stigma are felt not only individually, but also relationally. The emphasis on behaviorally bisexual Black men's presumed failure to disclose bisexual behavior to female partners places further blame on an already stigmatized community, and further contributes to bisexual stigma. Effective public health and HIV prevention efforts must move beyond individual narratives of blame and attribution to broader, community-centered anti-stigma campaigns that center the intersections of racism and sexual stigma for health equity.

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Compliance with Ethical Standards

Conflict of interest The authors have no conflict of interest to report.

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Informed Consent Informed consent was received from each study participant.

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