



Sex-Positivity, Medical Mistrust, and PrEP Conspiracy Beliefs Among HIV-Negative Cisgender Black Sexual Minority Men in Atlanta, Georgia

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Abstract

Because the public health response to the disproportionate HIV burden faced by Black sexual minority men (BSMMM) has focused on sexual risk reduction and disease prevention, other vital components of sexual health (e.g., intimacy, pleasure, benefits of sex) have been often overlooked. Sex-positive describes a more open, holistic approach toward sex and sexuality that prioritizes these other components, though such an approach is rarely applied to BSMMM's sexual health. For sex-positive BSMMM, risk/preventive discourse may foster or exacerbate medical mistrust as a reaction to the dissonance between how these men view sexual health and how the medical establishment views it, which may discourage sexual healthcare-seeking. We assessed sex-positivity and its association with medical mistrust and PrEP conspiracy beliefs among 206 HIV-negative cisgender BSMMM in Atlanta, Georgia. We performed exploratory factor analytic procedures on responses to a sex-positivity scale, followed by multivariable linear regressions to determine sex-positivity's associations with medical mistrust and PrEP conspiracy beliefs. We extracted two sex-positivity factors: sexual freedom ($\alpha = 0.90$), reflecting openness toward casual sex and rejection of sexual mores, and essence of sex ($\alpha = 0.77$), reflecting the intimate, relational, and pleasurable qualities of sex. Sexual freedom was independently associated with perceived provider deception ($\beta = 0.19$, CI = 0.04, 0.34). Essence of sex was independently associated with PrEP conspiracy beliefs ($\beta = 0.16$, CI = 0.02, 0.31) and marginally associated with perceived provider deception ($\beta = 0.14$, CI = -0.00, 0.29). Healthcare providers and public health practitioners may cultivate greater trust with BSMMM by incorporating a sex-positive approach into patient/participant interactions, clinical decision-making, and interventions. Improving access to sexual pleasure acknowledges BSMMM's right to optimal, holistic sexual health.

Keywords Black sexual minority men · Sex-positivity · Medical mistrust · PrEP · Sexual orientation

Introduction

In the United States (US), Black sexual minority men (BSMM) have been disproportionately impacted by HIV/AIDS since the epidemic first emerged (CDC, 1986, 2020; Samuel &

Winkelstein, 1987), and recent epidemiologic models estimate that 1 in 2 BSMM could contract HIV in their lifetime (CDC, 2016). Public health approaches to BSMM's sexual health have consequently centered on identifying and mitigating HIV risk factors and preventing HIV transmission. However, this risk/prevention focus has excluded other vital aspects of sexual health such as intimacy and pleasure (WAS, 2014; WHO, 2020), helping shape the discourse—i.e., system of meaning, knowledge, and practices that permeate and structure a social space and the language and power relations within it (Weedon, 1997)—on how BSMM as a population and their sexual health needs are conceptualized, discussed, and approached (Boone & Bowleg, 2020; Bowleg et al., 2017; Lewis, 2004). Considering the legacy of enslavement, racialization, and fetishization of Black male bodies in the US, as well as other discourses under which BSMM operate [e.g., hegemonic masculinity and heteronormativity in Black communities and in society more broadly (Wilson, 2008)],

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this risk/preventive discourse may reinforce negative cultural narratives and stereotypes of Black male sexuality as unfettered, dangerous, and deviant (Boone & Bowleg, 2020; Bowleg et al., 2017; Collins, 2004; Lewis, 2004).

This contrasts with eudemonic discourse, which centers attainment of sexual pleasure and the mental and physical health benefits of sex (Lewis, 2004). Eudemonic discourse aligns with sex-positivity, which is characterized by an open, nonjudgmental, value-neutral approach to sexuality that acknowledges, respects, and supports sexual diversity, personal choice and empowerment, pleasure and satisfaction, and beneficial contributions of sex to personal growth, well-being, and fulfillment (Bullough, 1980; Glickman, 2000; Williams et al., 2015). Eudemonic discourse and a sex-positive approach to Black male sexuality are largely absent from academia and healthcare delivery contexts (Bowleg et al., 2017; Lewis, 2004). However, issues of sexual pleasure among Black and other sexual minority men have received increasing attention in recent years (Martos et al., 2016). In fact, views indicative of sex-positivity among Black men have been documented (Bowleg et al., 2017), and though literature on the subject remains sparse (Bowleg et al., 2017), the presence, importance, and benefits of sexual pleasure have been reported among BSMM (Calabrese et al., 2015; Martos et al., 2016; Rosenberger et al., 2014). Other attention has been paid to HIV pre-exposure prophylaxis (PrEP) (Dehlin et al., 2019; Grant & Koester, 2016; Mabire et al., 2019; Race, 2016), though it remains largely conceptualized as a risk-mitigation and HIV-prevention tool rather than a facilitator of greater intimacy and sexual pleasure (Race, 2016), despite the myriad benefits of good sexual health to overall quality of life and well-being (2013b; Anderson, 2013; Syme et al., 2013a), and the growing calls for public health and the medical establishment to integrate pleasure into sexual healthcare (Boone & Bowleg, 2020; GAB, 2020; Gruskin et al., 2019; Land, 2020; Mofokeng, 2020). Research focused on sex-positivity among BSMM is needed, not only to provide a better understanding of the nature and dimensions of sex-positivity in this population, but also to support a more culturally tailored response to their sexual healthcare needs and address potential sexual healthcare access barriers, which may vary in important ways from those of other SMM.

Barriers such as medical mistrust and conspiracy beliefs may be especially relevant to sex-positivity. US healthcare and medical research enterprises have extensive, shameful histories of systematic exploitation, mistreatment, and neglect of Black individuals (Boone & Bowleg, 2020; Gamble, 1997; Washington, 2006), reinforced by a health system that continues to be plagued with systemic and interpersonal discrimination (Scharff et al., 2010), fueling suspicion, fear, and mistrust of

healthcare providers, treatments, and the health system more broadly (LaVeist et al., 2000). Medical mistrust is highly prevalent among Black men (Hammond et al., 2010), and a prior study with BSMM in particular, including those at elevated risk for HIV and those living with HIV, found that a near majority of participants distrusted the medical establishment and that such distrust was linked to delays in HIV-related and other medical care (Eaton et al., 2015). Conspiracy beliefs are also highly prevalent in Black communities (Bogart & Thorburn, 2005; Bogart et al., 2010; Hutchinson et al., 2007). Conspiracy beliefs related to HIV and HIV-related treatment have been widely documented, acted as barriers to healthcare, and negatively impacted HIV-related outcomes in Black communities, including BSMM communities (Bogart & Thorburn, 2005; Bogart et al., 2010; Brooks et al., 2018; Hutchinson et al., 2007; Maulsby et al., 2014). Research has uncovered similar beliefs regarding PrEP among Black and other sexual minority men, which may similarly act as barriers to PrEP uptake (Eaton et al., 2017; Mutchler et al., 2015; Parent et al., 2020; Quinn et al., 2019).

Sex-positive BSMM may experience dissonance in sexual healthcare interactions with providers who operate under a risk/preventive discourse, contributing to medical mistrust or preventing cultivation of trust. Research with Black and other sexual minority male populations has demonstrated how risk/prevention-based sexual norms and judgmental attitudes from providers and peers may negatively impact sexual healthcare experiences (Bailey, 2016; Mabire et al., 2019; Quinn et al., 2019). Similarly, sex-positive BSMM may view PrEP as representative of the risky rather than pleasurable aspects of sex, which is at odds with sex-positivity (Quinn et al., 2019; Race, 2016), and may feel negatively stereotyped based on the way in which providers address sex and PrEP issues (Quinn et al., 2019), which may contribute to conspiracy beliefs. These potential links warrant investigation.

Study Objectives

The objectives of this analysis were to characterize the extent, nature, and dimensions of sex-positivity and its associations with medical mistrust and PrEP conspiracy beliefs in a sample of HIV-negative cisgender BSMM in the South. Findings can provide an introductory glimpse into sex-positivity among BSMM, support calls for incorporating pleasure-focused approaches into public health research and practice, and lay groundwork for future scholarship and intervention development that targets healthcare systems and providers to adopt more balanced approaches to providing sexual healthcare services to BSMM.

Methods

Participants and Procedures

Participants ($N = 216$) resided in the Atlanta metro area where the study research site was located. Study activities included participation in a survey assessment where data were collected using REDCap. Survey administration occurred from October 2019 to September 2020 during the baseline assessment of a larger, ongoing behavioral intervention for promoting PrEP uptake. Participants were recruited from online social media platforms (e.g., Facebook, Instagram) and participant referrals. All participants were screened for study eligibility which included: ≥ 18 years of age, assigned male sex at birth, identifying as Black/African American, reporting condomless sex with male partners in the past six months, and no current PrEP use. All participants provided written informed consent, and all study activities were approved by the University of Connecticut Institutional Review Board. Participants were compensated \$30 for participation in the study.

Exposure Variable

Sex-Positivity

We used a 14-item adapted version of the Brief Sexual Attitudes Scale (BSAS) to assess sex-positivity (Hendrick et al., 2006). Items were declarative statements pertaining to different aspects of sex (e.g., “Life would have fewer problems if people could have sex more freely”), and respondents indicated the extent to which they agreed or disagreed on a 6-point Likert scale. Response options ranged from strongly disagree (1) to strongly agree (6). Internal consistency was excellent ($\alpha = 0.90$).

Outcome Variables

Medical Mistrust

We assessed medical mistrust with ten items. Four items consisting of declarative statements regarding public mistrust of providers and medicine (e.g., “People should be suspicious of medicine”) were adapted from the Group-Based Medical Mistrust Scale (Thompson et al., 2004). Six items comprised of declarative statements regarding deceptive practices by providers (e.g., “When healthcare providers make mistakes, they usually cover it up”) and personal trust in providers (e.g., “I trust that healthcare providers are giving me the best treatment available”) were adapted from the Medical Mistrust Index (LaVeist et al., 2000). Respondents indicated the extent to which they agreed or disagreed with each statement on a 6-point Likert scale. Response options ranged from strongly

disagree (1) to strongly agree (6). For analysis, the items regarding personal trust in providers were reverse-coded. Internal consistency was good ($\alpha = 0.87$).

PrEP Conspiracy Beliefs

PrEP conspiracy beliefs were assessed with three items adapted from HIV/AIDS conspiracy items (Bogart & Thornburn, 2005) and community feedback. Items were declarative statements regarding the disclosure of PrEP-related information (e.g., “Medical providers cannot be fully trusted to tell the truth about PrEP”). Respondents indicated the extent to which they agreed or disagreed with each statement on a 6-point Likert scale. Response options ranged from strongly disagree (1) to strongly agree (6). Internal consistency was good ($\alpha = 0.85$).

Control Variables

Physical Examination Engagement

Participants were asked when they last had a physical examination by a doctor or nurse and selected one of five response options: “past six months,” “past year,” “past two years,” “past five years,” and “more than five years.” For analysis, a binary variable was created to indicate lack of having had a physical examination during the past year (coded 1) or not (coded 0).

Depression

Given its negative relationship with libido, depression was included as a control variable (Arborelius et al., 1999; Hartmann, 2007; Phillips & Slaughter, 2000). Depression was determined by the Center for Epidemiological Studies Depression Scale (CES-D 10), which was comprised of eight statements that described experiencing a depressive symptom during the past week (e.g., “In the past week, I was bothered by things that usually do not bother me”) and two statements that described experiencing a positive mood symptom during the past week (e.g., “In the past week, I was happy”) (Björgevinnsson et al., 2013; Radloff, 1977). Respondents indicated the number of days they experienced each symptom on a four-point Likert scale. Response options ranged from “0 days” (0) to “5–7 days” (3). For analysis, items reflecting positive mood symptoms were reverse-coded. For each participant, a total depression score was calculated by summing item responses to arrive at a composite score, with a score of ≥ 10 being indicative of depression ($\alpha = 0.85$; Andresen et al., 1994). A binary variable was then created to indicate whether participants screened positive for depression (coded 1) or not (coded 0).

Sociodemographic Characteristics

Age was measured in self-reported years. Participant education was assessed with five response options: “less than high school,” “high school,” “some college,” “college degree,” and “graduate school.” For analysis, three education categories were created: high school or less, some college, and college or higher. Employment status was measured with six options: “unemployed,” “working part-time,” “working full-time,” “on disability,” “student,” and “other.” For analysis, four categories were created: employed (part/full-time) nonstudents; unemployed nonstudents; employed (part/full-time) and unemployed students; and those reporting a disability or other/unspecified employment status. Income was measured using seven response options: “\$0–10,000,” “\$11–20,000,” “\$21–30,000,” “\$31–40,000,” “\$41–50,000,” “\$51–60,000,” and “≥ \$61,000.” For analysis, three categories were created: ≤ \$10,000, \$11–40,000, and ≥ \$41,000. Sexual identity was assessed with four options: “same-gender loving,” “gay or homosexual,” “bisexual,” or “heterosexual.” Outness was assessed with three response options: “definitely closeted (not open about sexual orientation),” “closeted some of the time and out some of the time,” and “definitely out (open about sexual orientation all of the time).” Sexual identity and outness were unchanged for analysis.

Statistical Analysis

We assessed item-level missingness of our sex-positivity scale. Next, as we found no prior literature on use of the scale with BSMM, and because we used an abbreviated, adapted version of the scale, we performed exploratory factor analytic procedures on the scale. Specifically, the Kaiser–Meyer–Olkin (KMO) test of sampling adequacy was calculated to assess the suitability for factor analysis (KMO ≥ 0.50 indicates adequate sampling to detect underlying factors) (Kaiser, 1974; Tabachnick & Fidell, 2013). A polychoric correlation matrix was generated given ordinal response options, upon which a principal components analysis was conducted. Next, a scree plot was generated, and a parallel analysis was performed. The number of factors to extract in exploratory factor analysis (EFA) with promax factor-rotation (to allow for correlation of factors) and iterative principal factor estimation (due to nonmultivariate normal data) was determined based on the principal components analysis, scree plot, parallel analysis, and scientific interpretation. Factor loadings ≥ 0.40 in the selected model were retained. Items with low factor loadings (< 0.40) or cross-loadings (items that loaded strongly and similarly onto multiple factors, i.e., with a difference of ≤ 0.20 and where at least one loading ≥ 0.40) were removed (Matsunaga, 2010). Final model selection was based on factor loadings, interpretability, and parsimony. Cronbach’s alpha and inter-item

correlations were calculated to assess the internal consistency of each factor. The same factor analytic procedures were performed on the medical mistrust items, as they were drawn from two separate scales. Factor analytic procedures were not performed on the PrEP conspiracy beliefs scale, as it consisted of only three items.

Mean sex-positivity factor scores, medical mistrust factor scores, and PrEP conspiracy beliefs scale scores were calculated by summing item responses and dividing by the number of nonmissing responses on each extracted factor/scale, respectively, for each participant (range = 1–6). Higher scores indicated greater sex-positivity, medical mistrust, and PrEP conspiracy beliefs.

Mean sex-positivity factor scores were modeled as exposures, and mean medical mistrust factor scores and PrEP conspiracy beliefs scale scores were modeled as outcomes. Bivariate linear regressions were performed between each outcome and control variable, and between each outcome and exposure. Multivariable linear regressions were performed for bivariate associations ($p < 0.10$) between each exposure and outcome, with the inclusion of control variables that also had bivariate associations ($p < 0.10$) with the outcome. Wald tests, with statistical significance set at $\alpha = 0.05$, and 95% confidence intervals (CI) were calculated and examined. All analyses were conducted in Stata Version 15 (College Station, Texas).

Results

Study Sample

A total of 216 participants enrolled in the study. Eight participants who did not identify as a cisgender man, one participant who did not complete the sex-positivity scale, and one participant who did not complete the PrEP Conspiracy Beliefs scale were excluded, leaving 206 participants for analysis. Mean age was 35 years (SD = 10.39), with nearly half (99/206) reporting age between 25 and 34 years. Forty percent (83/206) had completed college or post-graduate studies, and roughly 70% (144/206) were employed and/or students. Three in four (153/206) identified as gay, homosexual, or same-gender loving, and over half (114/206) reported they were “definitely out” about their sexuality. Roughly one-third had not had a routine physical examination within the past year (66/206) and screened positive for depression (70/206) (Table 1).

Exploratory Factor Analyses

The KMO measure of sampling adequacy was > 0.80 for our sex-positivity scale, indicating suitability for factor analysis. Principal components analysis revealed two

Table 1 Sociodemographic characteristics, routine medical care engagement, and clinically significant depressive symptoms among cisgender BSMM in Atlanta, GA, 2019–2020 ($N=206$)

Mean age, (SD)	35.12 (10.39)
Median age, (IQR)	32.00 (28–39)
<i>Age categories</i>	
18–24 years	20 (9.71)
25–34 years	99 (48.06)
35–44 years	41 (19.90)
45–54 years	24 (11.65)
55+	14 (6.80)
Missing	8 (3.88)
<i>Education</i>	
≤High school	50 (24.27)
Some college	73 (35.44)
≥College	83 (40.29)
<i>Employment status</i>	
Employed, nonstudent	128 (62.14)
Unemployed	43 (20.87)
Disability, Other	17 (8.25)
Student, un/employed	16 (7.77)
Missing	2 (0.97)
<i>Income</i>	
≤\$10,000	63 (30.58)
\$11,000–40,000	96 (46.60)
≥\$41,000	43 (20.87)
Missing	4 (1.94)
<i>Sexual identity</i>	
Gay or homosexual	120 (58.25)
Bisexual	46 (22.33)
Same-gender loving	33 (16.02)
Heterosexual	4 (1.94)
Missing	3 (1.46)
<i>Outness</i>	
Definitely closeted	16 (7.77)
Closeted and out	76 (36.89)
Definitely out	114 (55.34)
<i>Lack of past-year physical examination</i>	
Yes	66 (32.04)
No	139 (67.48)
Missing	1 (0.49)
<i>Depression</i>	
Yes	70 (33.98)
No	136 (66.02)

eigenvalues > 1.00 , accounting for 64% of the variance, and parallel analysis suggested extracting two factors. Based on the 2-factor model from EFA, factor 1 consisted of 9 items and was named *sexual freedom*, reflecting openness toward casual sex. Factor 2 consisted of 4 items and was named *essence of sex*, reflecting core characteristics of sex. Loadings for item 7, “The best sex is with no strings attached,” were

low and cross-loaded (factor 1, 0.3689; factor 2, 0.2654; not displayed), and this item was consequently removed. *Sexual freedom* and *essence of sex* were moderately correlated (0.53). *Sexual freedom* had excellent internal consistency ($\alpha=0.90$), and *essence of sex* had acceptable internal consistency ($\alpha=0.77$) (Table 2).

The KMO measure of sampling adequacy was > 0.65 for our combined medical mistrust scale, indicating suitability for factor analysis. Principal components analysis revealed three eigenvalues > 1.00 , accounting for 81% of the variance, and parallel analysis suggested extracting two to three factors. We extracted three because a third factor would account for an additional 10.31% of the variance and because three factors more accurately reflected the constructs assessed by the scales. Based on EFA with a 3-factor model, Factor 1 consisted of three items and was named *perceived provider deception*, reflecting a belief that providers act deceitfully. Factor 2 consisted of four items and was named *public mistrust of healthcare*, reflecting a belief that people in general should not trust providers. Factor 3 consisted of three items and was named *personal mistrust of providers*, reflecting participants’ own mistrust of providers. There were no low loadings or cross-loadings. *Perceived provider deception* was moderately correlated with *public mistrust of healthcare* (0.51) and *personal mistrust of providers* (0.56); *public mistrust of healthcare* was marginally correlated with *personal mistrust of providers* (0.30). *Perceived provider deception* ($\alpha=0.86$), *public mistrust of healthcare* ($\alpha=0.81$), and *personal mistrust of providers* ($\alpha=0.88$) each had good internal consistency (Table 3).

Regression Analyses

Significant, positive bivariate associations were found between *sexual freedom* and *perceived provider deception* ($\beta=0.23$, $CI=0.08, 0.38$), *essence of sex* and *perceived provider deception* ($\beta=0.15$, $CI=0.00, 0.30$), and *essence of sex* and PrEP conspiracy beliefs ($\beta=0.17$, $CI=0.02, 0.32$). A marginally significant, positive bivariate association was found between *sexual freedom* and PrEP conspiracy beliefs ($\beta=0.15$, $CI=-0.00, 0.31$). In adjusted analyses, *sexual freedom* remained significantly, positively associated with *perceived provider deception* ($\beta=0.19$, $CI=0.04, 0.34$) but not with PrEP conspiracy beliefs ($\beta=0.13$, $CI=-0.03, 0.28$). *Essence of sex* remained significantly, positively associated with PrEP conspiracy beliefs ($\beta=0.16$, $CI=0.02, 0.31$) and marginally, positively associated with *perceived provider deception* ($\beta=0.14$, $CI=-0.00, 0.29$) (Table 4).

A marginally significant, positive bivariate association was found between *essence of sex* and *personal mistrust of providers*. However, regression diagnostics indicated non-normality of residuals. As a result, several variable transformations and alternative regressions were performed, and no

Table 2 Item means, promax-rotated factor loadings, and scale and factor properties of a 2-factor solution of sex-positivity among cisgender BSMM in Atlanta, GA, 2019–2020 ($N=206$)

Items	Item means (SD)	Factor loadings	
		Sexual freedom	Essence of sex
I do not need to be committed to a person to have sex with them	4.26 (1.83)	0.7992	−0.1503
Casual sex is acceptable	4.64 (1.61)	0.8369	−0.0571
I would like to have sex with many partners	2.48 (1.74)	0.6150	0.0498
One-night stands are sometimes very enjoyable	4.26 (1.75)	0.7099	0.0803
It is okay to have ongoing sexual relationships with more than one person at a time	3.44 (1.88)	0.7759	−0.0753
Sex as a simple exchange of favors is okay if both people agree to it	3.38 (2.03)	0.6058	−0.0250
The best sex is with no strings attached	2.86 (1.82)	–	–
Life would have fewer problems if people could have sex more freely	3.33 (1.95)	0.5673	0.2481
It is possible to enjoy sex with a person and not like that person very much	3.54 (1.90)	0.5848	0.1343
It is okay for sex to just be a good physical release	4.38 (1.77)	0.6409	0.2023
Sex is the closest form of communication between two people	3.61 (2.01)	−0.0110	0.6171
Sex is a very important part of my life	4.70 (1.60)	0.1610	0.4388
Sex is best when you let yourself go and focus on your own pleasure	3.73 (1.85)	−0.1265	0.8626
Sex is primarily a bodily function, like eating	3.55 (1.85)	0.0903	0.7559
Factor properties			
Mean (SD)	–	3.75 (1.35)	3.90 (1.41)
Median	–	3.89	4.00
Range	–	1–6	1–6
Cronbach's alpha (inter-item correlation)	–	0.90 (0.49)	0.77 (0.46)
Correlation between factors			
Sexual freedom	–	1.00	–
Essence of sex	–	0.5302	1.00

Bolded values indicate factor loadings ≥ 0.40

significant bivariate associations between *personal mistrust of providers* and either sex-positivity factor were found (Supplemental Table 1).

Sensitivity Analysis

We performed one sensitivity analysis in which we removed sex-positivity items with a uniqueness ≥ 0.60 , removed any items that cross-loaded because of this removal of high-uniqueness items, and reran factor analytic procedures. The same two factors emerged: *sexual freedom*, comprised of items 1, 2, 4, and 10, and *essence of sex*, comprised of items 13 and 14. Multivariable linear regressions between these factors and the outcomes yielded associations comparable to those in the main analysis, leaving most inferences unchanged. However, *sexual freedom* was found to be significantly, positively associated with PrEP conspiracy beliefs ($\beta=0.15$, $CI=0.01, 0.29$), which was not found in the main analysis (Supplemental Table 2).

Discussion

In this exploratory study, we sought to characterize the features and extent of sex-positivity in a nonprobability sample of urban, HIV-negative, cisgender BSMM, as well as determine associations between sex-positivity and various manifestations of medical mistrust. We found two latent constructs underlying sex-positivity—*sexual freedom* and *essence of sex*—and documented sizable proportions of our sample endorsing high levels of each factor. We also demonstrated links between each sex-positivity factor, and *perceived provider deception* and PrEP conspiracy beliefs.

Sexual freedom was comprised of items reflecting the acceptability of/desire for casual sex and nonmonogamy, as well as the utility of sex, reflecting a rejection of sexual mores, particularly those that have been prominent in HIV-prevention messaging (Shelton et al., 2004). Risk/preventive discourse has often identified the practices reflected in *sexual freedom* as risky for BSMM, with research often being framed to show the burden of these practices and their implications for HIV/STI transmission (Duncan et al., 2020; Kelly et al., 2013; Liu et al., 2013; Pines et al., 2017; Rosenberg

Table 3 Item means, promax-rotated factor loadings, and scale and factor properties of medical mistrust, and scale and factor properties of PrEP conspiracy beliefs among cisgender BSMM in Atlanta, GA, 2019–2020 ($N=206$)

Items	Item means (SD)	Factor loadings			Scale properties PrEP conspiracy beliefs
		Perceived provider deception	Public mistrust of healthcare	Personal mistrust of providers	
People cannot trust doctors and healthcare workers	2.26 (1.49)	−0.0412	0.7709	0.1194	–
People should be suspicious of information from doctors and healthcare workers	2.36 (1.51)	0.0382	0.9453	−0.0542	–
People should not confide in doctors and healthcare workers because it will be used against them	1.76 (1.22)	−0.0263	0.7061	0.0520	–
People should be suspicious of medicine	2.83 (1.75)	0.1282	0.6704	−0.0859	–
Patients have sometimes been deceived or misled by healthcare providers	3.03 (1.83)	0.6609	0.0477	0.0546	–
I trust that healthcare providers are giving me the best treatment available	2.19 (1.49)	−0.1160	0.0476	0.8982	–
I trust that healthcare providers have my best interest in mind when treating me	2.18 (1.52)	0.0334	−0.0739	1.0215	–
When healthcare providers make mistakes, they usually cover it up	3.34 (1.65)	0.7050	0.0285	0.0274	–
Healthcare providers have sometimes done harmful things to patients without their knowledge	3.57 (1.85)	0.8631	0.0098	−0.0684	–
I trust that healthcare providers will tell me if a mistake is made regarding my medical treatment	2.58 (1.63)	0.1323	0.0964	0.5688	–
Medical providers cannot be fully trusted to tell the truth about PrEP	2.79 (1.77)	–	–	–	–
Drug companies cannot be trusted to provide accurate information about PrEP	3.16 (1.79)	–	–	–	–
Information on PrEP side effects is being withheld from the public	2.90 (1.74)	–	–	–	–
Factor and scale properties					
Mean (SD)	–	3.32 (1.51)	2.30 (1.25)	2.32 (1.38)	2.96 (1.55)
Median	–	3.33	2.00	2.00	2.83
Range	–	1–6	1–6	1–6	1–6
Cronbach's alpha (inter-item correlation)	–	0.86 (0.60)	0.81 (0.58)	0.88 (0.70)	0.85 (0.66)
Correlations among medical mistrust factors					
Perceived provider deception	–	1.00	–	–	–
Public mistrust of healthcare	–	0.51	1.00	–	–
Personal mistrust of providers	–	0.56	0.30	1.00	–

Factor analytic procedures were not performed on the four-item PrEP conspiracy beliefs scale, hence the lack of factor loadings

Bolded values indicate factor loadings ≥ 0.40

et al., 2012; van den Boom et al., 2012). However, our findings show that such practices constitute an important dimension of participants' sex lives. *Essence of sex* was comprised of items reflecting attributes of sex, i.e., as intimate, relational, natural, and pleasurable. Similar characterizations have been described in other work with sexual minority men, reflecting how such communities create their own "Ideology of the Erotic" and exercise erotic autonomy when their sexual health views and priorities are not represented in hegemonic sexual health discourse (Bailey, 2016; Carrillo, 2002; Gagnon & Simon, 1973; Parker, 2009, p. 111; Watney, 1996).

These characterizations contrast with those of risk/preventive discourse, where sex is approached as a set of rational, behavioral acts (Petersen & Lupton, 1996; Race, 2016), and pleasure-motivated sexual behaviors in particular are framed as risks for morbidity and mortality (Klein & Tilley, 2012; Vosvick et al., 2016). Efforts to incorporate conceptions of sex represented in these factors into conceptions of sex in public health and healthcare can help shape a more balanced, inclusive sexual health discourse (Boone & Bowleg, 2020; Mabire et al., 2019). Along with enhancing understanding of sex-positivity and the broader sexual health needs of this

Table 4 Unadjusted and adjusted betas with 95% confidence intervals (CIs) of the relationship between sex-positivity factors and medical mistrust and PrEP conspiracy beliefs among cisgender BSMM in Atlanta, GA, 2019–2020 ($N=206$)

	Sexual freedom		Essence of sex	
	Unadjusted beta (95% CI)	Adjusted beta (95% CI)	Unadjusted beta (95% CI)	Adjusted beta (95% CI)
Perceived provider deception	0.23*** (0.08, 0.38)	0.19***^a (0.04, 0.34)	0.15** (0.00, 0.30)	0.14* ^a (−0.00, 0.29)
Public mistrust of healthcare	0.10 (−0.02, 0.23)	–	0.07 (−0.05, 0.19)	–
Personal mistrust of providers	−0.03 (−0.16, 0.12)	–	−0.11* (−0.25, 0.02)	−0.11 ^b (−0.25, 0.03)
PrEP conspiracy beliefs	0.15* (−0.00, 0.31)	0.13 ^c (−0.03, 0.28)	0.17** (0.02, 0.32)	0.16***^c (0.02, 0.31)

Bolded values indicate associations significant at $p < 0.05$ or lower

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; beta coefficients of “0.00” or “−0.00.” value were very small and could not be appropriately rounded to two decimal places

^aControlling for education, past-year physical examination, outness, and depression

^bControlling for income, outness, and depression

^cControlling for past-year physical examination, outness, and depression

population, additional quantitative and qualitative research on these constructs would communicate that BSMM’s sexual pleasure—not only their risk—matters and is prioritized, as would interventions (e.g., sexual risk-reduction), provider interactions, and public health messages that address intimacy and pleasure as key components of sexual health. Collaborative research and intervention-development with BSMM communities will be necessary in these efforts.

The link between *sexual freedom* and *perceived provider deception*, as well as *essence of sex* and *perceived provider deception*, may reflect the opposing risk/preventive and eudemonic discourses underlying sex-positivity and healthcare. A sex-positive approach acknowledges and respects an individual’s sexual choices, expressions, and pleasures, including those that traditionally have been stigmatized as risky, unnatural, or promiscuous, especially for BSMM, including casual sex, nonmonogamy, and sex for sex’s sake (Bowleg et al., 2017; Bullough, 1980; Rubin, 1984; Williams et al., 2015). Sex-negative messaging from providers, or messaging exclusively focused on risk-mitigation and HIV-prevention, may foster dissonance among sex-positive BSMM that in and of itself may deter uptake of sexual healthcare recommendations or treatment, or discourage future healthcare-seeking. Such dissonance may also contribute to beliefs that providers are deceitful toward patients. Alternatively, sex-positive BSMM may perceive providers as perpetuating sex-negative narratives that stigmatize Black and/or same-sex sexuality, fostering mistrust as a result (Bailey, 2016; Quinn et al., 2019). Healthcare systems could use tools such as those developed by the Global Advisory Board for Sexual Health and Wellbeing that align with a sex-positive approach, are grounded in a sexual rights framework, and

balance prevention with pleasure to train providers in sexual healthcare (GAB, 2020; Gruskin et al., 2019).

Positive associations were also found between *essence of sex* and PrEP conspiracy beliefs, as well as *sexual freedom* and PrEP conspiracy beliefs, which may also be explained by opposing discourses as described previously. Sex-positivity aligns with eudemonic discourse in which sexual pleasure and sexual freedom are centered (Lewis, 2004), whereas PrEP has primarily been aligned with risk/preventive discourse (Myers & Mayer, 2011; Remy & Enriquez, 2019; Reyniers et al., 2017; Young & McDaid, 2014; Calabrese & Underhill, 2015). PrEP uptake and sex-positivity may therefore be inherently at odds with one another: PrEP uptake signals the medicalization of sex and acknowledgment of oneself as a “subject of risk” who will participate in “socially unsanctioned sex,” contradicting a sex-positive perspective (Race, 2016, pp. 17, 20). Dissonance as a result of this disconnect, coupled with preexisting medical mistrust, may increase the likelihood of endorsing conspiracy beliefs, which may also fit with historical examples of the medical establishment’s attempt to control Black male sexuality (Bowleg et al., 2017; Washington, 2006). Therefore, incorporating a sex-positive approach into PrEP messaging and PrEP interventions, as well as physician interactions with patients regarding PrEP, in which the focus is more holistic with regard to sexual health (e.g., with attention to intimacy and pleasure issues) and less HIV-centric, may be valuable.

Our findings should be interpreted considering several limitations. Our sex-positivity scale was adapted from a preexisting sexual attitudes scale that was not designed to measure sex-positivity or to assess sexual attitudes among BSMM. Replication studies in which this scale is tested with larger samples of BSMM in other contexts could establish

its validity. Findings were drawn from one geographical, urban location, limiting generalizability of the results. Future research with larger, more geographically diverse BSMM in urban and nonurban settings would provide a more accurate understanding of sex-positivity in this population and how it relates to medical mistrust and conspiracy beliefs. Findings from our study are limited to individuals not currently taking PrEP. The analyses investigated in the current study, however, are also of potential importance among individuals taking PrEP and warrant future study. The variables of focus in the current study were primarily beliefs-based, and as such, it is unknown the extent to which behaviors align with beliefs. Understanding how behaviors map onto findings noted here is an important area of future research. Finally, temporality cannot be established due to the cross-sectional nature of the data, though the links between sex-positivity and medical mistrust demonstrated here suffice to motivate additional research on their relationship. It should be noted that, a subset of participants was recruited during shutdowns due to COVID; the extent to which COVID impacted medical mistrust and/or sex-positivity during this time period is unknown.

Sexual health requires a positive, respectful approach toward sexuality and the possibility for safe, pleasurable sex, not merely the absence of disease, but it can only be achieved insofar as sexual rights are honored (WAS, 2014; WHO, 2020). Oppressive norms and power structures shape which bodies, sexualities, expressions, and practices matter, and socioeconomic inequities constrain/enable the realization of sexual rights and one's perception of their entitlement to such rights (Bowleg et al., 2017; Correa et al., 2008; McClelland, 2010; Rubin, 1984). Incorporating sex-positive approaches grounded in sexual rights into public health and healthcare can make visible the sexual health priorities of Black and other SMM, communicate to them that they are entitled to sexual rights, and counterbalance risk/prevention-focused approaches. In so doing, optimal sexual health for BSMM can be realized.

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Data Availability Data are available upon reasonable request from the second author.

Code Availability Code is available upon reasonable request from the first author.

Declarations

Conflicts of interest Marcie Berman serves on the PrEP Advisory Board for Gilead Sciences. Other authors have no conflicts of interest to report.

Ethical approval Participants provided written informed consent to join the study, and ethical approval was provided by the University of Connecticut institutional review board.

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