



Published in final edited form as:

Am J Public Health. 2013 May ; 103(5): 875–880. doi:10.2105/AJPH.2012.300951.

Association of Discrimination-Related Trauma with Sexual Risk among HIV-Positive African-American Men Who Have Sex with Men

Errol L. Fields, MD, PhD, MPH,

Division of General Pediatrics and Adolescent Medicine, Johns Hopkins School of Medicine

Laura M. Bogart, PhD,

Boston Children's Hospital and Harvard Medical School

Frank H. Galvan, PhD,

Bienestar Human Services, Inc.

Glenn J. Wagner, PhD,

RAND Corporation

David J. Klein, MS, and

Boston Children's Hospital and Harvard Medical School

Mark A. Schuster, MD, PhD

Boston Children's Hospital and Harvard Medical School

Abstract

Objectives—HIV disproportionately affects African-American men who have sex with men (MSM). High levels of traumatic stress among African American MSM may be associated with poor health behaviors, including sexual risk, and thus may be a promising target for HIV prevention. We investigated whether one form of traumatic stress, discrimination-related trauma (e.g., physical assault due to race), was associated with unprotected anal intercourse (UAI), especially when compared to non-discrimination-related trauma, among African-American MSM.

Methods—A convenience sample of 131 HIV-positive African-American MSM receiving antiretroviral treatment completed audio computer-assisted-self-interviews that covered UAI; interpersonal trauma; and whether trauma was due to discrimination based on race/ethnicity, HIV-serostatus, or sexual orientation.

Results—60% reported at least one interpersonal trauma; they attributed at least one trauma to being gay (47%), African-American (17%), and/or HIV-positive (9%). In a multivariate regression, experiencing discrimination-related trauma was significantly associated with UAI

Corresponding Author Contact Information: Errol L. Fields, MD, PhD, MPH, Division of General Pediatrics and Adolescent Medicine, Johns Hopkins School of Medicine, 200 N. Wolfe Street, #2083, Baltimore, MD 21287, 443.287.3974 (office), 410.502.5440 (fax), errol.fields@jhmi.edu.

Contributor Statement

E.L. Fields conducted the literature review, helped to conceptualize the analysis plan and interpret the results, and led the writing of the manuscript. L.M. Bogart led the primary study design, conceptualized the analysis plan, helped to interpret the results, and helped to draft the manuscript. F.H. Galvan and G.J. Wagner helped to design the primary study and helped to interpret the results. D. Klein managed the data, conducted the statistical analyses, and helped to interpret the results. M.A. Schuster helped to interpret the results and draft the manuscript. All authors reviewed and approved of the final manuscript.

Human Participant Protection

Institutional review board approval was provided by all study institutions, and the National Institutes of Health issued a Certificate of Confidentiality.

(AOR=2.4,95%CI=1.0-5.7,p=0.04), whereas experiencing non-discrimination-related trauma was not (AOR=1.3,95%CI=0.6-3.1,p=0.53).

Conclusions—HIV-positive African-American MSM experience high levels of discrimination-related trauma, a stressor that was associated with greater risk. HIV prevention interventions should consider the potential damaging effects of discrimination in the context of trauma.

Introduction

HIV disproportionately affects African-American men who have sex with men (MSM). Twenty-eight percent of African-American MSM are estimated to be HIV-positive, compared to 16% of white MSM¹ and 2% of the general African-American male population.² Young Black males (aged 13–29) who have sex with males have had a higher increase in HIV incidence in recent years than any other racial/ethnic subgroup in the US.³ Rates of unprotected anal intercourse (UAI) fail to account for racial/ethnic disparities in HIV prevalence.⁴ However, UAI remains the highest risk factor for HIV transmission among MSM. Understanding the socio-cultural variables associated with UAI among African-American MSM is likely to be important for developing appropriate HIV prevention strategies for this population. One such socio-cultural variable is interpersonal trauma, including childhood sexual abuse (CSA),⁵ intimate partner violence (IPV),⁶ forced sex,⁷ and other physical assault. African-Americans in general⁸ as well as MSM^{9, 10} are disproportionately affected by interpersonal violence. Although few studies have examined forced sex and physical assault among African-American MSM, several have reported a higher prevalence of CSA among African-American MSM than among white MSM.¹¹ Furthermore, MSM who experience trauma may be more likely to engage in sexual risk behaviors. For example, one study reported that MSM with a history of CSA had more sexual contacts and acts of UAI than MSM who had no history of CSA.¹¹

Other research suggests that African-American MSM are faced with multiple forms of discrimination associated with their HIV-serostatus, race, and sexual orientation,¹² and that such discrimination may sometimes be experienced as interpersonal trauma. A qualitative study of 87 African-American MSM reported that victims may perceive experiences of CSA to be related to their sexual orientation.¹³ A small quantitative study of a convenience sample of 56 HIV-positive patients recruited from an AIDS treatment clinic reported that of HIV-positive men of color and MSM who reported IPV, slightly more than a quarter believed that their abuse was related to their HIV serostatus.¹⁴

The minority stress model posits that social discrimination leads to excess stress among minority persons that may be more damaging than other types of stressors, because discrimination based upon one's social group may threaten individuals' core sense of identity.^{15–18} Consistent with this model, a survey of lesbians and gays found that those who had experienced a bias-related crime showed worse mental health consequences (i.e., symptoms of depression, anxiety, anger, post-traumatic stress) than did those who had experienced non-bias-related crimes.¹⁹ The effect of social discrimination on mental health outcomes has been well documented across various populations, including people living with HIV.^{12, 20} Further, some research indicates a relationship between perceived social discrimination and sexual risk among MSM,^{21–28} but none has included an examination of the distinct relationship between discrimination-related trauma and sexual risk behavior, beyond the effects of other types of trauma. The minority stress model suggests that social discrimination-related trauma would have a greater association with sexual risk than would trauma alone. Although prior research has indicated an association between sexual risk and both trauma^{5–7} and chronic discrimination,^{21–28} the effects of trauma resulting from discrimination on sexual risk do not appear to have been investigated in the literature.

In the present study, we examined the association of prior trauma with sexual risk among African-American MSM living with HIV. In multivariate models, we examined the distinct effects of discrimination-related and -unrelated interpersonal trauma on sexual risk. We were especially interested in assessing whether experiences of discrimination-related interpersonal trauma had a unique relationship with UAI beyond variables related to sexual risk in prior research. We were also interested in whether there was a distinct relationship between UAI and discrimination-related interpersonal trauma beyond any relationship with interpersonal trauma in general (including discrimination-related and -unrelated interpersonal trauma). Such findings would suggest a need to focus on the added effects of discrimination from interpersonal trauma in both research and secondary HIV prevention interventions targeting this population.

Methods

Participants and procedures

Two hundred fourteen African-American men living with HIV participated in this study. Eligible participants provided informed consent and then completed an audio computer-assisted self-interview (ACASI) containing several measures relevant to the present analyses (described below). Participants received a \$30 honorarium.

The sample for the present analyses was restricted to men who reported having sex in the past three months ($n=131$). Men were recruited using flyers at an HIV medical clinic and three HIV social service agencies in Los Angeles, CA, from January 2007 to February 2009. Details of the recruitment process have been described previously.^{12, 29–32} Men responding to the fliers were screened via telephone for the following eligibility criteria: 1) Black/African-American identity; 2) self-identification as male; 3) HIV-positive serostatus; 4) 18 years or older; and 5) taking antiretroviral treatment (because medication adherence was relevant to another study goal).

Institutional review board approval was provided by all study institutions, and the National Institutes of Health issued a Certificate of Confidentiality.

Measures

Trauma and Discrimination—Participants were asked whether they experienced any of the following interpersonal traumatic events in their lifetime: physical assault; sexual assault; or sexual contact when younger than age 18 with someone 5 or more years older.³³ For each traumatic event, follow-up items designed for the present study were used to capture trauma due to Black/African-American race/ethnicity, HIV-positive serostatus, and gay sexual orientation (e.g., To what extent do you think that this happened because you are Black or African-American?). Two measures were derived from these questions. The first measure, discrimination-related trauma, was coded based on attributing any reported traumatic experience to discrimination based on the aforementioned personal characteristics. The second measure, interpersonal trauma not related to discrimination, was coded based on experiencing any of the aforementioned events and responding that they were not due to Black/African-American race/ethnicity, HIV-positive serostatus and/or gay sexual orientation (e.g. physical assault not believed to have been perpetrated against the participant because he was Black, gay or HIV-positive).

Socio-demographic characteristics—Participants were asked their age, education level, income, employment, sexual orientation, transgender identity, housing accommodations, date of HIV diagnosis, and history of imprisonment. Variables that were not initially dichotomous (e.g. transgender identity and history of incarceration) were

dichotomized based on their distributions; distribution of variables with some categories that were less represented than others were combined with other similar categories. Education was dichotomized into high school diploma or less versus greater than high school diploma; annual income into <\$5,000 versus ≥\$5,000 annually based on a median split; employment into employed full/part-time versus unemployed, on disability, retired, or in school; sexual orientation into heterosexual versus other categories (i.e., gay/same-gender loving, bisexual, not sure or in transition, something else, or don't know); and housing into stable (rent or own home or apartment, subsidized housing) versus not stable (homeless, living rent-free with friend/relative, residential treatment facility, temporary/transitional housing). We calculated the length of time since diagnosis from the interview date and the age at diagnosis.

Drug Use—Participants were asked about how frequently they used any of four illicit drugs (i.e., cocaine powder, crack cocaine, heroin, or amphetamine/methamphetamine) in the past 30 days. Responses were collapsed into a dichotomous variable indicating “any” or “no” drug use.

Alcohol use—Problematic drinking was measured with the RAPS4-QF,³⁴ which contains four screening items for alcohol problems over the past year and two quantity-frequency (QF) items. A dichotomous variable was created to represent whether or not a participant was engaged in problematic drinking defined as response of ‘yes’ to any of the initial four items or both of the QF items.

Depression—Depression was measured using the 8-item depression scale from the Medical Outcomes Study.³⁵ A positive screen on this instrument indicates a high probability of major depression. A dichotomous variable was created to cover whether the participant screened positive for depression.

Sexual Risk Behavior—Participants were asked about sexual behavior in the past three months. Those who reported any male sexual partners were asked the frequency of protected and unprotected (i.e., with and without condoms) insertive and receptive anal intercourse. Separate questions assessed each type of sexual behavior with HIV-positive, HIV-negative, and unknown HIV-serostatus male and female partners.

Sexual risk was defined in three ways, as reported engagement in any unprotected intercourse with male partners; in any unprotected intercourse with HIV-negative or unknown-status male partners (a measure of HIV transmission risk behavior); and reported engagement in any unprotected intercourse with HIV-positive male partners (a measure of risk for exposure to new infections and/or different strains of HIV).

Statistical Analysis

Descriptive statistics were computed for all study variables. Means and standard deviations were examined for continuous variables, and frequencies were examined for categorical variables. Bivariate tests were conducted to examine whether discrimination-related interpersonal trauma and non-discrimination-related interpersonal trauma, as well as potential covariates (socio-demographic characteristics, sexual identity, time since HIV diagnosis, depression, imprisonment, and drug use), were related to the UAI outcome variables. These potential covariates were chosen based on their association with unprotected anal intercourse in prior studies.^{36–38} Multivariate models testing the simultaneous effects of discrimination-related interpersonal trauma and non-discrimination-related interpersonal trauma were used to adjust for covariates that were related to unprotected sex at an alpha level of 0.20 in bivariate tests (sexual orientation, drug use, time

since diagnosis, stable housing, low education, transgender identity, and history of incarceration). Including these covariates in the model allowed us to determine whether interpersonal trauma functioned as an additional unique factor related to sexual risk, beyond the effect of variables that have been associated with sexual risk in the literature.^{39–45}

Results

Sample Description

The average age of the sample was 42 (SD 8.7; range 20–67), and a substantial percentage had low socioeconomic status, with 81% not employed, nearly 43% with very low incomes, and nearly 20% with less than a high school degree (Table 1). Nearly half (47%) were in housing situations that were not stable (e.g., homeless). Most (91%) identified as gay, bisexual, or another non-heterosexual category; 16% were transgender. On average, participants were diagnosed with HIV approximately 13 years before the study at an average age of 30. Half of the sample screened positive for depression, and 35% engaged in drug use in the past month. Over a fourth (28%) had been incarcerated. Nearly half (47%) reported having unprotected anal intercourse with a male partner in the past three months.

Experience with Interpersonal Trauma

Sixty percent of participants reported experiencing at least one interpersonal trauma; 45% experienced childhood sexual abuse (N=58, average age = 8.8, SD = 3.9), 8% adult sexual assault (N=10, average age = 23.4, SD = 5.0), and 36% physical assault (N=47, average age = 23.1, SD = 10.9). Of those who experienced any interpersonal trauma, 47% attributed at least one trauma experience to being gay (average age at first gay-related trauma experience = 13.8, SD = 9.2), 17% to race (average age at first race-related experience = 14.7, SD = 8.8), and 9% to HIV-serostatus (average age at first serostatus-related experience = 19.9, SD = 14.6).

Relationships between Interpersonal Trauma and UAI

In bivariate analyses, discrimination-related interpersonal trauma was associated with a higher likelihood of reporting UAI with any male partners in the past three months (odds ratio (OR)=2.78, 95% confidence interval (CI)=1.26–6.13, $p=0.01$) and, reporting UAI with HIV-positive male partners in the past three months (OR=2.83, 95% CI=1.29–6.22, $p=0.009$) (Table 2). There was no significant association between discrimination-related interpersonal trauma and UAI with HIV-negative/unknown male partners. Interpersonal trauma not related to discrimination was not significantly related to any of the UAI outcome variables.

Multivariate regressions indicated that participants who had experienced discrimination-related interpersonal trauma were more likely to have engaged in UAI with any male partner (OR=2.44, 95% CI=1.05–5.71, $p=0.04$), and UAI with HIV-positive male partners (OR=3.49, 95% CI=1.42–8.61, $p=0.007$) (Table 2).

In the multivariate regression for UAI with any male partner, none of the covariates remained significant. Transgender identity remained the only covariate significantly associated with UAI with HIV-negative or unknown male partners (OR=5.32, 95% CI=1.22 to 23.08, $p=0.03$). In the multivariate regression for UAI with male partners who are HIV-positive, transgender identity (OR=0.15, 95% CI = 0.03 to 0.69, $p=0.02$) and heterosexual identity (OR=9.03, 95% CI = 1.62 to 50.31, $p=0.01$) remained significant predictors.

Discussion

In our convenience sample of 131 African-American MSM living with HIV, we found a high prevalence of interpersonal trauma, including sexual assault, childhood sexual abuse, and other physical assault. About half of those who had experienced trauma attributed that trauma to discrimination based on their being Black/African-American, HIV-positive or gay. We also found a high prevalence of sexual risk, with 47% reporting UAI with a male partner in the previous three months.

We found that men who experienced discrimination-related interpersonal trauma in their lifetime were more likely than those who had not experienced such trauma to have engaged in UAI with a male partner in the past three months. This association was significant for two of the three UAI outcome variables – UAI with any male partner and UAI with an HIV-positive male partner – but not UAI with an HIV-negative/unknown male partner. In contrast, among men who experienced interpersonal trauma not related to discrimination, there was no significant association between their experience of trauma and UAI. Prior research has shown an association between trauma and sexual risk behavior. By separating out discrimination-related trauma from non-discrimination-related trauma, this study extends prior research by suggesting that discrimination could be driving this association.

These findings are consistent with studies based on the minority stress model, in which sexual minority individuals who experienced discrimination-related stressors showed greater adverse mental health outcomes (e.g., depressive symptoms and suicide ideation) than did sexual minorities not subjected to such stressors.¹⁹ Our findings extend prior research by showing an association between minority stress and a non-mental health outcome. Furthermore, biopsychosocial models^{46–49} posit that social discrimination may lead to poor health outcomes by increasing detrimental physiological and psychological stress responses, including maladaptive coping and lower thresholds for coping with new stressors. Our findings and those of others^{50–52} suggest that increased sexual risk behavior is a potential maladaptive avoidance/escape strategy for coping with stressors such as discrimination.

Decreasing maladaptive coping from discrimination-related trauma may be an important target for interventions in this population. However, little is known about the types and success of specific coping strategies used by African-American MSM in response to discrimination. Literature on resilience among African-Americans describes reliance on family and community networks for social support, religion and spirituality, and racial pride as adaptive strategies for coping with stress, including stress from racism.^{53–56} Additional formative work is critically needed to develop interventions to strengthen use of adaptive coping strategies and reduce use of avoidance/escape and other maladaptive strategies. Furthermore, such interventions must take into account that African-American HIV-positive MSM experience compounded minority stress, as members of multiple stigmatized social groups. For instance, social support, although important, may be difficult to garner for these men due to stigmatization based on sexual orientation and serostatus in African-American communities and race in white gay communities.^{57, 58}

Limitations

These findings are not generalizable to the broad population of African-American MSM living with HIV, as the sample was not randomly selected and was limited to one geographical area in Southern California. In addition, causality cannot be inferred from our cross-sectional study regarding the positive association between discrimination-related trauma and sexual risk. Recent research on seroadaptive behaviors, in which MSM adapt their sexual behaviors based on the status of their partners^{59–61} suggests that serosorting or strategic positioning (i.e. assuming a sexual position that lowers the risk of transmitting

HIV) may in part explain our findings of differential behaviors with negative or unknown partners compared to positive partners. Because we did not specifically ask about seroadaptive behaviors, we cannot rule out such practices as a confounding factor. In addition, because of our small sample size, the study was not sufficiently powered to examine the effects of different types of interpersonal trauma. Nor were we able to examine the effects of discrimination-related trauma due to HIV-serostatus, sexual orientation, or race/ethnicity separately. Further, our measures of discrimination-related interpersonal trauma are self-reported and subject to the limitations of other self-reported measures. Of note, several studies suggest that discrimination is often underreported,^{62, 63} and thus our findings may be underestimates of the true effects.

Conclusions

The African-American MSM living with HIV in this study reported high levels of interpersonal trauma including child sexual abuse, sexual assault, and other physical assault, a substantial proportion of which they believe stemmed from discrimination based on their race, sexual orientation or HIV status. Discrimination-related trauma may be a sizeable and overlooked stressor, particularly in populations faced with multiple stigmatized identities or conditions. Future work is needed to identify intervention strategies sensitive to these multiple conditions in order to reduce the harmful psychological and behavioral effects of discrimination and ultimately reduce HIV-related health disparities among African-American MSM.

Acknowledgments

This research was supported by R01 MH72351 from the National Institute of Mental Health (LM Bogart, PI), Boston Children's Hospital Division of Adolescent/Young Adult Medicine & MCH/HRSA LEAH T71 MC00009 (EL Fields fellowship grant), and Harvard Medical School Health Disparities Post-Graduate Fellowship (EL Fields fellowship grant). We would like to thank Charisma Acey, Denedria Banks, E. Michael Speltie, and Kellii Trombacco for their assistance, Charles Hilliard, PhD, and the staff and clients of SPECTRUM at the Charles Drew University of Medicine and Science, as well as AIDS Project Los Angeles, Minority AIDS Project, and OASIS, for their support.

References

1. CDC. [Accessed August 14 2011] NCHHSTP Newsroom -- National Gay Men's HIV/AIDS Awareness Day (NGMHAAD). 2010. Press Release. <http://www.cdc.gov/nchhstp/Newsroom/ngmHAAD2010PressRelease.html>.
2. CDC. CDC Fact Sheet: New Estimates of U.S. HIV Prevalence. Atlanta, GA: CDC; 2006. p. 2008
3. Prejean J, Song R, Hernandez A, et al. Estimated HIV Incidence in the United States, 2006–2009. PLoS ONE. 6(8):e17502. [PubMed: 21826193]
4. Millett GA, Flores SA, Peterson JL, Bakeman R. Explaining disparities in HIV infection among black and white men who have sex with men: a meta-analysis of HIV risk behaviors. AIDS. 2007 Oct 1; 21(15):2083–2091. [PubMed: 17885299]
5. Paul JP, Catania J, Pollack L, Stall R. Understanding childhood sexual abuse as a predictor of sexual risk-taking among men who have sex with men: The Urban Men's Health Study. Child Abuse Negl. 2001 Apr; 25(4):557–584. [PubMed: 11370726]
6. Feldman MB, Diaz RM, Ream GL, El-Bassel N. Intimate partner violence and HIV sexual risk behavior among Latino gay and bisexual men. J LGBT Health Res. 2007; 3(2):9–19. [PubMed: 19835037]
7. Wheeler DP, Lauby JL, Liu KL, Van Sluytman LG, Murrill C. A comparative analysis of sexual risk characteristics of Black men who have sex with men or with men and women. Arch Sex Behav. 2008 Oct; 37(5):697–707. [PubMed: 18509753]
8. Stark E. Rethinking homicide: violence, race, and the politics of gender. Int J Health Serv. 1990; 20(1):3–26. [PubMed: 2407673]

9. Roberts AL, Austin SB, Corliss HL, Vandermorris AK, Koenen KC. Pervasive trauma exposure among US sexual orientation minority adults and risk of posttraumatic stress disorder. *Am J Public Health*. 2010 Dec; 100(12):2433–2441. [PubMed: 20395586]
10. Welles SL, Corbin TJ, Rich JA, Reed E, Raj A. Intimate partner violence among men having sex with men, women, or both: early-life sexual and physical abuse as antecedents. *J Community Health*. 2011 Jun; 36(3):477–485. [PubMed: 21116698]
11. Welles SL, Baker AC, Miner MH, Brennan DJ, Jacoby S, Rosser BR. History of childhood sexual abuse and unsafe anal intercourse in a 6-city study of HIV-positive men who have sex with men. *Am J Public Health*. 2009 Jun; 99(6):1079–1086. [PubMed: 19372529]
12. Bogart LM, Wagner GJ, Galvan FH, Landrine H, Klein DJ, Sticklor LA. Perceived discrimination and mental health symptoms among Black men with HIV. *Cultural Diversity and Ethnic Minority Psychology*. 2011; 17(3):295–302. [PubMed: 21787061]
13. Fields SD, Malebranche D, Feist-Price S. Childhood sexual abuse in black men who have sex with men: results from three qualitative studies. *Cultur Divers Ethnic Minor Psychol*. 2008 Oct; 14(4):385–390. [PubMed: 18954175]
14. Ramachandran S, Yonas MA, Silvestre AJ, Burke JG. Intimate partner violence among HIV-positive persons in an urban clinic. *AIDS Care*. 2010 Dec; 22(12):1536–1543. [PubMed: 20924830]
15. Burke PJ. Identity processes and social stress. *Am Sociol Rev*. 1991; 56(6):836–849.
16. Thoits, P. Self, Identity, Stress, and Mental Health. In: Aneshensel, CS.; Phelan, JC., editors. *Handbook of the Sociology of Mental Health*. New York: Kluwer Academic/Plenum Publishers; 1999. p. 345-368.
17. Meyer IH. Minority Stress and Mental Health in Gay Men. *J Health Soc Behav*. 1995; 36(1):38–56. [PubMed: 7738327]
18. Meyer IH. Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychol Bull*. 2003; 129(5):674–697. [PubMed: 12956539]
19. Herek GM, Gillis JR, Cogan JC. Psychological sequelae of hate-crime victimization among lesbian, gay, and bisexual adults. *J Consult Clin Psychol*. 1999; 67(6):945–951. [PubMed: 10596515]
20. Pascoe EA, Smart Richman L. Perceived discrimination and health: A meta-analytic review. *Psychol Bull*. 2009; 135(4):531–554. [PubMed: 19586161]
21. Preston DB, D'Augelli AR, Kassab CD, Starks MT. The relationship of stigma to the sexual risk behavior of rural men who have sex with men. *AIDS Education and Prevention*. 2007 Jun; 19(3):218–230. [PubMed: 17563276]
22. Diaz RM, Ayala G, Bein E. Sexual risk as an outcome of social oppression: data from a probability sample of Latino gay men in three U.S. cities. *Cultur Divers Ethnic Minor Psychol*. 2004 Aug; 10(3):255–267. [PubMed: 15311978]
23. Yoshikawa H, Wilson PA, Chae DH, Cheng JF. Do family and friendship networks protect against the influence of discrimination on mental health and HIV risk among Asian and Pacific Islander gay men? *AIDS Educ Prev*. 2004 Feb; 16(1):84–100. [PubMed: 15058713]
24. Jarama SL, Kenamer JD, Poppen PJ, Hendricks M, Bradford J. Psychosocial, behavioral, and cultural predictors of sexual risk for HIV infection among Latino men who have sex with men. *AIDS Behav*. 2005 Dec; 9(4):513–523. [PubMed: 16328712]
25. Rosario M, Rotheram-Borus MJ, Reid H. Gay-Related Stress and Its Correlates Among Gay and Bisexual Male Adolescents of Predominantly Black and Hispanic Background. *J Community Psychol*. 1996; 24(2):136–159.
26. Hatzenbuehler ML, Nolen-Hoeksema S, Erickson SJ. Minority stress predictors of HIV risk behavior, substance use, and depressive symptoms: results from a prospective study of bereaved gay men. *Health Psychology*. 2008 Jul; 27(4):455–462. [PubMed: 18643003]
27. Nakamura N, Zea MC. Experiences of homonegativity and sexual risk behaviour in a sample of Latino gay and bisexual men. *Cult Health Sex*. 2010 Jan; 12(1):73–85. [PubMed: 19637067]
28. Ayala G, Bingham T, Kim J, Wheeler DP, Millett GA. Modeling the Impact of Social Discrimination and Financial Hardship on the Sexual Risk of HIV Among Latino and Black Men

- Who Have Sex With Men. *American Journal of Public Health*. :e1–e8. Published online ahead of print March 8, 2012.
29. Wagner GJ, Bogart LM, Galvan FH, Banks D, Klein DJ. Discrimination as a key mediator of the relationship between posttraumatic stress and HIV treatment adherence among African American men. *J Behav Med*. 2011 Feb 12. Epub. NIHMS##278825.
 30. Bogart LM, Galvan FH, Wagner GJ, Klein DJ. Longitudinal Association of HIV Conspiracy Beliefs with Sexual Risk Among Black Males Living with HIV. *AIDS and Behavior*. 2011; 15:1180–1186. [PubMed: 20734227]
 31. Bogart LM, Wagner G, Galvan FH, Banks D. Conspiracy Beliefs About HIV Are Related to Antiretroviral Treatment Nonadherence Among African American Men With HIV. *J Acquir Immune Defic Syndr*. 53(5):648–655. [PubMed: 19952767]
 32. Bogart LM, Wagner GJ, Galvan FH, Klein DJ. Longitudinal Relationships Between Antiretroviral Treatment Adherence and Discrimination Due to HIV-Serostatus, Race, and Sexual Orientation Among African-American Men with HIV. *Ann Behav Med*. 40(2):184–190. [PubMed: 20552416]
 33. Foa EB, Cashman L, Jaycox L, Perry K. The validation of a self-report measure of posttraumatic stress disorder: The Posttraumatic Diagnostic Scale. *Psychological Assessment*. 1997; 9(4):445–451.
 34. Cherpitel CJ. Screening for Alcohol Problems in the US General Population: Comparison of the CAGE, RAPS4, and RAPS4-QF by Gender, Ethnicity, and Service Utilization. *Alcoholism: Clinical and Experimental Research*. 2002; 26(11):1686–1691.
 35. Wells, KB.; Sturm, R.; Sherbourne, CD.; Meredith, LS. *Caring for Depression*. Cambridge, MA: Harvard University Press; 1996.
 36. Stall R, Mills TC, Williamson J, et al. Association of co-occurring psychosocial health problems and increased vulnerability to HIV/AIDS among urban men who have sex with men. *American Journal of Public Health*. 2003; 93(6):939. [PubMed: 12773359]
 37. Koblin BA, Husnik MJ, Colfax G, et al. Risk factors for HIV infection among men who have sex with men. *AIDS*. 2006; 20(5):731–739. [PubMed: 16514304]
 38. Lye Chng C, Géliga-Vargas J. Ethnic identity, gay identity, sexual sensation seeking and HIV risk taking among multiethnic men who have sex with men. *AIDS Education and Prevention*. 2000; 12(4):326–339. [PubMed: 10982122]
 39. Safren SA, Thomas BE, Mimiaga MJ, et al. Depressive symptoms and human immunodeficiency virus risk behavior among men who have sex with men in Chennai, India. *Psychology, health & medicine*. 2009; 14(6):705–715.
 40. Rosario M, Schrimshaw EW, Hunter J. A model of sexual risk behaviors among young gay and bisexual men: Longitudinal associations of mental health, substance abuse, sexual abuse, and the coming-out process. *AIDS Educ Prev*. 2006; 18(5):444–460. [PubMed: 17067255]
 41. Myers HF, Javanbakht M, Martinez M, Obediah S. Psychosocial predictors of risky sexual behaviors in African American men: implications for prevention. *AIDS Educ Prev*. 2003; 15(1 Supplement):66–79. [PubMed: 12630600]
 42. Irwin TW, Morgenstern J, Parsons JT, Wainberg M, Labouvie E. Alcohol and sexual HIV risk behavior among problem drinking men who have sex with men: An event level analysis of timeline followback data. *AIDS and Behavior*. 2006; 10(3):299–307. [PubMed: 16482407]
 43. Wheeler DP, Lauby JL, Liu K, Van Sluytman LG, Murrill C. A comparative analysis of sexual risk characteristics of black men who have sex with men or with men and women. *Arch Sex Behav*. 2008; 37(5):697–707. [PubMed: 18509753]
 44. Choi KH, Han C, Hudes ES, Kegeles S. Unprotected sex and associated risk factors among young Asian and Pacific Islander men who have sex with men. *AIDS Educ Prev*. 2002; 14(6):472–481. [PubMed: 12512848]
 45. Díaz RM, Ayala G, Bein E. Sexual Risk as an Outcome of Social Oppression: Data From a Probability Sample of Latino Gay Men in Three US Cities. *Cultural Diversity and Ethnic Minority Psychology*. 2004; 10(3):255–267. [PubMed: 15311978]
 46. Brondolo E, Rieppi R, Kelly KP, Gerin W. Perceived racism and blood pressure: a review of the literature and conceptual and methodological critique. *Ann Behav Med*. 2003; 25(1):55–65. [PubMed: 12581937]

47. Clark R, Anderson NB, Clark VR, Williams DR. Racism as a stressor for African Americans: A biopsychosocial model. *Am Psychol*. 1999; 54:805–816. [PubMed: 10540593]
48. Landrine H, Klonoff EA. The schedule of racist events: A measure of racial discrimination and a study of its negative physical and mental health consequences. *J Black Psychol*. 1996; 22(2):144–168.
49. Williams DR, Mohammed SA. Discrimination and racial disparities in health: Evidence and needed research. *J Behav Med*. 2009; 32(1):20–47. [PubMed: 19030981]
50. Martin JI, Knox J. Loneliness and sexual risk behavior in gay men. *Psychol Rep*. 1997; 81(3, Pt 1): 815–825. [PubMed: 9400073]
51. Folkman S, Chesney MA, Pollack L, Phillips C. Stress, coping, and high-risk sexual behavior. *Health Psychol*. 1992; 11(4):218–222. [PubMed: 1396489]
52. Martin JI, Pryce JG, Leeper JD. Avoidance coping and HIV risk behavior among gay men. *Health Soc Work*. 2005; 30(3):193–201. [PubMed: 16190295]
53. Teti M, Martin AE, Ranade R, et al. “I’m a Keep Rising. I’m a Keep Going Forward, Regardless”: Exploring Black Men’s Resilience Amid Sociostructural Challenges and Stressors. *Qualitative Health Research*. 22(4):524–533. [PubMed: 21911505]
54. Utsey SO, Brown C, Bolden MA. Testing the structural invariance of the Africultural Coping Systems Inventory across three samples of African descent populations. *Educational and psychological measurement*. 2004; 64(1):185–195.
55. Wyatt GE. Enhancing Cultural and Contextual Intervention Strategies to Reduce HIV/AIDS Among African Americans. *American Journal of Public Health*. 2009; 99(11):1941–1945. [PubMed: 19762666]
56. Jones, KT.; Wilton, L.; Millett, G.; Johnson, WD. Formulating the Stress and Severity Model of Minority Social Stress for Black Men Who Have Sex with Men. In: McCree, DH.; Jones, KT.; O’Leary, A., editors. *African Americans and HIV/AIDS: Understanding and Addressing the Epidemic*. New York: Springer; 2010. p. 223-238.
57. Loiacano, DK. *Psychological perspectives on lesbian and gay male experiences*. New York: Columbia University Press; 1993. Gay identity issues among Black Americans: Racism, homophobia, and the need for validation; p. 364-375.
58. Greene B. Ethnic-minority lesbians and gay men: Mental health and treatment issues. *J Consult Clin Psychol*. 1994; 62(2):243–251. [PubMed: 8201060]
59. Golden MR, Stekler J, Hughes JP, Wood RW. HIV serosorting in men who have sex with men: is it safe? *JAIDS Journal of Acquired Immune Deficiency Syndromes*. 2008; 49(2):212.
60. Parsons JT, Schrimshaw EW, Wolitski RJ, et al. Sexual harm reduction practices of HIV-seropositive gay and bisexual men: serosorting, strategic positioning, and withdrawal before ejaculation. *AIDS*. 2005; 19:S13. [PubMed: 15838191]
61. Truong HHM, Kellogg T, Klausner JD, et al. Increases in sexually transmitted infections and sexual risk behaviour without a concurrent increase in HIV incidence among men who have sex with men in San Francisco: a suggestion of HIV serosorting? *Sexually Transmitted Infections*. 2006; 82(6):461–466. [PubMed: 17151031]
62. Krieger N. Embodying inequality: a review of concepts, measures, and methods for studying health consequences of discrimination. *Int J Health Serv*. 1999; 29(2):295–352. [PubMed: 10379455]
63. Ruggiero KM, Taylor DM. Coping with discrimination: How disadvantaged group members perceive the discrimination that confronts them. *Journal of Personality and Social Psychology*. 1995; 68(5):826.

Table 1

Characteristics of the Sample of 131 African American Men who have Sex with Men (MSM) with HIV

Sample Characteristics	M (SD) or %
Socio-demographic characteristics	
Age	42.4 (8.7)
Employed	19%
Heterosexual	9%
Transgender	16%
Income (< \$5,000 annually)	43%
Education (< high school degree)	19%
Not in stable housing	47%
Depression (positive screen)	50%
Drug use (any in past 30 days)	35%
Ever incarcerated	28%
UAI with any male partner in the past 3 months	47%
Time since HIV diagnosis (years)	12.7 (6.5)

Note: UAI = unprotected anal intercourse

Table 2

Bivariate and Multivariate Regressions Predicting Unprotected Anal Intercourse (UAI) in Past Three Months with Interpersonal Trauma among 131 African American Men who have Sex with Men (MSM) Living with HIV

	Unadjusted OR (95% CI)	Adjusted OR (95% CI) [†]
UAI with Any Male Partner		
Non-discrimination-related Interpersonal Trauma	1.28 (0.61–2.68)	1.31 (0.56–3.08)
Discrimination-related Interpersonal Trauma	2.78 (1.26–6.13) [*]	2.44 (1.05–5.71) [*]
UAI with HIV Positive Male Partner		
Non-discrimination-related Interpersonal Trauma	1.29 (0.60–2.77)	1.17 (0.48–2.85)
Discrimination-related Interpersonal Trauma	2.83 (1.29–6.22) ^{**}	3.49 (1.42–8.61) ^{**}
UAI with HIV Negative/Unknown Male Partner		
Non-discrimination-related Interpersonal Trauma	1.03 (0.37–2.86)	1.23 (0.35–4.28)
Discrimination-related Interpersonal Trauma	1.86 (0.68–5.12)	1.48 (0.47–4.72)

Note: UAI = unprotected anal intercourse; CI = confidence interval; OR = odds ratio

^{*}
p<.05

^{**}
p<.01

[†] Adjusted for heterosexual sexual identity, transgender identity, time since HIV diagnosis, stable housing, low education, imprisonment, and drug use (in past 30 days)