Exploring Factors That Underlie Racial/Ethnic Disparities in HIV Risk among Young Men Who Have Sex with Men

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ABSTRACT *Young men who have sex with men (YMSM) are among the highest risk groups for HIV, and the risk distribution varies by race/ethnicity. Prevalence rates are consistently higher for minority YMSM. Factors underlying these disparities are poorly understood. We examined disparities in HIV risk among a community-based sample of Black, Latino, and non-Hispanic Caucasian YMSM age 16–24. To address gaps in the literature, we examined factors between and within racial/ethnic groups across domains including: sexual and substance use behaviors, sexualized and other social contexts, psychological well-being, HIV attributes and prevention skills, and sexual minority stress.*

KEYWORDS HIV, AIDS, MSM, Gay

INTRODUCTION

Men who have sex with men (MSM) account for a higher proportion of HIV/AIDS cases than any other demographic group in the USA.^{1,2} HIV prevalence among MSM is consistently higher for racial/ethnic minorities.³ Among young men who have sex with men (YMSM), the racial/ethnic disparities in HIV are particularly pronounced.^{4,5} Limited research has examined factors underlying racial/ethnic differences in HIV risk among YMSM. Harawa and colleagues found risky sex and drug use reported more frequently by Caucasian rather than Black YMSM, whereas Sifakis et al. found race to be unassociated with risk behavior.^{6,7} These findings suggest that understanding racial/ethnic disparities in HIV risk among YMSM requires inquiry about factors beyond risk behaviors.

METHODS

This study is part of a larger project of lesbian, gay, bisexual, and transgender youth ages 16–24 from Chicago. Participants were recruited over 12 months from multiple sources, flyer and palm card distribution, email advertisements, and snowball sampling. No recruitment occurred in high-risk venues. Study procedures were approved prior to data collection, including a waiver of parental consent. Surveys

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were administered using computer-assisted self-interviews, and participants received \$30.

Our study sample included 273 YMSM who self-identified as Caucasian ($N=93$), Black ($N=101$), or Latino ($N=79$). Eighty-two percent were gay; the remainder was bisexual (16%) or other (2%). The mean age of participants was 20 (range 16–24).

Participants self-reported age, race/ethnicity, sexual orientation, HIV status, past arrest/incarceration, and socioeconomic status. A version of the AIDS Risk Behavior Assessment⁸ assessed sexual behaviors and substance use. A composite sexual risk variable was constructed using five dichotomous variables (based on 12 month recall): (a) unprotected anal sex, (b) anal sex while intoxicated, (c) insertive and (d) receptive anal sex with multiple partners (<1 partner), and (e) receptive anal sex with a high-risk partner (someone HIV+, a commercial sex worker, or injection drug user). With regards to social contexts, participants reported if they ever had sex in a sex club/bathhouse, with a partner met online, in exchange for money/drugs, with an older partner (10+ years), and nonconsensual anal sex (sexual violence). Psychological distress,⁹ self-esteem,¹⁰ social support,¹¹ romantic loneliness,¹² HIV knowledge,¹³ health protective communication,¹⁴ internalized homophobia,¹⁵ attachment to the gay community,¹⁶ and gay-related victimization were measured using validated instruments previously used with adolescents or populations at risk for HIV.

We used hierarchical logistic regression and general linear modeling to assess risk differences *between* three racial/ethnic groups (Table 1). Next, we conducted *within*-group analyses, using two-step linear regressions controlling for HIV serostatus and age, to identify factors associated with the composite risk variable for each racial/ethnic group (Table 2).

RESULTS

Table 1 compares variables between racial/ethnic groups controlling for age. For social contexts, Caucasian (65.1%) and Latino (52.1%) YMSM were more likely to have met an Internet sexual partner than Black participants (20.2%), whereas Black YMSM were more likely to have been arrested or incarcerated ($p<0.05$). Caucasian and Latino youth reported more binge drinking, street drug, and methamphetamine use than Black participants ($p<0.05$). Black YMSM self-reported the highest levels of gay-related victimization ($p<0.05$); Caucasian and Latino YMSM scored higher on the scale measuring comfort with and attitudes towards homosexuality. Of note, controlling for age, there were no significant racial/ethnic differences in any sexual risk behavior, HIV-related attitudes/norms, or partner communication skills.

Table 2 identifies factors associated with our composite sexual risk variable *within* each specific racial/ethnic group. Controlling for age and HIV serostatus, sex with an internet partner, history of commercial sex, and sex with older partners correlated with the sexual risk variable for all three racial/ethnic groups ($p<0.05$). Types of substances used, partner communication skills, gay-related victimization, sexual minority stress, and other contexts (i.e., sex in a sex club/bathhouse) were more specific to certain racial/ethnic group(s).

DISCUSSION

This study identifies several similarities and a number of racial/ethnic differences in HIV risk factors. Supporting existing literature, our findings suggest that disparities

TABLE 1 Across-group analyses: sexualized social context, substance use, psychosocial, HIV attitudes and norms, sexual minority stress, sexual behavior, and HIV status variables by race/ethnicity

	Mean or cell percentage and 95% confidence interval		
	Caucasian	African American	Latino
Sexualized and other social context			
Exposure to sexual violence	Yes=18.3% (10.4–26.2)	Yes=20.8% (12.8–28.8)	Yes=12.8% (5.3–20.3)
Sex w/someone met on internet ^{*, **}	Yes=65.1% (55.0–75.2)	Yes=20.2% (11.6–28.8)	Yes=52.1% (40.4–63.8)
Commercial sex	Yes=21.5% (13.1–29.9)	Yes=28.7% (19.8–37.6)	Yes=20.8% (11.7–29.9)
Older sex partners	Yes=33.7% (24.0–43.4)	Yes=30.0% (20.5–39.5)	Yes=29.7% (19.2–40.2)
Sex in sex club or bathhouse [*]	Yes=33% (23.1–42.9)	Yes=18% (9.9–26.1)	Yes=23% (13.3–32.7)
Arrested ^{**}	Yes=24.7% (15.9–33.5)	Yes=44.6% (34.9–54.3)	Yes=25.3% (15.7–34.9)
Jail or juvenile detention ^{**}	Yes=16.1% (8.6–23.6)	Yes=25.7% (17.1–34.3)	Yes=8.9% (2.6–15.2)
Substance use			
Binge drinking ^{*, **}	2.9 (2.6–3.1)	2.2 (2.0–2.5)	2.8 (2.5–3.0)
Street drug use ^{*, **}	Yes=33.7% (24.0–43.4)	Yes=11.9% (5.6–18.2)	Yes=26.0% (16.1–35.9)
Injection drug use	1.1 (1.0–1.2)	1.1 (1.0–1.2)	1.1 (1.0–1.2)
Marijuana use ^{**}	2.3 (2.0–2.5)	2.3 (2.1–2.6)	1.8 (1.5–2.1)
Methamphetamine use ^{*, **}	Yes=20.4% (12.2–28.6)	Yes=3.0% (0.0–6.3)	Yes=16.9% (8.5–25.3)
Psychosocial			
Depression ^{**}	7.4 (6.2–8.5)	5.3 (4.2–6.4)	6.1 (4.9–7.3)
Self-esteem	1.9 (1.8–2.1)	1.8 (1.7–1.9)	1.9 (1.7–2.0)
Family social support	5.0 (4.7–5.4)	5.0 (4.7–5.4)	4.6 (4.2–5.0)
Friend social support [*]	5.9 (5.6–6.1)	5.7 (5.5–6.0)	5.7 (5.5–6.0)
Romantic loneliness ^{**}	48.0 (44.6–51.4)	44.3 (41.1–47.5)	51.5 (48.0–55.1)
HIV/AIDS attitudes, norms, communication			
Perceived threat	20.1 (19.4–20.7)	19.8 (19.1–20.5)	20.3 (19.6–21.1)
Self-control	22.3 (21.4–23.2)	22.6 (21.8–23.4)	22.6 (21.7–23.5)
Self-efficacy	45.5 (44.3–46.8)	46.7 (45.5–47.9)	45.4 (44.2–46.7)
Peer support	12.4 (11.9–12.9)	12.9 (12.5–13.4)	12.5 (12.0–13.1)
Health protective communication [*]	19.0 (17.5–20.4)	20.5 (19.0–21.9)	19.0 (17.5–20.5)
Sexual minority stress			
Connection to gay community [*]	3.2 (3.0–3.3)	3.0 (2.9–3.2)	3.2 (3.1–3.4)
Attitudes about homosexuality ^{**}	34.6 (33.4–35.8)	31.5 (30.2–32.7)	33.8 (32.5–35.1)
Comfort w/ homosexuality ^{**}	38.6 (37.0–40.2)	33.9 (32.3–35.6)	36.0 (34.3–37.7)
Victimization ^{**}	1.7 (1.6–1.8)	1.9 (1.8–2.0)	1.6 (1.5–1.7)
Sexual behavior/HIV risk			
Condom use during anal sex	Unprotected=51.6% (41.4–61.8)	Unprotected=38.6% (29.1–48.1)	Unprotected=43.6% (32.5–54.7)
Anal sex while drinking or using drugs [*]	Yes=57.0% (46.9–67.1)	Yes=45.5% (35.7–55.3)	Yes=50.0% (38.8–61.2)
Insertive anal sex with multiple partners [*]	Yes=60.2% (50.2–70.2)	Yes=45.5% (35.7–55.3)	Yes=53.8% (42.7–64.9)
Receptive anal sex with multiple partners [*]	Yes=52.7% (42.5–62.9)	Yes=43.6% (33.9–53.3)	Yes=50.0% (38.8–61.2)
Receptive anal sex with a high-risk partner [*]	Yes=24.7% (15.9–33.5)	Yes=31.7% (22.6–40.8)	Yes=24.4% (14.8–34)
HIV+ [*]	Yes=14.0% (6.9–21.1)	Yes=18.8% (11.1–26.5)	Yes=11.7% (4.5–18.9)
Socioeconomic status ^{**}	43.2 (40.7–45.7)	37.7 (35.1–40.4)	33.9 (31.1–36.6)

Age entered as a covariate for each analysis; logistic regression used for dichotomous variables and GLM (ANCOVA) used for continuous variables

* $p \leq 0.05$ for variable which vary across groups by age alone; ** $p \leq 0.05$ for variables which vary across groups by ethnicity controlling for age

TABLE 2 Within-group analyses: sexualized social context, substance use, psychological, social, HIV attitudes and norms, sexual minority stress, and health protective communication variables predicting HIV risk by ethnicity

	ΔR^2			β		
	Cauc.	AA	Lat.	Cauc.	AA	Lat.
Sexualized and other social context						
Exposure to sexual violence	0.00	0.00	0.04	-0.03	-0.002	0.20
Sex w/ someone met on internet	0.26***	0.07**	0.06*	0.55***	0.29**	0.26*
Commercial sex	0.04*	0.09***	0.10**	0.20*	0.30***	0.32**
Older sex partners	0.13***	0.17***	0.06*	0.36***	0.43***	0.25*
Arrested	0.00	0.03	0.05	0.02	0.16	0.22
Jail or juvenile detention	0	0.01	0.02	0.004	0.12	-0.13
Sex in sex club or bathhouse	0.15***	0.001	0.17***	0.41***	-0.03	0.47***
Substance use						
Binge drinking	0.05*	0.00	0.05	0.23*	-0.01	0.23
Street drug use	0.12***	0.02	0.15***	0.36***	0.15	0.40***
Injection drug use (idu03es)	0.00	0.01	0.07*	-0.04	-0.11	0.28*
Marijuana use	0.03	0.04*	0.05*	0.18	0.19*	0.22*
Meth use	0.07**	0.03	0.17***	0.27**	0.17	0.43***
Psychosocial						
Depression	0.04*	0.002	0.03	0.21*	-0.04	0.16
Self-esteem	0.02	0.00	0.02	0.12	-0.06	0.15
Family social support	0.003	0.002	0.001	0.06	-0.05	-0.03
Friend social support	0.01	0.00	0.03	0.10	-0.01	-0.17
Romantic loneliness	0.00	0.004	0.00	0.00	0.07	-0.008
HIV/AIDS attitudes, norms, communication						
Perceived threat	0.03	0.04	0.001	-0.17	-0.21	-0.04
Self-control	0.004	0.001	0.02	0.07	0.03	-0.15
Self-efficacy	0.002	0.003	0.03	0.05	0.06	-0.18
Peer support	0.02	0.02	0.05	0.14	-0.14	-0.22
Health protective communication	0.15***	0.04	0.19***	-0.42***	-0.21	-0.45***
Sexual minority stress						
Connection to gay community	0.04*	0.006	0.02	0.21*	0.08	-0.15
Attitudes about homosexuality	0.01	0.01	0.003	0.12	0.07	-0.05
Comfort w/ homosexuality (HomocomE)	0.07**	0.01	0.007	0.27**	0.10	-0.08
Victimization	0.001	0.02	0.10**	0.04	-0.15	0.31**
SES	0.001	0.003	0.03	-0.04	-0.05	0.16

Above variables entered on step 2, step 1 included HIV status (1 = HIV positive; 0 = HIV negative) and age
Cauc. Caucasian MSM, AAAfrican American MSM, Lat. Latino MSM
* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

in HIV among YMSM are not attributable to reported risky sexual behaviors. Previously unreported is our inclusion of contextual variables and partner characteristics. Black youth reported the least sex with internet partners and were the most likely to report prior arrest/incarceration. When examining factors within racial/ethnic groups, there was considerable similarity regarding contextual and partner characteristics associated with HIV-related sexual risk. Among all three groups, sex with an internet partner, commercial sex, and sex with older partners were significantly associated with HIV risk. These findings may highlight the importance of prioritizing social context in cross-cultural HIV prevention efforts geared towards YMSM.

In addition, our findings highlight considerable racial/ethnic differences in substance use patterns that influence potential targets in culturally tailored YMSM-specific HIV prevention. Among Caucasian and Latino YMSM, street drug use and

methamphetamine use were strongly correlated with sexual risk. However, among Blacks, it was marijuana use.

Although partner communication skills did not differ by race/ethnicity, this skill was strongly negatively correlated with sexual risk among Caucasian and Latino participants (β s = -0.42 and -0.45 respectively), meaning better communication was protective for these young men with regards to risky sex. This specific HIV prevention skill should be prioritized, discussed, and taught by clinicians and interventionists, specifically if working with Caucasian or Latino YMSM.

Several limitations should be considered. Data are cross-sectional and collected through self-report. Subjects came from one urban area, and results may not generalize. Finally, a large number of statistical comparisons were performed, which increases the likelihood that differences could be due to chance. Despite these limitations, this study is among the first to examine a broad range of factors underlying the racial/ethnic disparities in HIV risk among YMSM.

This study contributes important information for the development of HIV prevention efforts tailored to YMSM. Although we identified some racial/ethnic differences in risk factors as well as in factors associated with sexual risk specific to each racial/ethnic group, we also identified a great deal of similarity, particularly with regards to sexualized social contexts and the role they may play in contributing to sexual risk taking across racial/ethnic groups. Better understanding these similarities and differences is important to developing YMSM-specific HIV prevention efforts.

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