

Comparison of Sexual Risk Behaviors in Non-Hispanic Black and White Men Who Have Sex with Men Recruited in Online Surveys

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ABSTRACT

Background: As HIV behavioral risk surveys and prevention activities for men who have sex with men (MSM) move online, more information about racial/ethnic differences in behavior among men responding to online surveys is needed to target prevention messages. This analysis compares their sexual behavior between Non-Hispanic white and Non-Hispanic black MSM participating in online surveys.

Methods: Data were combined from two existing online MSM surveys, one from 10/03-3/04 (the other from 11/04-3/05). Participants were recruited through banner ads on a variety of gay-oriented websites. Detailed demographics and information on behavior in the last sexual encounter were collected. Analysis was limited to men from the USA or Canada who ever had sex with a man. Bivariate analysis was conducted to explore differences between Non-Hispanic white and Non-Hispanic black survey respondents. Only differences significant at $p \leq .001$ were reported because of the large sample size.

Results: Of 13,002 MSM respondents, 9549 were white and 530 were black. Black men, compared to white men, were younger (median age 35y vs 39y) and had lower income (57% vs 39% <\$40K annually), but were equally likely to report being HIV+ (13%) and HIV testing ever (65%) or in the last 3 months (27%). Black men were more likely to ever have sex with women (OR 1.64; 99.9%CI 1.18-2.28) and less likely to identify as gay/homosexual (61% vs 86%, OR 0.24; 99.9%CI 0.18-0.33). Regardless of race, men identifying as hetero- or bisexual were less likely to report ever HIV testing than gay-identified men (69%, 74%, and 88%, respectively). In the most recent sexual encounter occurring within the 3 months before the study, black and white men were equally likely to use drugs before sex (22%) but black men were more likely to have had sex with a woman (OR 3.58; 99.9%CI 2.15-6.03). Of men who had sex with a man in their last encounter, black men were more likely to report anal intercourse (AI) (OR 1.5; 99.9%CI 1.03-2.16) but less likely to have unprotected AI (OR 0.58; 99.9%CI 0.36-0.91).

Conclusions: In this sample of MSM recruited online, demographics and HIV-related risk behavior varied considerably by race/ethnicity although self-reported HIV prevalence was similarly high (13%) for black and white MSM. These findings demonstrate the need for more research to better understand behavioral and cultural differences as they relate to HIV risk and to appropriately target HIV prevention messages online.

INTRODUCTION

MSM, in particular Non-Hispanic Black MSM, are at high risk for HIV infection:

- Though only 5-7% of male adolescents and adults identify themselves as men who have sex with men (MSM), they represent 71% of all HIV infections among male adolescents and adults in 2005.¹
- A survey of 5 cities in 2005 showed that HIV prevalence among black MSM (46%) was more than twice that among white MSM (21%).²
- The racial disparity in HIV infection, with higher rates among non-Hispanic black MSM, does not appear to be explained by traditional behavioral risk factors, such as the number of sex partners, concurrent substance abuse, or rates of unprotected anal intercourse.³

The internet plays an increasing role in how MSM find sexual partners:

- A meta-analysis of studies that recruited MSM offline found that 40% (95%CI 35.2-45.2%) of MSM had used the internet to find sex partners.⁴
- The same analysis showed that the likelihood of unprotected anal intercourse (UAI) with male sex partners among MSM who had used the internet to find sex partners was higher than those who did not use the internet (odds ratio 1.68; 95%CI 1.18-2.40).⁴
- The internet can now be used to conduct behavioral risk surveys of MSM and to target HIV prevention efforts to this high-risk population.
- An internet-based survey of risk behavior among MSM found that rates of UAI were 23%, and UAI was associated with being HIV-seropositive (adjusted odds ratio 2.81; 95%CI 1.17-7.08, $p \leq .05$).⁵

As HIV behavioral risk surveys and prevention activities for (MSM) move online, more information about racial/ethnic differences in behavior among men responding to online surveys is needed to target prevention messages.

METHODS

- Data were combined from two existing online MSM surveys, one that collected data between Oct 2003 and March 2004, and the other from November 2004 and March 2005.
- Participants were recruited through banner ads posted on 14 different gay-oriented websites whose content ranged from news and information to sex.
- Of 15,359 male survey respondents, 13,002 reported having had sex with a man at least once in their lifetime. Of these MSM, 12,082 were from either the US or Canada.
- Detailed demographics and information on behavior in their last sexual encounter were collected.
- This analysis was limited to 10,079 non-Hispanic black or non-Hispanic white men from the USA or Canada who reported ever having sex with a man.
- Bivariate analysis was conducted to explore differences between Non-Hispanic white and Non-Hispanic black survey respondents.
- For variables specific to the last sexual encounter, the analysis was limited to those participants reporting sex within the three months prior to the completion of the survey.
- Only differences significant at $p \leq .001$ are reported because of the large sample size. Corresponding 99.9% confidence intervals are reported.

RESULTS

Table 1: Survey respondents' basic demographic data by race/ethnicity, limited to non-Hispanic Black and non-Hispanic White MSM from the USA or Canada.

Parameter	White Men	Black Men	
Number of respondents	9549	530	
Age (median in years)	39	33	$p < .001^*$
Income <=\$49,000/y	3414 (38.2%)	279 (52.3%)	$p < .001^*$
Lifetime male sexual partners			
1-50	4305 (45.1%)	335 (63.2%)	$p < .001^*$
51-100	3749 (39.3%)	181 (34.0%)	
>100	1495 (15.7%)	34 (6.4%)	
Lifetime female sexual partners			
none	3671 (39.0%)	148 (28%)	$p < .001^*$
1-10	4925 (52.3%)	275 (52.8%)	
11-100	768 (8.0%)	81 (15.2%)	
>100	10 (0.7%)	19 (3.6%)	
Kinsey scale			
gay/homosexual	6170 (68.4%)	313 (62.5%)	$p < .001^*$
bisexual	1173 (12.4%)	140 (27.1%)	
straight/heterosexual	110 (1.2%)	64 (12.4%)	
Reported HIV Status			$p = 0.028^*$
positive	1011 (11.5%)	58 (11.0%)	
negative	6552 (74.3%)	332 (62.2%)	
never tested	1286 (14.3%)	88 (16.4%)	

*Significant test
†Significant test, 2 sided

Figure 1. Percent of respondents reporting ever having had an HIV test, total and then by race/ethnicity. p values for chi-squared tests for all three categories < .001.

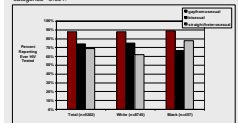


Figure 2. Percent of respondents reporting having had an HIV test in the past 90 days, total and then by race/ethnicity. p values for chi-squared tests are given.

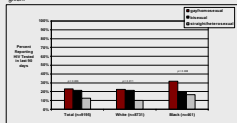
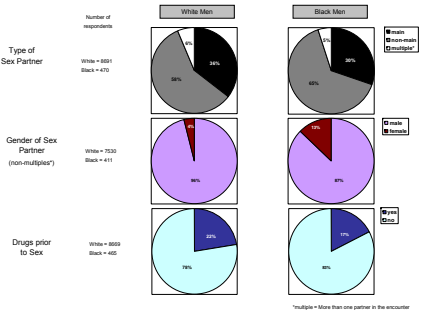


Table 2: Characteristics of the last sexual encounter, limited to MSM who reported having sex in the three months prior to the survey. Significance cutoff was set at $p < .001$.

Parameter	White Men	Black Men	
Number of respondents	6769	476	
Partner gender (non-mutual*)			$p < .001$
male	7231 (96.0%)	358 (87.1%)	
female	269 (4.0%)	53 (12.9%)	
Partner type			$p = 0.144^*$ [not significant]
man	3069 (35.7%)	142 (30.2%)	
non-man	5629 (67.8%)	304 (64.7%)	
mutual*	893 (8.2%)	42 (8.7%)	
Alcohol prior to sex	1952 (22.6%)	114 (24.5%)	$p = 0.325^*$ [not significant]
Drugs prior to sex	1943 (22.4%)	82 (17.4%)	$p = 0.019^*$ [not significant]

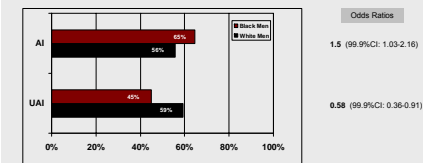
*Mutual = more than one partner in the encounter
†Partner OR required test, 2 sided

Figure 3. Characteristics of the last sexual encounter by race/ethnicity, limited to those respondents reporting sex within the past 90 days.



*Mutual = more than one partner in the encounter

Figure 4. Percentage of MSM reporting anal intercourse (AI) and unprotected anal intercourse (UAI) in the last sexual encounter, limited to respondents whose most recent sexual encounter was with a man within the prior 90 days. The white, non-Hispanic group is the referent for the odds ratios.



CONCLUSIONS

- In this sample of MSM recruited online, there were significant differences in basic demographic characteristics between black and white men: black men were younger, had lower income, were more likely to have had sex with women, and were less likely to identify themselves as gay/homosexual.
- Self-reported HIV prevalence was relatively high for both race/ethnicity categories (13%), and both lifetime and recent HIV testing varied by gender identity for both blacks and whites. MSM identifying themselves as straight/heterosexual were less likely to have HIV testing.
- HIV risk behavior also varied between groups. Black MSM were more likely to report anal intercourse in their last sexual encounter, but less likely to have unprotected anal intercourse. Blacks and whites were equally likely to report drug or alcohol use prior to sex.
- These findings demonstrate the need for more research to understand behavioral and cultural differences as they relate to HIV risk and to appropriately target HIV prevention messages online.

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