

ORIGINAL ARTICLE

Internalised homophobia is differentially associated with sexual risk behaviour by race/ethnicity and HIV serostatus among substance-using men who have sex with men in the United States

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ABSTRACT

Objectives There is a continuing need to identify factors associated with risk for HIV transmission among men who have sex with men (MSM), including a need for further research in the ongoing scientific debate about the association of internalised homophobia and sexual risk due partly to the lack of specificity in analysis. We assess the association of internalised homophobia by race/ethnicity within HIV serostatus for a large sample of substance-using MSM at high risk of HIV acquisition or transmission.

Methods Convenience sample of substance-using (non-injection) MSM reporting unprotected anal sex in the prior 6 months residing in Chicago, Los Angeles, New York and San Francisco. The analytic sample included HIV-negative and HIV-positive black (n=391), Latino (n=220), and white (n=458) MSM. Internalised homophobia was assessed using a published four-item scale focusing on negative self-perceptions and feelings of their own sexual behaviour with men, or for being gay or bisexual. Analyses tested associations of internalised homophobia with recent risk behaviour, stratified by laboratory-confirmed HIV serostatus within race/ethnicity, and controlling for other demographic variables.

Results In multivariate analysis, internalised homophobia was inversely associated ($p<0.05$) with recent unprotected anal sex among black MSM, and not significantly associated with sexual risk behaviour among white and Latino MSM.

Conclusions More research is needed to further identify nuanced differences in subpopulations of MSM, but these results suggest differentially targeted intervention messages for MSM by race/ethnicity.

or bisexual, or about having sex with men) is conceptualised as the self-internalisation of perceived or experienced external homophobic beliefs.³ In the scientific literature, there has been an ongoing debate about the association of internalised homophobia and risk behaviour among MSM.^{4–8} Internalised homophobia has been associated with sexual risk behaviour among MSM in some studies⁴ but not in others.^{5–6} For example, a recent large internet-based study in Europe found high internalised homonegativity to be associated with lower levels of condom use during anal sex when controlling for correlates.⁸ A recent meta-analytic review⁷ reported that studies on internalised homophobia and sexual risk behaviour collectively found mixed results, with a small overall effect size for studies of combined race/ethnicity, indicating a limited direct incremental association of internalised homophobia and risk, an association that may have decreased over recent decades. The authors suggest more focused and detailed research may enlighten the issue—including study among racial/ethnic subgroups of MSM as well as groups of MSM at higher risk for HIV infection.⁷ Other colleagues^{9–11} strongly encourage more research on the association of internalised homophobia and behaviour among MSM, which could address potential complexities that may mask subgroup differences in associations of internalised homophobia and risk behaviour.¹² This paper examines the association of internalised homophobia and recent unprotected anal sex (UA) in a large, multi-racial/ethnic sample of HIV-negative and HIV-positive MSM at high risk for HIV transmission in the USA.

INTRODUCTION

The US HIV epidemic remains largely among men who have sex with men (MSM),¹ and recent indicators suggest that sexual risk behaviour is steady or increasing among subpopulations of MSM.² Thus, there is a continuing need to identify factors associated with risk for HIV infection among MSM so that more effective prevention approaches are developed and implemented.

Internalised homophobia or homonegativity (ie, negative self-cognitions or feelings about being gay

METHODS

Sample

Data for this study were from a convenience sample of substance-using (non-injection) MSM reporting recent sexual risk (ie, at least one UA episode in the prior 6 months with a male partner whose HIV status was unknown or different from their own) enrolled in the Project MIX intervention trial in Chicago, Los Angeles, New York and San Francisco. Full study methods, sample description and trial results are reported elsewhere.¹³ The



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study protocol was approved by the US Centers for Disease Control and Prevention (CDC) and the local Institutional Review Board (IRB) for each city. This analysis focused on baseline data (n=1069) collected in 2005–2006, including black/African-American (n=391), Latino/Hispanic (n=220) and white/Caucasian (n=458) MSM.

Measurement

Demographic variables in this analysis included age group (18–29, 30–39, 40+ years old) and education level (high school diploma or less, some posthigh school training, college degree or more education). HIV serostatus (positive, negative) was based on a rapid test for HIV-negative and HIV-unknown status men, and for HIV-positive men who did not provide documentation of their status (eg, prior positive test result, antiretroviral therapy (ART) prescription bottle) at baseline. UA, including unprotected receptive anal sex and unprotected insertive anal sex (URA and UIA, respectively) during participants' most recent anal sex encounter with a non-primary partner within the past 3 months, and a measure of internalised homophobia were also assessed.

Internalised homophobia was assessed using a 4-item scale focusing on negative self-perceptions and feelings of their own sexual behaviour with men, or for being gay or bisexual.⁶ Items were adapted from the work of others^{14, 15} and employed a 5-point Likert response format, from 1=do not agree at all to 5=strongly agree. The four items were: 'Sometimes I dislike myself for being gay or bisexual'; 'Sometimes I wish I were not gay or bisexual'; 'I sometimes feel guilty about having sex with

men'; and 'I feel stress or conflict within myself over having sex with men'. The scale items had an inter-correlation of Cronbach's $\alpha=0.87$. Participant mean scores for the four items were dichotomised to 'non-agreement' (mean score 1–3) and 'agreement' (mean score 4–5) with the statements, for a single internalised homophobia 4-item scale score.

Analyses

Descriptive analyses consisted of χ^2 bivariate differences in demographic factors, internalised homophobia and sexual risk behaviour by race/ethnicity. Multivariate logistic regression analyses tested associations of internalised homophobia with recent UA (receptive, insertive, either), stratified by HIV serostatus within race/ethnicity (black/African-American, Latino/Hispanic, white/Caucasian), and controlling for age group (18–29 (referent group), 30–39, and 40+ years old), education level (\leq high school diploma/equivalent (referent group), some posthigh school training/education, college degree or more) and city.

RESULTS

In this sample of substance-using MSM (n=1069), a fourth of the men reported internalised homophobia (table 1). This percentage varied significantly by race/ethnicity with white MSM (14%) reporting less internalised homophobia than black (27%) or Latino (24%) MSM ($\chi^2=27.3$ p<0.0001). No differences were found based on HIV serostatus or age group, but men with higher education levels were less likely to report internalised homophobia compared with men with lower education (p<0.05). For the full sample, there were no significant

Table 1 Bivariate associations of sample characteristics and internalised homophobia by race/ethnicity and HIV status (n=1069)

Characteristic	Internalised homophobia by group						
	Total Sample (n=1069) n/n (%)	Black HIV-negative (n=114) n/n (%)	Black HIV-positive (n=277) n/n (%)	Latino HIV-negative (n=121) n/n (%)	Latino HIV-positive (n=99) n/n (%)	White HIV-negative (n=283) n/n (%)	White HIV-positive (n=175) n/n (%)
Overall sample	269/1069 (25)	33/114 (29)	98/277 (35)	30/121 (25)	26/99 (26)	54/283 (19)	28/175 (16)
Race/ethnicity							
Black (n=391)	106/391 (27)*	–	–	–	–	–	–
Latino (n=220)	52/220 (24)	–	–	–	–	–	–
White (n=458)	63/458 (14)	–	–	–	–	–	–
HIV status							
Negative (n=518)	100/518 (19)	–	–	–	–	–	–
Positive (n=551)	121/551 (22)	–	–	–	–	–	–
Age group, years							
18–29 (n=229)	51/229 (22)	14/38 (37)	6/17 (35)	17/58 (29)	1/11 (9)*	20/85 (24)	5/20 (25)
30–39 (n=371)	71/371 (19)	9/31 (29)	30/89 (34)	8/46 (17)	19/47 (40)	12/98 (12)	10/60 (17)
40+ (n=469)	99/469 (21)	10/45 (22)	62/171 (36)	5/17 (29)	6/41 (15)	22/100 (22)	13/95 (14)
Education							
\leq HS equivalent (n=338)	94/338 (28)*	18/52 (35)	46/131 (35)*	13/41 (32)	12/43 (28)	11/44 (25)	10/27 (37)*
Post-HS education (n=364)	74/364 (20)	9/33 (27)	45/107 (42)	10/45 (22)	7/32 (22)	14/77 (18)	6/70 (9)
\geq College degree (n=367)	53/367 (14)	6/29 (21)	7/39 (18)	7/35 (20)	7/24 (29)	29/162 (18)	12/78 (15)
UA, last anal sex (n=722)	143/722 (20)	13/71 (18)*	63/193 (33)	16/69 (23)	20/78 (26)	39/171 (23)*	26/140 (19)
No UA (n=347)	78/347 (22)	20/43 (47)	35/84 (42)	14/52 (27)	6/21 (29)	15/112 (13)	2/35 (6)
UIA, last anal sex (n=403)	78/403 (19)	8/48 (17)*	34/98 (35)	9/44 (20)	9/39 (23)	21/115 (18)	11/59 (19)
No UIA (n=666)	143/666 (21)	25/66 (38)	64/179 (36)	21/77 (27)	17/60 (28)	33/168 (20)	17/116 (15)
URA, last anal sex (n=417)	84/417 (20)	28/87 (32)	37/131 (28)*	9/30 (30)	12/54 (22)	21/76 (28)*	23/99 (23)*
No URA (n=652)	137/652 (21)	5/27 (19)	61/146 (42)	21/91 (23)	14/45 (31)	33/207 (16)	5/76 (7)

*p<0.05 for differences by characteristic within column. Internalised homophobia mean score: 1 to <3 recode (disagree with homophobic statements, '0' (ref)) versus 3–5 recode (do not disagree with homophobic statements, '1'). Multivariate models control for age, education and city.

HS, high school; UA, unprotected anal sex; UIA, unprotected insertive anal sex; URA, unprotected receptive anal sex.

Table 2 Multivariate associations of internalised homophobia and anal sex risk behaviours by race/ethnicity

	Internalised homophobia OR (CI)	UA OR (CI)	UIA OR (CI)	URA OR (CI)
<i>HIV-negative MSM</i>				
All HIV-negative MSM (n=518)				
Internalised homophobia	–			
Race/ethnicity (White, ref)				
Black				
Latino				
Age group (18–29 years, ref)				
30–39 years	0.56 (0.32–0.98)*			
40 or more years			2.07 (1.29 to 3.32)*	
Education (HS or less, ref)				
Some post-HS education				
College degree or more				0.52 (0.31 to 0.89)*
Black HIV-negative MSM (n=114)				
Internalised homophobia	–	0.20 (0.08 to 0.55)*		
Age group (18–29 years, ref)				
30–39 years				
40 or more years			2.96 (1.10 to 7.96)*	0.25 (0.08 to 0.78)*
Education (HS or less, ref)				
Some post-HS education				
College degree or more				0.18 (0.04 to 0.72)*
Latino HIV-negative MSM (n=121)				
Internalised homophobia	–			
Age group (18–29 years, ref)				
30–39 years				
40 or more years				
Education (HS or less, ref)				
Some post-HS education				
College degree or more				
White HIV-negative MSM (n=283)				
Internalised homophobia	–			
Age group (18–29 years, ref)				
30–39 years				
40 or more years			2.02 (1.08 to 3.77)*	
Education (HS or less, ref)				
Some post-HS education				
College degree or more				
<i>HIV-positive MSM</i>				
All HIV-positive MSM (n=551)				
Internalised homophobia	–			
Race/ethnicity (White, ref)				
Black	1.64 (1.44 to 4.83)*			
Latino	2.23 (1.13 to 4.42)*			
Age group (18–29 years, ref)				
30–39 years				
40 or more years			2.29 (1.09 to 4.80)*	
Education (HS or less, ref)				
Some post-HS education				
College degree or more	0.52 (0.28 to 0.96)*		1.77 (1.07 to 2.96)*	
Black HIV-positive MSM (n=277)				
Internalised homophobia	–			0.57 (0.37 to 0.99)*
Age group (18–29 years, ref)				
30–39 years				
40 or more years			5.09 (1.10 to 23.5)*	
Education (HS or less, ref)				
Some post-HS education				
College degree or more				
Latino HIV-positive MSM (n=99)				
Internalised homophobia	–			

Continued

Table 2 Continued

	Internalised homophobia OR (CI)	UA OR (CI)	UIA OR (CI)	URA OR (CI)
Age group (18–29 years, ref)				
30–39 years				
40 or more years				
Education (HS or less, ref)				
Some post-HS education				
College degree or more			2.98 (1.03 to 8.69)*	
White HIV-positive MSM (n=175)				
Internalised homophobia	–			
Age group (18–29 years, ref)				
30–39 years				
40 or more years				
Education (HS or less, ref)				
Some post-HS education	0.11 (0.03 to 0.41)*			
College degree or more	0.12 (0.03 to 0.42)*			

[bold] represents significant OR (CI) for the association of internalised homophobia and sexual risk behaviour.

Only significant associations presented, * $p < 0.05$. Internalised homophobia mean score: 1–3 recode (disagree with homophobic statements, '0' (ref)) versus 4–5 recode (do not disagree with homophobic statements, '1'). Multivariate models control for age, education and city.

HS, high school; MSM, men who have sex with men; UA, unprotected anal sex; UIA, unprotected insertive anal sex; URA, unprotected receptive anal sex.

bivariate differences in internalised homophobia for men who reported UA, UIA and URA (vs men who did not report those behaviours) in their most recent anal sex encounter.

Bivariate analyses by HIV serostatus within race/ethnicity (table 1) found that among black HIV-negative MSM, those who reported recent UA (vs those who did not) were *less* likely to report internalised homophobia (18% vs 47%, $p < 0.05$), as was found specifically for UIA (17% vs 38%, $p < 0.05$) in their most recent anal sex encounter; this pattern was also observed for URA and internalised homophobia among black HIV-positive men. Alternatively, white HIV-negative men reporting recent UA and URA were *more* likely to report internalised homophobia (23% vs 13% and 28% vs 16%, respectively, $p < 0.05$); this pattern was also consistent for URA and internalised homophobia among white HIV-positive MSM. There were no significant bivariate associations of internalised homophobia and sexual risk behaviour for Latino HIV-negative or HIV-positive MSM.

For multivariate analyses among all *HIV-negative MSM* (n=518), internalised homophobia was not associated with sexual risk behaviour (table 2). Among black HIV-negative men, internalised homophobia was inversely associated with sexual risk behaviour in a multivariate regression model for UA (adjusted OR=0.20, 95% CI=0.08 to 0.55). Supplemental regression analyses among HIV-negative black MSM (not shown) did not find internalised homophobia to be associated with any (protected or unprotected) receptive anal sex ($p > 0.05$). Among white and Latino HIV-negative men, internalised homophobia was not significantly associated with sexual risk behaviour.

In multivariate analyses for all *HIV-positive MSM* (n=551; table 2), black and Latino men were more likely to report internalised homophobia compared with white men ($p < 0.05$). Internalised homophobia was not associated with UA, UIA or URA. Among black HIV-positive MSM, internalised homophobia was again inversely associated for URA (OR=0.57, CI 0.37 to 0.99; table 2). Internalised homophobia was not significantly associated with sexual risk behaviour among white and Latino MSM. Supplemental multivariate analyses (not shown) found that internalised homophobia was not significantly associated with any (protected or unprotected) receptive anal sex among black HIV-positive men.

DISCUSSION

We found evidence that internalised homophobia is differentially associated with specific anal sex risk behaviours by race/ethnicity and HIV serostatus among substance-using MSM at high risk of HIV acquisition or transmission. These findings are in contrast with our overall findings in this paper for the sample of no association between internalised homophobia and specific sexual risk behaviours when analyses by HIV serostatus were not stratified by race/ethnicity. Important nuances of associations between internalised homophobia and sexual risk behaviour may be lost in broader analyses of demographic and behavioural characteristics, and it would advance the field going forward for assessing and analysing by these key variables.

Specifically, we found that internalised homophobia was associated with less UA reported by black HIV-negative MSM, and also with URA reported by black HIV-positive men. Further analyses found that internalised homophobia was not associated with receptive anal sex in general, and thus a potential overall association between internalised homophobia and receptive sex likely does not account for the homophobia–UA inverse association observed among some black MSM. Alternatively, internalised homophobia was not significantly associated with UA in multivariate analysis for white or Latino HIV-negative and HIV-positive MSM. Although there was evidence of a positive association between homophobia and sexual risk behaviour in bivariate analysis among white MSM, this association was non-significant when controlling for age and education. For HIV-positive MSM overall (but not for HIV-negative MSM), black and Latino men were more likely to report internalised homophobia compared with white men.

More research is needed to replicate and better understand the differential associations of internalised homophobia and UA for some black substance-using MSM compared with white and Latino substance-using MSM. Given that we found no association of internalised homophobia and overall receptive anal sex among HIV-positive MSM by race/ethnicity, the association found between homophobia and sexual behaviour appears to be specific to URA and unique to black HIV-positive MSM. Further inquiry should investigate whether under-reporting of risk behaviour could partially account for the differences, or if

psychosocial and socio-cultural distinctions between black and white MSM are the underlying cause. For example, internalised homophobia may facilitate condom use for some black MSM potentially due to heightened risk for HIV infection among black MSM compared with white and Latino MSM.¹ The finding of no association between homophobia and sexual risk behaviour among white and Latino MSM is consistent with findings of others who suggest that associations of internalised homophobia and risk behaviour may be waning over time due to increasing societal and self-acceptance of gay and bisexual men.⁷

This study is limited in that it assessed self-reported behaviour and psychosocial factors. Other limitations include a convenience sample in the four cities of Chicago, Los Angeles, New York and San Francisco, with a substance-using (non-injection) sample enrolled in a trial testing a behavioural intervention.¹³ The particular measure of internalised homophobia that was used may capture a subset specifically of negative feelings about being gay/bisexual for what others have described as multi-dimensional construct,^{7 16} although the items used here have been applied elsewhere⁶ and present face validity and internal consistency for such negative feelings. The pattern of associations observed in this study may not hold in broader populations of MSM or in other countries. Finally, sexual risk was defined as behaviour during the most recent anal sex encounter reported in the sample, which allows for behavioural and contextual specificity (eg, sexual positioning) but represents only a single episode.

This analysis contributes to a better understanding of internalised homophobia among substance-using MSM at risk, specifically on the topic of racial/ethnic differences by HIV serostatus in a large sample which have not been addressed previously. Future studies should further examine racial/ethnic differences in associations of multi-dimensional internalised homophobia with sexual risk behaviour in other large and diverse samples of MSM, and by other key demographic characteristics (age, education level, region). Overlooking critical nuances by race/ethnicity and other demographic variables would result in missing important opportunities for tailored or targeted behavioural intervention and support for reducing risk behaviour in a population that continues to be at high risk for HIV transmission and infection.

Key messages

- ▶ Internalised homophobia was inversely associated with recent sexual risk behaviour among black men who have sex with men (MSM); internalised homophobia was not associated with sexual risk behaviour among white and Latino MSM.
- ▶ Further research is needed to replicate and better understand internalised homophobia and the nature of its differential association with sexual risk behaviour by race/ethnicity.
- ▶ The findings suggest that differential interventions could be targeted by race/ethnicity in addressing internalised homophobia and sexual risk behaviour among MSM.

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Contributors GM analysed the data and wrote the first draft of the manuscript. PS assisted with analysing data. GM, SAF, BAK, DM, SMH and GNC designed and implemented the study. All authors reviewed, edited and approve of the manuscript.

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