American Journal of Men's Health
http://jmh.sagepub.com/

Identity Formation, Outness, and Sexual Risk Among Gay and Bisexual Men

Darcy White and Rob Stephenson

Am J Mens Health published online 19 May 2013
DOI: 10.1177/1557988313489133

The online version of this article can be found at:
http://jmh.sagepub.com/content/early/2013/05/19/1557988313489133

Published by:
SAGE
http://www.sagepublications.com

Additional services and information for *American Journal of Men's Health* can be found at:

Email Alerts: http://jmh.sagepub.com/cgi/alerts

Subscriptions: http://jmh.sagepub.com/subscriptions

Reprints: http://www.sagepub.com/journalsReprints.nav

Permissions: http://www.sagepub.com/journalsPermissions.nav

>> OnlineFirst Version of Record - May 19, 2013

What is This?

Downloaded from jmh.sagepub.com at EMORY UNIV on May 22, 2013

Identity Formation, Outness, and Sexual Risk Among Gay and Bisexual Men

American Journal of Men's Health
XX(X) 1–12
© The Author(s) 2013
Reprints and permissions:
sagepub.com/journalsPermissions.nav
DOI: 10.1177/1557988313489133
ajmh.sagepub.com
SAGE

Darcy White, MPH[1] and Rob Stephenson, PhD[1]

Abstract

Research on HIV among men who have sex with men has focused on individual behavioral and biomedical factors driving transmission risks, but these cannot be fully understood without also understanding the social context within which sexual minorities live. Using data from 703 gay and bisexual men in Atlanta, this study explores the factors associated with homosexual identity formation and disclosure ("outness") and examines how these constructs are associated with sexual risk taking. In multivariable regression models, sexual identity and outness were associated with age, race, education, employment, and experience of discrimination. Independent of these factors, having a more established and open homosexual identity was associated with lower sexual risk behaviors. These results highlight the need to address discriminatory policies and values in society and call for programs to provide support and promote healthy identity development among vulnerable groups.

Keywords

homosexual identity, outness, internalized homonegativity, minority stress, HIV

More than three decades since the first reports of HIV/AIDS, the burden of the epidemic in the United States remains centered on men who have sex with men (MSM). Despite making up only 2% of the population, MSM accounted for a disproportionate 61% of incident HIV infections in 2010 (Centers for Disease Control and Prevention, 2012). Young MSM and MSM of color have particularly high rates of infection, and recent trends suggest that incidence is increasing (Beyrer et al., 2012; Centers for Disease Control and Prevention, 2012). To explain these patterns, much has been written about individual behaviors and the biomedical markers of transmission (Beyrer et al., 2012; Goodreau & Golden, 2007; Koblin et al., 2006; Rosenberg, Sullivan, DiNenno, Salazar, & Sanchez, 2011), but these factors cannot be interpreted or influenced without acknowledging the social, institutional, and political context in which sexual minorities live and act. The stress of being a sexual minority in a heteronormative society has been linked to a range of psychological morbidities (Bybee, Sullivan, Zielonka, & Moes, 2009; Meyer, 2003), yet the associations with sexual risk remain unclear. To gain a more complete understanding of HIV transmission among MSM, it is important to understand what shapes the experience of developing and disclosing a homosexual identity and how identity and disclosure in turn relate to sexual risk.

Although the visibility of the gay, lesbian, and bisexual community in the United States has grown in recent years, stigma and discrimination based on sexual orientation remain prevalent. Survey data suggest that nearly 50% of gay, lesbian, and bisexual adults experience verbal abuse because of their sexual orientation, and 20% experience physical violence or property crimes (Herek, 2009). In a systematic review, Rothman, Exner, and Baughman (2011) calculated the median lifetime prevalence of hate-crime-related sexual assault among gay and bisexual men at 14%. Exposure to these discriminatory beliefs and actions begins early; in a national survey of lesbian, gay, bisexual, and transgender youth, the majority of respondents reported having heard homophobic comments from teachers and school staff (Kosciw, Greyak, Bartkiewicz, Boesen, & Palmer, 2012). Additionally, 82% of students reported they had been verbally harassed because of their sexual orientation, 40% reported physical harassment, and 18% reported physical assault.

For individuals with homosexual feelings and behaviors, the experience and even the anticipation of stigma and discrimination can cause substantial psychosocial stress (Herek, 2004; Meyer, 2003). One component of this

[1]Emory University, Atlanta, GA, USA

Corresponding Author:
Darcy White, Hubert Department of Global Health, Rollins School of Public Health, Emory University, 1518 Clifton Rd NE, No. 7030F, Atlanta, GA 30322, USA.
Email: darcy.white@emory.edu

Downloaded from jmh.sagepub.com at EMORY UNIV on May 22, 2013

"minority stress" is internalized homonegativity, a defensive identification with the majority group involving adoption of negative attitudes toward one's own sexual orientation (Herek, 2004; Meyer, 1995). These internalized attitudes, along with stigma from external sources, can result in identity confusion as MSM struggle to reconcile their same-sex feelings and desires with their perception of what is socially acceptable and expected (Herek, 2004). Research has indicated that internalized homonegativity is highest among men in early stages of identity development; progression to a fully formed identity requires confronting this stigma to resolve and accept one's internal thoughts, feelings, and desires (Dubé & Savin-Williams, 1999; Mayfield, 2001; Rosser, Bockting, Ross, Miner, & Coleman, 2008; Rowen & Malcolm, 2002).

A related construct influenced by minority stress is outness, a measure of the extent that men disclose their sexual identity and the groups they "come out" to. Although disclosure is thought to increase with identity formation, other circumstantial or environmental factors have been suggested to influence whether men are open about their sexual orientation (Mayfield, 2001). For example, even among men who have adopted an internal homosexual identity, concealment has been described as a strategy to cope with minority stress and avoid external discrimination (Lapinski, Braz, & Maloney, 2010; Meyer, 2003).

In prior studies, researchers have reported that men who are less accepting and open about their homosexual identities are more likely to report anxiety, low self-esteem, depression, suicidality, and general psychological distress (Allen & Oleson, 1999; Brady & Busse, 1994; Brown & Trevethan, 2010; Bybee et al., 2009; Dudley, Rostosky, Korfhage, & Zimmerman, 2004; Meyer, 1995; Ross, Rosser, & Neumaier, 2008). The evidence linking identity and outness to sexual behavior, however, remains inconclusive. Data from across the United States suggests that being more involved in the gay community, attending gay bars and clubs, being out to more people, and reporting greater comfort with a public homosexual identity are associated with increased risk of unprotected anal intercourse (UAI), having more sexual partners, and testing positive for HIV (Centers for Disease Control and Prevention, 2003; Flores, Mansergh, Marks, Guzman, & Colfax, 2009; Rosario, Schrimshaw, & Hunter, 2006). A possible explanation for these associations is that individuals who identify strongly as gay may view UAI—specifically receptive UAI—as an expression of their gay identity and affiliation with the gay community (Flores, Mansergh, et al., 2009). Additionally, men who are more openly out may feel less inhibited in their sexual behaviors (Rosario et al., 2006), and the social and cultural norms in venues such as gay bars and clubs have been reported to condone unprotected sex (Flores, Mansergh, et al., 2009). Other researchers, in contrast, have reported no direct association between identity-related variables and sexual risk (Dudley et al., 2004), and from a longitudinal study in New York City, Rosario et al. (2006) reported that men with more positive attitudes toward homosexuality had *lower* odds of receptive UAI. The authors suggest that this association reflects a tendency for men who are more accepting of their identities to take better care of their health by using condoms. Indirect associations have also been reported, whereby men who are more accepting of their homosexuality have less anxiety and lower substance abuse (Dudley et al., 2004; Rosario et al., 2006).

Taken together, these studies produce an inconsistent picture of the relationship between homosexual identity, outness, and sexual behaviors. Contributing to the lack of clear associations, studies have employed a range of definitions and measures to operationalize gay identity, outness, and internalized homonegativity (Newcomb & Mustanski, 2011). The use of different outcomes across studies—for example, UAI with men, UAI with women, oral sex, number of partners, HIV sero-positivity—also introduces variability to the understanding of identity, outness, and health (Newcomb & Mustanski, 2011). Furthermore, processes of identity development and disclosure, as well as their associations with sexual risk behaviors, have been reported to differ substantially depending on the race or ethnicity of the study population (Dubé & Savin-Williams, 1999; Flores, Mansergh, et al., 2009; Kennamer, Honnold, Bradford, & Hendricks, 2000; Millett et al., 2012; Rosario, Schrimshaw, & Hunter, 2004; Rosario et al., 2006). Although some studies have included measures to account for these discrepancies, many have been restricted to one demographic group or have not controlled for social or demographic characteristics (Dudley et al., 2004; Newcomb & Mustanski, 2011).

To further examine the links between identity, outness, and sexual risk, this study takes a holistic approach by looking first at what factors are associated with homosexual identity formation and outness and second at how identity and outness influence sexual risk. The results from this study will contribute a more comprehensive understanding of the role of identity formation and outness in shaping sexual risk behaviors among MSM, information that can inform the targeting of HIV prevention messages and programmatic efforts.

Method

The analysis uses data collected through a survey of approximately 1,000 gay and bisexual men in Atlanta, GA. Respondents were recruited through venue-based sampling, a derivative of time-space sampling that involves sampling during set blocks of time at venues frequented by hard-to-reach populations (Muhib et al.,

Downloaded from jmh.sagepub.com at EMORY UNIV on May 22, 2013

2001). Venue-based sampling has proven successful for the recruitment representative samples of lesbian, gay, bisexual, and transgender individuals in a number of studies (Flores, Bakeman, Millett, & Peterson, 2009; Liu et al., 2008; MacKellar, Valleroy, Karon, Lemp, & Janssen, 1996; Raymond et al., 2010). With the aim of reaching a diverse population of gay and bisexual men, the sampling frame for this study consisted of more than 160 gay-themed and gay-friendly venues and events including restaurants, gay bookstores, gay bars, an MSM-targeted drop-in center, urban parks, Gay Pride events, gay sports team events, and gay fundraising events.

During recruitment periods, study staff stood adjacent to the venues, established an imaginary line and approached every *n*th man who crossed it—the value of *n* ranged from one to three depending on the volume of traffic at the venue. Men who agreed to be screened were asked a series of eight questions to assess their eligibility. Those who qualified were then read a short script outlining their potential participation in a self-administered, web-based survey that would take approximately 25 minutes and could be completed at home or on an iPad at five of the recruitment venues. All men who expressed interest in participation were given a card with a web address to link them to the survey and a unique identifier to ensure that each respondent could only complete the survey once.

Of the 4,903 men approached, 2,936 (59.9%) agreed to be screened. Of these, 2,093 (71.3%) met the eligibility criteria for the study. Men were eligible if they reported: being 18 years of age or older, identifying as gay/homosexual or bisexual, living in the Atlanta Metro Area, and having had sex with a man in the previous 6 months. From among the eligible men, 1,965 (93.9%) expressed interest in participating in the study and 1,074 (51.3%) completed the survey. A total of 703 men provided complete data for all variables of interest for this analysis.

The survey included sections on demographic and socioeconomic characteristics, experience of external homonegativity, homosexual identity, outness, and recent sexual risk behaviors. External homonegativity was measured through a set of 11 items representing different forms of discrimination respondents may have experienced because of their sexual orientation in their lifetimes. Developed by Diaz, Ayala, and Bein (2001), the items address: being made fun of as a child, experiencing violence as a child, experiencing violence as an adult, being made fun of as an adult, hearing as a child that gay men grow up alone, hearing as a child that gays are not normal, feeling as a child that your gayness hurt your family, having to pretend to be straight, experiencing job discrimination, having to move away from family, and experiencing police harassment. Based on the responses to these items, a summative index was constructed to indicate the number of discriminatory experiences reported (range 0-11).

To measure outness, respondents were asked, "Besides your male sex partners, does anyone know about your sexual orientation?" Those who indicated "yes" were further asked if they had told any of their family, friends, or work associates about their sexual orientation. From these questions, four dichotomous variables were created to indicate whether respondents were out to family, out to friends, out at work, or out to everyone.

Homosexual identity formation was measured using a modified version of the Gay Identity Questionnaire (Brady & Busse, 1994). Through cognitive interviewing with gay and bisexual men in seven Atlanta-based focus groups, the original scale was reduced to 20 items agreed to be reflective of the lived experiences of local MSM. The items assess respondents' view of and attitude toward their sexual orientation as well as how open and comfortable they are about their identity in their social circles. Presented with statements such as, "I have homosexual feelings, but I doubt that I am homosexual/bisexual" and "I generally feel comfortable being the only gay/bisexual person in a group of heterosexuals," respondents were prompted to indicate their agreement on a 5-point Likert-type scale ranging from *strongly disagree* to *strongly agree*. To construct an index, responses were coded from −2 to 2, with neutral responses receiving a value of zero. Based on Brady and Busse's (1994) observation that the six stages of identity formation proposed by Cass (1984) could be collapsed into two primary stages, items that corresponded with the second stage—in which the internal identity becomes resolved—were reverse-coded. All items were then summed such that a higher, more positive score represents a more established homosexual identity. Finally, 40 points were added to each score to shift the possible range from −40 to 40 to 0 to 80.

Four indicators of sexual risk were considered. The first is a continuous measure of the number of anal sex partners respondents reported having over the preceding 6 months. The second, UAI, was operationalized as a dichotomous variable, coded one if the respondent reported anal intercourse without condom (all or part of the time) at last sex. The final two variables are dichotomous indicators of (a) whether respondents had sex while drunk from alcohol in the preceding 3 months and (b) whether they had sex while high on drugs in the preceding 3 months. Although these last two variables are not indicative of specific sexual behaviors, they represent indirect links to sexual risk, as alcohol and drug use has been linked to higher transmission of HIV and sexually transmitted infections because of impaired judgment and control (Koblin et al., 2006; Ross et al., 2001).

Stage 1 of the analysis focused on identifying factors associated with homosexual identity formation

Downloaded from jmh.sagepub.com at EMORY UNIV on May 22, 2013

and outness. Five regression models were fitted: First, a linear regression model was fitted using the index of homosexual identity as the outcome. Second, four separate logistic models were fitted to four binary outcomes measuring whether the respondent reported being out to family, out to friends, out at work, or out to everyone. Stage 2 of the analysis examined the factors associated with each of the four indicators of sexual risk, with separate regression models fitted for each outcome (a linear model for number of anal sex partners, and logistic models for UAI, sex while drunk and sex while high). The indicators of outness and homosexual identity were included as key covariates in the models of sexual risk: The index of homosexual identity was categorized into four levels based on the quartiles of the sample distribution. All analyses were performed using STATA version 12.0 (StataCorp, College Station, TX).

All models included as covariates: respondent age (18-24, 25-34, 35-44, and >45), race (White, Black/African American, or "other"), educational attainment (high school or less, some college or a 2-year degree, and college or higher), and employment status (employed versus unemployed). The unemployed category included 24 respondents who reported being retired (3.4% of the sample). Sexual orientation was measured as gay/homosexual versus bisexual, and a dichotomous variable was created to indicate whether respondents had a main male partner, defined as "someone who you feel committed to above all others." HIV sero-status was classified as negative for men who reported having tested negative, positive for those who had received a positive result, and as "don't know/never been tested" for men who could not remember their results, had an indeterminate result, had never been tested, or did not know if they had been tested. Last, the index of external homonegativity was included in all models in both stages to control for the experience of discrimination.

Results

The characteristics of the sample are presented in Table 1. The mean age was 35 years, with respondents ranging in age from 18 to 71 years. Slightly more than half of respondents identified as White and nearly one third identified as Black or African American. Just more than half of the sample reported attainment of a college-level education or higher, and nearly 80% reported current employment (78.7%, n = 553). The vast majority (91.6%, n = 59) identified as gay, and close to 60% (n = 420) reported that they had a main partner. When asked about their HIV status, 68.9% (n = 484) responded that they were negative, 24.2% (n = 170) indicated that they were positive, and 7% (n = 49) did not know their status.

Nearly all men in the sample (97.4%, n = 685) stated that at least one person besides their male sex partners knows about their sexual orientation. Ninety-six percent (n = 677) reported telling their friends, 90% (n = 636) had told their family, and 88% (n = 621) stated that they had come out to their work associates. A high proportion of the men (82.9%, n = 583) reported being out to all three groups. Correspondingly, the sample overall had scores indicative of relatively well-formed sexual identities. From the possible range of 0 to 80—with high scores representing more advanced identity formation—the mean in the sample was 56.6. However, respondents also reported experiencing an average of 5.8 of the 11 listed forms of external discrimination in their lifetimes; of the five items addressing discrimination or stigma during childhood, the mean for the sample was 3.1.

Regarding sexual risk, respondents reported an average of 3.6 anal sex partners over the preceding 6 months. In that same period, slightly more than half of respondents (54.3%, n = 382) reported having anal sex without a condom (UAI). Over the 3 months preceding the survey, 48% (n = 339) of the men had sex while drunk from alcohol, and nearly 20% (n = 140) had sex while high on drugs.

The results from Stage 1 of the analysis suggest a number of factors that are associated with men's disclosure of their sexual identity (Table 2) and their stage of homosexual identity formation (Table 3). Though age was not associated with outness, men aged 45 and older were significantly more likely to have a more positively formed homosexual identity relative to those aged 18 to 24. Relative to White respondents, Black/African American men were less likely to have a positively formed homosexual identity and they had lower adjusted odds of being out to family, friends, work associates, and to all three groups. Having some college education or a 2-year degree was associated with more than four times the odds of being out to friends, slightly more than twice the odds of being out at work, and an increased likelihood of having adopted a homosexual identity. On the other hand, men who were unemployed or retired had significantly lower odds of being out to friends, work associates, and to everyone.

Compared with self-identified gay men, bisexual men had lower odds of being out to any or all of the groups and were less likely to have a well-formed identity as a homosexual. Men with a main male partner had higher odds of being out to their family and to everyone in their social circles, and they were more likely to have a more established homosexual identity. HIV status was also associated with outness but not with homosexual identity; men who did not know their status or had never been tested had lower odds of being out to any groups, relative to those who knew their status to be negative. Finally,

Downloaded from jmh.sagepub.com at EMORY UNIV on May 22, 2013

Table 1. Descriptive Statistics ($N = 703$).

	n (%)	Mean (Min, Max)
Control variables		
Age (years)		
18 to 24	136 (19.35)	
25 to 34	213 (30.30)	
35 to 44	191 (27.17)	
45+	163 (23.19)	
Race		
White, non-Hispanic	385 (54.77)	
Black/African American, non-Hispanic	223 (31.72)	
Other	95 (13.51)	
Education		
High school or less	115 (16.36)	
Some college or 2-year degree	226 (32.15)	
College or more	362 (51.49)	
Employment status		
Employed (part or full time)	553 (78.66)	
Unemployed or retired	150 (21.34)	
Sexual orientation		
Gay	644 (91.61)	
Bisexual	59 (8.39)	
Has a main partner	420 (59.74)	
HIV status		
Negative	484 (68.85)	
Positive	170 (24.18)	
Don't know/never been tested	49 (6.97)	
Primary covariates		
Out to family	636 (90.47)	
Out to friends	677 (96.30)	
Out at work	621 (88.34)	
Out to everyone	583 (82.93)	
Quartiles of homosexual identity		56.57 (14, 68)
First	184 (26.17)	45.39 (14, 52)
Second	179 (25.46)	56.12 (53, 58)
Third	170 (24.18)	60.70 (59, 62)
Fourth	170 (24.18)	65.01 (63, 68)
Index of external homonegativity		5.80 (0, 11)
Outcomes		
Number of anal sex partners in the past 6 months		3.63 (0, 60)
Unprotected anal intercourse at last sex	382 (54.34)	
Sex while drunk in the past 3 months	339 (48.22)	
Sex while high in the past 3 months	140 (19.91)	

men who had experienced more discrimination because of their sexual identity had higher odds of being out to family, friends, or to all three groups.

From Stage 2 of the analysis, the age of the respondents was associated with recent UAI, sex while drunk, and sex while high (Tables 4 and 5). Relative to men aged 18 to 24, men in all other age groups had lower adjusted odds of having had UAI at last sex. Regarding sex while drunk, the decrease in odds was only significant among men aged 45 and older, and the odds of having had sex while high were significantly lower only among men aged 25 to 34. Race also emerged as an important factor related to sexual risk behaviors. Relative to White men, Black/African American men and those of "other" races had significantly lower odds of both UAI and sex while drunk. The only outcome influenced by education was sex while high; men with a college education or higher were approximately half as

Downloaded from jmh.sagepub.com at EMORY UNIV on May 22, 2013

Table 2. Adjusted Odds of Having Disclosed One's Sexual Identity to Specified Social Groups ($N = 703$).

	Out to family, OR (95% CI)	Out to friends, OR (95% CI)	Out at work, OR (95% CI)	Out to everyone, OR (95% CI)
Age (years)				
18 to 24	1.00 (reference)	1.00 (reference)	1.00 (reference)	1.00 (reference)
25 to 34	1.09 (0.53, 2.28)	2.65 (0.68, 10.33)	1.55 (0.73, 3.31)	1.12 (0.60, 2.07)
35 to 44	1.04 (0.45, 2.38)	2.07 (0.51, 8.37)	0.64 (0.30, 1.35)	0.69 (0.36, 1.32)
45+	1.08 (0.44, 2.64)	0.76 (0.21, 2.77)	0.65 (0.29, 1.47)	0.84 (0.42, 1.71)
Race				
White, non-Hispanic	1.00 (reference)	1.00 (reference)	1.00 (reference)	1.00 (reference)
Black, non-Hispanic	0.26 (0.13, 0.51)**	0.22 (0.06, 0.74)**	0.21 (0.11, 0.39)**	0.27 (0.16, 0.46)**
Other	0.61 (0.25, 1.54)	0.48 (0.10, 2.23)	0.66 (0.27, 1.62)	0.80 (0.38, 1.65)
Education				
High school or less	1.00 (reference)	1.00 (reference)	1.00 (reference)	1.00 (reference)
Some college or 2-year degree	1.36 (0.63, 2.92)	4.06 (1.12, 14.68)**	2.07 (1.04, 4.11)**	1.63 (0.90, 2.97)
College or more	0.92 (0.43, 1.97)	1.56 (0.53, 4.64)	1.44 (0.73, 2.87)	1.30 (0.71, 2.39)
Employment status				
Employed (part or full time)	1.00 (reference)	1.00 (reference)	1.00 (reference)	1.00 (reference)
Unemployed or retired	0.71 (0.38, 1.35)	0.23 (0.09, 0.61)**	0.40 (0.22, 0.71)**	0.44 (0.27, 0.73)**
Sexual orientation				
Gay	1.00 (reference)	1.00 (reference)	1.00 (reference)	1.00 (reference)
Bisexual	0.45 (0.22, 0.93)**	0.27 (0.10, 0.71)**	0.32 (0.17, 0.63)**	0.39 (0.21, 0.72)**
Has a main partner	2.22 (1.27, 3.88)**	2.12 (0.83, 5.45)	1.45 (0.86, 2.46)	1.91 (1.23, 2.96)**
HIV status				
Negative	1.00 (reference)	1.00 (reference)	1.00 (reference)	1.00 (reference)
Positive	1.43 (0.69, 2.94)	1.58 (0.46, 5.40)	1.60 (0.82, 3.11)	1.53 (0.87, 2.69)
Don't know/never been tested	0.31 (0.13, 0.72)**	0.21 (0.06, 0.72)**	0.36 (0.16, 0.85)**	0.42 (0.20, 0.90)**
Index of external homonegativity	1.16 (1.04, 1.28)**	1.17 (1.00, 1.38)*	1.08 (0.98, 1.18)	1.09 (1.00, 1.18)**

Note. OR = odds ratio; CI = confidence interval.
*$p < .10$. **$p < .05$.

likely to have sex while high relative to men with a high school education or less.

Sexual orientation emerged as a significant factor only for sex while drunk. Bisexual men had 74% higher odds of having had sex while drunk in the preceding 3 months than men who identified as gay. Additionally, having a main male partner was associated with a lower likelihood of having a large number of anal sex partners and nearly 2.5 times the odds of UAI at last sex. Relative to men who reported a negative HIV status, respondents who reported being positive had higher odds of UAI, higher odds of having had sex while high, and were more likely to have a higher number of anal sex partners. Another association emerged between HIV status and the number of anal sex partners in that those who did not know their status or had never been tested were less likely to have had numerous partners compared with men who had tested negative.

Outness influenced sexual risk in inconsistent directions. Men who were out to their family had higher adjusted odds of UAI at last sex. In contrast, men who were out to their friends had lower odds of UAI at last sex, lower odds of having had sex while drunk, and were more likely to have had more anal sex partners. Being out at work was associated with a lower likelihood of having more anal sex partners. Homosexual identity formation also influenced the likelihood of UAI at last sex, sex while drunk, and sex while high. Relative to men in the first quartile (earlier stages of identity formation), the odds of UAI were significantly lower only among men in the second quartile. The odds of having had sex while drunk and the odds of having had sex while high were lower among men in the second, third, and fourth quartiles compared with those in the first quartile. Finally, having experienced more instances of external homonegativity was associated with an increased likelihood of UAI at last sex, having had sex while drunk, and having had more anal sex partners in the past 6 months.

Discussion

The results of this analysis indicate that minority stress, as conceptualized through homosexual identity formation and outness, has a strong effect on sexual behavior and may contribute to a better understanding of the continued high rates of HIV among MSM. From Stage 1 of the analysis, there are notable variations in the experience, internalization, and response to minority stress, pointing to the influence of demographic, social, and circumstantial

Downloaded from jmh.sagepub.com at EMORY UNIV on May 22, 2013

Table 3. Adjusted Estimates of the Likelihood of Having a More Positively Formed Homosexual Identity ($N = 703$).

	Coefficient (95% CI)
Age (years)	
18 to 24	0.00 (reference)
25 to 34	0.61 (−1.07, 2.29)
35 to 44	−0.71 (−2.49, 1.08)
45+	1.71 (−0.15, 3.58)*
Race	
White, non-Hispanic	0.00 (reference)
Black/African American, non-Hispanic	−2.42 (−3.83, −1.01)**
Other	−0.04 (−1.78, 1.69)
Education	
High school or less	0.00 (reference)
Some college or 2-year degree	1.47 (−0.27, 3.21)*
College or more	−0.20 (−1.92, 1.53)
Employment status	
Employed (part or full time)	0.00 (reference)
Unemployed or retired	−1.18 (−2.66, 0.31)
Sexual orientation	
Gay	0.00 (reference)
Bisexual	−8.16 (−10.24, -6.09)**
Has a main partner	2.14 (0.96, 3.31)**
HIV status	
Negative	0.00 (reference)
Positive	−0.55 (−1.99, 0.89)
Don't know/never been tested	0.28 (−1.98, 2.53)
Index of external homonegativity	0.00 (−0.22, 0.22)

Note. CI = confidence interval.
*$p < .10$. **$p < .05$.

factors on identity formation and outness. In particular, the significant differences by race implicate distinct social and cultural environments among the men in the sample. The finding that Black/African American men were less likely to have a well-formed homosexual identity (as captured by the current measure) or to be out to any and all groups is consistent with previous research (Dubé & Savin-Williams, 1999; Flores, Mansergh, et al., 2009; Kennamer et al., 2000; Rosario et al., 2006). To explain these patterns, other studies have cited the influence of the social context, describing conservative, heterosexist values and strict gender norms in many African American communities (Crawford, Allison, Zamboni, & Soto, 2002; Dubé & Savin-Williams, 1999; Kennamer et al., 2000; Lapinski et al., 2010). In this unsupportive environment, Black men may be more likely to internalize the negative views of their community, and the anticipation of stigma may prevent them from disclosing their identity.

A more direct measure of the social and institutional environment, the index of external homonegativity was also associated with disclosure. Men who reported more lifetime experiences of discrimination were more likely to be out to family, friends, and all groups. Although the cross-sectional nature of the data precludes conclusions on causality, the positive association with outness likely reflects a higher probability of experiencing discrimination among those who have made their homosexuality more public. The lack of association with identify formation is supported by previous research, which has established that perceived or anticipated stigma and discrimination is distinct from the actual experience of it, and the former is more apt to lead to internalized homonegativity (Ross & Rosser, 1996).

Although less than 10% of the sample ($n = 59$) identified as bisexual, the results point to unique patterns of sexual identity formation and disclosure among bisexuals. The findings that bisexuals were less likely to have positive homosexual identities or to have come out to any and all groups are consistent with prior research, which has suggested that bisexuals experience more identity confusion, lower disclosure, and less community connection than gay and lesbian individuals (Balsam & Mohr, 2007). Research on "biphobia" has reported that bisexuals encounter social stigma both from heterosexuals and from homosexuals (Mulick & Wright, 2002), and a survey of heterosexuals reported that bisexuals were ranked

Downloaded from jmh.sagepub.com at EMORY UNIV on May 22, 2013

Table 4. Adjusted Estimates of the Likelihood of Having More Anal Sex Partners ($N = 703$).

	Coefficient (95% CI)
Age (years)	
18 to 24	0.00 (reference)
25 to 34	−0.78 (−2.08, 0.52)
35 to 44	−0.35 (−1.73, 1.04)
45+	−1.06 (−2.50, 0.38)
Race	
White, non-Hispanic	0.00 (reference)
Black/African American, non-Hispanic	−0.57 (−2.50, 0.38)
Other	−0.14 (−1.48, 1.20)
Education	
High school or less	0.00 (reference)
Some college or 2-year degree	−0.68 (−2.03, 0.68)
College or more	−0.13 (−1.47, 1.21)
Employment status	
Employed (part or full time)	0.00 (reference)
Unemployed or retired	0.06 (−1.10, 1.22)
Sexual orientation	
Gay	0.00 (reference)
Bisexual	−0.83 (−2.49, 0.83)
Has a main partner	−2.88 (−3.80, −1.96)**
HIV status	
Negative	0.00 (reference)
Positive	1.32 (0.21, 2.43)**
Don't know/never been tested	−1.77 (-3.54, -0.01)**
Out to family	−0.82 (−2.57, 0.93)
Out to friends	2.93 (0.07, 5.80)**
Out at work	−1.89 (−3.50, -0.27)**
Quartiles of homosexual identity	
First	0.00 (reference)
Second	−0.92 (−2.17, 0.34)
Third	0.73 (−0.58, 2.05)
Fourth	0.29 (−1.03, 1.61)
Index of external homonegativity	0.19 (0.02, 0.36)**

*$p < .10$. **$p < .05$.

less positively than any other group except injection drug users (Herek, 2002). These distinct experiences of stigma and discrimination are likely to affect internal development and decisions about disclosure, and more research is needed to explore the unique psychological experience and behaviors of bisexuals.

Independent of these demographic, social, and experiential factors, homosexual identity formation and outness were associated with sexual risk. The results suggest that the experience of minority stress among gay men leads to greater sexual risk behaviors through a number of parallel pathways. The lower odds of UAI among men in higher stages of identity formation, those who have disclosed their sexual identity to their friends, and those who reported fewer experiences of external homonegativity suggests that having a more adjusted, open, and accepted sexual identity is protective against risk-taking. Similarly, men who are out at work and those with fewer experiences of discrimination were less likely to have numerous sex partners, perhaps reflecting the effects of having a more supportive environment. In an exploration of minority stress among gay men, Meyer (1995) observed that internalized homonegativity, stigma, and discrimination were associated with several measures of distress, including guilt, dread, anxiety, low self-esteem, and suicidal ideation. It is possible that high levels of distress and low perceptions of self-worth result low empowerment or motivation to protect oneself (Nakamura & Zea, 2010). Huebner, Davis, Nemeroff, and Aiken (2002) reported that, after an HIV prevention session, levels of condom use self-efficacy were lower among men with higher levels of internalized homophobia.

Downloaded from jmh.sagepub.com at EMORY UNIV on May 22, 2013

Table 5. Adjusted Odds of UAI, Sex While Drunk, and Sex While High ($N = 703$).

	UAI at last sex, OR (95% CI)	Sex while drunk, OR (95% CI)	Sex while high, OR (95% CI)
Age (years)			
18 to 24	1.00 (reference)	1.00 (reference)	1.00 (reference)
25 to 34	0.66 (0.40, 1.07)*	0.74 (0.47, 1.18)	0.58 (0.33, 1.03)*
35 to 44	0.64 (0.38, 1.07)*	0.66 (0.41, 1.09)	0.61 (0.34, 1.11)
45+	0.50 (0.29, 0.85)**	0.34 (0.20, 0.57)**	0.64 (0.34, 1.20)
Race			
White, non-Hispanic	1.00 (reference)	1.00 (reference)	1.00 (reference)
Black, non-Hispanic	0.31 (0.20, 0.47)**	0.60 (0.40, 0.90)**	0.71 (0.43, 1.17)
Other	0.49 (0.30, 0.80)**	0.56 (0.34, 0.90)**	0.92 (0.50, 1.70)
Education			
High school or less	1.00 (reference)	1.00 (reference)	1.00 (reference)
Some college or 2-year degree	1.16 (0.70, 1.91)	0.71 (0.44, 1.16)	0.79 (0.45, 1.37)
College or more	0.94 (0.57, 1.54)	0.82 (0.51, 1.33)	0.49 (0.28, 0.86)**
Employment status			
Employed (part or full time)	1.00 (reference)	1.00 (reference)	1.00 (reference)
Unemployed or retired	0.84 (0.55, 1.29)	0.74 (0.49, 1.13)	0.76 (0.46, 1.27)
Sexual orientation			
Gay	1.00 (reference)	1.00 (reference)	1.00 (reference)
Bisexual	0.87 (0.47, 1.59)	1.74 (0.95, 3.17)*	0.80 (0.40, 1.62)
Has a main partner	2.45 (1.75, 3.43)**	1.04 (0.75, 1.45)	0.93 (0.62, 1.40)
HIV status			
Negative	1.00 (reference)	1.00 (reference)	1.00 (reference)
Positive	1.87 (1.23, 2.85)	0.95 (0.64, 1.42)	2.74 (1.72, 4.35)**
Don't know/never been tested	0.95 (0.50, 1.83)	0.83 (0.44, 1.55)	1.06 (0.48, 2.35)
Out to family	2.44 (1.22, 4.90)**	1.64 (0.86, 3.11)	0.99 (0.48, 2.05)
Out to friends	0.34 (0.12, 1.02)*	0.39 (0.14, 1.14)*	0.98 (0.32, 3.06)
Out at work	0.92 (0.51, 1.68)	1.15 (0.64, 2.05)	0.76 (0.39, 1.46)
Quartiles of homosexual identity			
First	1.00 (reference)	1.00 (reference)	1.00 (reference)
Second	0.66 (0.42, 1.05)*	0.52 (0.33, 0.82)**	0.65 (0.39, 1.08)*
Third	0.71 (0.44, 1.15)	0.61 (0.38, 0.97)**	0.45 (0.25, 0.79)**
Fourth	0.93 (0.57, 1.51)	0.59 (0.37, 0.94)**	0.36 (0.20, 0.66)**
Index of external homonegativity	1.07 (1.00, 1.14)**	1.10 (1.03, 1.17)**	1.06 (0.98, 1.14)

Note. UAI = unprotected anal intercourse; OR = odds ratio; CI = confidence interval.
*$p < .10$. **$p < .05$.

Two associations with outness were seemingly contradictory to the rest of the data. First, being out to one's friends, although associated with lower odds of UAI, was associated with having a greater number of sex partners. It is possible that being more socially open about one's sexual orientation may allow for a broader network of other gay and bisexual men, leading to more potential sex partners. Second, being out to one's family was associated with more than twice the odds of engaging in UAI at last sex. However, it is important to note that this study did not control for how the disclosure was received. Studies have suggested that individuals whose families react negatively experience more anxiety (Brown & Trevethan, 2010), which may lead to unprotected anal intercourse (Ryan, Huebner, Diaz, & Sanchez, 2009). To unpack these associations, future studies should measure social networks and the reasons for and reactions to disclosure to different groups.

Minority stress may also have indirect effects on sexual risk, represented by the associations with alcohol and drug use during sex. Among men with unresolved sexual identities and those who do not feel comfortable disclosing their identity to friends, substance use may serve as a coping mechanism to avoid or reduce feelings of shame, anxiety, or distress (Smolenski, Stigler, Ross, & Rosser, 2011). As these substances impair inhibition and, at high levels, may result in loss of consciousness, alcohol and drug use before or during sex have been linked to more sexual risk-taking (Ross et al., 2001) and to HIV conversion (Koblin et al., 2006).

Downloaded from jmh.sagepub.com at EMORY UNIV on May 22, 2013

Interestingly, although Black/African American men had lower levels of identity formation and disclosure, suggesting greater minority stress, they were significantly *less* likely to report UAI or sex while drunk relative to White respondents. From a meta-analysis of studies conducted between 1981 and 2011, Millett et al. (2012) reported similar associations, with Black MSM reporting fewer sexual risk behaviors in addition to less established gay identities and lower rates of disclosure. The link between low identity formation, low disclosure, and low sexual risk among Black men remains unclear. One possible explanation for this association is that, by not openly identifying with the gay community, Black men may not be influenced by norms and practices that encourage or accept high-risk sex, such as those discussed by Flores, Mansergh, et al. (2009). Additionally, the process and implications of homosexual identity formation have been suggested to be distinct among men with dual minority status (Crawford et al., 2002; Smolenski, Diamond, Ross, & Rosser, 2010). Gay minorities experience discrimination from their racial/ethnic community because of their homosexuality and from the gay community because of their race (Díaz, Ayala, & Bein, 2004). In a study of African American gay and bisexual men, Crawford et al. (2002) observed that men who identified with their ethnic group but did not identify as homosexual had lower psychological health, less social support, and lower self-efficacy for preventing HIV. Although they did not find that sexual behaviors with men were associated with identity, they reported that men with poorly formed homosexual identities were more likely to report more *female* partners. Notably, our study did not measure risk behaviors with female partners, nor did it measure risk factors such as sexual network selection or access and adherence to HIV treatment services, which have also been cited as possible drivers of racial disparities (Millett et al., 2012) and could be influenced by minority stress. Particularly in light of the disproportionately high rates of HIV among Black/African American MSM, more research is needed to explore the interaction between racial and sexual identities and the implications for sexual health.

Limitations

In addition to the cross-sectional nature of the data and the restriction to one geographic area, this analysis has some limitations. A challenge to most studies of homosexual identity is the difficulty of recruiting individuals with the highest levels of internalized homophobia and concealment (Meyer, 1995), such that the sample is likely biased toward those with more adjusted identities, especially given that recruitment operated through gay themed venues: Those who are less out or who have less well formed identities may not be found in these venues. Additionally, more research is needed to further validate measures of identity formation, particularly among dual minorities. Complex identity development processes as well as distinct norms surrounding sex and sexuality may call for the development of separate measures for racial/ethnic groups.

Conclusion

Nonetheless, this study provides strong evidence of the harmful effects of minority stress among MSM and its potential contribution to HIV transmission. To reduce the experience and consequences of minority stress, programs and services should be designed to combat feelings of guilt and anxiety and promote self-efficacy and self-esteem among those with less established identities, such as bisexuals, youth, and dual minorities. Additionally, this study points to a critical need for changes in policy, as many of the factors associated with identity development and disclosure reflect the influence of unsupportive social and institutional environments. In recent years, the rights of gay, lesbian, and bisexual individuals have been called into question by scores of initiatives and referenda, which create stigma and stress (Fingerhut, Riggle, & Rostosky, 2011). Conversely, legislation that validates same-sex relationships and extends rights and protections has been shown to have a positive impact on well-being, providing a sense of social inclusion and legitimacy (Fingerhut et al., 2011; Hatzenbuehler, Keyes, & Hasin, 2009). Policies that communicate equality and acceptance help define social norms and have wide-reaching implications, not only for the mental health and rights of sexual minorities but also for the future trajectory of the HIV epidemic.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This research was funded by the National Institutes of Health/National Institute of Child Health and Human Development, Grant Number R21HD066306 and by the Center for AIDS Research at Emory University, Grant Number P30 AI050409.

References

Allen, D. J., & Oleson, T. (1999). Shame and internalized homophobia in gay men. *Journal of Homosexuality*, *37*(3), 33-43.

Balsam, K. F., & Mohr, J. J. (2007). Adaptation to sexual orientation stigma: A comparison of bisexual and lesbian/gay adults. *Journal of Counseling Psychology*, *54*, 306-319. doi:10.1037/0022-0167.54.3.306.supp

Downloaded from jmh.sagepub.com at EMORY UNIV on May 22, 2013

Beyrer, C., Baral, S. D., van Griensven, F., Goodreau, S. M., Chariyalertsak, S., Wirtz, A. L., & Brookmeyer, R. (2012). Global epidemiology of HIV infection in men who have sex with men. *Lancet*, *380*, 367-377.

Brady, S., & Busse, W. J. (1994). The Gay Identity Questionnaire: A brief measure of homosexual identity formation. *Journal of Homosexuality*, *26*(4), 1-22.

Brown, J., & Trevethan, R. (2010). Shame, internalized homophobia, identity formation, attachment style, and the connection to relationship status in gay men. *American Journal of Men's Health*, *4*, 267-276.

Bybee, J. A., Sullivan, E. L., Zielonka, E., & Moes, E. (2009). Are gay men in worse mental health than heterosexual men? The role of age, shame and guilt, and coming-out. *Journal of Adult Development*, *16*, 144-154.

Cass, V. C. (1984). Homosexual identity formation: Testing a theoretical model. *Journal of Sex Research*, *20*, 143-167.

Centers for Disease Control and Prevention. (2003). HIV/STD risks in young men who have sex with men who do not disclose their sexual orientation: Six US cities, 1994-2000. *Morbidity and Mortality Weekly*, *52*(5), 81-86.

Centers for Disease Control and Prevention. (2012, March 2012). *HIV surveillance report*. Retrieved from http://www.cdc.gov/hiv/topics/surveillance/resources/reports/

Crawford, I., Allison, K. W., Zamboni, B. D., & Soto, T. (2002). The influence of dual-identity development on the psychosocial functioning of African-American gay and bisexual men. *Journal of Sex Research*, *39*, 179-189.

Diaz, R. M., Ayala, G., & Bein, E. (2001). The impact of homophobia, poverty, and racism on the mental health of gay and bisexual Latino men: Findings from 3 US cities. *American Journal of Public Health*, *91*, 927-932. doi:10.2105/ajph.91.6.927

Díaz, R. M., Ayala, G., & Bein, E. (2004). 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*, *10*, 255-267.

Dubé, E. M., & Savin-Williams, R. C. (1999). Sexual identity development among ethnic sexual-minority male youths. *Developmental Psychology*, *35*, 1389-1398.

Dudley, M. G., Rostosky, S. S., Korfhage, B. A., & Zimmerman, R. S. (2004). Correlates of high-risk sexual behavior among young men who have sex with men. *AIDS Education and Prevention*, *16*, 328-340.

Fingerhut, A. W., Riggle, E. D. B., & Rostosky, S. S. (2011). Same-sex marriage: The social and psychological implications of policy and debates. *Journal of Social Issues*, *67*, 225-241.

Flores, S. A., Bakeman, R., Millett, G. A., & Peterson, J. L. (2009). HIV risk among bisexually and homosexually active racially diverse young men. *Sexually Transmitted Diseases*, *36*, 325-329.

Flores, S. A., Mansergh, G., Marks, G., Guzman, R., & Colfax, G. (2009). Gay identity-related factors and sexual risk among men who have sex with men in San Francisco. *AIDS Education & Prevention*, *21*(2), 91-103.

Goodreau, S. M., & Golden, M. R. (2007). Biological and demographic causes of high HIV and sexually transmitted disease prevalence in men who have sex with men. *Sexually Transmitted Infections*, *83*, 458-462. doi:10.1136/sti.2007.025627

Hatzenbuehler, M. L., Keyes, K. M., & Hasin, D. S. (2009). State-level policies and psychiatric morbidity in lesbian, gay, and bisexual populations. *Journal Information*, *99*, 2275-2281. doi:10.2105/AJPH.2008.153510

Herek, G. M. (2002). Heterosexuals' attitudes toward bisexual men and women in the United States. *Journal of Sex Research*, *39*, 264-274. doi:10.2307/3813227

Herek, G. M. (2004). Beyond "homophobia": Thinking about sexual prejudice and stigma in the twenty-first century. *Sexuality Research and Social Policy*, *1*(2), 6-24.

Herek, G. M. (2009). Hate crimes and stigma-related experiences among sexual minority adults in the United States: Prevalence estimates from a national probability sample. *Journal of Interpersonal Violence*, *24*(1), 54-74.

Huebner, D. M., Davis, M. C., Nemeroff, C. J., & Aiken, L. S. (2002). The impact of internalized homophobia on HIV preventive interventions. *American Journal of Community Psychology*, *30*, 327-348.

Kennamer, J. D., Honnold, J., Bradford, J., & Hendricks, M. (2000). Differences in disclosure of sexuality among African American and White gay/bisexual men: Implications for HIV/AIDS prevention. *AIDS Education and Prevention*, *12*, 519-531.

Koblin, B. A., Husnik, M. J., Colfax, G., Huang, Y., Madison, M., Mayer, K., & Buchbinder, S. (2006). Risk factors for HIV infection among men who have sex with men. *AIDS*, *20*, 731-739.

Kosciw, J. G., Greyak, E. A., Bartkiewicz, M. J., Boesen, M. J., & Palmer, N. A. (2012). *The 2011 National School Climate Survey: The experiences of lesbian, gay, bisexual and transgender youth in our nation's schools*. New York, NY: Gay, Lesbian & Straight Education Network (GLSEN).

Lapinski, M. L., Braz, M. E., & Maloney, E. K. (2010). The down low, social stigma, and risky sexual behaviors: Insights from African-American men who have sex with men. *Journal of Homosexuality*, *57*, 610-633. doi:10.1080/00918361003712020

Liu, A. Y., Kittredge, P. V., Vittinghoff, E., Raymond, H. F., Ahrens, K., Matheson, T., & Buchbinder, S. P. (2008). Limited knowledge and use of HIV post-and pre-exposure prophylaxis among gay and bisexual men. *JAIDS Journal of Acquired Immune Deficiency Syndromes*, *47*, 241-247.

MacKellar, D., Valleroy, L., Karon, J., Lemp, G., & Janssen, R. (1996). The Young Men's Survey: Methods for estimating HIV seroprevalence and risk factors among young men who have sex with men. *Public Health Reports, 111*(Suppl. 1), 138-144.

Mayfield, W. (2001). The development of an internalized homonegativity inventory for gay men. *Journal of Homosexuality*, *41*(2), 53-76.

Meyer, I. H. (1995). Minority stress and mental health in gay men. *Journal of Health and Social Behavior*, *36*(1), 38-56.

Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual

Downloaded from jmh.sagepub.com at EMORY UNIV on May 22, 2013

issues and research evidence. *Psychological Bulletin*, *129*, 674-697.

Millett, G. A., Peterson, J. L., Flores, S. A., Hart, T. A., Jeffries, W. L., Wilson, P. A., & Fenton, K. A. (2012). Comparisons of disparities and risks of HIV infection in black and other men who have sex with men in Canada, UK, and USA: A meta-analysis. *Lancet*, *380*, 341-348.

Muhib, F. B., Lin, L. S., Stueve, A., Miller, R. L., Ford, W. L., Johnson, W. D., & Smith, P. J. (2001). A venue-based method for sampling hard-to-reach populations. *Public Health Reports, 116*(Suppl. 1), 216-222.

Mulick, P. S., & Wright, L. W. (2002). Examining the existence of biphobia in the heterosexual and homosexual populations. *Journal of Bisexuality*, *2*, 45-64. doi:10.1300/J159v02n04_03

Nakamura, N., & Zea, M. C. (2010). Experiences of homonegativity and sexual risk behaviour in a sample of Latino gay and bisexual men. *Culture, Health & Sexuality*, *12*(1), 73-85.

Newcomb, M. E., & Mustanski, B. (2011). Moderators of the relationship between internalized homophobia and risky sexual behavior in men who have sex with men: A meta-analysis. *Archives of Sexual Behavior*, *40*(1), 189-199.

Raymond, H. F., Rebchook, G., Curotto, A., Vaudrey, J., Amsden, M., Levine, D., & McFarland, W. (2010). Comparing internet-based and venue-based methods to sample MSM in the San Francisco Bay Area. *AIDS and Behavior*, *14*(1), 218-224.

Rosario, M., Schrimshaw, E. W., & Hunter, J. (2004). Ethnic/racial differences in the coming-out process of lesbian, gay, and bisexual youths: A comparison of sexual identity development over time. *Cultural Diversity and Ethnic Minority Psychology*, *10*, 215-228. doi:10.1037/1099-9809.10.3.215

Rosario, M., Schrimshaw, E. W., & Hunter, J. (2006). 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 Education & Prevention*, *18*, 444-460.

Rosenberg, E. S., Sullivan, P. S., DiNenno, E. A., Salazar, L. F., & Sanchez, T. H. (2011). Number of casual male sexual partners and associated factors among men who have sex with men: Results from the National HIV Behavioral Surveillance System. *BMC Public Health*, *11*(1), 189.

Ross, M. W., & Rosser, B. (1996). Measurement and correlates of internalized homophobia: A factor analytic study. *Journal of Clinical Psychology*, *52*(1), 15-21.

Ross, M. W., Rosser, B. R. S., Bauer, G. R., Bockting, W. O., Robinson, B. B. E., Rugg, D. L., & Coleman, E. (2001). Drug use, unsafe sexual behavior, and internalized homonegativity in men who have sex with men. *AIDS and Behavior*, *5*(1), 97-103.

Ross, M. W., Rosser, B. R. S., & Neumaier, E. R. (2008). The relationship of internalized homonegativity to unsafe sexual behavior in HIV seropositive men who have sex with men. *AIDS Education and Prevention*, *20*, 547-557.

Rosser, B. R. S., Bockting, W. O., Ross, M. W., Miner, M. H., & Coleman, E. (2008). The relationship between homosexuality, internalized homo-negativity, and mental health in men who have sex with men. *Journal of Homosexuality*, *55*, 185-203.

Rothman, E. F., Exner, D., & Baughman, A. L. (2011). The prevalence of sexual assault against people who identify as gay, lesbian, or bisexual in the United States: A systematic review. *Trauma, Violence, & Abuse*, *12*(2), 55-66.

Rowen, C. J., & Malcolm, J. P. (2002). Correlates of internalized homophobia and homosexual identity formation in a sample of gay men. *Journal of Homosexuality*, *43*(2), 77-92.

Ryan, C., Huebner, D., Diaz, R. M., & Sanchez, J. (2009). Family rejection as a predictor of negative health outcomes in White and Latino lesbian, gay, and bisexual young adults. *Pediatrics*, *123*, 346-352. doi:10.1542/peds.2007-3524

Smolenski, D. J., Diamond, P. M., Ross, M. W., & Rosser, B. R. S. (2010). Revision, criterion validity, and multigroup assessment of the Reactions to Homosexuality Scale. *Journal of Personality Assessment*, *92*, 568-576.

Smolenski, D. J., Stigler, M. H., Ross, M. W., & Rosser, B. R. S. (2011). Direct and indirect associations between internalized homonegativity and high-risk sex. *Archives of Sexual Behavior*, *40*, 785-792. doi:10.1007/s10508-010-9705-1

Downloaded from jmh.sagepub.com at EMORY UNIV on May 22, 2013