

The Relationship of Internalized Homonegativity to Sexual Health and Well-Being Among Men in 38 European Countries Who Have Sex With Men

RIGMOR C. BERG, PhD

Norwegian Knowledge Center for the Health Services, Oslo, Norway

PETER WEATHERBURN, PhD

*Department of Social & Environmental Health Research, London School of Hygiene
and Tropical Medicine, London, England*

MICHAEL W. ROSS, PhD

*Malmö University, Sweden; and Department of Medicine and Community Health, University
of Minnesota, Minneapolis, Minnesota, USA*

AXEL J. SCHMIDT, MD

*Department of Social & Environmental Health Research, London School of Hygiene
and Tropical Medicine, London, England*

The objective of this article is to examine internalized homonegativity (IH) in relation to aspects of well-being and several measures of clinical importance among men-who-have-sex-with-men (MSM) in 38 countries. The data were collected as part of the EMIS project. The multivariable regression analysis identified independent associations with IH for nongay identity, younger age, being closeted, limited gay social affiliation, and sexual unhappiness. IH was also positively associated with loneliness, inability to decline unwanted sex, and being less knowledgeable about HIV and HIV testing. These results provide evidence that homonegative internalization merits consideration as a predisposing factor in several aspects of ill health. There are also several clinical implications of this project, including:

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Address correspondence to Rigmor C. Berg, PhD, Norwegian Knowledge Center for the Health Services, PO Box 7004, St Olavs plass N-0130, Oslo, Norway. E-mail: rigmor.berg@nokc.no

(1) Treatment of lesbian, gay, and bisexual (LGB) persons should address gay self-acceptance, as internalized homonegativity seems to be a predisposing factor in several aspects of ill health among this population, and (2) therapy that is used to help LGB persons accept and integrate a gay or lesbian identity seems particularly important for younger, nongay identified persons.

KEYWORDS *health-care needs, HIV, mental health, internalized homonegativity*

INTRODUCTION

The concept of internalized homophobia, or internalized homonegativity (IH) as it is often termed (Mayfield, 2001; Szymanski & Carr, 2008), has a long research history, originally appearing in the literature four decades ago (e.g., Weinberg, 1973). It has been defined as “negative feelings about one’s homosexuality” (Herek, 2004, p. 19). The negative sentiments that lesbian, gay, and bisexual (LGB) individuals hold about their own sexuality is thought to stem from structural and environmental stigma toward homosexuals that to varying extents exists in the majority society and are absorbed from one’s culture (Shidlo, 1994; Berg, Ross, Weatherburn, & Schmidt, 2013). In an early Swedish-Australian study, Ross (1985) noted that it is important to measure the internalized component of social gay stigma. The reason is that there is a low correlation between experiencing homosexual discrimination and internalizing it, largely because those who most anticipate anti-homosexual prejudice are most likely to conceal their sexuality and thus least likely to be subject to anti-homosexual reactions. It follows that the anticipation (the mental internalization) of societal homonegativity rather than the actual experience is the crucial stress response that may lead to adverse health outcomes (Dunn, Gonzales, Costa, Nardi, & Iantaffi, 2014). Also, other experts (Gonsiorek, 1988; Malyon, 1982) emphasize that IH in gay men and other sexual minorities is important to examine because it may account for unique variance in their psychosexual profile that cannot be explained by other psychological phenomena that apply to heterosexual people.

The extent to which gay, bisexual, and other men-who-have-sex-with-men (MSM) internalize societal homonegativity may partially depend on their affiliation and connection with the gay community. This is suggested by findings showing that IH is negatively related to the degree of involvement in an LGB group, to the number of LGB friends one has, and to the amount of social time spent with other sexual minorities (Cox, van den Berghe, Dewaele, & Vincke, 2010; Mayfield, 2001; Ross & Rosser, 1996; Szymanski & Chung, 2001). IH has also been found to be higher in MSM who are younger (Cox et al., 2010), bisexual (Shoptaw et al., 2009; Vu, Tun, Sheehy, & Nel, 2012), closeted about their attraction to men (Ross, Rosser, Neumaier, & the Positive Connections Team, 2008), human immunodeficiency virus (HIV)

negative (Shoptaw et al., 2009), and those with a high school education or less (Ross et al., 2008; Vu et al., 2012).

Importantly, research has found that IH in gay and bisexual men is a factor that contributes to sexual health problems, in the way that Kuyper and Vanwesenbeeck's (2011) recent Dutch population study on sexual health demonstrated that gay men with higher IH reported lower levels of sexual satisfaction but also greater sexual dysfunction and sexual health care needs. Similar studies of MSM, primarily from the United States, show that IH is associated with sex guilt (Rowen & Malcolm, 2002, describe sex guilt as a feeling of remorse associated with thoughts about or participation in sexual activity), greater frequency of sexual compulsivity (Dew & Chaney, 2005; Ross et al., 2008), and likelihood of engaging in unprotected anal and oral sex (Ratti, Bakeman, & Peterson, 2000). Ross and colleagues (2013) found that higher IH was associated with unprotected anal intercourse (UAI) among Ugandan MSM but lower IH was associated with not engaging in anal sex at all, suggesting that it was the anal component of the sex that was most associated with IH rather than having a male partner. Among Spanish gay and bisexual men, Folch, Muñoz, Zaragoza, and Casabona (2009) found that IH was an independent predictor of sexual risk practices, specifically UAI with casual male partners, indicating along with the above studies that IH is an obstacle to MSM protecting themselves from HIV and sexually transmitted infections (STIs).

Across Europe, there is an increase in the number of new diagnoses of HIV infection in MSM (Herida et al., 2007; Likatavicius, Klavs, Devaux, Alix, & Nardone, 2008) and in the number of other STIs (Dougan, Evans, & Elford, 2007). In fact, HIV diagnoses among MSM in Western and Central Europe almost doubled in the last decade (Likatavicius et al., 2008), a resurgence that in many countries is linked to STIs (Dougan et al., 2007; Savage, Hughes, Ison, & Lowndes, 2009). Meta-analyses have confirmed that the presence of bacterial and viral STIs increase an individual's risk of both the acquisition and transmission of HIV infection (Ward & Rönn, 2010). Notwithstanding the fact that HIV and STIs are a considerable sexual health problem faced by many MSM, there are indications that many MSM have high levels of HIV misinformation, which is linked with high levels of IH (Vu et al., 2012). Further, IH has been found to be negatively related to awareness of HIV prevention programming (Huebner, Davis, Nemeroff, & Aiken, 2002) and substance use (DiPlacido, 1998; Shoptaw et al., 2009).

Consistent with and as a much overdue European perspective to the aforementioned, largely U.S.-based research on IH, the present study examines the relationship between internalized homonegativity and sociodemographic characteristics, mental health and cognition variables, sexual health and behaviors, and substance use among 144,177 European MSM in 38 countries. Thus, the study expands previous research, which is sometimes inconsistent, largely based on small samples, and primarily describes MSM residing in North America (Berg, Munthe-Kaas, & Ross, in press), by examining IH in

relation to aspects of well-being (here indicated in particular by measures of being closeted, loneliness, happiness with sex life) and several measures of clinical importance among a large sample of European MSM.

METHODS

Participants

The research, entitled European MSM Internet Survey (EMIS), was carried out with institutional review board approval through the University of Portsmouth, England. Eligible participants were men who were legally of age to have consensual sex with men in their country of residence and who were attracted to men and/or had sex with men. This included men who self-identified as homosexual, bisexual, or heterosexual. Additionally, the men needed to live in Europe and declare that they had read and understood the aim of the study. Respondents were not compensated for their participation.

From June through August 2010, the study was promoted via nongovernmental organizations in each participating country, and through invitations in gay social media and a wide variety of more than 235 (trans-)national websites for MSM. Five large dating sites sent instant messages: PlanetRomeo[®], Manhunt/ManhuntCares[®] and Gaydar[®], each of which has membership across Europe; Qguys[®] for (Russian-speaking) countries within the Commonwealth of Independent States and the Baltic countries; and Qruiser[®] for Scandinavia. A core slogan was used to promote the survey, the English language version of which was "Be part of something huge!" The study's welcome web page gave potential participants an option of 25 languages. Upon selection of language, the study website described the research in the chosen language, and eligible volunteers were routed to the survey questions.

A total of 180,988 MSM acknowledged entry eligibility and completed the survey. We excluded 6,779 surveys which failed our cross-validation protocol, leaving a final sample of 174,209 MSM from 38 countries in Europe. The analytic sample of men with a valid internalized homonegativity (IH) score was 144,177. By design, a broad representation of regions was obtained (Table 1), although almost a quarter resided in five West European countries. Most participants self-identified as gay or homosexual. (Consistent with other literature of IH, unless otherwise indicated, in this study we use the collective term MSM for gay, bisexual, and other men-who-have-sex-with-men.) Respondents were between 13 and 89 years old with a median age of 32 (mean = 34.2, SD = 11.1). About a quarter of the respondents had never received the result of an HIV test, and 8.4% had tested positive. A third of this sample resided in a city with more than a million inhabitants, about half had a tertiary academic or professional degree, and almost three-quarters were employed either full- or part-time. Further details regarding

TABLE 1 Description of the Analytic Sample ($N = 144,177$)

	<i>n</i>	%
Region of residence ¹		
West (be, fr, ie, nl, uk)	33,987	23.6
Northwest (dk, fi, no, se)	7,492	5.2
Central-West (at, ch, de, lu)	53,297	37.0
Southwest (gr, es, it, pt)	30,206	21.0
Northeast (ee, It, Iv)	1,478	1.0
Central east (cz, hu, pl, si, sk)	6,349	4.4
Southeast, EU (bg, cy, mt, ro)	2,74	1.9
Southeast, nonEU (ba, hr, mk, rs, tr)	2,817	2.0
East (by, md, ru, ua)	2,811	4.0
Sexual identity		
Gay or homosexual	116,448	80.9
Bisexual	17,147	11.9
Straight or heterosexual	580	0.4
Any other term	1,016	0.7
Don't usually use a term	8,672	6.0
Age		
<25	32,196	22.3
25-39	71,781	49.8
40+	40,200	27.9
HIV-status		
HIV-positive	12,093	8.4
HIV-negative (last test was negative)	92,741	64.3
Never received HIV test result	38,635	26.9
Settlement size		
≥1 million inhabitants	44,499	31.6
500,000 - 999,999 inhabitants	21,708	15.4
100,000-499,999 inhabitants	30,618	21.7
10,000-99,999 inhabitants	26,913	19.1
≤10,000 inhabitants	17,082	12.1
Education (ISCED ²)		
ISCED 6	36,117	25.1
ISCED 5	37,291	25.9
ISCED 4	32,303	22.5
ISCED 3	27,188	18.9
ISCED 2	9,355	6.5
ISCED 1	1,514	1.1
Occupation		
Employed full-or part time	104,011	72.3
Unemployed	8,541	5.9
Student	21,689	15.1
Retired	3,488	2.4
Long term sick leave/medically retired	1,825	1.3
Other	4,352	3.0

Note. ¹ Regions: West = Belgium, France, Ireland, Netherlands, United Kingdom; Northwest = Denmark, Finland, Norway, Sweden; Central-West = Austria, Switzerland, Germany, Luxemburg; Southwest = Greece, Spain, Italy, Portugal; Northeast = Estonia, Lithuania, Latvia; Central-East = Czech Republic, Hungary, Poland, Slovenia, Slovakia; Southeast, EU = Bulgaria, Cyprus, Malta, Romania; Southeast, nonEU = Bosnia-Herzegovina, Croatia, Macedonia, Serbia, Turkey; East = Belarus, Moldova, Russia, Ukraine.

² ISCED = International Standardised Classification of Educational Degrees: highest (6) is terminal tertiary education and lowest (1) is primary education.

the methods, response rates, measures, and the EMIS sample are available elsewhere (Weatherburn et al., 2013).

Measures

The 20-minute (median completion time), 280-item online survey was the result of more than a year's work of survey design, piloting, and revisions in order to ensure relevance for the entire European MSM population regardless of their sexual identity or the social and political environment in which they lived. It assessed four research priorities: measures of sexual HIV/STI exposure and the presence of transmission facilitators; prevention needs, including knowledge and beliefs; perceptions of intervention accessibility and performance; and measures of HIV stigma. For this study, internalized homonegativity was assessed with the cross-culturally validated Reactions to Homosexuality (revised) 7-items scale (Ross & Rosser, 1996; Smolenski, Diamond, Ross, & Rosser, 2010). The scale items are: "I feel comfortable in gay bars," "Social situations with gay men make me feel uncomfortable," "I feel comfortable being seen in public with an obviously gay person," "I feel comfortable discussing homosexuality in a public situation," "I feel comfortable being a homosexual man," "Homosexuality is morally acceptable to me," and "Even if I could change my sexual orientation, I wouldn't." The scale has a 7-point, Likert-type answer scale which ranges from strongly disagree to strongly agree. The respondents could also check the answer "does not apply to me" (those answering the latter or skipping any one item were coded as missing, which explains the loss of 30,025 cases). The score range was 0 to 6 with a higher score representing greater homonegative internalisation. Cronbach alpha was $\alpha = 0.76$.

In accordance with our aim (to examine the relationship between internalized homonegativity and sociodemographic characteristics, mental health and cognition variables, sexual health and behaviors, substance use), we reviewed related literature, clarified the research question, and narrowed the scope of our investigation before we selected the variables that were best suited to answer our question. We also conducted a systematic mapping review of the IH literature, which included 201 articles with 77,663 participants (Berg et al., in press). This work informed the selection of the most pertinent variables to include. Henceforth, we included several sociodemographic and health-related measures in our analysis. These were selected in accordance with our research aim and categorized into four domains that were developed from literature described in the introduction, including our systematic mapping review, and as endorsed in related research (Berg, Tikkanen, & Ross, 2011).

SOCIODEMOGRAPHICS

Participants were asked to indicate their age, sexual identity (men who self-described themselves as gay or homosexual were categorized as “gay”), degree to which they were out about being gay/bisexual (out to no-one or a few vs. more people), proportion of their male friends who are attracted to men, relationship status, HIV status, settlement size, highest obtained education, and whether they had visited a gay social place in the last half year (gay community center, organization, social group, cafe, pub, bar, or disco). For the purposes of this analysis, ordinal data on several variables were dichotomized. For example, education was dichotomized from the six-level International Standardised Classification of Education (1997 version) to indicate whether men had completed higher education, defined as at least upper secondary education (i.e., levels 5 and 6). Our dichotomization and variables’ cut-off were developed from related MSM research (during the study design phase).

MENTAL HEALTH AND COGNITIONS

Participants were asked to respond to the statements “I find it easy to say no to sex I don’t want” and “I sometimes feel lonely” with Likert-scale options from strongly disagree (1) to strongly agree (5), which were dichotomized as disagree (1–3) and agree (4–5) (the middle option “3” was “Neither/Not sure”). They were presented with the question “Are you happy with your sex life?” which was answered yes or no. Their HIV knowledge was assessed with five correct statements regarding basic knowledge of HIV and testing (e.g., “There is a medical test that can show whether or not you have HIV” and “HIV infection can be controlled with medicines so that its impact on health is much less”) and dichotomized into those who said they knew this already regarding all five statements versus those who did not.

SEXUAL HEALTH AND BEHAVIORS

With a recall time of the past 12 months, we measured whether participants had tested for STIs, whether they had tested for HIV, and whether they had been diagnosed with any of the following STIs: gonorrhoea, syphilis, Chlamydia, anogenital warts, or anogenital herpes. We used the median to dichotomize age of first sexual experience with a man, such that the sample was divided into those who were younger than 18 and those who were 18 and older when they had their first sexual experience with a man. Respondents were asked to state whether they had ever experienced anal intercourse with a man, and whether they in the past 12 months had engaged in sex with a man who was not their partner outside their country of residence (had sex abroad). There were three questions regarding unprotected sex in

the past 12 months: UAI with a steady male partner, UAI with a nonsteady male partner, and unprotected sex with a female partner.

SUBSTANCE USE MEASURES

We asked the respondents whether they had consumed party drugs in the past 12 months (ecstasy, amphetamines, crystal methamphetamine, mephedrone, GHB/GLB, ketamine), poppers (nitrite inhalants) in the past four weeks, cannabis in the past four weeks, and drunk alcohol in the past 24 hours (to assess whether they were daily drinkers).

Analysis

Results from previous, albeit somewhat inconsistent, research (cited above), and theoretical literature, formed the basis for our hypotheses. In particular, the results of our systematic mapping review informed our hypotheses (Berg et al., in press). The review summarized 164 studies which had as a primary emphasis the examination of the association of IH with other variables. These variables were largely in the areas of sociodemographics, mental health, sexual health, and substance use. For the present study, we thus posited the following hypotheses: there are negative correlations between IH and age, education, HIV status, openness about being gay (indicated by the variables self-identification, being closeted, visiting gay places); there are positive correlations between IH and indicators of problematic mental health and cognitions, problematic sexual health and behaviours, and substance use.

SPSS 18.0 statistical software was used to perform analyses. Analyses were carried out on IH, which was computed following the recently revised (Smolenski et al., 2010) scale developed by Ross and Rosser (1996), and 26 independent variables. These were categorized into four domains, as described above, and their collinearity and correlation were assessed. First, the associations were tested in multivariable regression domain-specific models that only included other variables within the same domain. Using again the conservative enter method with intercept, the final multivariable regression analysis included all variables that remained associated with IH in the context of the other variables in the same domain-specific model at $p < 0.3$ and that met collinearity requirements. Analyses were two-tailed with significance set at the 1% level.

RESULTS

The correlation and collinearity among the variables within each domain were acceptable (all tolerance >0.65). The results of the four domain-specific multivariable regression analyses are presented in Table 2 and show that all

TABLE 2 Domain-specific Multiple Regression on Internalized Homonegativity

Variables	B (SE)	β	95% CI
<i>Domain 1: Sociodemographics (adjR² = .27)</i>			
Age	-.01(.00)	-.10	-.01, -.01
Identify as gay	-.43(.01)	-.14	-.44, -.41
Closeted about being attracted to men	.92(.01)	.33	.91, .94
Currently in steady relationship with a man	-.18(.01)	-.07	-.19, -.17
Visited gay social place in last 6 mo	-.41(.01)	-.15	-.42, -.39
Diagnosed HIV positive	.06(.01)	.01	.08, .04
High education (ISCED 5–6)	.17(.01)	.07	.16, .18
<i>Domain 2: Mental health and cognitions (adjR² = .07)</i>			
Find it easy to say 'no' to unwanted sex	-.23(.01)	-.05	-.26, -.21
Sometimes feel lonely	.26(.01)	.10	.24, .27
Happy with sex life	-.42(.01)	-.17	-.44, -.41
Knowledge about HIV and HIV testing	-.36(.01)	-.12	-.38, -.35
<i>Domain 3: Sexual health and behaviours (adjR² = .06)</i>			
STI test in past 12 mo	-.13(.01)	-.05	-.15, -.12
HIV test in past 12 mo	-.13(.01)	-.05	-.14, -.11
Diagnosed with an STI in the past 12 mo	.04(.01)	.01	.02, .07
Age \geq 18 when first sexual experience with man	.18(.01)	.08	.17, .20
Ever anal intercourse with men	-.39(.02)	-.06	-.43, -.36
Sex abroad (with non-steady male partner)	-.14(.01)	-.05	-.16, -.13
UAI with steady male partner in past 12 mo	-.18(.01)	-.07	-.19, .16
UAI with non-steady male partner in past 12 mo	.04(.01)	.02	.02, .05
Unprotected intercourse with female partner in past 12 mo	.80(.02)	.14	.77, .83
<i>Domain 4: Substance use (adjR² = .02)</i>			
Used party drugs in past 12 mo	-.20(.01)	-.06	-.22, -.18
Used cannabis in past 4 weeks	-.06(.01)	-.02	-.08, -.04
Used poppers in past 4 weeks	-.32(.01)	-.10	-.34, -.30
Drank alcohol in past 24 hours	-.15(.01)	-.06	-.17, -.14

all $p \leq .001$. mo = months

variables with respect to mental health and cognitions, sexual health and behaviors, and substance use (domains 2–4) remained significantly associated with IH. Two variables regarding sociodemographic characteristics (domain 1) were not significantly related to IH in the context of other sociodemographic variables; these were settlement size and proportion of their male friends who are attracted to men.

Consequently, the final multivariable regression model included 24 variables from the four domains. Correlation and collinearity among the variables were acceptable (all tolerance >0.68). The final model was significant ($F_{24, 116481} = 1978.88$), with $\text{adjR}^2 = 0.29$. As shown in Table 3, independent associations with IH were demonstrated for 15 variables ($p < .001$). Specifically, with respect to sociodemographic characteristics, IH was higher among younger men ($\beta = -.10$), those who were closeted about being attracted to men ($\beta = .31$), men who were single (not currently in a steady relationship with a man) ($\beta = -.02$), and those with higher education

TABLE 3 Multiple Regression on Internalized Homonegativity, Final Model (adjR² = .29)

Variables	B (SE)	β	95% CI	
Age	-.01(.00)	-.10	-.01, -.01	***
Identify as gay	-.44(.01)	-.14	-.46, -.42	***
Closeted about being attracted to men	.87(.01)	.31	.85, .88	***
Currently in steady relationship with a man	-.05(.01)	-.02	-.06, -.03	***
Visited gay social place in last 6 mo	-.36(.01)	-.14	-.37, -.34	***
Diagnosed HIV positive	-.05(.01)	-.01	-.06, -.02	$p = .001$
High education (ISCED 5–6)	.16(.01)	.07	.15, .17	***
Find it easy to say 'no' to unwanted sex	-.21(.01)	-.05	-.24, -.19	***
Sometimes feel lonely	.17(.01)	.07	.16, .19	***
Happy with sex life	-.27(.01)	-.11	-.28, -.25	***
Knowledge about HIV and HIV testing	-.12(.01)	-.04	-.14, -.10	***
STI test in past 12 mo	-.02(.01)	-.01	-.03, -.00	$p = .06$
HIV test in past 12 mo	-.02(.01)	-.01	-.03, -.00	$p = .02$
Diagnosed with an STI in the past 12 mo	.07(.01)	.02	.05, .09	***
Age ≥ 18 when first sexual experience with man	.11(.01)	.04	.09, .12	***
Ever anal intercourse with men	-.02(.02)	.00	-.05, .01	$p = .14$
Sex abroad (with non-steady male partner)	.01(.01)	.00	-.01, .02	$p = .28$
UAI with non-steady male partner in past 12 mo	.02(.01)	.01	.01, .03	$p = .004$
UAI with steady male partner in past 12 mo	-.01(.01)	.00	-.03, .00	$p = .11$
Unprotected intercourse with female partner in past 12 mo	.00(.01)	.00	-.03, .03	$p = .88$
Used party drugs in past 12 mo	-.04(.01)	-.01	-.06, -.02	***
Used cannabis in past 4 weeks	-.03(.01)	-.01	-.05, -.01	$p = .005$
Used poppers in past 4 weeks	-.04(.01)	-.01	-.06, -.03	***
Drank alcohol in past 24 hours	-.06(.01)	-.02	-.07, -.05	***

*** $p < .001$. ISCED = International Standardised Classification of Education. mo = months. UAI = Unprotected anal intercourse.

($\beta = .07$). Conversely, IH was lower among men who identified as gay ($\beta = -.14$) and those men who reported that they had visited a gay social place in the past six months ($\beta = -.14$). Most of these results, but not all, were consistent with our hypotheses.

Further, all of the mental health and cognitions measures remained significantly associated with IH. Consistent with our hypotheses, homonegative internalisation was negatively associated with finding it easy to say 'no' to unwanted sex ($\beta = -.05$) and being happy with one's sex life ($\beta = -.11$). IH was higher in men who reported they were sometimes lonely ($\beta = .07$). Lastly, respondents with higher IH were also less knowledgeable about HIV and HIV testing ($\beta = -.04$).

Concerning the sexual health and behaviour variables, IH was positively associated with being diagnosed with an STI in the past 12 months ($\beta = .02$) and being 18 years or older when having the first sexual experience

with a man ($\beta = .04$). Finally, three of the substance use variables were independently associated with IH. Men who scored lower on IH were also more likely to report use of party drugs in the past 12 months ($\beta = -.01$), poppers in the last four weeks ($\beta = -.01$), and alcohol in the past 24 hours ($\beta = -.02$). These results offered mixed support for our hypotheses.

DISCUSSION

Overall, the standardized regression coefficients show that nongay identity, younger age, being closeted, limited gay social affiliation, and sexual unhappiness proved to be the main variables associated with higher internalized homonegativity among MSM in this large sample. Although the regression coefficients were smaller, it is also noteworthy that an additional ten other variables remained independently associated with IH ($p < .001$), in particular loneliness, inability to decline unwanted sex, higher education and less knowledge about HIV and HIV testing.

Consistent with our hypothesis and prior work (Franssens, 2010; Kuyper & Fokkema, 2011; Vu et al., 2012), IH was higher in nongay identified MSM compared with those who identified as gay (or homosexual). It is possible that self-identification as gay indicates a higher degree of self-acceptance. We also established that being younger was associated with higher scores on the IH scale, which is in line with previous research (Cox et al., 2010; Cox, Dewaele, van Houtte, & Vincke, 2011). According to some theorists (e.g., Gonsiorek, 1988; Huebner et al., 2002; Meyer, 1995), the effects of homonegative internalizations will likely be most intensely felt early in the coming-out process. According to Morris, Waldo, and Rothblum (2001), through coming out LGB people learn to cope with and overcome the adverse effects of having a sexual minority status. We found that IH was higher in MSM who were out to fewer people about their sexual identity and who were not currently in a steady relationship with a man. Related to sexual identity formation processes, it seems logical that social stigmatization continues into homosexuals' arrangement of their private and social life, such as limiting disclosure of sexual identity and entering into steady relationships. Self-acceptance is likely to be a common precondition for establishing romantic relationships with other men and self-stigma may deter same-sex romantic attachments that should be viewed in the context of the gay social stigma to which MSM are exposed.

Related, our results show that MSM who had higher homonegative internalization were more likely not to have recently visited a gay social place, suggesting these men are more isolated from gay peers. The result is in line with research among Belgian LGB youth, which showed that IH was related to in-group ties (Cox et al., 2011) and identification with the LGB community (Cox et al., 2010). Also, U.S.-based research has shown that higher levels of

gay self-stigma predicted more isolation from gay peers (Rosser et al., 2008) and lower levels of being comfortable with other gay men (Hubner et al., 2002). These results show the importance of a positive sense of one's same-sex sexuality for integration into the gay community, and likely the other way around. Such integration may be particularly important since gay and bisexual individuals, unlike other stigmatized groups such as ethnic minorities, do not (typically) grow up with family members who share their stigmatized characteristic. Thus, they often lack positive role models and parental buffers against a potential antagonistic environment (Crocker & Major, 1989).

Continuing from above, in addition to feelings of self-stigma, social isolation from gay communities may contribute to feelings of loneliness. The effect size for loneliness was fairly small, but as perhaps the first study, we found a positive relationship between greater homonegative internalisations and loneliness, although Kuyper and Fokkema (2011) identified another minority stress factor, homonegative experiences, as an antecedent of loneliness among older LGB persons. The researchers further established that having an extensive gay social network buffered against loneliness. We also found a negative relationship between IH and happiness with one's sex life. In our large and diverse sample of MSM from 38 European countries, IH was lower in men who were happy with their sex life, which supports researchers' (Dupras, 1994; Ross et al., 2008) findings that a lower IH score predicted greater sexual satisfaction and comfort with sex. It seems reasonable that MSM who to a greater extent accept their same-sex attraction are more integrated in gay communities, and by extension have more access to gay affirmative values, which supports both opportunities to meet potential sex partners and psychological comfort with same-sex sexual intimacy. Such factors may also be related to the finding that men with higher IH waited longer (were 18 years or older) to have their first sexual experience with a man, and the negative link in our study between IH and not finding it easy to refuse unwanted sex. While examinations of sexual happiness among gay and bisexual men are scarce, in one of the first international sexuality studies, Laumann and colleagues (2006) examined sexual well-being for the general adult population in 29 countries. They found that there were positive relationships between both emotional and physical satisfaction with sexual relationships and overall happiness. More than half of the men in the European countries reported that sex was highly important to them. As our results suggest, given the strong link between general well-being and sexual satisfaction in MSM (e.g., Peplau, Cochrane, & Mays, 1997), this association deserves further consideration.

Moreover, the importance of a happy sex life is worth emphasising for its value in arguing for more and better sex education and sexual health promotion services. As pointed out by researchers like Štulhofer and Rimac (2009), there are major differences across Europe in the amount of sex education provided in schools. Sexual health education and related same-sex

affirming promotional measures, which assist men in sexual self-acceptance and the development of skills in refusal and negotiation, could also play a role in lowering homonegative internalisations and in turn enhance men's ability to refuse unwanted sex. Our findings regarding this latter link (although weak) is of importance to mental health professionals and fit well with work by Dupras (1994), who showed that IH predicted internal sexual control and sexual esteem among gay men. Possible implications of the above results include that therapists and others working directly with gay men should promote gay self-acceptance and facilitate activities aimed at enhancing contacts among gay people because this could reduce feelings of loneliness and enhance sexual satisfaction and safer-sex decision making processes. From the above, it is notable that several indicators of a lack of well-being (for a comprehensive discussion of the concept "well-being," see, e.g., Diener, Scollon, & Lucas, 2009) were related to internalized homonegativity, particularly being closeted, loneliness, and sexual unhappiness.

In the present study, higher IH was statistically associated with lower knowledge about HIV and HIV testing. The association was weak, however, and may not have practical significance. Thus, we merely mention that a likely explanation for this relationship is that MSM who experience self-stigma and social isolation from gay communities have less access to safer sex information and resources. Other researchers have reported that higher levels of IH was related to higher levels of HIV misinformation (Vu et al., 2012) and lower awareness of HIV prevention programming (Huebner et al., 2002). It seems likely that stigma affects MSM's learning about HIV, in effect, making self-stigma a barrier to HIV prevention efforts. Thus, there may be advantages in efforts to lower MSM's sense of self-stigma in that these could enhance gay and bisexual men's engagement with HIV prevention initiatives. In fact, there was a higher likelihood of men with greater IH to have been diagnosed with an STI in the past year, which may be related to not only knowledge, but the previously discussed results about the ability to refuse unwanted sex and feelings of loneliness. Lastly, we mention that contrary to other studies (Ross et al., 2008; Vu et al., 2012), we found that IH was higher in MSM with higher education. There is no obvious explanation for this finding but it may be an artefact, it may be because higher educated men believe they have more to lose by being "outed," and it may be related to awareness of cultural heterosexism.

There are likely benefits in individualistic interventions for LGB people as well as in gay affirmative programmes directed at LGB communities (see, e.g., Evans, 2002); however, as we argue elsewhere (Berg et al., 2013), IH must also be countered through institutionalized equity. The impacts of IH on negative health outcomes such as loneliness, ability to negotiate sex, and unsafe sex are in themselves clinically important and provide evidence for intervention need. Additionally, population health approaches to reduce IH are indicated by our results, particularly for younger and closeted MSM, such

as LGB community development. This could include various community mobilisation and social action efforts, as well as increasing the social infrastructure available to gay and bisexual individuals. Engagement in networking and advocacy may in the first instance help expand people's social circles and sense of agency toward social change, and subsequently reduce their IH. Therapists and other mental health professionals can play an important role in encouraging such changes.

The current analysis with a cross-sectional study design does not allow for causal inferences. Findings are also limited by possible measurement bias and reliance on self-reports. However, the large size of the sample suggests findings are valid, even if some respondents misrepresented self-reports, and the range of MSM milieus is good, despite the smaller proportions of respondents from Eastern European countries. Yet it is likely that our sampling techniques did not recruit the most closeted MSM. In a similar cross-sectional study, Huebner and colleagues (2002) suspect that men underreported their feelings of self-stigma. Thus, our recruitment strategy means we may have underestimated levels of internalized homonegativity and limited our generalizability of findings to MSM who use gay websites. Internet samples tend to be more urban, younger, single, and have higher education (Ross, Månsson, Daneback, Cooper, & Tikkanen, 2005). Several of the variables that were independently associated with IH at the $p < .001$ statistical significance level are too small to be considered practically significant. Therefore, we have focused on the factors most strongly associated with IH. Lastly, we acknowledge the limitation concerning the fact that potentially important socio-demographic characteristics, such as ethnicity and religious affiliation, were not measured.

It bears mention that we aimed to understand IH-related health of a large European population defined by common characteristics and did not compare IH across countries. It has already been shown in another analysis of EMIS data (Ross et al., 2013) that the average IH score of European countries varies, and forms a regional pattern of liberal northern and western countries, moderately gay-friendly southern and eastern countries, and largely gay-hostile southeastern and post-Soviet-Union European countries with regards to prejudice against homosexuals.

Despite these limitations, the results from more than 144,000 MSM across 38 countries in Europe provide evidence that suggests that homonegative internalization merits consideration as a predisposing factor in several aspects of ill health. For example, men with high internalized homonegativity were more likely to have not recently visited a gay social place, suggesting they are more isolated from gay peers. The chief sociodemographic characteristics of MSM with greater homonegative internalisations were lower age, nongay identified, out to few about their same-sex attraction, and more isolation from gay peers. Findings also showed the role of IH regarding sexual health in its association with not being happy with one's sex life, as well as loneliness and difficulty in saying no to unwanted sex. This research demonstrates that

the concept of internalised homonegativity has a valuable role to play in mental health work with MSM but invites further research.

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