



Published in final edited form as:

Arch Sex Behav. 2016 August ; 45(6): 1329–1346. doi:10.1007/s10508-016-0694-6.

The Internalized Homophobia Scale for Vietnamese Sexual Minority Women (IHVN-W): Conceptualization, factor structure, reliability, and associations with hypothesized correlates

Trang Quynh Nguyen, PhD^{1,2,3,4,8}, Tonia Poteat, PhD⁵, Karen Bandeen-Roche, PhD³, Danielle German, PhD², Yen Hai Nguyen, BA⁶, Loan Kieu-Chau Vu, HSD⁶, Nam Thi-Thu Nguyen, PhD^{7,4}, and Amy R. Knowlton, ScD²

¹Department of Mental Health, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA

²Department of Health, Behavior and Society, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA

³Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA

⁴Institute for Studies of Society, Economy and Environment, Ha Noi, Viet Nam

⁵Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA

⁶The ICS Center, Ho Chi Minh City, Viet Nam

⁷Health Policy and Strategy Institute, Ha Noi, Viet Nam

Abstract

We developed the first Vietnamese internalized homophobia (IH) scale, for use with Vietnamese sexual minority women (SMW). Drawing from existing IH scales in the international literature and based on prior qualitative research about SMW in the Viet Nam context, the scale covers two domains: self-stigma (negative attitudes toward oneself as a sexual minority person) and sexual prejudice (negative attitudes toward homosexuality/same-sex relations in general). Scale items, including items borrowed from existing scales and items based on local expressions, were reviewed and confirmed by members of the target population. Quantitative evaluation used data from an anonymous web-based survey of Vietnamese SMW, including those who identified as lesbian (n=1187), or as bisexual (n=641) and those who were unsure about their sexual identity (n=353). The scale was found to consist of two highly correlated factors reflecting *self-stigma (not normal/wholesome)* and *self-reproach and wishing away same-sex sexuality*) and one factor reflecting *sexual prejudice*, and to have excellent internal consistency. Construct validity was evidenced by subscales' associations with a wide range of hypothesized correlates including perceived sexual stigma, outness, social support, connection to other SMW, relationship quality,

⁸To whom correspondence should be addressed at Department of Mental Health, Johns Hopkins Bloomberg School of Public Health, 624 North Broadway, Room 896, Baltimore, MD 21205, USA; tnguye28@jhu.edu.

Conflict of interest: The authors declare they have no conflict of interest.

psychological well-being, anticipation of heterosexual marriage and endorsement of same-sex marriage legalization. Self-stigma was more strongly associated with psychosocial correlates and sexual prejudice was more associated with endorsement of legal same-sex marriage. The variations in these associations across the hypothesized correlates and across sexual identity groups were consistent with the Minority Stress Model and the IH literature, and exhibited context-specific features, which are discussed.

Keywords

internalized homophobia; internalized homophobia scale; correlates of internalized homophobia; sexual minority women; lesbian; bisexual

Internalized homophobia (also referred to as internalized homonegativity) (IH) refers to a sexual minority person's internalization of ubiquitous homophobic beliefs (Malyon, 1982) and "acceptance of sexual stigma as part of her or his own value system and self-concept" (Herek, 2009, p. 73) or "direction of negative social attitudes toward the self" (Meyer & Dean, 1997, p. 161). In the Viet Nam context, valid scales for measuring IH in sexual minority populations are lacking. Such measures are necessary, however, in order to study the effects of minority stress on Vietnamese sexual minorities, as well as to examine predictors and potential interventions for IH (and consequent health and social outcomes). In this paper we review existing IH measures, describe the need for a new scale appropriate to the life context of Vietnamese sexual minority women, present the scale we developed for this population with its psychometric properties and discuss its associations with correlates of IH documented in the literature. Future studies will address IH measurement in Vietnamese sexual minority men.

"Sexual minority women" (SMW) in this paper refers to women who are romantically/sexually attracted to, or have romantic/sexual relations with, other women, or who identify as lesbian or bisexual; and "same-sex sexuality" refers to any of these elements of sexuality (attraction, behavior or identity) concerning same-sex counterparts.

The Construct of Internalized Homophobia

Consistent with the working definition of IH above and based on our understanding of the Vietnamese context described below, we conceptualize IH as a construct that includes the major domains of negative feelings about one's same-sex sexuality (which may include elements such as shame and rejection of one's sexual desires and/or behaviors) and negative attitudes towards homosexuality in general. This conceptualization is consistent with Herek's (2009) description of IH. In addition, this construct is more parsimonious than the existing measures of lesbian IH (Szymanski & Chung, 2001; Weibley, 2009), and it excludes dimensions that do not apply to contexts where access to a lesbian community is limited and where concealment may be a reasonable strategy for self protection. Below we summarize existing scales designed to measure IH and discuss their relevance to the context of SMW in Viet Nam.

Existing Measures of Internalized Homophobia

Our search of the literature revealed a large number of published IH scales listed in Table 1. These include (i) two scales for lesbian women, Szymanski & Chung's (2001) LIHS and Weibley's (2009) SLIHS; (ii) three scales for both men and women, Lingiardi et al.'s (2012) MISS-LG, Martin and Dean's IHP (Herek, Cogan, Gillis, & Glunt, 1998) and Herek et al.'s (2009) IHP-R; and (iii) seven scales for gay men, including Nungesser's (1983) NHAI, Shidlo's (1994) scale, Theodore et al.'s (2013) MAGI-MSV, Ross & Rosser's (1996) RHS, Smolenski et al.'s (2010) revised RHS, Currie et al.'s (2004) SIHS, and Mayfield's (2001) IHNI. All scales refer to gay men or lesbian women, only the IHP-R was inclusive of bisexual individuals.

Except for the SIHS, all of these scales have a dimension that captures *negative feelings about oneself as a sexual minority person*, also referred to as “personal comfort with gay identity,” “personal feelings about being a lesbian,” (lack of) “self-acceptance,” (lack of) “gay self-assurance and worth,” “personal homonegativity,” and simply “identity.” Two other dimensions common among multi-dimensional scales are *disclosure/public identification as gay/lesbian* and *negative attitudes toward homosexuality in general and toward other homosexuals*, which are present under different names in eight and seven of these twelve scales, respectively. The RHS, revised RHS and SIHS also include a *social comfort with gay men* domain; the SLIHS has a similar domain named *connectedness*; and the LIHS has a similar but broader domain *connection with the lesbian community* which covers social comfort with other lesbian women as well as knowledge about/involvement with lesbian groups, events, venues and cultural products. The IHP and the IHP-R differ from the other scales in that they were conceptualized to have only one domain, *negative attitudes toward one's homosexuality*, or *self-stigma* (Herek et al., 2009).

Among IH scholars, there have been disagreements about other domains. Regarding *disclosure*, Williamson (2000) commented that where the social environment is hostile, anti-gay/lesbian victimization is prevalent and lesbian/gay-affirmative social infrastructure is lacking, concealment may be adaptive and does not necessarily imply high IH. Mayfield (2001) argued that attitudes toward disclosure and IH are distinct, although related, constructs, and thus the former should not be included in measures of the latter. When working to improve upon his 1994 scale, Shidlo and his colleagues actually eliminated the *disclosure* factor, resulting in the MAGI-MSV (Theodore et al., 2013) not including this factor. Our conceptualization of IH is consistent with this distinction from disclosure.

Mayfield (2001) commented that the NHAI confounds attitudes toward gay culture and attitudes toward homosexuality, noting that “I am proud to be part of the gay community” belongs in the former, rather than the latter, category. Applying this logic, most items in the LIHS's *connection to the lesbian community* subscale are about attitudes toward the lesbian community (including “lesbian events and organizations,” “bookstores, support groups, bars” for lesbians, “lesbian books and/or magazines,” etc.), not directly about attitudes toward homosexuality. *Social comfort with gay men* items may tap into social anxiety or lack of confidence in one's attractiveness; Szymanski and Chung (2001) suggested that the RHS's item “I do not feel confident about making an advance to another man” may be

measuring self-esteem rather than IH. In addition, in contexts without a visible lesbian or gay community, such questions are not applicable. Therefore, our conceptualization of IH excludes such items.

Several scholars have called for tighter conceptualization and operationalization of the IH construct (Herek, 2009; Mayfield, 2001; Shidlo, 1994). Mayfield proposed that IH consisted of a cultural facet termed *global homonegativity* and an intrapsychic facet termed *personal homonegativity* (terms previously used by Shidlo), defining the former as “the socialized negative attitudes that gay men and lesbians experience when they encounter other gay men and lesbians and when they contemplate homosexuality in general,” and the latter as “the negative attitudes that gay men and lesbians possess which directly influence their personal lives, such as their attitudes toward same-sex sexual and emotional attraction, same-sex sexual behavior, and same-sex intimate relationships” (Mayfield, 2001, p. 55).¹ Herek (2009) conceptualized that IH manifests in a sexual minority person as *self-stigma*, i.e., negative attitudes toward oneself as homosexual/bisexual, and *sexual prejudice*, i.e., negative attitudes toward homosexuality and sexual minorities in general; these are very similar to the concepts of *personal homonegativity* and *global homonegativity* mentioned above. In the section below we comment on whether a narrower or broader conceptualization is most relevant to SMW in Viet Nam.

Sexual Minority Women in Viet Nam and the Relevance of Existing IH Scales

Viet Nam is a lower middle-income country in Southeast Asia with a Confucius-influenced culture (Zabin et al., 2009) that values hierarchical social order and the patriarchal family. Heterosexual marriage and having children is an expected way of life and a filial duty (Williams & Guest, 2005). While homosexuality is not criminalized, same-sex romantic relationships threaten the patriarchal script that maintains the expected social order and secures women’s place in it; homosexuality is thus commonly negatively perceived, and non-acceptance, especially by families, is prevalent (T. Q. Nguyen et al., 2015).

In a qualitative study that interviewed forty Vietnamese SMW in 2009 (T. Q. Nguyen, Nguyen, Le, & Le, 2010), the women reported that parents were unaccepting of their daughters’ same-sex relationships for a range of reasons: they perceive them as deviant and perverted, they fear that the family reputation will be tainted, they grieve the loss of their daughter’s potential (heterosexual) marriage and of their potential grandchildren, they worry about their daughter’s well-being in the face of society’s negativity, and they worry about her not having the security of a husband and children who would care for her as she grows older. Since it is normative for adult daughters to live with their parents until they get married, few women have the option of moving out from their parents’ home. Instead, they live with family reactions to their same-sex attraction/behavior, or the potential for such

¹In developing the IHNI, Mayfield (2001) generated items based on these two conceptualized domains. Factor analysis separated the items into three groups, with two dimensions mapping on to *global homonegativity* and *personal homonegativity*, and a third dimension (termed *gay affirmation*) that included all positively worded items about positive attitudes towards one’s own homosexuality as well as towards homosexuality in general. It appears to us that this factor may represent a *homo-positivity* construct that is different from the inverse of IH.

reactions, on a daily basis. The majority of the study's respondents reported concealing their same-sex attraction and relationships from their parents, and among those whose parents knew, most had not disclosed this information themselves, rather it had been discovered. The two common reasons for concealment from parents were to avoid conflict and to avoid causing parents pain and suffering. Many respondents described feeling guilty about hurting their parents or bringing shame on them, or about not pleasing them by marrying (a man) and having children. These results suggest that guilt feelings, especially toward one's family, may be an important part of Vietnamese SMW's *negative feelings about their same-sex sexuality*, and should be included in instruments that measure IH in this population; the existing IH scales, however, do not address guilt feelings toward one's family. In addition, given the high level of concealment in this context, the *disclosure/public identification* dimension in existing scales is not appropriate, as there are other strong motivations for concealment unrelated to IH.

Another theme that emerged from the interviews with these women is normality. Heterosexuality was considered the default normal. While interview respondents argued that homosexuality should also be considered normal, some talked about personal feelings that they were "not normal like other people," and the English word "normal" was used interchangeably with the Vietnamese word "người bình thường" (normal person) by some respondents to refer to a heterosexual woman. At the time of data collection for the qualitative study, it was common to find chat forums on Vietnamese youth websites with titles "loving a normal," "she is a normal," and "am I a lesbian or a normal?". A dichotomy of normal (good, unproblematic) versus not normal (bad, problematic) seemed to be insidious not only in the broader society, but also in Vietnamese SMW communities. Again, we found that the existing IH measures, while including unhappiness or shame related to being gay/lesbian, do not reference the specific feelings of being abnormal or unhealthy/unwholesome.

In Viet Nam, the levels of connection between SMW may be related to sexual identity. In the above-mentioned qualitative study, most respondents identified as lesbian, several identified as bisexual, and a few did not identify as lesbian or bisexual and reported that they just happened to fall in love with a lesbian woman. The latter group were less connected to lesbian/bisexual women other than their girlfriends. Location also influenced level of connection to other SMW. Ha Noi and Ho Chi Minh City, metropolitan centers in Viet Nam, had several coffee/tea shops frequented by lesbian women, but that was not the case in smaller cities/towns. In general, venues and activities described in items from the *Connection to the lesbian community* component of the LIHS were not widely available in Viet Nam. The LIHS's construct of *Connection to the lesbian community*, while related to IH, is constrained by multiple factors in the Vietnamese context and thus not an appropriate dimension on a scale measuring IH for Vietnamese SMW. In addition, given the range of identities among SMW, an IH scale for this population needs to be inclusive of women who do not identify as lesbian or bisexual.

Based on these qualitative findings, (i) a desired IH scale for this population should include the two domains that are part of the tight conceptualization of IH – negative attitudes about one's same-sex sexuality (self-stigma) and negative attitudes about same-sex sexuality in

general (sexual prejudice) – and should exclude the disclosure and connection to sexual minority community domains; (ii) its self-stigma component should cover feelings of guilt toward family and feelings that one is not normal; and (iii) the scale should be inclusive of SMW with different sexual identities. Since none of the existing scale meets these criteria or could be easily adapted to meet these criteria, we developed a new scale that is tailored to this population and also draws from relevant contents of existing scales.

Correlates of Internalized Homophobia

The literature on IH lays out multiple correlates of the construct. Among SMW, IH has been found to be associated with perceived stigma (Lea, de Wit, & Reynolds, 2014) and perceived costs associated with one's sexual orientation (Herek et al., 2009). Those with higher levels of disclosure (Chow & Cheng, 2010; Herek et al., 1998, 2009; McGregor et al., 2001; Radonsky & Borders, 1996; Szymanski, Chung, & Balsam, 2001) tend to have lower IH. IH is negatively related to perceived social support and satisfaction with social support (Lehavot & Simoni, 2011; McGregor et al., 2001; Szymanski et al., 2001). It predicts not being member of lesbian/gay groups in both lesbian women (Szymanski et al., 2001) and gay men (Ross & Rosser, 1996). It is associated with psychological distress including depressive symptoms (Herek et al., 1998; Igartua, Gill, & Montoro, 2003; Lehavot & Simoni, 2011; Szymanski et al., 2001) and anxiety symptoms (Herek et al., 2009; Igartua et al., 2003; Lehavot & Simoni, 2011), and with lower self-esteem (Herek et al., 2009; Szymanski & Chung, 2001). IH is also related to lower relationship quality (Balsam & Szymanski, 2005; Frost & Meyer, 2009). Research with lesbian women suggests that attitudes about oneself as a lesbian is more closely related to psychosocial difficulties than general attitudes about homosexuality and other lesbian women (Szymanski et al., 2001; Szymanski & Chung, 2001).

Developing a New Internalized Homophobia Scale for Vietnamese Sexual Minority Women

The present study developed a scale to measure IH in Vietnamese SMW. Based on the review of existing scales and relating them to the life context of this population, we chose to include two domains: self-stigma (i.e., negative attitudes toward oneself as a sexual minority person) and sexual prejudice (i.e., negative attitudes toward homosexuality/same-sex relations). Using survey data, we established the scale's factor structure and reliability in three groups of SMW: those who identified 1) as lesbian, 2) as bisexual, and 3) who reported being unsure of their sexual identity. We evaluated the scale's associations with constructs documented in the literature as correlates of IH, including perceived stigma, outness, social support, connection to other SMW, psychological distress/well-being, and relationship quality. We tested the scale's relationships with two additional variables relevant to this context: anticipation of heterosexual marriage for oneself and support of legal same-sex marriage, hypothesized to correlate positively and negatively with IH, respectively. Of the two components of IH, we anticipated that self-stigma generally is more strongly associated with psychosocial correlates, but that sexual prejudice maybe more strongly associated with

support for legal same-sex marriage, an opinion about equal rights of sexual minority persons as a group.

Methods

Item Generation and Verification

We derived items reflecting self-stigma and sexual prejudice (see Table 2) from existing scales and from the qualitative study referenced in the Introduction. To ensure content validity, ten lesbian-identified volunteers reviewed the items to verify that they reflect self-stigma and sexual prejudice and to improve content and clarity. Due to the limited time frame of this project, we were unable to have the items examined by women who do not identify as lesbian. Instead, the lesbian volunteers were asked, when reviewing the items, to keep in mind that the scale would also be used with non-lesbian-identified SMW. The set of items and their sources are presented in Table 2. For all items, a five-point response scale was used, ranging from *strongly disagree* to *strongly agree*, coded as 1 to 5.

Data Source

Data were collected through an anonymous internet-based survey over four months in 2012. The survey was advertised on Vietnamese SMW websites. Potential participants were screened with three statements: “You are a woman?”, “You are 18 or older?” and “You have *loved* another woman (/other women)?”; the Vietnamese word *yêu* (*love*) implies either having romantic/sexual feelings for, or being in a relationship with, someone. Those who indicated all three statements were correct were provided informed consent material including the topics of the survey and their rights as potential participants. Those who consented then proceeded to fill out the survey questionnaire online. For more detail about the recruitment process and the sample, refer to [masked citation]. The study was approved by the Institutional Review Board at Johns Hopkins Bloomberg School of Public Health.

Since an internet survey does not involve researcher-participant contact, there were concerns about issues such as multiple submissions by the same person, careless responses or responses with the intention to disrupt the study. The study undertook several measures to minimize these issues. First, the survey was made as clear and easy to answer as possible through multiple design-and-piloting rounds. Second, we focused on building good will with respondents and the SMW community to encourage serious and quality response. A phone number and an email address dedicated to the survey was provided on the survey website and on the SMW websites that advertised the survey, so respondents and other SMW could contact the study team. Discussion forums were created on the SMW websites, where SMW posted comments and questions about the survey, which we promptly addressed, in order to keep open and respectful communication with the community. We emphasized on all channels that each person should respond only once and the response should be serious and truthful, so that the data would be accurate, which would ultimately benefit the community. We leveraged website moderators and other respected individuals to motivate SMW community members to take the survey seriously. Third, after data were collected, data cleaning efforts focused on identifying responses with illogical patterns (e.g., stating birth

year as 1982 but reporting having lived in the current location for 25 years) and removing them from the dataset.

Data for this paper consisted of SMW living in Viet Nam who identified as lesbian (n=1187) or bisexual (n=641) or who reported being unsure about their sexual identity (n=353) (herein referred to as the *lesbian*, *bisexual* and *unsure* samples), for whom data were available on IH items. The respondents were predominantly young (mean age less than 23 for all three samples). The large majority (74.6% of lesbian, 78% of bisexual and 79.1% of unsure women) lived in major metropolitan areas. Forty-five percent of the lesbian sample and more than half of the bisexual (54.9%) and unsure (54.6%) samples had some college education. Slightly more than half (53.5%) the lesbian women and less than half the bisexual (45%) and unsure (44.2%) women reported a religion affiliation.

Potential Correlates Examined

Perceived sexual stigma—Two variables represented perceived opinions about homosexuality by friends and by people in the local community, each rated from 0 (=completely normal) to 8 (=very negative).

Outness—Two variables represented the degree to which the respondent was open about her same-sex sexuality in her family and with her friends, each rated from 0 (=keeping a complete secret) to 10 (=being completely open).

Social support—Three variables represented the degree to which the respondent felt supported by her family, her friends, and other SMW who she knew, each rated from 0 (=very little) to 8 (=very much). Those who currently had a female partner were asked about the degree to which they felt supported by the female partner, rated from 0 (=no support) to 10 (=a lot of support); for means reporting, this variable was rescaled to a 0-to-8 scale to be comparable with the variables about support by family, by friends and by other SMW. Four questions asked about availability of sexuality/sexual-stigma-related support, specifically having someone to talk to and get advice from when having relationship problems or encountering sexual prejudice (Cronbach's alpha=.93, .93 and .95 in the lesbian, bisexual and unsure samples, respectively). These items were averaged to form a score.

Connection to other sexual minority women—Respondents were asked three questions about how many other SMW they knew, how many they considered friends, and how many they were in contact with in the past two weeks. These counts were log-transformed (to reduce skewness), standardized to a variance of 1 (to equalize the originally different scales) and averaged into a score representing social connection to other SMW; Cronbach's alpha was .86, .84 and .84 for the three samples.

Psychological well-being—Depressive symptoms over the past two weeks were measured using the Patient Health Questionnaire (PHQ-9 – sample item “feeling no interest or pleasure in doing anything”) (Spitzer, Kroenke, & Williams, 1999), which has been adapted and validated for Vietnamese SMW (Nguyen et al., in press); Cronbach's alpha was .87, .86 and .88 for the lesbian, bisexual and unsure samples. For a small sub-sample of early survey respondents, two additional instruments were administered: Rosenberg's (1965)

self-esteem scale (sample item “I am able to do things as well as most other people”), which has been adapted and validated for Vietnamese youth (H. T. Nguyen, 2006); and the Satisfaction with Life Scale (SWLS – sample item “In most ways my life is close to my ideal”) (Diener, Emmons, Larsen, & Griffin, 1985), which has been used with Vietnamese populations (Takahashi et al., 2011; emojtel-Piotrowska et al., 2015) although not yet psychometrically evaluated. These were used in analysis with the lesbian group (n=144, Cronbach’s alpha .85 for self-esteem; n=151, Cronbach’s alpha .88 and life satisfaction); the available samples for the other groups were too small for analysis.

Relationship quality—Respondents who reported having a female partner were asked two questions about the degree to which they felt (i) happy in, and (ii) satisfied with, the relationship, on a zero (=very unhappy/dissatisfied) to 10 (=very happy/satisfied) scale; these two highly correlated items were averaged to form one measure of relationship happiness/satisfaction. One question asked about conflict in the relationship, rated from zero (=no conflict) to 10 (=a lot of conflict).

Anticipation of opposite-sex marriage—Respondents was asked to assess the chance that they would someday get married to a man, on a 0 to 100 percent scale.

Support for legal same-sex marriage—Respondents were asked if they thought the law should allow same-sex couples to marry. Responses were dichotomized (1=yes, 0=no/not sure).

The present study was embedded in an online survey covering multiple topics. Online surveys generally require brief questionnaires to avoid participant fatigue and dropout. Most of the variables above, therefore, were measured using a single item or a small number of items created for this study, instead of existing longer scales. (For example, the Relationship Assessment Scale (Hendrick, 1988), a brief measure of relationship quality, requires seven questionnaire items; the Attitudes Toward Same-Sex Marriage Scale (Pearl & Galupo, 2007) includes 17 items.) This decision made the study length reasonable while still covering a range of potential correlates to assess the scale’s construct validity. In addition, one of the hypothesized correlates, anticipation of opposite-sex marriage, arose from formative research with this population; to our knowledge, the anticipation of opposite-sex marriage among SMW had not previously been studied and no relevant measure existed.

Statistical Analyses

Factor analysis and item trimming—Of the three samples, the lesbian sample was the largest. We used this sample to carry out item selection of the internalized homophobia scale and establish the scale’s factor structure, and then tested the factor structure in the bisexual and unsure samples. Specifically, we randomly split the lesbian sample into two halves. With the first half, we conducted exploratory factor analysis (EFA) based on the items polychoric correlations, using Mplus 7.11 (Muthén & Muthén, 2012). We trimmed items that were poor-loading (loading<.40) or cross-loading (loading > .40 on a second factor or equal loadings across two or more factors). How best to determine the number of factors to extract from ordinal indicators is still an open area of research; and few method options

are available in standard statistical software. Therefore, we relied on the combination of two simple methods, the scree test (Cattell, 1966) and eigenvalues greater than one (Kaiser, 1974), acknowledging that they have weaknesses, the former involving subjectivity in evaluating the scree plot, and the latter having an over-extraction tendency. As a sensitivity analysis, we conducted parallel analysis (Horn, 1965) using Pearson correlations. This method, which is available in Mplus, has been established as one of the best methods for continuous data, but it is only an approximation with ordinal data; parallel analysis using polychoric correlations would be a theoretically appropriate choice, but it is not an option in Mplus.

After EFA, we tested the factor structure found in the first half (the tentative model) on the second half, using confirmatory factor analysis (CFA), and considered further modification of the scale so that it fit well to both halves. Subsequently, the factor model from the lesbian sample was tested in the bisexual and unsure samples using CFA. CFA was conducted based on polychoric correlations, using the robust estimator WLSMV. This estimator uses available-data pairwise correlations in model fitting, which is appropriate given the limited missingness (between 1.3% and 3.5%) on the items.

Reliability analysis—The final scale's internal consistency was assessed using ordinal alpha (Zumbo, Gadermann, & Zeisser, 2007), a modified version of Cronbach's alpha that is based on ordinal items' polychoric correlations. To facilitate comparison with internal consistency coefficients reported in the literature, we also computed Cronbach's alphas.

Associations with hypothesized correlates—Items were averaged within scale dimensions to form subscale scores. All but one of the hypothesized correlates were continuous/ordinal variables; Spearman's rank correlation was used to examine the association between those correlates and subscale scores. Correlations of a variable with self-stigma and sexual prejudice were compared using a test of the difference between two correlations with one variable in common, implemented with a program developed by Lee & Preacher (2013); this test involves Fisher's (1915) z-transformation of the correlations and is based on asymptotic covariance from Steiger (1980). For the binary variable support for legal same-sex marriage, logistic regression was used, estimating odds ratio (OR) for supporting legal same-sex marriage associated with a unit difference in subscale score.

Results

Factor Analysis and Item Trimming

Our analysis resulted in a three-dimensional scale. Two of the dimensions measured aspects of self-stigma, while the third measured sexual prejudice. The separation of the two self-stigma dimensions was meaningful; therefore, based on their items, we named them *Self-stigma: Not normal/wholesome* and *Self-stigma: Self-reproach and wishing away same-sex sexuality*. For brevity, we will refer to them as Self-stigma I and Self-stigma II. Below we describe the results of the EFA, factor trimming, and CFA.

EFA on the first lesbian half sample provided three eigenvalues greater than 1. The scree plot had a substantial drop from the third eigenvalue (1.40) to the fourth (.74), and was

relatively flat for the remaining eigenvalues. A three-factor solution using promax rotation resulted in roughly two factors for self-stigma and one for sexual prejudice. Item 11 (“If a person could love the opposite sex, he/she should not start a romance with someone of the same sex”), conceptualized to belong to sexual prejudice, actually loaded more strongly on self-stigma, with a loading of .44 on one of the two self-stigma factors, an unexpected negative loading (−.35) on the other, and a small loading (.22) on the sexual prejudice factor. We decided to exclude this item because of this uninterpretable behavior, and because this item could represent a mix of disapproval of same-sex relationships and the wish for the person to avoid any challenges that come with being in a same-sex relationship in a non-accepting social environment. Item 6 (“I feel disappointed in myself because I love women”) was also problematic, cross-loading on both self-stigma factors (loadings .48 and .51). EFA was rerun, removing first item 11, then item 6; the resulting solution retained three factors and no cross-loading.

Sensitivity analysis using parallel analysis showed that the three largest eigenvalues based on the observed Pearson correlation matrix (5.09, 1.73 and 1.21) were larger than the means (1.24, 1.18 and 1.13) and 95th percentiles (1.30, 1.22 and 1.17) of the corresponding random eigenvalues. While the distances between the third eigenvalue and its referent values were small, given evidence about parallel analysis’s under-extraction tendency with ordinal indicators (Cho, Li, & Bandalos, 2009), we maintained the three-factor solution.

CFA was run based on the EFA in this half sample (see the *tentative model* in Table 2) to check model fit. Loadings ranged from .70 to .90 for the first factor (items 1 to 5), .73 to .92 for the second factor (items 7 to 10) and .90 to .92 for the third factor (items 12 to 14). Model fit was good: CFI=.99, TLI=.99, RMSEA=.052 (90% CI=.041,.063), although chi-square(51df)=131.76 was significant (p-value<.0001). In comparison, a two-factor model with only one factor for self-stigma items fit substantially less well: RMSEA=.112 (90% CI=.102,.122, p-value<.001), chi-square(53df)=446.99, CFI=.955, TLI=.944.

The same CFA model, when fit to the second lesbian half sample, also had good loadings, but model fit was not as good. CFI=.98 and TLI=.98 indicated good fit, but RMSEA=.074 (90% CI=.064,.084) was borderline, considering the .08 cut-point for reasonable errors of approximation (Browne & Cudeck, 1992); chi-square(51df)=216.41 was significant (p-value<.0001). Modification indices were examined, and the by far largest modification index was 64.6 for adding a loading of item 5 (“I try not to love women any more”) on the second factor. The residual correlations matrix also showed three large (i.e., absolute value > .1) residual correlations (Kline, 2011) all involving item 5. With the additional loading specified, model fit improved (RMSEA=.062, 90% CI=.052,.073) and residual correlations were all under .08; in this model, item 5 had roughly equal loadings on both factors (.44 and .43). With item 5 removed, model fit was also good: CFI=.99, TLI=.98, RMSEA=.064, 90% CI=.052,.076, chi-square(41df)=139.76 was significant (p-value<.0001).

We considered the content of item 5 in relation to the two sets of self-stigma items – one set reflecting feeling abnormal/unhealthy and the other reflecting guilt, self-reproach and wishing away the fact that one loves women. Item 5 is slightly different, as it refers to an action/effort (trying not to love women any more), which could be considered a result either

of feeling abnormal/unhealthy or of guilt and wanting to change, and as such, secondary to those two components. Considering that both sets of items reflect the broader construct of self-stigma, item 5 is not quite a misfit. However, in order to minimize complexity and avoid cross-loading, we removed item 5.

The scale established from the lesbian sample thus included 11 items on three dimensions, two including items 1–4 (Self-stigma I) and items 7–10 (Self-stigma II) from the self-stigma domain, and one including items 12–14 from the sexual prejudice domain. The high correlation (0.76) between these two self-stigma dimensions was expected since their items were conceptualized to reflect the broader construct self-stigma. For factor loadings, factor correlations and model fit in both lesbian half samples, see the *final model* in Table 3.

CFA supported the same factor structure in the bisexual and unsure samples. The loadings were high, and the model fit very well to the bisexual sample and moderately well to the unsure sample (see Table 4). Factor correlations were highest between the two self-stigma factors (.76, .83 and .80 in the full lesbian, bisexual and unsure samples, respectively), and lower between self-stigma I and sexual prejudice (.67, .69, .64) and between self-stigma II and sexual prejudice (.51, .54 and .54) (see Table 4).

Reliability

The subscales exhibited high internal consistency. The range of ordinal alpha across the three subscales and three samples was 0.89 to 0.94; and the range of Cronbach's alpha was 0.80 to 0.88 (see Table 4). If self-stigma I and II were combined in the same score, that score would also have good internal consistency (ordinal alpha = .92, .94, .93 and Cronbach's alpha = .87, .91, .90, in the lesbian, bisexual and unsure samples, respectively).

Associations with Hypothesized Correlates

Table 5 presents the associations between IH subscale scores and the hypothesized correlates.

Perceived stigma—As hypothesized, subscales were positively associated with perceived stigma among friends and among people in one's local community. Overall, perceived stigma was more highly correlated with self-stigma, especially self-stigma II, than with sexual prejudice.

Outness—Subscales were negatively associated with outness in the family and outness with friends. Again, correlations with self-stigma were larger.

Social support—Results were different for perceived support from family compared to perceived support from friends, female partner and other SMW. For all three groups, perceived support from family was not associated with subscales. Among lesbian and bisexual women, the other three perceived support variables were all negatively correlated with self-stigma, and perceived support from friends and from other SMW also correlated with sexual prejudice. In unsure women, perceived support from friends and from other SMW were not associated with subscales; perceived support from female partner was negatively associated with self-stigma II, and had non-significant negative correlations with

self-stigma I and sexual prejudice. In all three groups, perceived support from female partner was more correlated with self-stigma than with sexual prejudice.

Availability of sexuality/stigma-related support was correlated with self-stigma in both the lesbian and bisexual groups, and with sexual prejudice in the lesbian group. It was correlated with neither in the unsure group.

Connection to other sexual minority women—This measure was negatively correlated with all three subscales for lesbian women and with self-stigma for bisexual women. In both lesbian and bisexual women, this measure had higher correlations with self-stigma than with sexual prejudice. In unsure women, connection to other SMW had roughly equal correlations with all three subscales.

Psychological well-being—Self-stigma was correlated with depressive symptoms in all three groups. In bisexual women, the correlation between sexual prejudice and depressive symptoms was also statistically significant but its magnitude was small. In lesbian women, self-stigma II was negatively associated with life satisfaction, and all three subscales were negatively associated with self-esteem.

Relationship quality—Relationship happiness/satisfaction was negatively associated with self-stigma in all three groups, and with sexual prejudice in bisexual women. Relationship conflict was positively correlated with self-stigma II in all three groups. It was correlated with self-stigma I in lesbian and bisexual women; the correlation in unsure women was not statistically significant but of similar magnitude.

Anticipation of opposite-sex marriage—This variable was correlated with all three subscales for all three groups. Its correlations with self-stigma were stronger than with sexual prejudice.

Of all the variables described above, those with highest correlations with subscales included anticipation of opposite-sex marriage (most of correlations with self-stigma $> .30$), followed by relationship happiness/satisfaction, outness with friends, and perceived stigma among friends (most of correlations with self-stigma $> .20$).

Support for legalizing same-sex marriage—All three subscales were negatively associated with support for legalizing same-sex marriage in all three groups. As expected, from the magnitudes of the ORs, the strongest associations seemed to be with sexual prejudice, and the second strongest associations with self-stigma I.

Discussion

The Scale and Its Components

The Internalized Homophobia Scale for Vietnamese Sexual Minority Women (IHVN-W) developed in this study has strong content validity based on a review of existing scales and the IH construct, incorporation of qualitative data about Vietnamese SMW and their life context, and consultation with this target population. Factor analysis revealed that the scale

consists of two highly correlated factors representing self-stigma, specifically *Self-stigma: Not normal/wholesome* and *Self-stigma: Self-reproach and wishing away same-sex sexuality*, and one factor representing *Sexual Prejudice*. The scale exhibited excellent internal consistency for all the three groups: lesbian, bisexual and unsure women. As hypothesized, scale dimensions were associated with constructs documented in the literature as correlates of IH, including perceived stigma, outness, social support, connection to other SMW, psychological well-being and relationship quality. Our findings also suggest that among scale dimensions, self-stigma, especially *Self-stigma: Self-reproach and wishing away same-sex sexuality*, is more strongly associated with psychosocial correlates; and that *Sexual Prejudice* is more strongly associated with not endorsing sexual minority persons' equal rights (in this case legal same-sex marriage), as we had anticipated. These associations provide support for the scale's construct validity in this population.

The emergence of two dimensions within the self-stigma domain deserves attention. The *Self-stigma: Not normal/wholesome* dimension (including items about finding one's attraction to women "not a good thing", feeling one is "not a normal person", perceiving one's love feelings for women "not healthy/wholesome", and being unable to completely accept one's feelings for women) captures a non-acceptance of one's same-sex sexuality. This non-acceptance may exist even if one does not want it – this is explicit in item 3 and implicit in item 4. The other dimension, *Self-stigma: Self-reproach and wishing away same-sex sexuality* (with items about giving oneself a hard time for having love feelings for women, wishing one did not have those feelings, and wishing to change if there were away) is about active (psychological) rejection of one's same-sex sexuality. While they are highly correlated (which is expected as they both are part of self-stigma), this differentiation of the two dimensions is meaningful.

Looking specifically into *Self-stigma: Not normal/wholesome*, all four items in this dimension were derived from prior qualitative research with Vietnamese SMW. Re-examining existing scales, we did not find similar items about the feeling that one's sexuality is not normal, not good, or not healthy. Items such as feeling ashamed, unhappy, depressed about, or resenting, one's homosexuality (from the IHNI), or feeling that one's homosexuality is a shortcoming (IHP) are related but different. There is no theoretical reason, however, to think that these feelings are not experienced in a Western context; they could be present either early in the identity formation process when a person feels different and struggles with the idea that there is something wrong with that different-ness, or they could be persistent for a person who has deeply accepted the idea that only heterosexuality is natural, healthy and allowed by the god they believe in. Also, the not-normal, not-good, not-healthy feelings might underlie the shame, unhappiness and resentment captured by existing scales. The difference, perhaps, is that in the collectivist culture in Viet Nam, there is a greater tendency to conform to what is normal and to consider the non-normative as problematic, wrong or pathological, and this results in higher salience of the not-normal, not-good, not-healthy theme in Vietnamese SMW's recognition and expression of negativity towards their sexuality.

In the second self-stigma dimension, the two items about wishing away one's same-sex sexuality were adapted from existing scales. A third item (giving oneself a hard time for

loving women) was derived from prior qualitative research; a re-examination of existing scales found this item to be closest in content to items such as “I feel bad for acting on my lesbian desires”, “I hate myself for being attracted to other women” (from the LIHS). The overlap of these three items with existing scales confirms common, cross-cultural features of negativity towards one’s same-sex sexuality. That the guilt-feelings-towards-family item also belongs in this dimension suggests that in this population, rejection of one’s same-sex sexuality may be to a great extent driven by guilt towards family. This is likely different from Western contexts, given that existing IH scales do not include items about guilt feelings towards family. It would be interesting to examine in cross cultural research whether other (e.g., religion-related) guilt feelings in a Western context functions similarly to guilt feelings towards family in the Vietnamese context in driving a sexual minority person’s rejection of his/her same-sex sexuality.

Regarding the application of the scale, we anticipate that there will be situations where researchers are interested in (i) the sub-dimensions of the scale as three separate variables, and other situations where researchers are interested in (ii) having only two variables for self-stigma and sexual prejudice, or in (iii) having only one IH variable. In the first case, subscale scores (averaging the items in each dimension) can be used. Alternatively, analysis can be done using a structural equation model in which the three dimensions are represented as latent variables. In the second case, since the two self-stigma dimensions are highly correlated, it is reasonable to combine their items and average them for a self-stigma score. Alternatively, using structural equation modeling, self-stigma can be represented as a higher-order factor with two sub-factors. In the third case, we do not recommend averaging items from all three dimensions to create an IH score, because the correlations of sexual prejudice with the two self-stigma dimensions are not high. Instead, we recommend structural equation modeling with IH being a higher-order factor with three sub-factors.

Beyond Construct Validity: A More Detailed Look at Associations with Hypothesized Correlates

This study allows comparing IH’s associations with other variables over a wide range of variables and across sexual identities. Such comparison facilitates consideration of the *minority stress model* (Meyer, 2003), an important model in LGBT health research, in the context of Viet Nam. This model posits that sexual minority health is negatively impacted by stressors such as sexual prejudice encountered and IH, and that the relationships between minority stress and health vary by valence of minority identity. The positive correlations between IHVN-W and depressive symptoms as well as the variability in the magnitude of correlations by sexual identity are consistent with this model. Future studies using structural equation modeling could be used to fully test the model in this population.

Among the psychosocial correlates, the one most highly correlated with the scale was anticipation of heterosexual marriage. As expected, bisexual and unsure women reported higher anticipation of heterosexual marriage on average. However, women in all three groups who had higher IH were more likely to anticipate marrying a man than women with lower self-stigma. The direction of this association is unclear, i.e., IH may lead to greater anticipation of heterosexual marriage or the reverse may be true; additionally, family and

societal pressure could be confounding the relationship. Given the high mean scores on anticipation of heterosexual marriage, it could be considered another source of minority stress. This stressor may be more relevant in contexts where heterosexual marriage is normative and strongly expected of women. The absence of this variable in previous studies from North America and Europe suggests the pressure to marry a man may be less intense, with women being freer to stay unmarried and, in an increasing number of places, to marry a woman.

The three variables with the highest correlations to the scale include two about friends (openness about same-sex sexuality with friends and perceived stigma among friends) and the third about the relationship with the female partner. The relationships between IH and the friend-related variables are likely to be complex – perceived stigma and IH could have a bidirectional relationship; perceived and internalized stigma could influence level of openness; openness could make friends' homophobia more apparent or could reduce it; and IH may influence the selection of friends. While this study did not examine these relationships, the correlations among these variables suggest that friends are important to the well-being of Vietnamese SMW. Combining these correlations and the correlation with relationship happiness/satisfaction, this suggests that IH may have an effect on the quality of a person's personal relationships, a theme consistent with the literature (Balsam & Szymanski, 2005; Frost & Meyer, 2009).

IH was not associated with perceived support from family, while it was associated with perceived support from other sources. One possible explanation is variation in content of support. When rating support from friends, other SMW, and female partner, respondents may have thought more about emotional support and help with self-validation; and the provision and receipt of such support may have been influenced by respondents' level of IH. When rating support from family, however, respondents may have incorporated other kinds of support including financial and material support and general upbringing, which were perhaps less likely to be influenced by IH.

Comparing the three groups, some correlations were significant for lesbian and bisexual women but not for unsure women. While this may be due to the smaller unsure sample, other explanations are plausible. With three support variables – support from friends, support from other SMW and availability of sexuality/stigma-related support – correlations with IH in the unsure sample were not only non-significant but also much smaller in magnitude compared those from the other two samples. Women who were unsure of their sexual identity were also less open about their same-sex sexuality (see lower outness scores in Table 5), and it is possible that as a result they have less support from other SMW and less sexuality/stigma-related support, and feel less supported by their friends because their friends did not know. Regarding the variable outness in the family, whose correlations with IH were also much smaller in the unsure sample than in the lesbian and bisexual samples, this could be due to limited variance in this variable, as unsure women were generally not open with their families about their attraction/relationships.

The finding that sexual prejudice was more highly associated than self-stigma with endorsement of legalizing same-sex marriage suggests that this subscale may be able to

predict who are more likely to participate in activities advocating against discrimination and for recognition and protection of equal rights. This is potentially an important area for research and practice, not only because these activities are important for improving the collective social standing and well-being of sexual minorities, but also because there is evidence to suggest that activist/political participation is beneficial to mental well-being in sexual minority individuals (Cameiro & Menezes, 2007) and in young women affected by depression (Sanders, 2001).

Directions for Further Scale Evaluation and Improvement

Within the scope of one paper, we did not address the question of whether the scale is invariant across the three SMW groups. Given the complexity of measurement invariance testing with ordinal data and, more importantly, the complexity of interpreting the results of such analysis, this topic will be addressed in a subsequent paper. Here, we briefly report that there is evidence for measurement variance, with the models for items 2, 4, 7 and 10 being different in the lesbian group compared to the other two groups, and the models for items 3 and 8 being different in the bisexual group. We recommend that studies that wish to compare IH across these groups or to model the association of IH with another variable in a SMW sample with mixed identities (i) use structural equation modeling with IH represented by latent factors and (ii) specify direct effects from identity covariates to items with measurement variance.

In the present study, respondents were predominantly young, well-educated, urban-dwelling women, and by design all respondents used the internet and had some connection to sexual minority communities; the sample likely under-represents older, non-urban, poor and isolated SMW. This means item endorsement could have been biased towards less IH, limiting variance in scale items, affecting the precision of estimated correlations with external constructs and their statistical significance. In this study, the long survey period improved the diversity of respondents, as later participants tended to be older, less likely to have college education and score higher on this IH scale, compared to earlier participants. Future research on IH in this population, however, should also use other recruitment methods to reach population segments not reached by this study.

In future development of the scale, variance in scale items might be improved by providing a greater number of response options. Items in this version were rated on a five-point *strongly disagree* to *strongly agree* scale, and responses for most items concentrated on the disagree side, which had only two options. This is consistent with what other researchers have documented about IH scores, for example, Herek and colleagues (2009) using the IHP-R on the same response scale (also coded 1 to 5) on an American sample found that the mean score was 1.25 for lesbian and 1.53 for bisexual women. Further research on the scale should compare the present response metric with a metric with a wider number of response options (e.g., seven-, nine-, or eleven-point) is recommended.

In examining associations with external constructs, a limitation of the study is that many constructs were measured using single questions. Since single items are less reliable than multiple-item scales, this may have attenuated estimated correlations. Within the limits of an online survey that covered multiple topics, of which IH was one, we were not able to

measure every construct with a multiple-item scale. Results from this study should therefore be supplemented with additional studies that use more rigorous measures.

In identifying scale items, we included more items reflecting self-stigma than those reflecting sexual prejudice, because participants of the prior qualitative study talked more about how they felt about themselves and their situations than about how they judged homosexuality/same-sex relationships in general or how they judged other sexual minority persons. Qualitative research with this population to explore elements of sexual prejudice that they hold would help further improve the sexual prejudice subscale.

To conclude, this study developed the first Vietnamese IH scale, the Internalized Homophobia Scale for Vietnamese Sexual Minority Women (IHVN-W), providing an important tool for the growing but still very limited research on sexual stigma in this population. The scale drew from the international literature and was tailored to SMW's experiences and perceptions in the Vietnamese context, is a valid and reliable scale reflecting two components of IH, self-stigma and sexual prejudice. The study also revealed patterns in the association of IH with external constructs in different groups of Vietnamese SMW that have theoretical relevance for the application and adaptation of the minority stress model to a non-Western context.

Acknowledgments

The survey was primarily funded by the Institute for Studies of Society, Economy and Environment (iSEE). Instrument development was partially funded by Department of Health, Behavior and Society, Johns Hopkins Bloomberg School of Public Health (JHSPH) through doctoral research grants to TQN. TQN's time was supported by the Sommer Scholarship Program and the Drug Dependence Epidemiology Training Program (NIDA grant T-32DA007292, PI: C. Debra M. Furr-Holden) at JHSPH. The authors are grateful for the tremendous implementation support by staff and volunteers of iSEE and the ICS Center, the effective collaboration by websites for Vietnamese sexual minority women, the contribution of the survey respondents, and helpful suggestions from three anonymous reviewers.

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Table 1

Existing measures of internalized homophobia

Measure (abbreviated name) (reference for psychometric properties)	Relation to other scales	Domains covered ^a	Evaluated for use with
Lesbian Internalized Homophobia Scale (LIHS) (Szymanski & Chung, 2001)		<ul style="list-style-type: none"> • Personal feelings about being a lesbian • Moral and religious attitudes toward lesbians • Public identification as a lesbian • Attitudes toward other lesbians • Connection with the lesbian community 	Lesbian women
Self-Identified Lesbian Internalized Homophobia Scale (SLIHS) (Weibley, 2009)		<ul style="list-style-type: none"> • Visibility • (Lack of) Connectedness • (Lack of) Self-acceptance • Judgment (of other lesbians/lesbian lifestyle) 	Lesbian women
Measure of Internalized Sexual Stigma for Lesbians and Gay Men (MISS-LG) (Lingiardi et al., 2012)		<ul style="list-style-type: none"> • (Negative gay/lesbian) Identity • Social discomfort (related to disclosure) • (Negativity regarding gay/lesbian) Sexuality 	Gay men; lesbian women
Internalized Homophobia Scale (IHP) by Martin and Dean (Herek et al., 1998; Meyer, 1995)		<ul style="list-style-type: none"> • Negative attitudes towards one's homosexuality 	Gay men; lesbian women
Revised Internalized Homophobia Scale (IHP-R) (Herek et al., 2009)	Based on IHP	<ul style="list-style-type: none"> • Negative attitudes towards one's homosexuality 	Gay/bisexual men; lesbian/bisexual women
Nungesser Homosexual Attitudes Inventory (NHAI) (Nungesser, 1983)		<ul style="list-style-type: none"> • Attitudes toward the fact of one's own homosexuality • Attitudes toward homosexuality in general and toward other homosexual males • Attitudes toward the fact of one's homosexuality being known by others 	Gay men
Shidlo's Revised NHAI (Shidlo, 1994)	Based on NHAI	<ul style="list-style-type: none"> • Subscale self, or personal homonegativity • Subscale other, or global homonegativity • Subscale disclosure 	Gay men
Multi-Axial Gay Men's Inventory--Men's Short Version (MAGI-MSV) (Theodore et al., 2013)	Based on Shidlo's scale	<ul style="list-style-type: none"> • Gay self-assurance and worth • Public appearance of homosexuality • Extreme/maladaptive measures to eliminate homosexuality • Impact of HIV/AIDS on homosexuality 	Gay men
Reactions to Homosexuality Scale (RHS) (Ross & Rosser, 1996)		<ul style="list-style-type: none"> • Public identification as gay • Perception of stigma associated with being gay • Social comfort with gay men • Moral and religious acceptability of being gay 	Gay men
A shortened version of the RHS (Smolenski et al., 2010)	Based on RHS	<ul style="list-style-type: none"> • Personal comfort with gay identity 	Gay men

Measure (abbreviated name) (reference for psychometric properties)	Relation to other scales	Domains covered ^a	Evaluated for use with
		<ul style="list-style-type: none"> • Social comfort with gay men • Public identification as gay 	
Short Internalized Homonegativity Scale (SIHS) (Currie et al., 2004)	Based on RHS	<ul style="list-style-type: none"> • Public identification as gay • Sexual comfort with gay men • Social comfort with gay men 	Gay men
Internalized Homonegativity Inventory (IHNI) (Mayfield, 2001)		<ul style="list-style-type: none"> • Personal homonegativity • Morality of homosexuality • Gay affirmation 	Gay men

Note. This table results from a thorough search but is unlikely to be exhaustive of published IH scales. The table also does not include scales which have been used but are without formal psychometric evaluation.

^a In the Domains column, the words in brackets were added by this paper's authors to clarify the contents of several scale domains.

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Table 2

Items used in psychometric evaluation and items retained^a

Conceptualized domains	Emerged dimensions	Items in Vietnamese	Translation to English ^b	Sources
Self-stigma (SS)	Sexual stigma: Not normal (SS I)	1. Tôi thấy việc mình thích con gái là điều không tốt.	1. I find my liking women not a good thing.	Prior qualitative research
		2. Tôi cảm thấy mình là người không bình thường vì có tình cảm yêu thương với nữ giới.	2. I feel I am not a normal person because I have love feelings for women.	Prior qualitative research
		3. (Dù không muốn) tôi vẫn thấy cảm xúc yêu thương của mình với nữ giới là không lành mạnh.	3. (Even if I don't want to) I still find my love feelings for women not healthy/wholesome.	Prior qualitative research
		4. Bản thân tôi không thể hoàn toàn chấp nhận việc mình có tình cảm yêu thương với nữ giới.	4. I myself cannot completely accept the fact that I have love feelings for women.	Prior qualitative research
	Sexual stigma: Self-reproach & wishing away same-sex sexuality (SS II)	5. Tôi cố gắng để không yêu nữ nữa.	5. I try to not love women any more.	Adapted from IHP-R
		6. Tôi cảm thấy thất vọng với bản thân vì tôi yêu nữ.	6. I feel disappointed in myself because I love women.	Adapted from LIHS
		7. Tôi cảm thấy mình yêu nữ là có lỗi với gia đình.	7. I feel my loving women is doing wrong to my family.	Prior qualitative research
		8. Tôi trách móc, dằn vặt bản thân vì tôi yêu nữ.	8. I give myself a hard time and beat myself up (psychologically) for loving women.	Prior qualitative research
		9. Tôi ước gì mình không có tình cảm yêu thương với nữ giới.	9. I wish I did not have love feelings for women.	Adapted from IHP-R Similar to items in MAGI-MSV, IHNI
		10. Nếu có thể làm cách nào để thay đổi ước (trở thành người yêu nam giới, không yêu nữ) thì tôi muốn thay đổi.	10. If there were a way to change (becoming someone who loves men and not women), I would want to change.	Adapted from IHP-R Similar/related to items in LIHS, RHS
Sexual prejudice (SP)	Sexual prejudice (SP)	11. Nếu có thể yêu thương người khác giới, thì không nên bắt đầu quan hệ yêu thương với người cùng giới.	11. If a person could love the opposite sex, he/she should not start a romance with someone of the same sex.	Prior qualitative research
		12. Đồng tính là không bình thường.	12. Homosexuality is not normal.	Prior qualitative research Related to item in LIHS
		13. Đồng tính là trái tự nhiên.	13. Homosexuality is against nature.	Prior qualitative research Related to LIHS, RHS items
		14. Đồng tính là sai trái về mặt đạo đức.	14. Homosexuality is morally wrong.	Prior qualitative research Similar to an IHNI item

^aItems 5, 6 and 11 were not retained in the final scale.

^bThe English translation is only to help the readers understand the scale; it should not be considered a scale itself.

Table 3
Items' means (standard deviations), polychoric correlations, and factor loadings from *lesbian* half samples

	Polychoric correlations													Factor loadings		
	Mean (SD) ^a	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	Tentative model ^b	Final model ^c
Half sample 1 (n=594)																
1. not good	1.83 (1.22)														.76	.76
2. not normal	1.91 (1.32)	.59													.70	.71
3. not healthy	1.53 (0.98)	.68	.59												.90	.90
4. can't accept	1.61 (1.09)	.58	.58	.77											.82	.82
5. try not to	1.54 (1.05)	.65	.58	.74	.70										.85	
6. disappointed	1.54 (0.99)	.62	.63	.70	.70	.66										
7. wrong to family	2.69 (1.52)	.41	.33	.43	.47	.40	.62							.73		.74
8. hard on self	1.89 (1.25)	.57	.49	.60	.57	.62	.84	.70						.90		.89
9. wish not	1.98 (1.33)	.54	.42	.60	.54	.63	.77	.69	.80					.92		.92
10. want change	1.84 (1.27)	.49	.34	.58	.53	.59	.65	.58	.69	.80				.84		.84
11. should not start	3.25 (1.48)	-.05	.07	.01	.00	.08	.22	.30	.24	.25	.14					
12. H not normal	1.51 (1.02)	.37	.47	.47	.45	.36	.50	.30	.41	.42	.33	.04		.90		.90
13. H against nature	1.55 (1.05)	.38	.46	.51	.42	.40	.53	.34	.39	.41	.40	.21	.83	.92		.92
14. H morally wrong	1.32 (0.77)	.39	.46	.55	.44	.45	.52	.36	.42	.40	.34	.39	.79	.90		.89
Half sample 2 (n=593)																
1. not good	1.75 (1.19)															.83
2. not normal	1.84 (1.32)	.71														.83
3. not healthy	1.57 (1.06)	.74	.76													.90
4. can't	1.55 (1.05)	.72	.71	.79												.89
5. try not to	1.43 (0.87)	.63	.57	.69	.75											
7. wrong to family	2.62 (1.49)	.50	.47	.59	.55	.56										.77
8. hard on self	1.90 (1.25)	.61	.63	.64	.70	.69	.73									.91
9. wish not	1.86 (1.25)	.54	.49	.54	.62	.67	.65	.78								.88
10. want change	1.76 (1.21)	.58	.48	.56	.60	.70	.58	.70	.81							.85
12. H not normal	1.50 (1.01)	.56	.60	.62	.55	.42	.35	.45	.43	.42						.95
13. H against nature	1.58 (1.09)	.51	.51	.55	.47	.42	.39	.38	.34	.41	.86					.89

	Mean (SD) ^a	Polychoric correlations			Factor loadings								
14. H morally wrong	1.37 (0.86)	.54	.54	.63	.59	.48	.39	.47	.44	.43	.84	.80	.90

^aSD = standard deviation. Means and SDs were calculated on the items' raw scale.

^bThe tentative model resulted from step 1 analysis – factor analysis of the *lesbian* half sample 1. This model fit well to this half sample: CFI=.99, TLI=.99, RMSEA=.052, RMSEA 90% CI=(.041,.063), chi-square(131.73, 51df) p-value<.0001.

^cThe final model was a modification of the tentative model after testing it in the *lesbian* half sample 2. This model fit well to half sample 2 (CFI=.99, TLI=.98, RMSEA=.064, RMSEA 90% CI=.052,.076), chi-square(100.69, 41df) p-value<.0001) as well as half sample 1 (CFI=.99, TLI=.99, RMSEA=.050, RMSEA 90% CI=(.037,.062), chi-square(139.76, 41df) p-value<.0001). For half samples 1 and 2 respectively, correlations between factors 1 and 2 were .74 and .79; between factors 1 and 3 were .62 and .71; and between factors 2 and 3 were .49 and .52.

Table 4

Means (standard deviations) of items and subscales, factor loadings, factor correlations and reliabilities from the final model

Items:	Lesbian (full sample, n=1187)				Bisexual (n=641)				Unsure (n=353)			
	Mean (SD) ^b	Self-stigma I ^a	Self-stigma II ^a	Sexual prejudice	Mean (SD)	Self-stigma I	Self-stigma II	Sexual prejudice	Mean (SD)	Self-stigma I	Self-stigma II	Sexual prejudice
		Factor loadings ^c	Factor loadings ^c	Factor loadings ^c		Factor loadings ^c	Factor loadings ^c	Factor loadings ^c		Factor loadings ^c	Factor loadings ^c	Factor loadings ^c
1. not good	1.79 (1.20)	.80			2.25 (1.29)	.83			2.43 (1.33)	.85		
2. not normal	1.88 (1.32)	.77			2.24 (1.36)	.83			2.51 (1.40)	.86		
3. not healthy	1.55 (1.02)	.90			2.12 (1.33)	.88			2.22 (1.34)	.85		
4. can't	1.58 (1.07)	.86			2.10 (1.31)	.88			2.39 (1.44)	.82		
7. wrong to family	2.65 (1.50)		.75		3.12 (1.46)		.73		3.19 (1.48)		.77	
8. hard on self	1.89 (1.25)		.90		2.29 (1.34)		.90		2.52 (1.40)		.85	
9. wish not	1.92 (1.29)		.90		2.55 (1.47)		.94		2.73 (1.48)		.87	
10. want change	1.80 (1.24)		.85		2.58 (1.51)		.89		2.70 (1.49)		.85	
12. H not normal	1.50 (1.01)			.93	1.75 (1.17)			.91	1.98 (1.27)			.95
13. H against nature	1.57 (1.07)			.90	1.81 (1.22)			.90	2.01 (1.30)			.91
14. H morally wrong	1.35 (0.82)			.90	1.50 (0.97)			.90	1.68 (1.11)			.84
		Factor correlations ^c				Factor correlations				Factor correlations		
		SS-I ^a	SS-II ^a	SP ^a		SS-I	SS-II	SP		SS-I	SS-II	SP
		.76	.76	.67		.83	.83	.69		.80	.80	.64
				.51		SS-II	SS-II	.54		SS-II	SS-II	.54
Subscales:	Mean (SD) ^b	Ordinal alpha	Cronbach's alpha		Mean (SD)	Ordinal alpha	Cronbach's alpha		Mean (SD)	Ordinal alpha	Cronbach's alpha	
Self-stigma I	1.70 (0.92)	.90	.80		2.18 (1.13)	.91	.87		2.39 (1.17)	.91	.87	
Self-stigma II	2.07 (1.02)	.91	.85		2.63 (1.24)	.92	.88		2.78 (1.22)	.89	.85	
Sexual prejudice	1.47 (0.85)	.93	.85		1.69 (0.99)	.93	.85		1.89 (1.09)	.93	.86	

^a Self-stigma I (or SS I) = *Self-stigma*. Not normal/wholesome. Self-stigma II (or SS II) = *Self-stigma*. *Self-reproach and wishing away same-sex sexuality*. SP = *Sexual Prejudice*.

^b SD = standard deviation. Means and SDs were calculated on the items' raw scale.

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^cFactor loadings and factor correlations were from confirmatory factor analysis (CFA). The CFA model fits very well to both the *lesbian* sample (CFI=.99, TLI=.99, RMSEA=.056, RMSEA 90% CI=.048,.064), chi-square(191.47, 41df) p-value<.0001) and the *bisexual* sample (CFI=.99, TLI=.99, RMSEA=.067, RMSEA 90% CI=.056,.078), chi-square(158.84, 41df) p-value<.0001), and moderately well to the *unsure* sample (CFI=.99, TLI=.99, RMSEA=.070, RMSEA 90% CI=.055,.086), chi-square(112.72, 41df) p-value<.0001).

Table 5

Hypothesized correlates' summary statistics and associations with subscale scores in the lesbian (n=1187), bisexual (n=641) and unsure (n=353) samples

	Mean (SD) ^b	Self-stigma: Not normal/wholesome	Self-stigma: Self-reproach and wishing away SSS ^a	Sexual prejudice		
		Spearman's rank correlations with subscale scores				
Perceived stigma						
Perceived stigma among friends						
lesbian sample	2.63 (2.61)	.17 ***	.24 ***	.11 ***	#	\$
bisexual sample	3.22 (2.69)	.20 ***	.22 ***	.19 ***		
unsure sample	3.51 (2.66)	.21 ***	.23 ***	.13 ***		\$
Perceived stigma in local community						
lesbian sample	5.97 (2.30)	.03	.12 ***	-.02	#	\$
bisexual sample	6.57 (2.01)	.12 **	.22 ***	.09 *		\$
unsure sample	6.44 (1.97)	.14 *	.22 ***	.07		\$
Outness						
Openness about sexuality in family						
lesbian sample	2.51 (3.53)	-.14 ***	-.23 ***	-.02	#	\$
bisexual sample	1.27 (2.52)	-.26 ***	-.35 ***	-.14 ***	#	\$
unsure sample	1.00 (2.36)	-.14 *	-.15 *	.03		\$
Openness about sexuality with friends						
lesbian sample	5.80 (3.63)	-.19 ***	-.24 ***	-.11 ***	#	\$
bisexual sample	4.16 (3.43)	-.36 ***	-.34 ***	-.21 ***	#	\$
unsure sample	3.53 (3.43)	-.27 ***	-.22 ***	-.18 **	#	
Social support						
Support from family						
lesbian sample	3.70 (3.24)	-.02	-.06	.01		
bisexual sample	3.76 (3.31)	.01	.01	.02		
unsure sample	4.02 (3.44)	-.01	.00	.03		
Support from friends						
lesbian sample	4.31 (2.62)	-.13 ***	-.11 ***	-.11 ***		
bisexual sample	4.07 (2.60)	-.12 **	-.12 **	-.09 *		*
unsure sample	3.88 (2.65)	-.04	-.03	-.08		
Support from other sexual minority women						
lesbian sample	4.44 (2.79)	-.12 ***	-.16 ***	-.13 ***		
bisexual sample	3.65 (2.84)	-.14 **	-.14 **	-.11 *		*
unsure sample	2.93 (2.77)	.04	-.04	-.01		
Support from female partner						
lesbian (n=798)	6.07 (1.97)	-.16 ***	-.20 ***	-.07	#	\$

			Self-stigma: Not normal/wholesome		Self-stigma: Self-reproach and wishing away SSS ^a		Sexual prejudice	
bisexual (n=319)	5.72 (1.96)	-.12	*	-.14	*	-.05	# \$	
unsure (n=166)	5.72 (2.16)	-.12		-.20	*	-.05	\$	
Availability of sexuality/stigma-related support								
lesbian sample	3.89 (1.22)	-.16	***	-.20	***	-.14	***	\$
bisexual sample	3.64 (1.27)	-.18	***	-.15	***	-.06	# \$	
unsure sample	3.34 (1.45)	-.05		-.02		-.01		
Connection to other sexual minority women								
lesbian sample	1.89 (.88)	-.15	***	-.18	***	-.13	***	\$
bisexual sample	1.46 (.82)	-.19	***	-.18	***	-.08	# \$	
unsure sample	1.19 (.77)	-.13	*	-.14	*	-.13	*	
Psychological well-being								
Depressive symptoms								
lesbian sample	8.71 (6.18)	.10	***	.16	***	.06		\$
bisexual sample	9.38 (6.07)	.12	**	.18	***	.08	*	\$
unsure sample	9.73 (6.53)	.11	*	.15	**	.03		\$
Life satisfaction								
lesbian (n=151)	3.19 (.96)	-.13		-.28	***	-.14		
Self-esteem								
lesbian (n=151)	3.75 (.79)	-.21	**	-.29	***	-.21	*	
Relationship quality								
Relationship happiness/satisfaction								
lesbian (n=798)	8.06 (2.14)	-.18	***	-.25	***	-.07	# \$	
bisexual (n=319)	7.51 (2.25)	-.25	***	-.26	***	-.12	*	# \$
unsure (n=166)	7.59 (2.34)	-.28	***	-.36	***	-.03	# \$	
Conflict in relationship								
lesbian (n=798)	5.25 (2.63)	.10	*	.16	***	.07		\$
bisexual (n=319)	5.55 (2.55)	.17	**	.18	**	.00	# \$	
unsure (n=166)	5.78 (2.63)	.16		.29	***	.01	# \$	
Anticipation of opposite-sex marriage								
lesbian sample	22.5 (29.5)	.23	***	.34	***	.12	***	# \$
bisexual sample	57.6 (29.9)	.39	***	.35	***	.20	***	# \$
unsure sample	48.8 (31.9)	.35	***	.42	***	.25	***	# \$
	Percent	Odds ratio						
Legalize same-sex marriage								
lesbian sample	94.6	.61	***	.72	**	.46	***	
bisexual sample	89.0	.64	***	.73	**	.55	***	

		Self-stigma: Not normal/wholesome		Self-stigma: Self-reproach and wishing away SSS ^a		Sexual prejudice	
unsure sample	83.4	.53	***	.74	*	.51	***

^aSSS = same-sex sexuality.

^bSD = standard deviation.

*, ** and *** denote p-values (< .05, < .01 and < .001) comparing the correlations to the null value of zero.

and \$ mean the variable's correlation with *Sexual Prejudice* was statistically significantly different from its correlations with *Self-stigma: Not normal/wholesome* and with *Self-stigma: Self-reproach and wishing away SSS*, respectively; statistical significance was based on $\alpha=.05$.

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