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# Internalized homophobia and sexual risk behavior in men who have sex with men: The mediational role of sexual self-concept

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Men who have sex with men (MSM) are one of the populations most likely to be infected with human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) worldwide. Sexual risk behaviors (SRB) are the main route of HIV transmission. Among the factors associated with SRB, internalized homophobia (rejection of one's sexuality) is a risk factor unique for MSM. However, how this factor influences SRB is not clear. Therefore, the present study attempts to clarify the mechanism of action of the relationship between internalized homophobia on SRB based on the mediating effects of sexual self-concept. A study was conducted with 124 MSM living in Chile over 18 years of age ( $M = 24.4$  and  $SD = 4.19$ ). Through path analysis, it was observed that internalized homophobia has slight inverse effects on SRBs (multiple sexual partners and sexual activity under the influence of alcohol or drugs) when the sexual self-efficacy dimension acts as a mediating variable. These findings suggest that developing sexually transmitted infections (STIs) and HIV/AIDS prevention campaigns focused on MSM must highlight the development of a healthy sexual self-concept and address self-stigma.

## KEYWORDS

internalized homophobia, sexual risk behavior, sexual self-concept, men who have sex with men, PHAT analysis

## Introduction

Sexually Transmitted Infections (STIs), including Human Immunodeficiency Virus (HIV), have become a global public health challenge (Hemelaar et al., 2019; Mahy et al., 2021; Quinn, 2021), given the increase in the number of people infected with HIV (Joint United Nations Programme on HIV/AIDS [UNAIDS], 2021). HIV is prevalent primarily

among young people aged 20–29, with a 3/1 male-to-female ratio (Institute of Public Health, 2016; Goldstein, 2019). Within high-risk groups, men who have sex with men (MSM) have the highest prevalence, at least 20 times higher than the general population (Stuardo, 2017; Diaz et al., 2019; Kabapy et al., 2020). The main way of HIV transmission is sexual risk behaviors (SRB) (Martinez et al., 2016; Luz et al., 2019; Coelho et al., 2021; Mulaudzi et al., 2022; Wei et al., 2022). Understood as sexual situations or practices that generate harm to one's or others' sexual health, for example, (1) sexual activity with multiple partners (Sönmez et al., 2021; Dong et al., 2022), (2) absence or misuse of condoms (Closson et al., 2018; Chu and Huang, 2020), (3) sexual activity under the influence of alcohol and drugs (Palfai and Luehring-Jones, 2021; Bustamante et al., 2022).

Different factors have been associated with SRB, including family values, peer group attitudes, alcohol and drug use, sex education, and social context (Jarrett et al., 2018; Valencia et al., 2018; Blondeel et al., 2021; Bozzini et al., 2021). Likewise, there is a large body of research focused on the individual's psychological factors, which points to certain personality types and behaviors as a possible explanation for SRB (e.g., risk perception; sexual sensation seeking) (Danko et al., 2016; Xu et al., 2016; Gil-Llario et al., 2018; Wang et al., 2021).

Within these psychological factors, there is one that is specific to the lesbian, gay, bisexual, and transgender LGBT populations, and particularly to MSM, called internalized homophobia or internalized homonegativity (IH) (e.g., Berg et al., 2013; Parker et al., 2016; Rendina et al., 2017; Ramos et al., 2021; Michli and Jamil, 2022), both refers to a negative attitude toward one's sexuality and is attributed to experiences of victimization and cultural heterosexism (Williamson, 2000), which, in extreme cases, can lead to rejection or shame of one's sexual orientation, experiencing guilt, discrimination, having poor attachment to non-heterosexual others, and feeling dissatisfied with same-sex sexual activity (Meyer and Dean, 1998; Frost and Meyer, 2009; Cao et al., 2017; Meanley et al., 2020; Gill and Randhawa, 2021).

Some studies have shown a relationship between IH and SRB, noting that people who experience significant rejection of their sexuality tend to have more SRB, like inadequate condom use (Huebner et al., 2002; Morell-Mengual et al., 2017). However, it is unclear how internalized homophobia influences sexual risk behavior (Newcomb and Mustanski, 2011; Smolenski et al., 2011; Berg et al., 2015; Doyle and Molix, 2015; Puckett et al., 2017; Michael and Soskolne, 2020). Among the possible explanations found in the literature, it has been suggested that IH could affect the development of a healthy sexual self-concept (Hossain and Ferreira, 2019), propitiating risky sexual behaviors.

The self-concept refers to the dynamic and organized system of beliefs that an individual has about his or her identity, which is formed through experience and perceptions of the environment, playing an important role in multiples behaviors

(Shavelson et al., 1976; Marsh and Shavelson, 1985; Jankowski et al., 2021). The literature often distinguishes between general self-concept and sexual self-concept; the latter is more specific and has been more frequently incorporated in sexuality research (Salehi et al., 2015a,b; Siu-ming et al., 2019). Sexual self-concept is defined as a multidimensional psychological construct that contains positive or negative cognitions and emotions about one's sexuality (Deutsch et al., 2014; de Neve-Enthoven et al., 2022), which partially guides sexual behaviors (Sigre-Leirós et al., 2015; Potki et al., 2017; Emetu et al., 2020).

In the case of IH and its relationship with sexual self-concept, evidence suggests that those who are more prejudiced toward their sexuality tend not to express adequate identity integration (Rowen and Malcolm, 2003). Additionally, they exhibit a lower physical self-concept than heterosexual men (Shenkman and Toussia-Cohen, 2020) and also have a negative sexual self-image (García et al., 2016; Puckett et al., 2018; Træen, 2018; Morell-Mengual et al., 2021; Foster et al., 2022). However, when there is adequate identity integration, levels of internalized homophobia decrease, as does depressive symptomatology (Li et al., 2021).

Although, studies attempting to explain the effects of IH on SRB are observed in the literature (e.g., Newcomb and Mustanski, 2011; Berg et al., 2015; Puckett et al., 2017; Michael and Soskolne, 2020). Explanations could be incomplete as the mechanism of action would not be direct, which makes it essential to develop new research exploring other strategies, as noted by Puckett et al. (2017).

The hypothesis in the following study proposes that self-stigma toward sexuality has a negative impact on sexual self-concept (Herek et al., 2015). This damage, in turn, would make people more prone to engage in risky sexual behaviors by decreasing the levels of sexual assertiveness to reject such behaviors (Ménard and Offman, 2009; Javier et al., 2018; Shafer et al., 2018; Van de Bongardt and de Graaf, 2020; Brasileiro et al., 2021). Therefore, this research aims to examine, through a mediation model, the mechanism of action of internalized homophobia on SRB, involving the indirect effects (i.e., mediation) of sexual self-concept in Chilean MSM.

## Materials and methods

A cross-sectional study with a descriptive correlational design was conducted (Ato et al., 2013). The sampling was non-probabilistic, mixing snowball and social network strategies (León and Montero, 2007).

## Participants

The sample consisted of 124 men who reported having sex with men in the last year. Only 124 cases were considered

for the final sample out of 254 completed forms, given the inclusion criteria defined for the study (i.e., being male, having had sexual relations with other men in the last year, residing in Chilean territory, and having less than 10% of missing values).

Most respondents were residents of Arica (51.6%), followed by the city of Santiago de Chile (26.6%). The mean age was 24.4 years ( $SD = 4.19$ ). A total of 65.3% of the participants reported not having a stable relationship, 26.6% had a partner, and 8.1% were living with a partner together. As for their educational level, 87.9% reported having completed or been in higher education, and 12.1% reported having completed secondary education. Over one-third (30.6%) reported being diagnosed with an STI, and 14 (11.3%) with HIV/AIDS. Regarding the sexual orientation of the participants, 66.1% reported being sexually attracted only to men, 23.4% reported being generally attracted to men. A further 7.3% reported being sometimes attracted to men and to a lesser extent 2.4% reported being generally attracted to women and finally only 0.8% reported being totally attracted to women in the sexual domain. On the other hand, 67.7% reported having sex only with men, 16.1% reported having sex usually with men, as well as 14.5% reported having sex sometimes with men.

## Instruments

The Sexual Risk Behavior Scale (SRBS) (Ferrer-Urbina et al., 2019) is a 12-items self-report measure that assesses sexual behaviors at risk of STI or HIV/AIDS infection. Through four dimensions: sexual activity with multiple partners (items = 4); inappropriate or insufficient use of protective barriers (items = 4); (c) sexual activity under the influence of alcohol or drugs (items = 4); (d) knowledge of the partner's sexual record (items = 4). The items are 4-level Likert attitudinal/behavioral statements (1 "Never"—4 "Always"). The version used has reported evidence of validity based on the internal structure of the test and adequate levels of reliability ( $\omega > 0.8$ ) (Ferrer-Urbina et al., 2019). The dimension of partners sexual history was excluded in a phase prior to data collection, as this dimension does not refer to risky sexual behavior itself. It has also been excluded from other published studies (Ferrer-Urbina et al., 2022).

Internalized Homophobia Scale (IHS) (Wagner, 1998) is a self-report measure composed of 20-items assessing the level of internalized homophobia. This scale was conceived initially for homosexual men (Wagner, 1998); nonetheless, the present study gives it a more generalized use, involving a broader population such as MSM (i.e., who may be or identify as bisexual, pansexual, or even heterosexual regardless of their sexual behavior). The items are answered on a 5-point Likert scale (1 "Strongly disagree"—5 "Strongly agree"). The scale has reported adequate levels

of reliability ( $\alpha > 0.7$ ) and evidence of validity, based on the internal structure of the construct, in Chilean samples (Pinto-Cortez et al., 2018).

The multidimensional scale of sexual self-concept (MSCS) (Ferrer-Urbina et al., 2019) is a 16-items self-report measure that assesses four dimensions with 4-items each, which make up sexual self-concept: Sexual self-esteem, which refers to feelings about one's sexuality (items = 4); sexual self-efficacy, concerning beliefs about one's sexual ability (items = 4); assertive sexual behavior (items = 4); assertive sexual communication (items = 4), understood as the expressions of one's sexual desires. The items are 4-level Likert behavioral/attitudinal statements (1 "Never"—4 "Always"; 1 "Strongly disagree"—4 "Strongly agree"). The scale has reported satisfactory levels of reliability in all its dimensions, and validity evidence, based on the internal structure of the test, through exploratory structural equation models in the Chilean sample (Ferrer-Urbina et al., 2022).

## Procedure

The Scientific Ethics Committee of the Universidad de Tarapacá approved the study within the framework of the FONDECYT Initiation Project No. 11170395.

The questionnaire was disseminated through social networks. An informed consent form was included at the beginning of the questionnaire explaining the study's objectives, the voluntary nature of the application, and the confidentiality and anonymity of the data. Once participation was agreed upon, the participants answered three instruments (i.e., sexual risk behavior questionnaire, internalized homophobia questionnaire, and multidimensional sexual self-concept questionnaire) and a demographic section, with questions regarding age, and sexual orientation, among others. Once the questionnaire was completed, participants were invited to forward the form to their friends and close contacts to reach a significant number of people.

The response time for the questionnaire was approximately 15 min.

## Data analysis

The means and standard deviations of all dimensions were initially calculated. At the same time, internal consistency was examined using Cronbach's alpha coefficient ( $\alpha > 0.07$ ). Additionally, univariate relationships were assessed using Pearson correlations, which were interpreted using Cohen's effect size criteria (Cohen, 1988). Finally, a path analysis estimated indirect effects (i.e., mediation) was performed (Kline, 2016). Standardized

regression coefficients ( $\beta$ ) were assessed to determine the strength and direction of relationships between independent variables (i.e., internalized homophobia) and dependent variables (i.e., SRB in particular: multiple sexual partners; inadequate use of protective barriers; sexual intercourse under the influence of alcohol and drugs) while controlling for variables that comprise sexual self-concept (i.e., sexual self-esteem; sexual self-efficacy; assertive sexual behavior; assertive sexual communication). In addition, multiple regression assumptions were tested. Analyses were conducted using Jamovi software version 0.9.5.11 (The Jamovi Project, 2019).

## Results

The means and standard deviations of each of the dimensions, along with the reliability estimates, are presented in [Table 1](#).

The scales are shown on a standard metric of 1–4, except for the IHS, which is on a scale of 1–5. Remarkably, the dimensions with the lowest means are sex under the influence of alcohol and drugs ( $\bar{x}$  = 1.61), the multiplicity of sexual partners ( $\bar{x}$  = 1.71), and internalized homophobia ( $\bar{x}$  = 1.94), while all the dimensions of sexual self-concept present the highest means (> 3.00). Regarding the reliability estimates, most of the dimensions presented optimal or acceptable estimates, except for the variable: inadequate use of protective barriers which presented a lower value of 0.61.

In the case of the univariate effects of internalized homophobia on dimensions of sexual self-concept and sexual risk behavior, it is observed that internalized homophobia variable shows a moderate, inverse, and statistically significant effect on sexual self-efficacy ( $r$  = -0.368;  $p$  < 0.001), a small effect on assertive sexual communication ( $r$  = -0.198;  $p$  < 0.05) and sexual self-esteem ( $r$  = -0.266;  $p$  < 0.01). Also, a slight inverse effect ( $r$  = -0.246;  $p$  < 0.01) is observed in the inadequate use of protective barriers.

In the sexual self-concept and the dimensions that compose sexual risk behavior, a statistically significant, slight direct effect ( $r$  = 0.252;  $p$  < 0.01) is observed between sexual self-efficacy and the multiplicity of sexual partners, and a slight inverse effect ( $r$  = -0.207;  $p$  < 0.05) between assertive sexual behavior and sex under the influence of alcohol and drugs.

Concerning the evaluation of the assumptions for the development of a path model, it was found that there were no collinearity problems (tolerance > 0.4; VIF < 2) between independent and moderator variables. Moreover, the residuals of the dependent variables did not show severe deviations from normality (see [Supplementary material](#)). In addition, a posterior statistical power estimation was performed. The model used was one in which the direct effects between variables were equivalent to the largest effects

observed in the correlation table (see [Table 2](#)); the power was 0.78 (Schoemann et al., 2017).

A mediated pathway was developed to assess whether the effects of internalized homophobia on SRB are mediated by sexual self-concept. In this model, the mediating variables were sexual self-esteem, sexual self-efficacy, assertive sexual behavior, and assertive sexual communication. The results of the mediation analysis are shown in [Table 3](#).

It is observed that internalized homophobia has a direct, statistically significant, and inverse effect on the adequate use of protective barriers ( $\beta$  = -0.264,  $p$  < 0.01). Similarly, regarding indirect effects, it was observed that internalized homophobia had inverse effects on multiple sexual partners ( $\beta$  = -0.121,  $p$  < 0.01) when the sexual self-efficacy dimension acted as a mediating variable. No significant direct effects of internalized homophobia were found on the multiplicity of sexual partners or sex under the influence of alcohol or drugs. Nor were indirect effects of assertive sexual behavior, such as assertive sexual communication or sexual self-esteem, observed as mediating variables.

## Discussion

Employing a mediation model, this study aimed to examine the link between internalized homophobia and SRB through sexual self-concept in MSM. The results suggest that internalized homophobia has only slight inverse effects on the absence or misuse of condoms (i.e., a higher level of internalized homophobia is linked to a decrease in inappropriate use of protective barriers). However, when sexual self-efficacy acts as a mediating variable, an effect on the multiplicity of sexual couples is presented, which gives partial support to the study hypothesis since we only observed mediation in one of the 12 contrasted combinations (i.e., 3 dimensions of SRB  $\times$  4 dimensions of self-concept).

Regarding the effects of internalized homophobia on the dimensions that make up sexual self-concept (i.e., sexual self-esteem, sexual self-efficacy, assertive sexual behavior, assertive sexual communication), inverse effects were observed on sexual self-efficacy, sexual self-esteem, and assertive sexual communication. The higher the levels of internalized homophobia, the lower the perceived ability to achieve effective sexual behaviors and responses, communicate sexual preferences and needs, and have a more negative appraisal of one's sexuality. This appraisal is consistent with available research, as previous studies have shown that those who are more prejudiced against their sexuality have negative self-concepts about their sexuality (Hossain and Ferreira, 2019).

However, in the case of internalized homophobia and SRB (i.e., SRB in particular: multiple sexual partners; inadequate use of the protective barriers; sexual relations under the influence of alcohol and drugs), inverse effects on the inadequate use

TABLE 1 Descriptive statistics for sample.

	Dimensions	M	SD	$\alpha$
Independent variable	Internalized homophobia	1.94	0.584	0.858
Mediating variables	Sexual self-esteem	3.01	0.632	0.813
	Sexual self-efficacy	3.22	0.573	0.878
	Assertive sexual behavior	3.20	0.694	0.831
	Assertive sexual communication	3.20	0.609	0.809
Dependent variables	Multiplicity of sexual partners	1.71	0.545	0.782
	Inadequate use of protective barriers	2.22	0.502	0.610
	Sex under the influence of alcohol and drugs	1.61	0.543	0.780

M, mean; SD, Standard deviation;  $\alpha$  = Cronbach's alpha coefficient.

TABLE 2 Correlation coefficients between measures.

Variable	1.	2.	3.	4.	5.	6.	7.
Internalized homophobia	—						
Sexual self-esteem	−0.266**						
Sexual self-efficacy	−0.363***	0.570***					
Assertive sexual behavior	−0.149	0.188*	0.246**				
Assertive sexual communication	−0.198*	0.354***	0.363***	0.456***			
Multiplicity of sexual partners	−0.144	0.039	0.252**	−0.078	0.018		
Inadequate use of protective barriers	−0.246**	0.020	0.057	−0.022	0.030	0.252**	
Sex under the influence of alcohol and drugs	0.045	0.135	0.104	−0.207*	−0.094	0.328***	0.242**

\*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$ ;  $\alpha$  = Cronbach's alpha coefficient.

Independent variable = internalized homophobia; mediating variables = sexual self-esteem; sexual self-efficacy; assertive sexual behavior and assertive sexual communication; dependent variables = multiplicity of sexual partners; Inadequate use of protective barriers; sex under the influence of alcohol and drugs.

of protective barriers are observed, which differs from what has been found in the literature, where it has been pointed out that higher levels of internalized homophobia would decrease control over one's sexual behavior, making it more impulsive and risky (Puckett et al., 2017). However, in the sample studied, there seems to be an opposite effect since when the levels of rejection of one's sexuality are higher, the proper use of condoms increases. A possible explanation for this finding could be that higher levels of internalized homophobia translate into higher levels of stigmatization and prejudice toward LGBT people, including beliefs such as that LGBT people are promiscuous and that homosexuality and transsexuality are directly related to HIV/AIDS (Barrientos et al., 2016).

In the mediational analysis, results shown that internalized homophobia has an indirect effect on SRB (i.e., multiple sexual partners) when it is mediated by sexual self-efficacy. This result is consistent with the findings of Shahar et al. (2020), who found no relationship between internalized homophobia and SRB in MSM, except when mediating variables such as self-efficacy and depression were considered. In this particular case, a possible explanation could be that people who have high levels of internalized homophobia tend to have a lower diversity of

sexual partners, but only when they have low perceived self-efficacy, whereas, in those who have higher levels of sexual self-efficacy, internalized homophobia has no impact on partner diversity.

Although these findings show a minor role of IH on SRB, these results show that the direct effects of IH may be underestimated by not including other variables that may have relevant mediational effects. Additionally, the small effect sizes may be underestimated, given that the sample presented low mean levels of HI and SRB. The high mean levels of sexual self-concept, accompanied by low dispersion, may underrepresent the effects observed at more extreme values. Despite this, we consider that, our findings add to the emerging field of research on the mechanisms that influence and mediate internalized homophobia in sexual minorities such as MSM (Li et al., 2021; Munn and James, 2022), we emphasize the need to incorporate other mediational aspects to the study and understanding of HI (e.g., social support, age, gender) aspects that are not very frequent but that could contribute to a better understanding.

Finally, it is necessary to point out the limitations of population representativeness, both because of the small sample size and the non-probabilistic approach, so it is



TABLE 3 Standardized and unstandardized estimates, of internalized homophobia on sexual risk behavior, mediated by sexual self-concept.

	Dependent variables models														
	Multiplicity of sexual couples			Inadequate use of protective barriers			Sex under the influence of alcohol and drugs								
	$\beta$ <i>std</i>	SE	C.I. 95%	$\beta$ <i>std</i>	SE	C.I. 95%	$\beta$ <i>std</i>	SE	C.I. 95%	Lower	Upper				
Internalized homophobia	Direct effect	-0.079	0.077	-0.235	0.069	0.069	-0.264**	0.082	0.082	-0.408	-0.07	0.084	0.122	-0.155	0.324
	Total	-0.144	0.083	-0.297	0.028	-0.358	-0.245**	0.075	0.075	-0.358	-0.063	0.045	0.083	-0.122	0.206
Sexual self-esteem	Indirect effect	0.038	0.033	-0.018	0.110	-0.048	0.011	0.029	0.029	-0.048	0.072	-0.040	0.032	-0.108	0.022
	Indirect effect	-0.121**	0.042	-0.210	-0.039	-0.059	0.003	0.034	0.034	-0.059	0.075	-0.047	0.033	0.015	0.015
Assertive sexual behavior	Indirect effect	0.020	0.019	-0.009	0.069	-0.018	0.009	0.017	0.017	-0.018	0.049	0.032	0.022	0.083	0.083
	Indirect effect	8.17e-4	0.022	0.036	0.054	-0.058	-0.004	0.022	0.022	-0.058	0.036	0.015	0.022	0.064	0.064

$\beta_{std}$ , Betas standardized; SE, Standard; C.I., confidence intervals. \*\*\* $p < 0.001$ , \*\* $p < 0.01$ , \* $p < 0.05$ .

suggested that this study be replicated in other samples to increase the generalizability of these findings. Replication and clarification of these findings could be valuable for developing STI and HIV/AIDS prevention campaigns focused on MSM, highlighting the importance of promoting the development of a healthy sexual self-concept and combating stigma toward the MSM population.

### Conclusion

These results support the idea that internalized homophobia is not a relevant risk factor by itself. However, when associated with other aspects such as self-concept and self-perceived efficacy, it becomes detrimental for MSM, as in some cases it could generate different risk behaviors, specifically those addressed in this study referring to risky sexual behaviors (i.e., multiple partners). These results demonstrate the need to expand the field of research.

### Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

### Ethics statement

The studies involving human participants were reviewed and approved by the Comité de ética científico de la Universidad de Tarapacá. The patients/participants provided their written informed consent to participate in this study.

### Author contributions

RF-U contributed to conceptualization, review, and editing of methodology and was the main academic and research mentor. GS-P contributed to formal analysis, data curation, and writing the original draft. FS-P wrote the original draft and participated in the preparation of the original research concept. RF-U, GS-P, and FS-P participated in the review of the research proposal, prior to submission. DA, PB, JC, MF, and BZ worked to process the samples. All authors contributed to the article and approved the submitted version.

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## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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## Supplementary material

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fpsyg.2022.1007749/full#supplementary-material>

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