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When Stigma Meets the Sheets: Sexual Satisfaction, LGB Identity, and Shame Proneness in LGB Individuals—A Quantitative Study

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Abstract

Introduction Sexual satisfaction is integral to overall well-being and quality of life. This study explores the relationship between sexual satisfaction, sexual minority stigma, and shame among LGB (lesbian, gay, bisexual) individuals in Germany.

Methods A sample of $n = 1373$ participants ($n = 760$ gay/bisexual men, $n = 91$ heterosexual men, $n = 128$ lesbian/bisexual women, $n = 145$ heterosexual women) was recruited through convenience and snowball sampling from December 2020 to June 2021. Participants completed a web-based survey measuring demographic variables, shame proneness, sexual satisfaction, and aspects of LGB identity using validated scales. Statistical analyses included t -tests, ANOVAs, Pearson's correlations, and multiple regression models to explore differences and relationships among the variables.

Results LGB individuals reported significantly lower sexual satisfaction compared to heterosexual counterparts, with gay/bisexual men showing the lowest levels. Higher shame proneness correlated with decreased sexual satisfaction in LGB individuals but not in heterosexual participants. While internalized homonegativity was inversely correlated with sexual satisfaction, identity affirmation was positively correlated. Regression models indicated that internalized homonegativity, shame proneness, and identity affirmation were significant predictors of sexual satisfaction in gay/bisexual men. For lesbian/bisexual women, only internalized homonegativity remained a significant predictor of sexual satisfaction.

Conclusion The study highlights the impact of sexual minority stigma and shame on sexual satisfaction among LGB individuals in Germany. Addressing internalized stigma and promoting affirmative attitudes are crucial for enhancing sexual well-being.

Implications These findings underscore the need for clinical practices and social policies that focus on reducing sexual minority stigma and fostering positive identity-related beliefs to improve the sexual health and overall well-being of LGB individuals.

Keywords Sexual satisfaction · Sexual minority stigma · Shame proneness · LGB identity · Internalized homonegativity · Identity affirmation · Minority stress model

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Sexual satisfaction can be defined as an emotional reaction to an individual's personal assessment of their sexual relationship (Lawrance & Byers, 1995) and encompasses various aspects of individual, relational, social, and cultural experiences (S  nchez-Fuentes et al., 2014). Sexual satisfaction and sexual health are closely related and the WHO states that "sexual health requires a positive [...] approach to sexuality [...], as well as the possibility of having pleasurable and safe sexual experiences, free of [...] discrimination." (World Health Organization [WHO], 2010, p. 10). Recognizing the importance of sexual satisfaction the WHO included sexual satisfaction in its "Quality of Life"-questionnaires (WHO,

2004). Numerous studies have shown that sexual satisfaction is a significant contributor to wellness, quality of life, and general life satisfaction across the lifespan (Cheng & Smyth, 2015; Davison et al., 2009; Flynn et al., 2016; Laumann et al., 2006; Schmiedeberg et al., 2017; Skafacka & Gerymski, 2019; Stephenson & Meston, 2015). Studies have also shown that sexual satisfaction is inversely linked with risky sexual behavior, which can negatively impact sexual health (Layh et al., 2020; Leivo et al., 2022). While most research investigating sexual satisfaction has focused on heterosexual experiences, the body of literature addressing LGB (lesbian, gay, bisexual) realities is expanding. Studies comparing the subjectively reported sexual satisfaction among LGB and heterosexual individuals are scarce and report inconclusive results. Some studies suggest greater sexual satisfaction among LGB individuals compared to heterosexual individuals (Gil, 2007; Henderson et al., 2009), others report lower levels of sexual satisfaction among LGB individuals (Björkenstam et al., 2020; Flynn et al., 2017; Grabovac et al., 2019), and some report no significant differences in sexual satisfaction (Buczak-Stec et al., 2023; Kuyper & Vanwesenbeeck, 2011).

This study aims to contribute to the existing literature by focusing on the underexplored relationships between sexual satisfaction, minority stress, and shame among LGB individuals. By providing data specific to a German-speaking population, it seeks to bridge the gap in research on cultural and regional differences and offer insights that can inform both clinical practices and public policies aimed at improving the well-being of sexual minority populations.

Minority Stress

To explain the differences in outcomes of health and well-being of sexual minorities, several models have been conceptualized and can be regarded as complementary to one another (Herek et al., 2007; Meyer, 2003). The “Minority Stress Model” (Meyer, 2003) proposes that LGB individuals find themselves in a socially, culturally, and politically adverse environment where they may be exposed to prejudice, discrimination, victimization, and violence. These structural factors are defined as “distal stressors” as they are external to the individual and arise from societal conditions rather than personal experiences or psychological processes.

Negative societal views, encountered regularly, may over time be absorbed, transforming into proximal stressors that are more internal to the self. As sexual minority individuals anticipate rejection or other enactments of stigma, they may develop vigilance in social interactions. This heightened awareness often leads to behavioral changes, such as the concealment of one’s identity out of fear of harm. Over time, this process may culminate in an internalization of societal

stigma, where the individual integrates these negative views into their own value system. This can manifest as prejudice against other sexual minorities but, more significantly, as negative self-views—referred to as “internalized homonegativity.” These circumstances create sustained psychological stress unique to minority individuals. Stress is a known risk factor for unfavorable health outcomes (Lopez-Otin et al., 2013).

While sexual minority men and sexual minority women may experience different manifestations of sexual minority stigma, several studies have shown that key components of this stigma—such as internalized homonegativity, concealment, having had a difficult coming out process, and acceptance concerns—are positively linked with shame (Allen & Oleson, 1999; Chow & Cheng, 2010; Mason & Lewis, 2016; Sherry, 2007). Conversely, affirmative attitudes, such as pride in one’s identity, are negatively associated with shame proneness and may serve as protective factors (Ünsal & Bozo, 2022).

Shame, Minority Stress, and Sexual Satisfaction

According to Irwin et al., (2019, p. 157), shame is defined as “a painful emotional experience of global, self-focused negative attributions based on [...] negative evaluations of others.” When an individual perceives that they have violated social or cultural norms, they may feel “small, worthless, incompetent, unworthy, and disgusted with oneself” (de Hooge et al., 2018, p. 1671). The tendency of a person to respond to a given situation with shame is termed “shame proneness” (Covert et al., 2003).

As sexual minorities face stigmatization from an early age due to societal heteronormativity, they may experience an excess of shame (Johnson & Yarhouse, 2013; Martins et al., 2007; Mereish et al., 2019, 2021). Pachankis et al. (2024) confirmed this, finding significantly higher levels of shame among sexual minority participants compared to their heterosexual counterparts. Despite the centrality of shame in frameworks addressing sexual minority stigma, studies employing heterosexual control groups remain limited.

Sexuality is an area where shame can be particularly significant (Gordon, 2017; Klontz et al., 2005; Pulverman & Meston, 2020; Shadbolt, 2009). Shame, as it pertains to sexuality, is a pervasive construct throughout the lifespan and across various cultures and communities (Litam & Speciale, 2021; Mollon, 2005; Ussher et al., 2017). The perpetuation of sexual shame is driven by societal norms, rigid moral standards, family attitudes, religious teachings, and inadequate sex education (Clark, 2017). Societal expectations often categorize certain sexual behaviors as undesirable, thereby inducing shame (Brown, 2006; Rendina et al., 2019). Research indicates that family dynamics and negative attitudes toward sex can instill early feelings of shame

(Leath et al., 2020). Additionally, religious teachings contribute to fostering shame by framing certain sexual acts and nonheterosexual intimacy as sinful (Marcinechová & Záhorcová, 2020; Pietkiewicz & Kołodziejczyk-Skrzypek, 2016). Media portrayals of unrealistic and conflicting sexual norms may also lead to feelings of inadequacy (Litam & Speciale, 2021; Magsig, 2008). When these misconceptions are not addressed due to inadequate or heteronormative sex education, sexual shame may develop, particularly in young sexual minority individuals (Hobaica & Kwon, 2017).

Previous research has shown that shame may lead to decreased sexual satisfaction across genders (Beck, 2015; Marcinechová & Záhorcová, 2020; Pulverman & Meston, 2020). However, these studies did not examine its impact on sexual minorities. Existing literature does indicate that in sexual minority men sexual shame is linked to behaviors such as sexual compulsivity (Rendina et al., 2019), risky sexual practices, condomless anal intercourse (Christensen et al., 2013; Park et al., 2014), and not testing for sexually transmitted infections (Pachankis et al., 2015a). Despite the documented consequences of sexual shame, there is a notable gap in the literature examining its specific impact on the sexual satisfaction of sexual minority individuals. This study seeks to address this gap and provide new insights into this understudied area.

Concerning experiences related to sexual minority stigma, some studies have shown that internalized homonegativity is linked with increased sexual dysfunction and decreased sexual satisfaction in sexual minority men and women (Henderson et al., 2009; Kuyper & Vanwesenbeeck, 2011; Li et al., 2019). Other studies have shown no significant relationship between stigma-related experiences and sexual satisfaction (Cohen & Byers, 2015; Šević et al., 2016). Identity affirmative attitudes, such as personal acceptance of one's sexual identity and pride, are positively correlated with sexual satisfaction in sexual minority individuals (Shepler et al., 2018) and may prove to be a starting point tangible to the individual for enhancing sexual satisfaction. Owing to the diverging outcomes of previous research, this study aims to explore the situation within a German-speaking sample and identify potential needs.

Aims

Given that approximately 7% of the German population, representing approximately 5.8 million individuals, identifies as part of the queer community (YouGov, 2021), the primary aim of this study is to explore the underexamined relationship between sexual satisfaction and certain psychosocial aspects, such as shame, sexual minority stigma, and affirmative attitudes, among LGB individuals in Germany. While previous studies have examined these variables individually within German or international contexts, no research

has comprehensively analyzed their interplay in a single study. By integrating these factors, this study examines the combined impact of sexual minority stigma, affirmative attitudes, and shame on sexual satisfaction, offering insights to guide culturally tailored interventions, policies, and clinical practices to enhance the well-being of sexual minorities in Germany and beyond.

The central hypothesis of this study is that certain psychosocial aspects are associated with sexual satisfaction in both gay/bisexual men and lesbian/bisexual women. In this study, psychosocial aspects refer to factors such as sexual minority stigma, shame proneness, and affirmative attitudes, which were explored in relation to sexual satisfaction. To test this hypothesis, the research was structured around the following subhypotheses: (1) LGB individuals experience significantly different levels of sexual satisfaction than heterosexual individuals do. (2) Shame proneness will differ significantly between LGB and heterosexual individuals. (3) Shame proneness is negatively correlated with sexual satisfaction in both LGB and heterosexual individuals. (4) Gay/bisexual men and lesbian/bisexual women report different levels of sexual minority stigma and affirmative attitudes. (5) Shame proneness is significantly correlated with sexual minority stigma and affirmative attitudes in both gay/bisexual men and lesbian/bisexual women. Specifically, dimensions of sexual minority stigma are expected to show a positive correlation with shame proneness, while affirmative attitudes are expected to show a negative correlation. (6) Sexual minority stigma and affirmative attitudes are significantly correlated with sexual satisfaction in both gay/bisexual men and lesbian/bisexual women. (7) Sexual minority stigma, shame proneness, and affirmative attitudes significantly predict sexual satisfaction in both gay/bisexual men and lesbian/bisexual women.

By addressing these hypotheses, this study aims to contribute to a better understanding of the factors influencing sexual satisfaction among LGB individuals and guide the development of more effective, minority-inclusive therapeutic practices.

Methods

Procedure

Data were collected between December 2020 and June 2021 via a web-based survey tool (LimeSurvey V3.2). Participants were recruited via convenience and snowball sampling, which utilized online advertisements, and calls for participation in mailing lists, newspaper articles, and podcasts. Given the researchers' particular interest in queer experiences, greater emphasis was placed on recruiting within queer institutions such as sports clubs, political

organizations, dating platforms, leisure groups, community centers, and health centers. Upon entering the study website, the participants were presented with a brief description of the survey's nature, an estimated completion time of 20 min, and an assurance of anonymity. Owing to a strict privacy protocol, no IP addresses or other personal data were recorded. Participation was voluntary, and no incentives were offered for completing the survey. The participants were permitted to withdraw from the study at any time. After providing their informed consent, the participants were queried about (1) demographic variables, (2) sexual and gender identity, (3) sexual history in the previous 12 months, (4) LGB identity (if applicable), (5) shame proneness, and (6) sexual satisfaction. A (7) seriousness check at the end of the questionnaire allowed respondents to exclude their submission from the study. To be included in the initial analysis, datasets needed to be (I) completed and (II) truthfully answered by participants (III) over 18 years of age who were (IV) sexually active within the last 12 months. To ensure data completeness, participants were required to answer all survey questions to proceed, resulting in full datasets for the primary variables. The LGBIS-DE questionnaire, however, was optional to respect participants' comfort regarding potentially sensitive aspects of their identity. Participants who chose not to answer some or all questions of the LGBIS-DE were excluded from analyses requiring this data but were included in all other analyses. This study was approved by the ethics committee of Ludwig-Maximilians-University Munich (28/09/2020 – KB 20/004), as well as by the data protection commissioner of LMU University Hospital Munich. It was conducted as part of a larger project examining queer sexualities (DRKS00022336).

Measures

The entire questionnaire was administered in German. The reported Cronbach's α refers to the internal validity within this dataset.

Sociodemographic Measures

The sociodemographic information obtained included the participants' age, current self-defined relationship status, highest level of education, employment status, and size of their town by number of inhabitants.

Sexual and Gender Identity

The participants were asked to select the gender identity that best described them from the following options: “female (cis),” “female (trans),” “male (cis),” “male (trans),” “intersex,” and “nonbinary,” and “not listed / diverse.” Definitions of “cis” and “trans” were given in the instructions.

The participants could select their sexual identity from the following options: “heterosexual,” “rather heterosexual,” “bisexual,” “rather gay/lesbian,” “gay/lesbian,” “queer,” and “not listed.”

Sexual History

The participants were asked if they had been sexually active within the last 12 months and to estimate the number of sexual partners during that period.

LGB Identity

The German version of the “Lesbian, Gay, and Bisexual Identity Scale” (LGBIS) (Niepel et al., 2019) is a 27-item self-report instrument used to assess eight aspects of LGB identity (subscale definitions in parentheses). The questionnaire is an adaptation of the English version of the “Lesbian, Gay, and Bisexual Identity Scale” (Mohr & Kendra, 2011). Subscales include “Acceptance Concern” (concern with being stigmatized as a LGB person; $\alpha=0.78$), “Concealment Motivation” (motivation to conceal one's LGB identity; $\alpha=0.80$), “Identity Uncertainty” (uncertainty about one's sexual identity; $\alpha=0.79$), “Internalized Homonegativity” (rejection of one's LGB identity; $\alpha=0.87$), “Difficult Process” (experiencing one's LGB identity development process as difficult; $\alpha=0.83$), “Identity Affirmation” (affirmation of one's LGB identity; $\alpha=0.80$), and “Identity Centrality” (centrality of one's LGB identity to overall identity; $\alpha=0.83$). Using adaptive questioning, the LGBIS was presented only to participants who identified themselves as “gay/lesbian,” “rather gay/lesbian,” or “bisexual”. The participants had the option to skip the LGBIS if they found that the wording (“schwul/lesbisch” = “gay/lesbian”) was incompatible with their sexual identity. Statements such as “I think a lot about how my sexual orientation affects the way people see me.” were rated for approval on a 6-point Likert scale ranging from “1 = Disagree strongly” to “6 = Agree strongly.” The items were averaged for each subscale, with higher scores indicating greater expression of the measured dimension. Lacking sufficient internal consistency, the subscale “Identity Superiority” ($\alpha=0.69$) was excluded from further analyses.

Shame Proneness

To measure shame proneness, we used the German version of the SHAME (Scheel et al., 2013), a tool comprising 21 items to address three dimensions of shame (cognitive, bodily, and existential). The participants were asked to rate how ashamed they would feel in hypothetical scenarios such as “I address someone, who I really should know, with the wrong name.” (Scheel et al., 2020). The rating took place

on a 5-point Likert scale ranging from “0 = not at all” to “4 = extremely.” The items were averaged to give a final score for shame proneness, with higher scores indicating greater shame proneness. The internal consistency was good with Cronbach’s alpha for shame proneness $\alpha = 0.84$.

Sexual Satisfaction

The “Multidimensionale Fragebogen zur Sexualität” (MFS) (Brenk-Franz & Strauß, 2011) is the German adaptation of the “Multidimensional Sexuality Questionnaire” (MSQ) (Snell et al., 1993). The MFS is a self-rating tool that assesses twelve independent sexual self-concepts, one of which is sexual satisfaction. The participants were asked to rate statements of the subscale “Sexual-Satisfaction” (5 items; $\alpha = 0.90$) such as “I am very satisfied with the sexual aspects of my life.” on a 5-point Likert scale ranging from “1 = Not at all characteristic of me” to “5 = Very characteristic of me”. The items were averaged across the subscale, with higher scores corresponding to greater sexual satisfaction.

Seriousness Check

On the last page of the survey, the participants were asked to indicate how truthfully they answered the survey (“How truthfully did you fill out the questionnaire?”) on a 5-point Likert scale ranging from “1 = Truthfully” to “5 = Not truthfully”. This allowed respondents to exclude their submission from the study, thus increasing data quality (Aust et al., 2013). Only participants who indicated that they answered “Truthfully” or “Rather truthfully” were considered for the analyses.

Analytic Plan

Statistical analyses were conducted via SPSS version 29. Only respondents meeting all the inclusion criteria (stated in the procedure section) were considered for the analyses. The respondents were grouped into four groups based on their sexual and gender identity, resulting in the following groups: “GBM” (men identifying as “gay,” “rather gay,” and “bisexual”), “HM” (men identifying as “heterosexual”), “LBW” (women identifying as “lesbian,” “rather lesbian,” and “bisexual”), and “HW” (women identifying as “heterosexual”). Participants who could not be grouped were excluded from further analyses. Frequencies were analyzed for gender identity, sexual identity, age, level of education, employment status, town size, relationship status, and the number of sexual partners in the last 12 months. For psychometric measurement instruments to be included, Cronbach’s internal reliability needed to exceed $\alpha \geq 0.7$.

We conducted one-way analyses of variance (ANOVAs) for “Sexual-Satisfaction” and “SHAME” to assess for differences in shame proneness and sexual satisfaction among the four groups. Significant results were subjected to Tukey’s HSD test for multiple comparisons. Only differences between groups of the same gender (GBM-HM; LBW-HW) and the same sexual minority status (GBM-LBW; HM-HW) will be reported. *t*-tests were applied for group comparisons between GBM and LBW on each subscale of the LGBIS. To account for multiple comparisons, Bonferroni correction was applied, ensuring a more stringent significance threshold. The effect size of the differences between groups was measured via Cohen’s *d*. Correlations were calculated via Pearson’s *r*. Finally, multiple linear regression models (method = stepwise) were constructed to examine the predictive value of shame proneness and aspects of LGB identity for sexual satisfaction in GBM and LBW. All variables of the LGBIS-DE and SHAME were eligible to be entered into the model. All data presented in this study will be made available upon reasonable request.

Results

Participants

A total of $n = 2856$ responses could be amassed, with $n = 1373$ datasets meeting our inclusion criteria. Of these, $n = 1124$ could be classified into one of the following sexual behavior groups: “GBM” ($n = 760$), “HM” ($n = 91$), “LBW” ($n = 128$), or “HW” ($n = 145$). Some responses could not be grouped by sexual identity [“rather heterosexual” ($n = 130$), “queer” ($n = 76$), “not listed/diverse” ($n = 12$)] or gender identity [“nonbinary” ($n = 24$), “intersex” ($n = 1$), “not listed/diverse” ($n = 6$)]. A detailed summary of the participants’ gender identity, age, level of education, employment status, town size, sexual identity, relationship status, and the number of sexual partners can be found in Table 1.

Sexual Satisfaction and Shame Proneness

The distribution of the mean scores for sexual satisfaction among the four sexual identity status groups are displayed in Fig. 1. In line with our first subhypothesis, ANOVA revealed significant differences between the groups; $F(3, 1120) = 17.57, p < 0.001$. Tukey’s HSD test for multiple comparisons revealed significantly lower mean values of sexual satisfaction in GBM ($M = 2.35, SD = 1.01$) than in HM ($M = 2.71, SD = 0.95$). The effect size, measured by Cohen’s *d*, was $d = 0.36$, indicating a small effect. LBW ($M = 2.62, SD = 1.1$) reported significantly lower values of sexual satisfaction than HW ($M = 2.95, SD = 0.87$). The effect size was $d = 0.33$, indicating a small effect. GBM also

Table 1 Sociodemographics of respondents by sexual identity status

	GBM		HM		LBW		HW	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Total	760		91		128		145	
Gender								
Male (cis)	747	98.3	90	98.9				
Male (trans)	13	1.7	1	1.1				
Female (cis)					117	91.4	142	97.9
Female (trans)					11	8.6	3	2.1
Sexuality								
Gay/Lesbian	579	76.2			55	43.0		
Rather Gay/Lesbian	95	12.5			18	14.1		
Bisexual	86	11.3			55	43.0		
Heterosexual			91	100.0			145	100.0
Age								
18–19	16	2.1	4	4.4	5	3.9	6	4.1
20–24	75	9.9	11	12.1	29	22.7	22	15.2
25–29	90	11.8	20	22.0	21	16.4	34	23.4
30–39	240	31.6	20	22.0	44	34.4	37	25.5
40–49	188	24.7	12	13.2	18	14.1	19	13.1
50–59	124	16.3	18	19.8	9	7.0	22	15.2
60–69	23	3.0	5	5.5	2	1.6	5	3.4
70 and older	4	0.5	1	1.1				
Education								
Secondary school								
None	3	0.4						
Lower	24	3.2			1	0.8		
Intermediate	65	8.6	3	3.3	2	1.6	5	3.4
Upper	213	28.0	33	36.3	39	30.5	39	26.9
Apprenticeship	110	14.5	6	6.6	12	9.4	18	12.4
University								
Bachelor	83	10.9	11	12.1	23	18.0	16	11.0
Master	221	29.1	25	27.5	42	32.8	54	37.2
Doctorate / PhD	41	5.4	13	14.3	9	7.0	13	9.0
Employment								
Full-time	471	62.0	53	58.2	43	33.6	63	43.4
Part-time	72	9.5	6	6.6	29	22.7	30	20.7
Self-employed	73	9.6	7	7.7	15	11.7	9	6.2
Student	85	11.2	24	26.4	34	26.6	38	26.2
Retired (regular)	11	1.4	1	1.1	2	1.6	1	0.7
Retired (early)	24	3.2			2	1.6	2	1.4
Not employed	24	3.2			3	2.3	2	1.4
Residency								
Rural (< 10 k)	107	14.1	8	8.8	14	10.9	18	12.4
Small city (10 k–100 k)	162	21.3	20	22.0	18	14.1	36	24.8
Mid-sized city (100 k–500 k)	163	21.4	26	28.6	40	31.3	33	22.8
Big city (500 k–1 m)	105	13.8	11	12.1	23	18.0	15	10.3
Metropolis (> 1 m)	223	29.3	26	28.6	33	25.8	43	29.7
Relationship								
Yes	437	57.5	78	85.7	103	80.5	117	80.7
No	323	42.5	13	14.3	25	19.5	28	19.3

Table 1 (continued)

	GBM		HM		LBW		HW	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Sexual partners a								
1	145	19.1	75	82.4	88	68.8	121	83.4
2–5	281	37.0	10	11.0	36	28.1	20	13.8
6–11	152	20.0	3	3.3	2	1.6	3	2.1
12–30	107	14.1	3	3.3	1	0.8	1	0.7
31–50	37	4.9			1	0.8		
51–100	26	3.4						
101 and more	12	1.6						

Total *n* = 1124. Groups based on sexual identity status. *GBM*, gay/bisexual men; *HM*, heterosexual men; *LBW*, lesbian, lesbian/bisexual women; *HW*, heterosexual women. *k*, thousand; *m*, million
 a Number of sexual partners in last 12 months

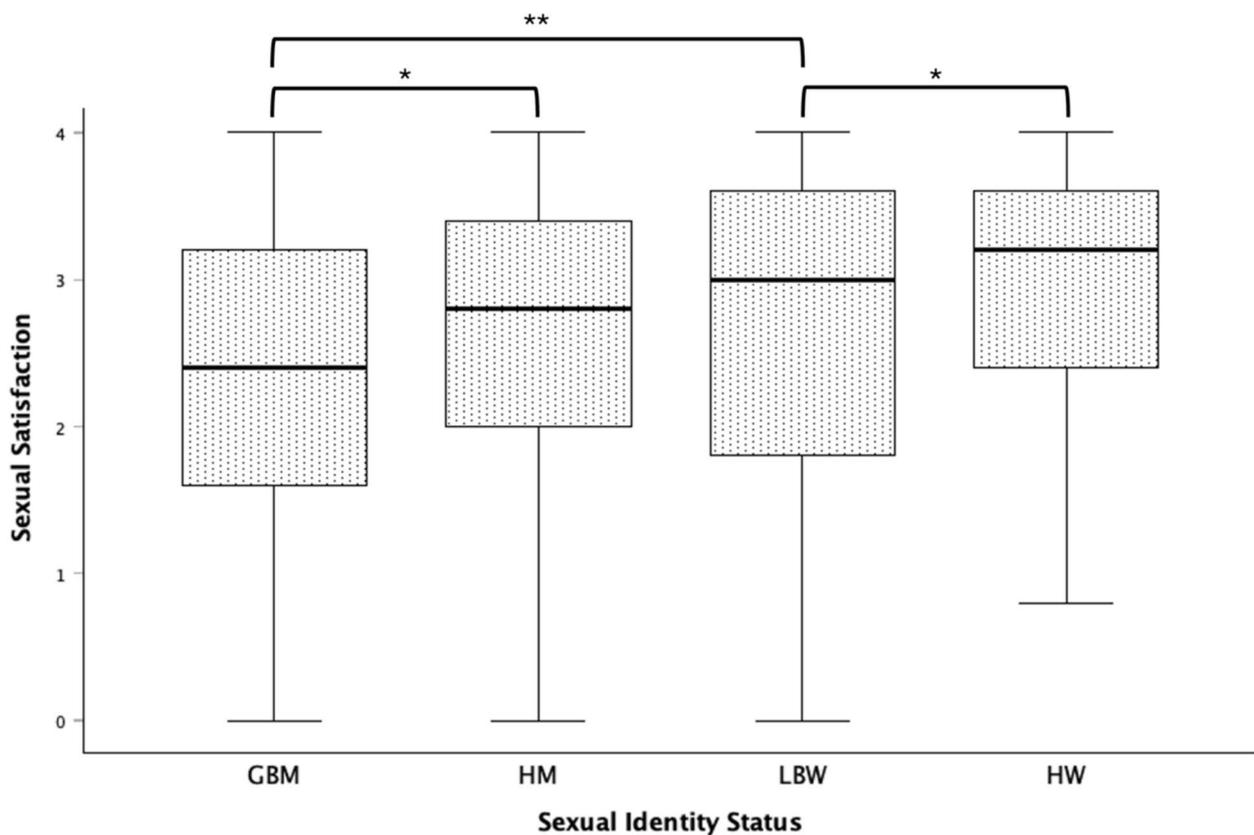


Fig. 1 Sexual satisfaction by sexual identity status. Note: Total *n* = 1124. Sexual satisfaction (MFS) mean values. Groups are based on sexual identity status. GBM, gay/bisexual men (*n* = 760); HM, heterosexual men (*n* = 91); LBW, lesbian/bisexual women (*n* = 128);

HW, heterosexual women (*n* = 145). The brackets indicate the significance level of the mean group differences. **p* < .05, ***p* < .01, ****p* < .001

presented significantly lower mean values of sexual satisfaction than LBW. The effect size was *d* = 0.25, indicating a small effect. HM and HW did not differ significantly in terms of the mean values of sexual satisfaction (*d* = 0.26).

For shame proneness, ANOVA revealed significant differences between the groups; *F*(3, 1120) = 14.5,

p < 0.001. Contrary to our second subhypothesis, Tukey’s HSD test for multiple comparisons revealed no significant difference in shame proneness between GBM (*M* = 1.72, *SD* = 0.59) and HM (*M* = 1.74, *SD* = 0.59). The effect size, measured by Cohen’s *d*, was *d* = 0.03, indicating a very small effect. Similarly, no significant

difference in shame proneness was observed between LBW ($M = 2.01$, $SD = 0.55$) and HW ($M = 1.98$, $SD = 0.55$). The effect size was $d = 0.09$. However, the analysis revealed significantly greater mean values of shame proneness in LBW than in GBM, with an effect size of $d = 0.49$, indicating a small to medium effect. Similarly, HW reported significantly higher mean values of shame proneness than HM, with an effect size of $d = 0.42$, indicating a small to medium effect.

Correlations between sexual satisfaction and shame proneness were computed using Pearson's r . In support of our third subhypothesis, GBM showed a significant negative correlation between sexual satisfaction and shame proneness; $r(758) = -0.34$, $p < 0.001$. These findings indicate that increasing levels of shame proneness correlate with decreasing levels of sexual satisfaction. Analysis also revealed a significant negative correlation between sexual satisfaction and shame proneness in LBW; $r(126) = -0.16$, $p = 0.034$. However, no significant correlation between sexual satisfaction and shame proneness was found for HM ($r(89) = 0.02$, $p = 0.437$) or HW ($r(143) = 0.02$, $p = 0.415$). A visual representation of these relationships can be found in the Supplement 1.

LGB Identity and Shame Proneness

The distribution of the mean scores for the subscales of the LGBIS among GBM and LBW are provided in Fig. 2. Partial support for our fourth subhypothesis was found, as aspects of LGB identity were compared between GBM and LBW. A Bonferroni correction was applied to adjust for multiple comparisons. After adjustment, the corrected p -value threshold was set at $p < 0.007$ ($p = 0.05/7$). t -tests indicated significantly greater concealment motivation in GBM ($M = 2.32$, $SD = 1.38$) than in LBW ($M = 1.63$, $SD = 1.04$); $t(135.3) = 5.8$, $p < 0.001$. The effect size, measured by Cohen's d , was $d = 0.51$, indicating a medium effect. Identity uncertainty was significantly higher in LBW ($M = 0.96$, $SD = 1.10$) than in GBM ($M = 0.61$, $SD = 0.93$); $t(108.9) = -2.9$, $p = 0.004$, with an effect size of $d = 0.37$, indicating a small effect. Nonsignificant results were found when GBM and LBW were compared for acceptance concerns (GBM $M = 2.08$, LBW $M = 2.45$, $p = 0.012$, $d = 0.28$), identity affirmation (GBM $M = 3.19$, LBW $M = 3.53$, $p = 0.011$, $d = 0.28$), internalized homonegativity (GBM $M = 0.73$, LBW $M = 0.60$, $p = 0.20$, $d = 0.13$), identity centrality (GBM $M = 2.84$,

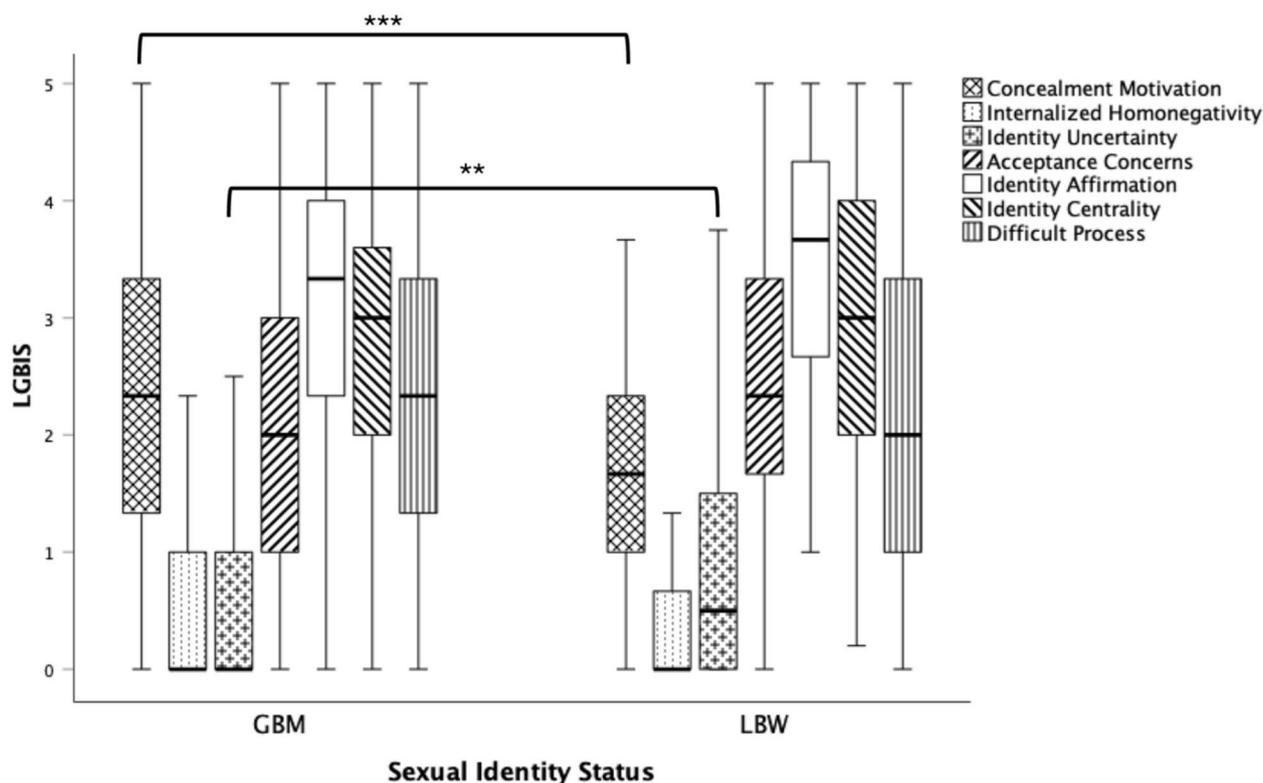


Fig. 2 LGB Identity Scale by sexual identity status. Note: Total $n = 1124$. Mean values of the LGBIS subscales (Lesbian, Gay, Bisexual Identity Scale). Groups are based on sexual identity status. GBM, gay/bisexual men ($n = 751$), LBW, lesbian/bisexual women ($n = 93$).

The brackets indicate the significance level of the mean group differences. Only the mean group differences that remained significant after Bonferroni correction are displayed. * $p < .05$, ** $p < .01$, *** $p < .001$

LBW $M = 2.86$, $p = 0.87$, $d = 0.02$), and difficult process coming out (GBM $M = 2.36$, LBW $M = 2.16$, $p = 0.21$, $d = 0.14$).

Our fifth subhypothesis was partially confirmed through a Pearson correlation analysis conducted to examine the relationship between aspects of LGB identity and shame proneness. The findings are detailed in Table 2. After adjusting for multiple testing with a Bonferroni correction, the corrected p -value threshold was set at $p < 0.007$ ($p = 0.05/7$). For GBM, the correlations between shame proneness and internalized homonegativity ($p < 0.001$), identity uncertainty ($p < 0.001$), acceptance concern ($p < 0.001$), identity affirmation ($p < 0.001$), and difficult process ($p < 0.001$) remained significant at the corrected significance level. This means that having more internalized homonegativity, being less sure about one's sexual identity, being more concerned with being stigmatized for one's sexual minority identity, and describing one's process of sexual minority identity formation as more difficult correlates with increased levels of shame proneness in GBM. Viewing one's sexual minority identity as a positive attribute correlates with decreased levels of shame proneness in GBM. For LBW the correlation between shame proneness and having experienced one's coming out process as difficult ($p = 0.004$) remained significant at the corrected significance level, with a more difficult process correlating with higher levels of shame proneness.

Sexual Satisfaction, LGB Identity, and Shame

Partial support for our sixth subhypothesis was found in a Pearson correlation analysis examining the relationship between aspects of LGB identity and sexual satisfaction. For a detailed overview, please refer to Table 3. Following the application of a Bonferroni correction for multiple testing, the revised significance level was established at $p < 0.007$ ($0.05/7$). After Bonferroni correction, the correlation between sexual satisfaction and all aspects of LGB identity in GBM remained significant, with all correlations showing a significance level of $p < 0.001$, except for identity centrality ($p = 0.005$). In LBW, only the correlations between sexual satisfaction and internalized homonegativity ($p = 0.001$) and identity affirmation ($p = 0.007$) remained significant at the adjusted significance level. A visual representation of these relationships can be found in the Supplement 2.

Consistent with our seventh subhypothesis, multiple regression analyses were performed to evaluate a model combining sexual minority stigma, shame proneness, and affirmative attitudes in predicting sexual satisfaction among GBM and LBW (method = stepwise). For GBM, the model constructed was highly significant and explained 22.6% of the variance; $F(3, 747) = 74.17$; $p < 0.001$. Internalized homonegativity ($\beta = -0.206$, $p < 0.001$), shame proneness ($\beta = -0.269$, $p < 0.001$), and identity affirmation ($\beta = 0.176$, $p < 0.001$) were significant predictors of sexual satisfaction

Table 2 Correlations between LGBIS and SHAME

	Concealment motivation	Internalized homonegativity	Identity uncertainty	Acceptance concerns	Identity affirmation	Identity centrality	Difficult process
Shame proneness							
GBM a	.093*	.229***	.143***	.361***	-.167***	-.021	.310***
LBW b	.111	-.017	.036	.242*	-.106	-.045	.293**

Values displayed are Pearson's r . *LGBIS* Lesbian, Gay, Bisexual Identity Scale; *SHAME* Shame Proneness. *GBM*, gay/bisexual men; *LBW* lesbian/bisexual women

a $n = 751$; b $n = 93$

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 3 Correlations between LGBIS and MFS

	Concealment motivation	Internalized homonegativity	Identity uncertainty	Acceptance concerns	Identity affirmation	Identity centrality	Difficult process
Sexual satisfaction							
GBM a	-.135***	-.371***	-.168***	-.238***	.341***	.102**	-.194***
LBW b	-.214*	-.329**	-.067	-.001	.280**	-.017	-.144

Values displayed are Pearson's r . *LGBIS* Lesbian, Gay, Bisexual Identity Scale; *MFS* Multidimensionale Fragebogen zur Sexualität. *GBM*, gay/bisexual men; *LBW*, lesbian/bisexual women

a $n = 751$; b $n = 93$

* $p < .05$; ** $p < .01$; *** $p < .001$

in GBM. In our model, higher levels of internalized homonegativity and shame proneness predicted decreased sexual satisfaction, and stronger identity affirmation predicted increased sexual satisfaction in GBM. The model constructed for LBW was also significant, explaining 9.8% of the variance ($F = (1, 91) = 11.04; p = 0.001$). In constructing the multiple regression model stepwise, only internalized homonegativity ($\beta = -0.329, p = 0.001$) remained as a significant predictor of sexual satisfaction in LBW. In this model, increased internalized homonegativity predicted decreased sexual satisfaction, whereas other aspects of LGB identity and shame proneness did not significantly influence the sexual satisfaction of LBW. Tables displaying the full hierarchical regression models for GBM and LBW can be found in Supplement 3 and Supplement 4.

Discussion

This study explored the relationship between psychosocial aspects, such as sexual satisfaction, shame, sexual minority stigma, and affirmative attitudes among LGB individuals in Germany. Given the scarcity of comparative research on sexual satisfaction between LGB and heterosexual individuals, our initial objective was to evaluate these experiences within a German-speaking sample.

In line with our first subhypothesis, which posits that LGB individuals experience significantly different levels of sexual satisfaction compared to heterosexual individuals, our results indicate that, although the effect sizes were small, LGB individuals report significantly lower sexual satisfaction than their heterosexual counterparts, with gay/bisexual men reporting the lowest levels of sexual satisfaction in our sample. Our findings are consistent with previous research indicating that LGB individuals often report lower levels of sexual satisfaction compared to their heterosexual counterparts (Björkenstam et al., 2020; Flynn et al., 2017; Grabovac et al., 2019; Henderson et al., 2009). However, it is important to note that not all studies have observed this disparity. For instance, some research has found no significant differences in sexual satisfaction between LGB and heterosexual individuals (Buczak-Stec et al., 2023; Frederick et al., 2021; Peixoto, 2022). This study adds to a growing yet inconclusive body of literature. Particularly noteworthy is a study assessing the sexual satisfaction of LGB and heterosexual individuals across different sexual contexts (Mark et al., 2015). The results suggest that sexual satisfaction is highest among individuals in committed sexual relationships and lowest among those in more casual sexual contexts, this association is present regardless of sexual orientation. While sexual contexts were not the focus of this study, it can nevertheless provide explanatory approaches for the observed differences in sexual satisfaction among

the gay/bisexual men in our dataset, given that they reported being in a committed relationship the least when compared with the other demographic cohorts. With Vale and Bisconti (2024) emphasizing the critical role of sexual satisfaction in the psychological well-being of sexual minorities, future research should prioritize diverse and representative samples to validate and extend these findings. Such efforts would deepen our understanding of queer sexualities and inform public health interventions and policies to reduce disparities in sexual satisfaction and promote LGB well-being.

Considering the role of shame in how a person may experience their sexuality (Clark, 2017; Shadbolt, 2009) this study aimed to explore this association in a German-speaking sample. Contrary to our second subhypothesis that LGB individuals would display higher shame proneness, the participants in our study reported no significant difference in shame proneness based on their sexual orientation. This finding is notable, as a meta-analysis by Katz-Wise and Hyde (2012) documented higher incidences of victimization among LGB individuals compared to heterosexuals, and victimization has been shown to contribute to shame (Mereish et al., 2019). Confirming this logic, a recent study by Pachankis et al. (2024) found that sexual minority participants reported higher levels of shame compared to their heterosexual counterparts. One possible explanation for this discrepancy, albeit speculative, could be our recruitment process, which involved queer institutions. This approach may have introduced a selection bias favoring LGB individuals who are well-integrated into the queer community, potentially excluding less integrated or more marginalized members of the LGB community who might experience higher levels of shame proneness. The only significant differences in shame proneness were found between subjects of different genders, with women displaying greater amounts of shame proneness than men. A large meta-analysis showed that this gendered difference in self-conscious emotions seems to be reported by many studies, especially within the domains of physical appearance, nutritional habits, and sexual behavior (Else-Quest et al., 2012). The authors partially attribute this to socialization processes, where societal norms overemphasize the importance of physical attractiveness for women while upholding a sexual double standard that promotes sexual freedom in men but expects sexual modesty in women.

Existing literature suggests that shame plays a significant role in shaping sexual satisfaction (Calogero & Thompson, 2009; Davis et al., 2017; Mercer, 2018); however, few studies have quantitatively examined its effects within sexual minority populations. To address this gap, our third subhypothesis proposed that shame proneness would be negatively correlated with sexual satisfaction in both LGB and heterosexual individuals. This hypothesis was partially confirmed by our findings, as shame proneness was negatively correlated with sexual satisfaction among LGB individuals, with

a moderate effect size observed in gay/bisexual men and a small effect size in lesbian/bisexual women. A study by Rolt (2021) reported comparable effect sizes for the relationship between shame and sexual satisfaction in a sample of men who have sex with men (MSM) engaging in sexualized substance abuse. To our knowledge, no quantitative study has specifically examined this association in lesbian/bisexual women. Surprisingly, this correlation was not present among the heterosexual participants of this study. This unexpected finding should be investigated in future research projects as international studies do show a link between shame and sexual satisfaction in heterosexual individuals (Gordon, 2017; Marcinechová & Záhorková, 2020).

Given the documented connection between shame and sexual minority stigma (Mereish & Poteat, 2015), we first examined this relationship before exploring its combined impact on sexual satisfaction. Our analyses revealed significant correlations for shame proneness and sexual minority stigma/affirmative attitudes in both gay/bisexual men and lesbian/bisexual women, partially supporting our fifth subhypothesis. More specifically, stigma-related experiences such as perceiving one's sexual minority identity development process as difficult showed a small to moderate positive correlation with shame proneness in both gay/bisexual men and lesbian/bisexual women. This aligns with research indicating that heterosexist stigmatization, particularly during sexual minority identity formation, may have long-term consequences (Flowers & Buston, 2001; Floyd & Stein, 2002; Ryan et al., 2009). Conversely, studies suggest that social support during this period can promote greater self-acceptance and improve health outcomes among LGB adolescents, contributing to better well-being in adulthood (Ryan et al., 2010). Additionally, greater concern over being stigmatized as an LGB individual correlated positively with shame proneness in both gay/bisexual men and lesbian/bisexual women; however, this moderate correlation remained significant only in gay/bisexual men after Bonferroni correction. Conversely, more affirmative attitudes towards one's LGB identity were associated with lower levels of shame proneness, although this moderate association was significant only among gay/bisexual men. We believe that the lack of significance in some dimensions for lesbian/bisexual women in our sample may be partially attributable to this cohort being underpowered, as effect sizes for acceptance concerns, identity affirmation, and concealment motivation were comparable to those observed in gay/bisexual men. This interpretation is supported by international literature, which demonstrates that associations between shame and stigma-related experiences—such as distal stressors, acceptance concerns, concealment motivation, and internalized homonegativity—are significant for both sexual minority men and women (Frost et al., 2015; Liu et al., 2023; Mason & Lewis, 2016; Seabra et al., 2024). Research further suggests that the

association between positive attitudes towards one's LGB identity and reduced self-conscious emotions is evident in both gay/bisexual men and lesbian/bisexual women (Chow & Cheng, 2010; Petrocchi et al., 2020; Ünsal & Bozo, 2022). Moreover, fostering positive attitudes towards one's sexuality has been shown to enhance overall well-being and health among sexual minorities (Ghavami et al., 2011; Rostovsky et al., 2018; Skinta, 2014). Although cross-sectional, our data indicate that promoting affirmative attitudes toward one's sexual minority identity may help mitigate these effects. A multi-level intervention incorporating intrapersonal, interpersonal, and structural approaches, as proposed by Cook et al. (2014), may be effective in supporting sexual minorities. While intrapersonal interventions, such as LGB-affirmative therapy, have been effective in mitigating these effects (Burger & Pachankis, 2024; Pachankis et al., 2015b; 2020), structural changes, including anti-discrimination policies, remain essential in reducing stigma against sexual minorities, as highlighted in a systematic review (Hebl et al., 2016).

Shame is a complex emotion and despite their reported association, shame proneness and sexual minority stigma are not the same entity (Brown, 2006; Goffnett et al., 2022). This study examined specific experiences related to sexual minority stigma. Generally speaking, stigmatizing aspects (e.g., internalized homonegativity, concealment motivation, difficult process) were associated with lower levels of sexual satisfaction in both gay/bisexual men and lesbian/bisexual women. This aligns with our sixth subhypothesis, which proposed that sexual minority stigma and affirmative attitudes are significantly correlated with sexual satisfaction in both groups. Notably, the relationship between internalized homonegativity and sexual satisfaction was significant and had a moderate effect size in both groups. This finding is not only in line with the framework of minority stress theory, which identifies internalized sexual stigma as the most proximal stressor and a critical factor in the experiences of sexual minorities (Meyer, 2003) but has also been reported by many other studies (Henderson et al., 2009; Kuyper & Vanwesenbeeck, 2011; Shepler et al., 2018) including a large meta-analytic review (Croteau & Morrison, 2024). However, other aspects of sexual minority stigma were not significant among the lesbian/bisexual women in this study. This may be attributable to the smaller sample size and the conservative nature of the Bonferroni correction, as previous research has demonstrated that these factors influence both gay/bisexual men and lesbian/bisexual women. For instance, Kuyper and Vanwesenbeeck (2011) found that negative social reactions to one's sexuality were associated with reduced sexual satisfaction among lesbian/bisexual women, while Vale and Bisconti (2021) identified a significant inverse correlation between concealment motivation and sexual satisfaction in a pooled lesbian, gay, and bisexual sample. A study by

Blondeel et al. (2024) found that men who have sex with men report higher sexual satisfaction when they perceive their environment as less hostile towards sexual minorities, highlighting the role of societal acceptance in mitigating negative psychological and sexual health outcomes. Furthermore, gay/bisexual men and lesbian/bisexual women showed a significant positive correlation between identity affirming attitudes and sexual satisfaction. Previous studies have shown that LGB individuals who indicate more positive feelings toward their sexual identity report significantly greater well-being and satisfaction in sexual relationships (Riggle et al., 2014; Rostosky et al., 2018; Shepler et al., 2018). These findings underscore the potential identity affirming attitudes such as pride may hold for enhancing sexual satisfaction in LGB individuals. While therapeutic interventions addressing the unique challenges and resources encountered by LGB individuals are already available in other domains (Broadway-Horner & Kar, 2022; Layland et al., 2020), sex therapists and counselors working with LGB individuals should also consider integrating strategies to reduce internalized stigma and promote affirmative attitudes.

As reported in the literature and underlined by the findings of this study, sexual minority stigma, shame proneness, and affirmative attitudes each have individual associations with sexual satisfaction. The final aim of this project was to investigate whether the combination of the stated factors provides an effective model for predicting sexual satisfaction among LGB individuals. These findings provide partial support for our seventh subhypothesis, which proposed that sexual minority stigma, shame proneness, and affirmative attitudes significantly predict sexual satisfaction in both gay/bisexual men and lesbian/bisexual women. The resulting models were highly significant, predicting 22.6% of sexual satisfaction in gay/bisexual men and 9.8% in lesbian/bisexual women. Both models include a stigmatizing aspect (internalized homophobia) that decreases sexual satisfaction. The model for gay/bisexual men also included shame proneness, decreasing sexual satisfaction, and identity-affirming attitudes, enhancing it. For the gay/bisexual men in this sample, the model highlights that while they share similarities, internalized homonegativity and shame should be addressed independently. It also demonstrated that sexual satisfaction may be improved not only by reducing stressors but also by fostering affirmative attitudes specific to the experiences of gay/bisexual men. Although the model for lesbian/bisexual women includes only internalized homonegativity as an inverse predictor of sexual satisfaction, we are confident that the same nuanced pattern would emerge in a larger and more representative sample of lesbian/bisexual women, which must be studied in future projects.

The findings from this study suggest that sexual minority stigma continues to significantly impact the lives of German-speaking sexual minority individuals. Given its negative

associations with sexual satisfaction, it is essential for practitioners to assess and address internalized stigma and shame in sexual minority clients. Adapting techniques from LGB-affirmative therapy protocols (American Psychiatric Association, 2021; Burton et al., 2019; Proujansky & Pachankis, 2014), such as psychoeducation, including education on the psychological and relational impact of minority stress, along with cognitive restructuring and development of adaptive coping strategies, may help mitigate the negative effect of stigma on sexual satisfaction. Additionally, fostering social support, cultivating hope, and incorporating self-affirmation practices may enhance resilience, while assertive communication training can empower individuals to navigate their sexual and relational experiences with greater confidence and well-being (Keleher et al., 2010; Kwon, 2013; Kwon & Hugelshofer, 2010). For these interventions to be effective, therapists must be trained in creating a safe, affirming environment by actively eliminating bias and discrimination, ensuring that clients feel supported in exploring their identities and experiences (Broadway-Horner & Kar, 2022; Godfrey et al., 2006). These adapted therapeutic strategies need to be further developed and tested in clinical trials to ensure that evidence-based approaches are available in sex therapy to effectively address the unique challenges faced by sexual minority individuals. Building on the principles of multi-level intervention (Cook et al., 2014), equipping sexual minorities with adaptive stigma coping skills through individual-level therapy can empower them to advocate more effectively against structural stigma (Burton et al., 2019). Advocating for and enforcing inclusive legislation, along with establishing supportive educational environments, has been shown to reduce discrimination against sexual minorities (Hebl et al., 2016; Hobaica & Kwon, 2017). By decreasing the prevalence and impact of minority stressors, these structural interventions may enhance overall well-being (Chadoir et al., 2017) and, in turn, improve sexual satisfaction among LGB individuals (Blondeel et al., 2024).

In support of the main hypothesis, our findings show that sexual satisfaction among LGB individuals is significantly associated with some psychosocial aspects measured in this study. Particularly, internalized homonegativity and shame were significantly negatively associated with sexual satisfaction, whereas affirmative attitudes towards one's sexuality were positively associated. Although the effect size was small, LGB individuals in our sample reported significantly lower sexual satisfaction than their heterosexual counterparts. While these psychosocial aspects represent key influencing factors, we must acknowledge that our data suggest that other factors influence sexual satisfaction in LGB individuals as well. Sanchez et al. (2014) summarized in their review, that sexual satisfaction is influenced by variables from four groups – the microsystem, mesosystem, exosystem, and macrosystem. Starting at the individual

level (microsystem) this hierarchy of systems is becoming increasingly more distal (macrosystem). Our study focused mostly on variables from the microsystem, and future research should include more variables from other systems for a more thorough understanding of sexual satisfaction among LGB individuals in Germany.

Additionally, integrating intersectional approaches in future research to examine how intersecting identities such as race, gender, and socioeconomic status affect sexual satisfaction among LGB individuals may be beneficial, as stigma from these marginalized identities can overlap, interact, and compound, leading to unique psychosocial stressors (McConnell et al., 2018; Shangani et al., 2020; Szymanski & Gupta, 2009). This analysis may generate a more detailed understanding and more specific interventions to address minority stress and improve sexual health strategies for diverse LGB populations (Bauer, 2014).

Implications

This study highlights the critical need for targeted policies and clinical practices to support sexual minority individuals' sexual satisfaction and health. Increased funding for research focused on the health and well-being of sexual minority populations, including studies on sexual satisfaction and minority stress, is essential. On a societal level, the results of this study demonstrate that despite legal equality, sexual minority stigma still significantly impacts the lives of German-speaking sexual minority individuals. Consequently, efforts must be expanded to reduce stigma against sexual minorities until these adversities are eliminated (Hatzenbuehler, 2010). Implementing and enforcing antidiscrimination policies is crucial to creating supportive environments for sexual minority individuals (Raifman et al., 2017). Adopting these policies and clinical recommendations may help improve the sexual and mental health of sexual minority individuals and enhance their overall quality of life and well-being (Thoits, 2010).

Limitations and Future Directions

While this study provides valuable insights, it is important to acknowledge its limitations. The cross-sectional design of this study provides a snapshot of data at one point in time, making all findings correlative and preventing any conclusions about causative pathways. To amass a larger sample, this study employed nonrandom recruitment (snowball sampling) and self-report measures. Approximately half of the participants indicated having a university education and living in an urban area with more than 500,000 residents. Consequently, stigma may be underestimated, as it tends to increase in rural areas, which are underrepresented in our sample (Morandini et al., 2015; Swank et al., 2012).

Furthermore, as this study is among the first to examine these psychosocial aspects in a German-speaking sample, our primary aim was to provide an initial overview. To ensure sufficient statistical power, lesbian and bisexual women were grouped together, as were gay and bisexual men, to maintain conceptual consistency. While this approach is still common in sexual minority research (McCann et al., 2021), it may obscure within-group differences, particularly given the distinct psychosocial experiences of bisexual individuals (Garr-Schultz & Gardner, 2021; Worthington & Reynolds, 2009). Future studies should address these limitations by employing longitudinal designs and larger, more representative samples that better capture the diversity of sexual minority experiences.

The technical limitations of this study include that no records of IP addresses were kept due to a strict privacy policy, making it impossible to rule out theoretical multiple participation, although this is unlikely given the survey's extent. Moreover, this study was intended for and advertised to a German audience, as experiences of stigma are influenced by country-specific legislation and culture. However, no technical measures have been implemented to exclude participation from other German-speaking countries.

Conclusion

In conclusion, this study highlights the complex interplay between sexual satisfaction, shame, and stigma among LGB individuals in Germany. Our findings underscore the importance of addressing internalized stigma and promoting affirmative attitudes to enhance the sexual well-being of LGB individuals. By incorporating these insights into therapeutic practices and educational programs, overall improvements in sexual satisfaction and, in turn, the quality of life may be achieved for the LGB community.

Supplementary Information The online version contains supplementary material available at <https://doi.org/10.1007/s13178-025-01137-0>.

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Data Availability The data supporting this study's findings are available from the corresponding author upon reasonable request.

Declarations

Ethics Approval This study was approved by the ethics committee of Ludwig-Maximilians-University Munich (28/09/2020 – KB 20/004) and by the data protection commissioner of LMU University Hospital Munich. The study was registered at DRKS (29/10/2020 – DRKS00022336).

Informed Consent Informed consent was obtained from all subjects involved in this study.

Competing Interests The authors declare no competing interests.

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