

# A Study of suicidal ideation in different subgroups within a sexual minority by assessing variables that may reflect subjective experience of distress among minorities

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## Abstract:

**INTRODUCTION:** A discord between natal role and gender identity, poor self and societal acceptance of one's sexual orientation/gender identity, physical, verbal and sexual abuse and discrimination, from family, friends, and peers during and after coming out, fear of law-enforcement, loneliness, and lack of coping mechanisms and healthy role models can lead to poor physical and mental health outcomes among the LGBTQ youth in India. For sexual minority people, sexual orientation-related discrimination and prejudice might be associated with feelings of thwarted belongingness. Given that perceived burdensomeness, thwarted belongingness and Psych-ache. have been associated with SI in other populations, included sexual minority.

**Methodology:** - Advertisement in form of Flash banners will be generated on websites, forums and social media related to sexual minority. Within the advertisement, volunteers who were at least 18 years of age (no other inclusion criteria) were invited to complete a survey that took approximately 20 min to finish. The Flash Banner containing the performa for Thwarted belongingness and perceived burdensomeness, Suicidal ideation, The Psych-ache Scale.

**Result & Conclusion:** Interpersonal construct perceived burdensomeness, which accounts for some increased prevalence of suicidal ideation for adult gay men, lesbian women, and bisexual men and women. Clinicians can utilize this information by using cognitive and behavioural interventions to decrease perceived burdensomeness and, thus, decrease suicide risk for sexual minority adult clients.

**Keywords:** LGBTQ, Suicidal ideation, Thwarted belongingness, Perceived burdensomeness.

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#### **INTRODUCTION: -**

A discord between natal role and gender identity, poor self and societal acceptance of one's sexual orientation/gender identity, physical, verbal and sexual abuse and discrimination, from family, friends, and peers during and after coming out, fear of law-enforcement, loneliness, and lack of coping mechanisms and healthy role models lead to poor physical and mental health outcomes among the LGBTQ youth in India.<sup>1</sup> Discrimination and exclusion reflect the deeply embedded cultural practice of homophobia and transphobia, supported by a lack of adequate legal protection against discrimination based on sexual orientation and gender identity is highly prevalent in South Asian Countries including India.<sup>2</sup>

The aforementioned factors and others exacerbate sexual minority's need to conceal personal and sexual experiences leaving one more susceptible to medical and mental health concerns which is worsened by insufficient/inaccessibility to healthcare services have now garnered national attention, particularly after a spate of well-publicized suicides of sexual minority individuals in recent years, especially among young sexual minority.<sup>3</sup> Suicide rates of LGBTQIA+ individuals living in India are higher than population estimates in other developing countries.<sup>4</sup>

For decades, people who study suicide (suicidologies) have tried to understand why some people want to die but never try, why some people actually act on their suicidal thoughts and why most people actually never think about or try to kill themselves. More recently researchers have now evolved from exclusively linking suicide to psychopathology to, try and understand the role played by universal emotions and experiences in peoples suicide behaviour. Today the dominant theory of suicide mind is Interpersonal-psychological theory of suicide by Joiner<sup>5</sup>.

Joiner in his theory proposes that, if individuals believe they are a burden on others (high in "perceive burdensomeness") and if they feel like they do not belong to a community, despite repeated attempts to connect (high in "thwarted belongingness"), they may be more likely to consider suicide. His model also proposes that, for individuals transition from only contemplating suicide to engaging in suicidal behaviour, one must also have an "acquired capability" for suicide (e.g., low to no fear of death). To date, different aspects of Joiner's model have found empirical support in various populations including military samples<sup>6</sup> and college<sup>7</sup>. Taken together, these findings suggest that perceived burdensomeness and thwarted belongingness are both important constructs in SI for various populations. We believe thwarted belongingness and perceived burdensomeness may also be associated with SI for sexual minority individuals living in India.

For sexual minority people, sexual orientation-related discrimination and prejudice might be associated with feelings of thwarted belongingness. Discriminatory experiences which are especially common among "out" sexual minority individuals<sup>8</sup> can have everlasting psychological consequences such as internalized negative messages about sexual minority individuals (Internalized Homophobia), which may be associated with the development or exacerbation of mental health problems, including SI.<sup>9</sup> Some sexual minority individuals may endorse lower perceived belongingness because of difficulty feeling comfortable displaying their authentic/true sexual minority selves with others and, instead, may feel pressure to conceal their sexual identity.<sup>9,10</sup> Specifically, bisexually identified individuals may feel unwelcome in both heterosexual and gay or lesbian company and, thus, experience a lack of connectedness with other sexual minority people. Thus, thwarted belongingness may be a salient experience for all sexual minority persons, and should be considered as different from social support.<sup>8</sup>

Research suggests that sexual minority individuals experience intense anticipatory anxiety regarding disclosure of their sexual minority status.<sup>11</sup> Sexual minority individuals may feel like a burden to their supports if they believe their sexual minority status brings additional stress to those individuals, even if they are supportive, disclosure of minority sexual identities may also cause sexual minority people to feel burdensome because they perceive others now to be charged with advocating for them because of their sexual identity.<sup>12</sup>

Empirical research have also shown that psychological pain is linked to SI and suicide attempts.<sup>13-15</sup> The term psychological pain as defined by Mee as "the intolerable, unbearable, or unacceptably aversive experience of intense negative feelings".<sup>16,17,15</sup> It is believed to result from unmet psychological needs, such as the need for social affiliation, the need to defend/protect oneself against assault, blame, or criticism, the need to avoid shaming experiences, and the need for order and understanding in one's life.<sup>18</sup> Further, Schneidman<sup>19</sup> hypothesized that feelings of psychological pain arise due to intense feelings of shame, guilt, or loneliness, and LGBTQ individuals often report feeling shame when confronted with discrimination or societal nonacceptance.<sup>20</sup>

A considerable amount of previous research on risk factors for SI has focused on sexual minority youth or adolescents living in developed countries,<sup>21,22</sup> which may be because sexual minority youth tend to report higher SI levels than sexual minority adults.<sup>23</sup> However, much of the research on sexual minority youth may not generalize to sexual minority adults, given the shifting cultural context for acceptance of minority sexual orientation and changing laws (e.g., age cohort effects), as well as the fact that adults can exert more control over their environments, as described in sexual minority identity management models.<sup>24</sup> Sexual minority adults may modify/control the method or frequency with which they disclose their sexual orientation to others, and may have different or more well-developed coping abilities that likely affect their exposure to, and ways of dealing with environmental, institutional and interpersonal risk factors.

Given that perceived burdensomeness, thwarted belongingness and Psych-ache. have been associated with SI in other populations, included sexual minority. We need to understand interpersonal constructs associated with SI in sexual minority individuals in adults living in India. we aimed to evaluate the interpersonal constructs of Joiner's theory<sup>25</sup> and Psych-ache in a national sample of sexual minority adults living in India. Our goal was to replicate and extend previous research by assessing variables that may reflect participants' subjective experience of distress.

In addition, previous research findings have suggested that SI prevalence significantly differs between genders<sup>26</sup> and sexual identity. Specifically, there are some data to suggest that bisexually identified individuals report more SI than gay and lesbian-identified individuals, and that women tend to report more SI than men.<sup>26</sup> Thus, another aim of this study was to assess SI for different subgroups within a sexual minority sample (e.g., gay men, lesbian women).

## **METHOD:-**

### **Participants**

After getting the approval Ethics Committee. Advertisement in form of Flash banners will be generated on websites, forums and Social Media related to sexual minority. Within the advertisement, volunteers who were at least 18 years of age (no other inclusion criteria) were invited to complete a survey that took approximately 20 min to finish. The advertisement contained a Web link to the survey for those who were interested in participating. Participants who clicked on the link were taken to an information page where they indicated whether or not they consented to participate. If individuals indicated they were 18 years of age or younger or if they reside outside India on the first page of the study after the consent page, they were automatically taken to a separate Web page thanking them for their interest but indicating they were ineligible to participate. An online survey format was chosen because Internet-based surveys are found to be a more comfortable environment to collect data on sensitive issues such as sexuality,<sup>27</sup> and Internet data have been found to be equivalent to traditional data collection system with regard to validity, reliability, and efficiency.<sup>28</sup> Additionally, Riggle and colleagues<sup>28</sup> supported the usefulness of online research to expand reach to LGBTQ communities as it provides higher level of privacy.

### **Procedures**

For the study, an informed consent page appeared notifying potential participants of their rights, including the right to skip questions or stop participating at any moment, anonymity, risks, and benefits. To bolster confidentiality, researchers disabled the ability to record participant IP addresses (although responses from the same computer were not allowed), and all survey data were encrypted to enhance confidentiality because participants were notified of these measures, it may have increased respondent honesty.

### **Measures**

We aimed to predict the more common experience of SI (rather than suicide attempts), we assessed whether perceived burdensomeness, thwarted belongingness and Psych-ache would predict SI, and did not include an assessment of the last of the factors posited by Joiner<sup>25</sup> acquired capability which is the most relevant for suicide attempts. We did not assess the predictors of suicide attempts in this study. However, SI has been found to be predictive of future suicide attempt, and thus, is a clinically important construct.<sup>30</sup>

**Demographics.** Basic demographic information about the participants was collected through a investigator-created questions inquiring age, current annual income, gender identity, and current relationship status.

**Sexual identity.** Participants were asked to self-identify with one of the following sexual identity labels: *Gay, Lesbian, Bisexual men, Bisexual women and Something else*. Use of categorical sexual identity labels is somewhat controversial in the literature, yet it remains the most commonly used method in research related to sexual minority.<sup>31</sup>

**Thwarted belongingness and perceived burdensomeness.**<sup>32</sup>

The 18-item Interpersonal Needs Questionnaire was used to assess to what extent the participants felt that they were a burden on others (perceived burdensomeness), and how participants viewed their connectedness within their communities (thwarted belongingness). Participants were asked questions about family, society, and friends. Examples included, “These days, I think I am a burden on society,” and “These days, I often feel like an outsider in social gatherings.” Each statement was rated on a 7-point Likert scale (1- *not true for me at all* and 7-*very true for me*). Total scores were the mean of all items in each subscale (i.e., mean of items 1–9, for burdensomeness), with higher overall scores indicating increased levels of perceived burdensomeness and thwarted belongingness. The measure has previously demonstrated good construct validity and internal consistency in a sample of 602 university undergraduates.<sup>33</sup>

**Suicidal ideation.<sup>34</sup>**

This four-item Depressive Symptom Index Suicidality subscale was used to assess participants’ thoughts about attempting suicide over the past one month, we aimed to provide a more comprehensive assessment for frequency and intensity of SI compared to the controversial administration of one item alone.<sup>35</sup> Participants answered four questions, each assessing a separate element of SI: thought, impulse, plan, and perceived control over suicidal thoughts. Examples included, “Most of the time, I have thoughts of killing myself,” and “I am having thoughts about suicide and have formulated a definite plan.” Scores ranged from 1 to 4 on each item, with total inventory scores ranging from 4 to 16—higher scores on the inventory suggest greater severity of SI.

**The Psych-ache Scale<sup>36</sup>**

The Psych-ache Scale developed by Holden and Colleagues is a 13-item scale measuring current psychological pain. Questions such as “My psychological pain seems worse than any physical pain.” & “I seem to ache inside”. Each question was answered using a Likert response scale ranging from 1 (never/strongly disagree) to 5 (always/strongly agree). Responses were added to produce a total score. For the purpose of this study, participants were asked to respond to each question within the time frame of the last year. Cronbach’s alpha for the Psych-ache scale was 0.97.

**Analyses**

**Missing data.** We assessed the amount of missing data before conducting analyses, and found no more than 3.8% data missing from any item measuring our covariates, independent variables (IVs), or dependent variable (DV). Because the percentage of missing data was lower than the accepted standard of 5%, we retained all the original data.<sup>37</sup>

Analyses were conducted on all data (N= 1102). Data entry was done using Microsoft Excel and analysis was conducted in SPSS Statistical Software 22.0. We ran preliminary correlational analyses to investigate whether variables have association with SI and whether there are correlation differences among different sexual minority.

**Table 1** Demographic data of participants (n = 1102) for Sexual Minority Adults in Overall Sample.

Variable	n %
<b>Gender</b>	
Male	684 (62.0%)
Female	418 (37.9%)
<b>Sexual Orientation</b>	
Gay	432 (39.2%)
Lesbian	313 (28.4%)
Bisexual men	242 (21.9%)
Bisexual women	97 (8.8%)
Something Else	18 (1.6%)
<b>Relationship Status</b>	
Married	372 (33.7%)
Widowed	5 (0.45%)
Divorced	36 (3.2%)
Separated	66 (5.9%)
Single	623 (56.5%)
<b>Location</b>	
Metropolitan	538 (44.8%)
Urban	382 (34.3%)
Rural	182 (16.5%)
<b>Current Suicidal Ideation</b>	
Yes	264 (23.9%)
No	838 (76%)

Table 2: Intercorrelations for Variables for Sexual Minority Adults in Overall Sample.

Variable	PBurden	Tbelong	Pache	SI	Age	CRIn
PBurden						
Tbelong	.684**					
Pache	.671**	.529**				
SI	.680**	.444**	.485**			
Age	-.265**	-.221*	-.144*	.541**		
CRIn	-.277**	-.195*	.130	-.239**	.167*	
Income	-.213*	.163*	-.136*	-.192*	.112	-.223**

Note: PBurden-Perceived Burdensomeness, Tbelong- Thwarted Belongingness, Pache- Psych-ache, SI- Suicidal Ideation, CRIn- Current romantic relationship, Income- Current annual Income.

\*  $p < 0.01$ , \*\*  $p < 0.05$ .

Table 3 Hierarchical Logistic Regression Predicting Suicidal Ideation for Sexual Minority Adults in Overall Sample.

Predictors entered	No ideation vs. Some ideation OR (95% CI)	p Value
STEP 1		
Age	1.072 (1.035, 1.215)	.067
Gender	1.027 (0.997, 1.078)	.452
Sexual Identity	1.078 (0.659, 1.912)	.591
Current romantic Relationship	1.036 (.0445, 2.235)	.875
Current annual Income	0.664 (0.468, 0.892)	.312
STEP 2		
Age	1.043 (1.007, 1.080)	.054
Gender	0.559 (0.216, 1.446)	.764
Sexual Identity	0.907 (0.512, 1.608)	.751
Current romantic Relationship	1.188 (0.432, 3.266)	.426
Current annual Income	0.701 (0.480, 1.025)	.569
Perceived Burdensomeness	3.456 (1.719, 6.950)	.002**
Thwarted Belongingness	0.822 (0.469, 1.442)	.461
Psych-ache	1.049, (0.997, 1.104)	.651

Note. OR = odds ratio.

\*  $p < 0.01$ , \*\*  $p < 0.05$ .

Table 4: Hierarchical Logistic Regression Predicting Suicidal Ideation by Sexual Identity.

Predictors Entered	Gay		Lesbian		Bisexual Men		Bisexual Female	
	OR (95% CI)	P	OR (95% CI)	P	OR (95% CI)	P	OR (95% CI)	P
STEP 1								
Age	1.064(1.026, 1.146)	.143	1.221(1.054, 1.242)	.236	1.145 (1.077, 1.235)	.13	1.125 (1.057, 1.235)	.048*
Current romantic Relationship	1.421 (0.895, 1.057)	.656	1.142(0.956, 1.111)	.461	1.835 (0.376, 9.194)	.392	1.342 (0.556, 9.123)	.298
Current annual Income	0.748(0.457, 1.268)	.337	1.832(0.356, 9.164)	.399	1.035 (1.034, 1.156)	.031	1.25 (0.867, 1.034)	.753
STEP 2								
Age	1.045(1.004, 1.139)	.026	1.029(0.682, 1.173)	.132	1.635 (0.262, 1.156)	.611	1.686 (0.272, 1.156)	.598

					12.463)		12.478)	
Current romantic Relationship	1.552(0.367, 6.345)	.553	1.621(0.122, 12.733)	.615	1.026 (1.044, 1.104)	.032*	1.037 (1.047, 1.352)	.078
Current annual Income	0.847(0.464, 1.378)	.476	0.865(0.430, 1.526)	.613	0.843 (0.770, 1.535)	.614	0.578 (0.853, 1.358)	.625
Perceived Burdensomeness	3.472(1.255, 9.563)	.013**	6.947(1.134, 41.42)	.033**	5.935 (1.176, 27.935)	.025**	5.386 (1.164, 31.937)	.047**
Thwarted Belongingness	0.870(0.433, 1.841)	.734	0.526(0.146, 1.835)	.362	.535 (0.095, 2.737)	.433	.647 (0.039, 2.744)	.426
Psych-ache	1.031 (0.975, 1.134)	.473	1.046(0.956, 1.206)	.093	1.185 (0.921, 1.302)	.117	1.239 (0.946, 1.354)	.122

Note. OR = odds ratio.  
 \*  $p < 0.01$ , \*\*  $p < 0.05$ .

## RESULTS:-

### Sexual Minority Sample

See Table 1 for Basic demographic information about the sample. Means, standard deviations, and intercorrelations are provided in Table 2. Table 3 shows the Hierarchical Logistic Regression with dichotomous Dependent Variable as SI, and the following predictor variables were entered in model 1(a) Age, Current Annual Income, Current Romantic Relationship. (b) perceived burdensomeness, thwarted belongingness and Psych-ache were added in subsequent model. Although perceived burdensomeness thwarted belongingness and Psych-ache were positively correlated, we retained them as separate constructs in the analyses because this relation makes conceptual sense, based on Joiner's<sup>32</sup> theory and Holden and colleagues<sup>36</sup> Theory respectively and other analyses have found separate effects for them.

Results indicated that this model, tested in the entire sample of sexual minority participants was a good fit ( $\chi^2 = 85.001$ ,  $df = 5$ ,  $p < .001$ ), and a Hosmer and Lemeshow test was nonsignificant, which indicated low error in the model ( $p < .05$ ). Introducing perceived burdensomeness, thwarted belongingness and Psych-ache and SHB accounted for an additional 27.7% of the variance, which was a significant change in  $R^2$  ( $\Delta R^2 = .057$ ,  $p < .01$ ) Only perceived burdensomeness (Wald = 12.108, OR = 3.456, 95% CI [1.719, 6.950]) was significant predictor of SI, although thwarted belongingness, psych-ache and Sexual Orientation did not account for a significant portion of the variance ( $p = .461$ ,  $p = .651$ ,  $p = .751$  respectively).

These results suggest that one component of Joiner's model perceived burdensomeness was relevant predictor of SI in a sexual minority sample, even after accounting for age, gender, sexual identity, current romantic relationship, and current annual income (see Table 3).

### Sexual Identity Groups

We also assessed whether our constructs would differentially predict SI among the sexual identity groups (see Table 4). gay men ( $n = 432$ ), lesbian women ( $n = 313$ ), bisexual men ( $n = 242$ ) and bisexual women ( $n = 97$ ). There were too few Something Else to meet the assumptions of this analysis ( $n = 18$ ), and thus, for the within-group comparisons, we excluded Something Else.

**Gay men.** We utilized the same hierarchical model as described above, and results indicated the model was also a good fit for gay men ( $\chi^2 = 26.492$ ,  $df = 5$ ,  $p < .001$ ), with low error (Hosmer and Lemeshow,  $p < .05$ ). Results from our logistic regression indicated that perceived burdensomeness (Wald = 5.407, OR = 3.472, 95% CI [1.255, 9.563]) was significant predictors of SI. The most notable effect was that gay men who experience higher levels of perceived burdensomeness appear to have three times higher odds of considering suicide than gay men with lower levels.

**Lesbian women.** We utilized the same hierarchical model as described above, and results indicated the model was also a good fit for lesbian women ( $\chi^2 = 24.975$ ,  $df = 5$ ,  $p < .000$ ), with low error (Hosmer and Lemeshow,  $p < .05$ ). For lesbian women, only perceived burdensomeness predicted SI (Wald = 4.524, OR = 6.947, 95% CI [1.134, 41.42]), after accounting for all other variables. This finding suggests that lesbian women who experience higher levels of perceived burdensomeness are almost seven times as likely to consider suicide as lesbian women who reported lower levels.

**Bisexual women.** We utilized the same hierarchical model as described above, and results indicated the model was a good fit ( $\chi^2 = 14.771$ ,  $df = 5$ ,  $p = .002$ ) and had low error (Hosmer and Lemeshow,  $p = .029$ ). Results indicated that perceived burdensomeness was a significant predictor of SI (Wald = 4.777, OR = 5.386, 95% CI [1.164, 31.937]). This finding suggests that bisexual women who report higher levels of perceived burdensomeness are at five times greater likelihood of considering suicide than bisexual women who reported lower levels.

**Bisexual men.** We utilized the same hierarchical model as described above, and results indicated the model was a good fit ( $\chi^2 = 19.163$ ,  $df = 5$ ,  $p = .002$ ) and had low error (Hosmer and Lemeshow,  $p = .791$ ). Results indicated that perceived burdensomeness (Wald = 5.103, OR = 6.149, 95% CI [1.176, 27.935]) was significant predictor of SI. This finding suggests that bisexual men who report higher levels of perceived burdensomeness are at six times greater likelihood of considering suicide than bisexual men who reported lower levels.

## DISCUSSION:-

Our results suggest that, in a sample of sexual minority adults living in India, one component of Joiner's<sup>32</sup> interpersonal-psychological theory of suicide perceived burdensomeness predicted SI, as well as for the subsamples of gay men, lesbian women, bisexual men and bisexual women even after accounting for the contributions of age, gender, sexual identity, current romantic relationship, and current annual income.

This finding is consistent with previously published research testing components of Joiner's<sup>32</sup> theory. Perceived burdensomeness predicted SI in other samples in which sexual orientation was not reported e.g. undergraduate students and adults in a university sample.<sup>33</sup> Our results extended findings linking perceived burdensomeness and SI from a previous study that included sexual minority college students<sup>38</sup> by assessing a different, more diverse demographic sample of sexual minority individuals living in India. Previous research has also demonstrated that increased PB is linked to a decreased willingness to seek help with mental health issues<sup>39</sup> and the greater an individual feels they are a burden to others, the stronger they feel others would be better off with them dead,<sup>40</sup> with higher PB therefore driving up SI.

One possible explanation for individuals who reported higher burdensomeness might feel that way because they perceive their sexual identity to be a burden on their intimates and thus, consider suicide as a means to eradicate what they perceive to be a permanent problem themselves. For example, they might internalize negative core beliefs about themselves as being inherently burdensome on family and friends.<sup>28</sup> Indeed, research suggests that real and perceived negative reactions from friends and family about ones' sexual minority identity are associated with negative mental health consequences.<sup>41</sup> Perhaps individuals who internalize negative external messages about themselves can develop greater feelings of burden, isolating from their social supports, and developing a higher likelihood of considering suicide.

Our results are not only statistically significant, but clinically meaningful as well. Result adds meaningful information to clinical practice because it isolates a potential intervention target for SI i.e. subjective perception of one's interpersonal relationships (perceived burdensomeness) rather than a static risk factor such as "being gay"<sup>42</sup> or having experienced homophobic discrimination/prejudice.<sup>43</sup>

Our results can be used to tailor clinical interventions for sexual minority individuals, especially in the context of suicide risk assessment. For clinicians working with sexual minority individuals who report some depressive symptoms or SI, evaluating and addressing clients' perceived burdensomeness on others can be a target of intervention, whereas traditionally static risk factors, such as knowing the client identifies as a sexual minority person, cannot be addressed with psychological interventions. Patients recording higher scores on the PB and/or TB can be triaged for treatment ahead of those with lower scores due to increased risk for suicide. High levels of perceived burdensomeness can be targeted for both cognitive interventions to challenge such perceptions and behavioural interventions for clients to seek out social support in which they are affirmed and validated.<sup>44</sup>

Although thwarted belongingness has predicted SI and attempts in some populations of undergraduates and adults,<sup>33</sup> this construct appears not to be a predictor of SI for sexual minority individuals in our sample. In fact, thwarted belongingness has not predicted SI in many other samples, including undergraduates (25% sexual minority students)<sup>38</sup> and American Indians.<sup>45</sup> One hypothesis to make sense of this null finding, in our sample and others, is that thwarted belongingness is either (a) truly not predictive of SI across samples, or (b) is predictive of suicide attempts, but not ideation, for some groups. One other possibility raised to explain this finding is that the subscale of the Interpersonal Needs Questionnaire that assesses thwarted belongingness may not validly capture thwarted belongingness for marginalized groups as in our study.<sup>45</sup>

Overall, findings from this study identified one interpersonal construct perceived burdensomeness, which accounts for some increased prevalence of suicidal ideation for adult gay men, lesbian women, and bisexual men and women. Clinicians can utilize this information by using cognitive and behavioural interventions to decrease perceived burdensomeness and, thus, decrease suicide risk for sexual minority adult clients.

**Conflicts of interests: None**

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