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Suicidality among bisexual youths: the role of parental sexual orientation support and concealment

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Abstract

Compared with the heterosexual population, the prevalence of mental health outcomes such as suicidality (suicidal ideation, suicide plans, and suicide attempts) is higher among sexual minority youth, particularly those who identify themselves as bisexuals. Bisexuals are at an even elevated risk within the LGB populations due to biphobia, monosexism, bisexual invisibility or erasure, and lack of support resources. These experiences may bring about issues regarding concealment of their sexual orientation linked to suicidality. Studies have also identified that parental support is a protective factor against suicidality among the youth, particularly their sexual orientation. The present study used a cross-sectional, predictive research design to examine parental sexual orientation support and concealment and their associations and predictive abilities in the suicidality of 151 Filipino bisexual youths aged 18–24 years old. The participants were recruited online within six months, from July 2021 to December 2021. As measured by the Parental Support for Sexual Orientation Scale, Sexual Orientation Concealment Scale, and Suicide Behaviors Questionnaire-Revised, results showed that among our bisexual participants, parental sexual orientation support and concealment did not have a significant relationship with and could not predict their risk for suicidality. Limitations and suggestions for further research were discussed, considering our findings.

Keywords Bisexuals · Parental support · Concealment · Suicidality · Filipino

Suicidality is a term that encompasses suicidal ideation (suicidal thoughts), suicide plans, and suicide attempts (Russell, 2003). It is a growing health problem that needs to be equally addressed as it puts more youth at risk for committing suicide (Ivey-Stephenson et al., 2020). Suicide is a significant public health concern. The World Health Organization (WHO, 2021) documented that roughly 700,000 people die globally because of suicide, one person every 45 s. The number of people who resort to suicide increases continuously every year (WHO, 2021). In general, suicide rates are higher in older people aged 60–70 years and above (Bilsen, 2018; Ritchie et al., 2015); however, suicide has become an escalating problem, particularly among youth.

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In 2019, suicide was the fourth leading cause of death in 15 to 29-year-olds worldwide (WHO, 2021). Suicide in younger age groups remains a pervasive issue as it brings about a significant portion of early deaths and tragic psychological and socio-economic impacts (Bilsen, 2018). The prevalence of suicide is high among youths, especially those facing discrimination, particularly members of the LGB (lesbian, gay, and bisexual) community. Research has consistently demonstrated that in comparison to heterosexuals, the prevalence of adverse mental health outcomes such as suicidality, depression, and anxiety is higher in sexual minorities who generally comprise LGB individuals (Hottes et al., 2016; Marshal et al., 2011; Ross et al., 2018; Tomicic et al., 2016; Yildiz, 2018).

The Centers for Disease Control and Prevention (CDC) Youth Risk Behavior Survey (YRBS) 2019 conducted by (Ivey-Stephenson et al. 2020) recorded that among all students, LGB individuals had the highest prevalence estimates of having seriously thought about suicide (46.8%), planning a suicide (40.2%), and attempting suicide (23.4%). According to Kann and colleagues (2016), LGB youth in the United

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States have seriously thought about suicide at almost three times the rate of their heterosexual counterparts. Compared to heterosexual youth, these sexual minorities are approximately five times as likely to have attempted suicide, with their attempts described as graver and requiring medical assistance Kann et al. (2016). Similarly, a multi-center cross-sectional study in three Asian cities found that LGB youth were more likely to report suicidal ideation and suicide attempts compared with heterosexual youth in the past 12 months (Lian et al., 2015). In the Philippines, two extensive sample studies found that young Filipino LGBs were at an elevated risk of suicidal ideation and suicidal attempts relative to their heterosexual peers (Manalastas, 2013, 2016).

Across lifetime prevalence estimates, young sexual minority individuals are at an increased risk for suicidal ideation, suicide plans, and suicide attempts (Marshal et al., 2011; Miranda-Mendizábal et al., 2017). (Miranda-Mendizábal and colleagues 2017) emphasized that while sexual orientation has been linked with a greater risk for suicide attempts in adolescents and young adults, more investigation is required to understand completed suicide rates and specific risk factors that impact the LGB population. One apparent risk factor for a sexual minority identity, conceptualized as a stressor, is concealment (Meyer, 2003/2013). Riggle and colleagues (2017) stated that LGB people might feel compelled to conceal their identity when they internalize stigma and feel ashamed. They also added that LGB individuals might even resort to appearing straight when feeling unsafe or threatened. Even though concealment of sexual orientation may act as a short-term protective factor against victimization and discrimination, it is generally correlated with poor mental health outcomes. Concealment contributes to increased rates of psychological distress in the long run (Brennan, 2019; Meyer, 2003/2013; Schrimshaw et al., 2013). Studies also explained that the stress associated with concealment of one's sexual identity could lead to mental health issues resulting in suicide (Michaels et al., 2016). Moreover, concealment has also been linked with decreased support, which in turn has been associated with poorer mental wellbeing and physical health (Lehavot & Simoni, 2011; Meyer, 2003/2013).

As LGB youth navigate through the coming out process, parents can either be a source of stress, reject and become hostile towards their child, or a key source of support as they accept and shield their child from adverse reactions to their sexual orientation (D'Augelli, 2005). The immediate caregiver has one of the essential roles in shaping their development. According to Bronfenbrenner and Morris (2007), the microsystem of a person, consisting of their family and school, is the environment in which development occurs through regular interactions. Parental influences on a person cannot be belittled (Mills-Koonce et al., 2018). Several studies have shown that healthy parent-child relationships are generally linked with positive mental health outcomes. A parent-child relationship marked by support emerged among LGB youth to have a protective association with suicidal thoughts (Needham & Austin, 2010). In a recent study, parental support was also beneficial for lesbian, gay, bisexual, transgender, and questioning (LGBTQ) youth who struggle with suicidality (Hatchel et al., 2018). Moreover, parental connectedness served as mitigation in reducing suicide attempts and the risk of committing self-harm (Taliaferro & Muehlenkamp, 2017). Among LGBT youth, it was also found that family acceptance was associated with all these variables: higher self-esteem, social support, general health status, less depression, less drug abuse, and less suicidal ideation and behaviors (Ryan et al., 2010).

The minority stress model attempts to explain the health issues and disparities in LGB individuals (Meyer, 2003/2013). Proposed by Meyer (2003/2013), this model distinguishes proximal (subjective, internal processes) and distal (objective, external events) stressors as unique to sexual minorities, which make them more vulnerable to physical and mental health problems compared with heterosexuals. Meyer (2003/2013) further argued that a minority identity is associated with stress and strength when support resources, such as coping and group solidarity, protect the individual and buffer the effects of minority stress. The minority stress theory has been used to explain mental health disparities among sexual minorities in general. Despite its limitations, it may be a relevant explanatory framework for gay and lesbian mental health and bisexual mental health (Persson & Pfaus, 2015). Moreover, Filipinos who identify as sexual minorities still experience significant minority stressors which negatively impact their mental health and overall wellbeing (Psychological Association of the Philippines, 2011, 2020). Following this minority stress framework, the present study will specifically investigate the role of concealment as a proximal minority stressor and parental sexual orientation support as a stress-ameliorating factor in suicidality among bisexual youths.

The age limits used to define youth are relatively arbitrary and differ by place and time (Furlong, 2013, as cited in Bilsen 2018). The WHO (2019) defines youth as those between the ages of 15 and 24, while young people as those between the ages of 10 and 24. Moreover, McDonagh and colleagues (2018) emphasized that inherent developmental specificities mark the 18–24 age group. Both bisexual youths and young bisexual men and women are then used to refer to the participant sample of the current study. Using Miller and colleagues' (2007) definition, the term bisexual in this study is defined as: "The capacity for emotional, romantic and/or physical attraction to more than one gender. That capacity for attraction may or may not manifest itself in terms of sexual interaction" (p. 2). This description of bisexuals acknowledges the potential for, but not a

requirement of, attraction or involvement with more than one gender. The description also allows for the inclusivity of, and attraction for, all genders, including transgender people and non-binary.

There is a growing body of evidence within LGB populations that bisexual youths are at higher risk for adverse mental health outcomes. Various research works have reported that the prevalence of depression and anxiety and proportions of suicide ideation and suicide attempts are higher among bisexuals compared with gay and lesbian groups (Chan et al., 2020; Feinstein & Dyar, 2017; Pompili et al., 2014; Ross et al., 2018; Salway et al., 2018). Within the context of the life cycle, it was also found that suicide attempts were significantly more severe for bisexual adults than lesbian and gay adults (Hottes et al., 2016). Moreover, bisexuals had the lowest likelihood of complete mental health than their heterosexual and gay/lesbian counterparts (Gilmour, 2019). Total mental health has both the presence of positive and absence of negative aspects; as explained by Gilmour (2019), total mental health was characterized by "a combination of flourishing mental health, absence of self-reported diagnosis of mood or anxiety disorders, and absence of suicide ideation in the previous 12 months" (p. 4).

Studies have found that compared with lesbians and gay men, bisexuals had a higher tendency to conceal their sexual orientation and report identity uncertainty, which in turn were associated with having low levels of mental wellbeing (Chan et al., 2020; Dyar et al., 2015; Kuyper & Fokkema, 2011). Moreover, for both bisexual men and women, significant relationships have been documented between higher levels of sexual orientation concealment and higher levels of depression and anxiety symptoms (Prell & Traeen, 2018; Schrimshaw et al., 2013). As bisexual youth are exposed to a greater risk for depression than their lesbian and gay peers, this is where the family unit can play an instrumental role; this elevated risk may be buffered by parental support (Pollitt et al., 2017). The support that they get from these prominent individuals in their lives provides healthy coping strategies that help manage the harmful effects of stressors that may lead to self-harm (Taliaferro & Muehlenkamp, 2017). Pollitt and colleagues (2017) explained that bisexual individuals had experienced a less supportive social environment than their lesbian and gay peers. However, this lack of support that they fail to receive socially can be substituted by the help that they receive from their families.

Given the mental health disparities observed among bisexuals, they can be considered to be at a surprisingly high level of risk among sexual minorities and face more difficulties than much of the literature has addressed. In addition to being discriminated against by heterosexuals, bisexual individuals also experience bi-antagonism or biphobia from lesbian and gay communities (Bisexual Resource Center [BRC], 2019; Sarno et al., 2020; Ulrich, 2011). Not being gay enough to conform to these communities and the sense of isolation brought about by mainstream cultures led bisexual individuals to internalize biphobia (Ross et al., 2010). This feeling experienced by bisexuals that can be characterized as "feeling your sexuality is bad or wrong" has contributed to increased negative mental health consequences (Chard et al., 2015, p. 1183). The lack of acceptance of one's sexuality, especially to bisexuals, must be addressed as an essential factor concerning mental health and well-being. Additionally, a Pew Research Center (2013) survey recorded bisexual individuals less likely to report that their sexual orientation is an essential aspect of their identity than lesbians and gay individuals. This data further illustrates a need to investigate bisexuals' experiences as they may encounter distinct challenges.

Bisexuals being accused of benefitting from the "heterosexual privilege" and labeled as traitors to the LGBTQ community (BRC, 2019, p. 2) as well as being viewed as sexually promiscuous and having a sexual orientation that is illegitimate or unstable (Alarie & Gaudet, 2013; Brewster & Moradi, 2010; Burke & LaFrance, 2016) are more specific issues bisexual individuals face. With their identity being stereotyped as invalid, bisexuals are often assumed to either be heterosexual or gay/lesbian (Dyar et al., 2014; Ross et al., 2010). Bisexual individuals experience misorientation as well—that is, being labeled as straight, gay, or lesbian based on romantic relationships (GLAAD, 2016). These kinds of hostility contribute to making the bisexual identity "invisible, illegitimate, or stigmatized" (Sarno et al., 2020, p. 2).

Bisexual invisibility or bisexual erasure is disregarding the evidence that bisexuality exists (BRC, 2019; Movement Advancement Project [MAP] et al., 2014; Ulrich 2011). It poses various consequences in a bisexual individual's daily life. Ignoring or removing representations of bisexuality in media, sources, and other academic fields is also most likely to result in bisexual erasure. As demonstrated by previous studies, the most severe consequences are related to poor health outcomes (Pennasilico & Amodeo, 2019). According to GLAAD (2014), bisexual invisibility or erasure has also been a prevalent discriminatory practice towards the bisexual population. It is considered critical to access resources and support opportunities they need. Friedman and colleagues (2014) explained that gay/lesbian communities expressing hostility towards bisexuals indicate 'LGBT' support systems that are ostensibly inclusive may not be as applicable to bisexual people as they are to gay men and lesbians.

The unawareness of health practitioners and lack of research about the bisexual community have resulted in poor mental health. Moreover, Durso and Meyer (2012) asserted that healthcare providers should be wary of the differences between bisexuals and gay/lesbian groups. They found that increased nondisclosure of sexual orientation to health

professionals was higher among bisexual men and women and related to poor mental wellbeing. Accordingly, in a recent literature review by McCann and colleagues (2020), they indicated several studies that have recommended that healthcare practitioners be trained and develop skills to address bisexual health issues and have emphasized the need for bisexual-specific support services and research.

Recent studies have focused on lesbian and gay health, leaving a noticeable gap regarding knowledge, awareness, and education, specifically on the mental health needs of bisexuals (Chard et al., 2015). There is inadequate research among the bisexual population; their distinct experiences and care and support needs are less explored (Loi et al., 2017). Echoing Salway and colleagues (2018), while there have been findings essential with the shared experiences of LGB people, being bisexual should be considered differently. Finally, with suicide behavior disorder (SBD) being included in the DSM-5 as a condition for further study (Fehling & Selby, 2021), we believe our research will add to the body of knowledge and potentially aid in the future investigation about suicidality.

Overall, this literature and research have prompted us to conduct this study among bisexual youths, highlighting suicidality as a possible mental health risk outcome. We examined parental sexual orientation support as a protective factor and concealment as a risk factor to aid future interventions and research. We hypothesize that there will be significant relationships among the research variables parental support, concealment, and suicidality. Additionally, lower parental support and higher concealment would predict more suicidality among Filipino bisexual youths. Our findings may advance efforts in eliminating the stigma surrounding sexual minorities and suicide. Moreover, with a bi-specific focus, the present study may help create discussions about the bisexual population and alleviate bisexual invisibility or erasure inside and outside the LGBT community.

Method

Design

The present study used a cross-sectional, predictive research design by Johnson (2001). It is non-experimental research that determines if the investigation would predict an event or phenomenon without any manipulation involved and the data is collected at a single period. The design was proper to the current study as we determined the relationships among the research variables (parental sexual orientation support, concealment, and suicidality) and examined whether the role of parental sexual orientation support and concealment would predict suicidality among bisexual men and women.

Participants

Using the definitions set by WHO as a basis, we decided to have the lower limit of the age criteria to 18-year-old to no longer require participants with parental consent to participate. Individuals can be characterized through developmental specificities during their youth, from 18 to 24 years old, according to McDonagh et al. (2018). Likewise, bisexual individuals experience identity development and disclosure of sexual orientation during emerging adulthood, which includes the same age group of 18 to 24 (Scroggs & Vennum, 2020). A total of 281 individuals participated voluntarily without remuneration. Participants must be Filipino, bisexual, aged 18 to 24, and have already disclosed their sexual orientation to both parents (biological/adoptive) to participate in the study. Disclosure of sexual orientation to both parents was required to answer the Parental Sexual Orientation Scale in the questionnaire. Participants were residents of the Philippines at the time of the data collection and the scope of the sample extended to all gender identities (i.e., cisgender, transgender, etc.). However, participants were excluded from the present study ($N=130$) since they are: (1) bisexuals who have not disclosed their sexual orientation to both parents (biological/adoptive) ($n=15$) and (2) participants who have significantly missing responses in the test battery ($n=115$). A total of 151 Filipino bisexual youths were included in the final analysis. Majority of them were females (88.74%; male = 11.26%) aged 18 to 24 (M = 21.04; SD = 1.45). The participants were gathered online through convenience sampling via publication materials posted on several social media platforms (e.g., Facebook, Twitter, and Instagram) and requested from local LGB + community organizations and advocacy groups (e.g., Metro Manila Pride, UP Babaylan, etc.).

Table 1 shows that most of the participants came from the National Capital Region (43.71%), and the majority were Roman Catholic (79.47%). Also, many participants were still in college (71.52%), others had already received their degree (13.91%), and some had only graduated from high school (14.57%).

The level of disclosure of the participants was used to determine if the participants had already disclosed their sexual orientation to others. The data showed that most of the participants had disclosed their sexual orientation only to some people (55.63%), others have disclosed it to most people (30.46%), while a few reported that they are openly out (13.91%).

Measures

Parental Support for Sexual Orientation Scale (PSOS) The PSOS is an 18-item measure developed by Mohr and Fassinger (2003) that assesses the sexual orientation and

Table 1 Socio-demographic profile of participants

Variable	*n*	%
Location		
National Capital Region (NCR)	66	43.71%
Region III – Central Luzon	24	15.89%
Region IV-A - Calabarzon	36	23.84%
Region V – Bicol Region	5	3.31%
Region VII – Central Visayas	5	3.31%
Others	15	9.93%
Religion		
Roman Catholic	120	79.47%
Christian	16	10.60%
Iglesia ni Cristo	2	1.32%
Protestant	3	1.99%
Agnostic	4	2.65%
Others	6	3.97%
Educational Attainment		
College Graduate	21	13.91%
College Undergraduate	108	71.52%
High School Graduate	22	14.57%
Work Status		
Employed	22	14.57%
Part-time employed and studying	15	9.93%
Interning	4	2.65%
Interning and studying	7	4.64%
Studying	103	68.21%
Level of Disclosure		
Openly out	21	13.91%
Out to most people	46	30.46%
Out to some people	84	55.63%

$N = 151$

current same-sex romantic relationship support from parents. It is divided into two subscales, with the first nine items for mother support (e.g., *"My mother has become a real support regarding my sexual orientation"*) and the following nine items for father support (e.g., *"My father does not recognize my sexual orientation as legitimate."*). All 18 items are answered on a 7-point Likert scale (1 = *Disagree Strongly*, 7 = *Agree Strongly*). Negative statements are reverse scored, then the sum of all items is calculated to determine the two subscales (mother support and father support) and add these two subscales to arrive at the PSOS overall score, with higher scores indicating greater or stronger perceived parental sexual orientation support. For parents to have expressed support for the minority sexual orientation of their child, they must have been aware of the information (i.e., their child should have disclosed their sexual orientation). Thus, the participant must have already revealed their sexual orientation to both parents to answer the scale. Previous research has found internal consistency reliability estimates of 0.92, 0.91, and 0.93 for mother subscale, father subscale, and overall scores. The same research conducted multiple regression analyses for the convergent and discriminant validity of the subscales (Mohr & Fassinger, 2003). PSOS was utilized in previous studies that included bisexual individuals (Kibrik et al., 2018; Marks, 2012; Mohr & Fassinger, 2003). In the present study, the PSOS has Cronbach's alphas ranging from 0.87 to 0.92: Father support (0.87), Mother support (0.89), Overall parental support of sexual orientation (0.92).

Sexual Orientation Concealment Scale (SOCS) The SOCS is a 6-item measure developed by Jackson and Mohr (2016) that assesses the active sexual orientation concealment of LGB individuals within the past two weeks. The items include six concealment behaviors divided into three avoidance strategies (evading situations that indicate the individual's sexual orientation) and three counterfeiting strategies (creating a pretense of heterosexuality). Sample items are: "In the last two weeks, I have concealed my sexual orientation by telling someone that I was straight or denying that I was LGB" and "In the last two weeks, I altered my appearance, mannerisms, or activities in an attempt to pass as straight"; both reflecting the use of avoidance and counterfeiting strategies, respectively. Items are answered on a 5-point Likert scale (1 = *Not at all to* 5 = *All the time*) and scored by averaging the six items, with higher overall scores indicating greater concealment of sexual orientation. Concealment and disclosure are separate constructs (Meidlinger & Hope, 2014; Schrimshaw et al., 2013). Therefore, our participants who have already disclosed to their parents may still find themselves engaging in active concealment behaviors that this scale measures. Exploratory and confirmatory analyses supported the SOCS structure. The scale's validity and reliability were established through a large data sample of LGB college students resulting in an internal consistency estimate of 0.78 (Jackson & Mohr, 2016). The SOCS in the present study has a reliability coefficient of 0.79.

Suicide Behaviors Questionnaire-Revised (SBQ-R) The SBQ-R is a 4-item self-report questionnaire developed by Osman et al. (2001), designed to assess different dimensions of suicidality. Item one considers the presence of lifetime suicidal ideation and suicide attempts, answered on a scale from 1 (*Never*) to 4b (*I have attempted to kill myself and really hoped to die*). Item two assesses the frequency of suicidal ideation over the past year, answered on a scale from 0 (*Never*) to *5* (*or more times*). Item three assesses the threat of suicide attempt, which is responded to on a scale from 1 (*No*) to 3b (*Yes, more than once, and really wanted to do it*). Item four includes evaluating the likelihood of suicidal behavior in the future, answered on a scale from 0 (*Never*) to 6 (*Very likely*). An individual's responses on all the items

will be summed up in scoring. Using the area under the receiver operating characteristic curve (AUC) analyses, the most helpful cutoff scores on the SBQ-R indicate 7 for nonsuicidal samples and 8 for clinical samples. The single SBQ-R Item 1 and total scores can be used in clinical and non-clinical settings. Moreover, this questionnaire is widely used in research with general population samples, demonstrating moderate evidence for criterion validity in previous studies, yielding values of > 0.88 and > 0.875 in sensitivity and specificity, respectively. SBQ-R also indicated strong evidence of internal consistency, producing Cronbach's value of 0.8, and strong structural validity showing support for a one-factor solution in another study (Cassidy et al., 2018). The SBQ-R in the present study has a Cronbach's alpha of 0.77.

Procedure

Approval from the College of Science Ethics Review Committee of the University of Santo Tomas was sought before data collection. Participants were recruited using convenience sampling through research posters disseminated on social media platforms and by approaching local LGB + community organizations and advocacy groups through their emails and social media accounts. Data collection was online, and the research posters included the general qualifications to participate, link, and QR code to the online questionnaire. The qualifications indicated in the research posters indicated that participants must be aged 18 to 24, Filipino currently living in any of the regions in the Philippines and identify as a bisexual person. The questionnaire was created via Google Form and contained a brief description of the study, informed consent, demographic, test battery (PSOS, SOCS, SBQ-R), and a debriefer. Several screening questions were also included in the first part of the questionnaire to ensure that participants were qualified to answer the test battery; otherwise, they would be redirected to the end of the questionnaire. Participants were fully aware of the minimal risks involved in completing the survey, particularly about suicide, confidentiality, and data security, and that participation was purely voluntary. All participants have the option to discontinue completing the online survey without prejudice. A distress protocol was also in place if a participant needed it. The online research questionnaire took approximately 15 min to complete, and the order of three scales (PSOS, SOCS, SBQ-R) was systematically controlled using Allocate Monster. This random allocation tool provided the participants with one of the three versions of the test battery.

To prevent a person from completing the questionnaire multiple times, the settings of the Google Form were customized, particularly individuals were required to sign in, but their emails were not collected, and were limited to submit one response only. To determine the sample size needed for our study, we used the G*Power software version 3.1. With an effect size of 0.15, we yielded a total sample size of 89. We used 0.15 because it is the conventional value for a medium effect size according to Cohen (1998, as cited in Selya et al., 2012). A total of 281 data were collected, but 130 were excluded based on the following criteria: (1) have not disclosed their bisexual sexual orientation to both parents (biological/adoptive) ($n = 15$) and (2) have significantly missing responses in the test battery ($n = 115$). Thus, a final sample of 151 valid data was statistically analyzed using Microsoft Excel Version 16.58 and Statistical Package for the Social Sciences (SPSS) Version 23. Initially, descriptive statistics were utilized to characterize the demographic variables. As for our hypotheses, we intended to use Pearson's product-moment correlation to determine the relationships among our research variables: parental sexual orientation support, concealment, suicidality, and multiple regression analysis to test the predictive ability of lower parental support and higher concealment on the suicidality among Filipino bisexual youths. However, we computed the Spearman's correlation coefficients instead, after analyzing the data for normality.

Results

Table 2 shows that more than half of the participants, 53.64%, reported having low or close to average parental support regarding their sexual orientation and yielded a score of 72 or lower. In comparison, 46.36% reported receiving high parental sexual orientation support scores higher than 72. Thus, our participants may perceive their parents as supportive that they are bisexual. Surprisingly, a large majority of the participants, comprised 98.68%, reported low levels of concealing their sexual orientation. The bisexual youths in our study do not feel the need to hide their sexual orientation. However, despite these results, about 71.52% of our participants reached the suicidal risk cutoff score of 7, indicating being at-risk and having high levels of suicidality.

Before analyzing for correlations, we first tested the data for normality using SPSS. As detected by the Kolmogorov-Smirnov and Shapiro-Wilk tests (see Table 3), parental support was the only variable that showed normally distributed data, $D(151) = .04$, $p = .20$ and $W(151) = .99$, $p = .61$, respectively. With this, we computed Spearman's correlation coefficients and found that parental sexual orientation support and concealment were not significantly correlated to suicidality. The high levels of suicidality we found among bisexual participants were not significantly associated at all with their low levels of concealment or their perceived positive parental support. As such, we did not significantly prove our hypothesis that lower parental support and higher

concealment would predict more suicidality among Filipino bisexual youths.

However, our findings revealed a significant moderate relationship between our independent variables. As seen in Table 4, parental support and concealment were negatively significantly correlated, $r_s(149) = -.36$, $p < .01$. This result indicates that the lower their scores on concealment, the higher their scores would be on perceived parental support, and vice versa. Perceived parental support was significantly associated with our participants' lesser need to conceal their bisexual sexual orientation.

Discussion

The present study investigated the possible link of parental sexual orientation support and concealment to Filipino bisexual youth's suicidality. Previous studies found significant associations among these variables (Needham & Austin, 2010; Riggle et al., 2017; Taliaferro & Muehlenkamp, 2017) and that suicidality could be predicted by parental support and sexual orientation concealment, whereby it has been established that parental support acts as a buffer against suicidality (Hatchel et al., 2018; Pollitt et al., 2017; Taliaferro & Muehlenkamp, 2017) and concealment as a risk (Brennan, 2019; Meyer, 2003/2013). However, contrary to our hypotheses, we found that our participants' parental sexual orientation support and concealment were not significantly associated with their risk for suicidality. Other significant factors may be at play in the dynamics of suicidality among bisexual youths.

Looking closely into our descriptive findings as revealed by the Parental Support for Sexual Orientation Scale (PSOS), we anticipated that there would be low parental sexual orientation support for bisexual youths in our study. However, we found that our participants in our study

Table 2 Participants' profile on the PSOS, SOCS, and SBQ-R

Measure	*N*	%	*M*	*SD*
Parental Support for Sexual Orientation Scale (PSOS)			71.31	23.21
Low to average parental support (≤ 72)[a]	81	53.64%		
High parental support (> 72)[a]	70	46.36%		
Sexual Orientation Concealment Scale (SOCS)			1.85	.83
Low concealment (< 4)[b]	149	98.68%		
High concealment (≥ 4)[b]	2	1.32%		
Suicide Behaviors Questionnaire-Revised (SBQ-R)			8.67	3.43
Not at-risk (< 7)[c]	43	28.48%		
At-risk (≥ 7)[c]	108	71.52%		

N = 151

[a, b, c] Values in parentheses indicate the obtained total scores of the participants per scale (a = summed scores on PSOS - Overall Parental Support, b = averaged scores on SOCS, and c = summed scores on SBQ-R)

Table 3 Tests of normality

Variable	Kolmogorov-Smirnov			Shapiro-Wilk		
	D	*df*	*p*	*W*	*df*	*p*
Parental Support for Sexual Orientation Scale (PSOS)	.044	151	.200*	.992	151	.607
Sexual Orientation Concealment Scale (SOCS)	.235	151	.000	.816	151	.000
Suicide Behaviors Questionnaire- Revised (SBQ-R)	.119	151	.000	.968	151	.001

N = 151. *D* = the Kolmogorov-Smirnov test statistic. *W* = the Shapiro-Wilk test statistic. *This indicates a lower bound of the true significance

Table 4 Nonparametric intercorrelations among parental support, concealment, and suicidality

Measure	PSOS	SOCS	SBQ-R
Parental Support for Sexual Orientation Scale (PSOS)	-	−.357**	.018
Sexual Orientation Concealment Scale (SOCS)		-	.050
Suicide Behaviors Questionnaire-Revised (SBQ-R)			-

N = 151 **$p < .01$ (2-tailed)

perceived their parents to support their bisexual sexual orientation. A potential reason for this is its association with child-parent attachment, which posited that the parents of securely attached youths encouraged them with age-appropriate exploration and valued them as unique individuals (Rosario, 2015). This result could be further supported by Gonzalez and colleagues' (2012) findings that there were several remarkable positive experiences among parents who expressed acceptance and support of their LGBTQ child's identity. Such incidents include personal growth (open-mindedness, new perspectives, awareness of discrimination, and compassion), positive emotions (pride and unconditional love), activism, social connection, and closer relationships with their children who belong to sexual minority youth, which could explain why the parents of the bisexual individuals are now starting to support their children belonging in sexual minority youth actively.

Furthermore, according to a review on health and sexual identity development among LGB adolescents, parents usually become more accepting of their child over time despite initial reactions (Rosario & Schrimshaw, 2013, as cited in Katz-Wise et al., 2016). In addition, there have been changes in how society views the LGBT population for the past few years despite the Philippines being one of the countries in Asia with many conservative Roman Catholics (Manalastas & Torre, 2016). These changes are included in the advances in Philippine psychology, which resulted in positive engagements in sexual orientation and gender diversity. Despite its traditional conservatism, the Philippines is still deemed one of the more LGBT-friendly countries in Southeast Asia (Manalastas & Torre, 2016). Congruent to this is the study conducted by Tan and colleagues (2019), where Filipinos were more open-minded and tolerant of sexual minorities. Furthermore, surveys conducted by Pew Research Center showed that 73% of Filipino respondents think that homosexuality should be accepted, with the acceptance rate from 2013 to 2019 remaining the same (Poushter & Kent, 2020; United Nations Development Programme & United States Agency for International Development, 2014). This data is considered a high acceptance rate. The country also yielded the most significant number of respondents who stated they were accepting among the Asian participants in the survey.

We also expected participants to score high on the Sexual Orientation Concealment Scale (SOCS). However, our findings revealed otherwise since SOCS results showed low levels of concealment concerning their bisexuality. This result could be attributed to the fact that most of our participants were recruited in private and public Facebook communities for LGB + individuals and by approaching various LGB + student organizations and advocacy groups. Joining these different groups indicates that the bisexual youths in our study may have adapted to societal stigma and not feel the need to conceal their sexual orientation, thus their low scores on SOCS.

The increasing suicide rates support our participants' high scores on the suicidality measure among bisexual individuals (Hottes et al., 2016; Ross et al., 2018; Tomicic et al., 2016; Yildiz, 2018). However, this increased risk for suicidality was not linked to the lack of parental sexual orientation support or higher concealment need. Therefore, we could say that the high suicidality scores of the participant sample were due to other factors unrelated to parental sexual orientation support and concealment. Among these other factors, self-stigma may be considered. Following the minority stress model by Meyer (2003/2013), other proximal stressors such as self-stigma may also contribute to adverse health outcomes such as suicidal ideation and suicidal behavior among LGBT + persons (Reyes, Davis, Dacanay, et al., 2017; Reyes, Davis, David, et al., 2017). Our findings showed that concealment of sexual orientation was not significantly related to suicidality, similar to what Mereish and colleagues (2017) found in their research on the effects of minority stressors on psychological distress and suicidality among bisexual women adults. Interestingly, concealment was demonstrated to indirectly affect suicidality when mediated by loneliness in their proposed model. The ongoing pandemic may significantly contribute to the suicidality of youths in general, not only those who identify as bisexuals.

Recent studies that investigated the impact of the COVID-19 pandemic among vulnerable populations found that its psychological consequences, together with intersecting social inequalities, aggravate the adverse mental health outcomes (e.g., suicidality, depression, anxiety) among LGBT + people (Green et al., 2020; Whittington et al., 2020). Some studies also discovered that sexual and gender minority (SGM) individuals, including youth cohorts, reported significantly more mental health and substance use impacts of the COVID-19 pandemic than their heterosexual peers (Mitchell et al., 2021; Slemon et al., 2022). Moreover, Moore and colleagues (2021) revealed that COVID-19-related physical symptoms were more common among SGM individuals. Among older LGBT + adults, higher levels of social isolation and loneliness have been recorded as well (Seegert, 2020).

Although we could not significantly prove our hypothesis that parental sexual orientation support and concealment are associated with suicidality, our study has found vital information. Apart from validating the increased risk of suicidality among bisexual youths, our results showed a significant relationship between our independent variables, parental sexual orientation support, and concealment. In a study by Kiekens and Mereish (2021), it was found that a significant relationship exists between daily concealment and family support among LGBTQ + adolescents and that this interaction was predictive of negative affect. LGB

young adults who have expectations of parental rejection may also feel motivated to conceal their identities (Bonet et al., 2007, as cited in Mills-Koonce et al., 2018). In addition, according to Pachankis and Bränström (2018, as cited in Pachankis et al., 2020), in comparison to those living in California and Sweden, it is expected that population-based studies would find that sexual minorities living in less-supportive environments are even more likely to conceal their sexual orientation from all others, with possible buffers against and distinct pathways to mental health issues.

Lastly, the demographic data obtained from our study may help understand further bisexual individuals, who have been mostly excluded from analyses regarding outness, which examines issues such as disclosure and concealment (Meidlinger & Hope, 2014) and whose unique experiences and support needs have received less attention (Loi et al., 2017). Based on the remarkable disparity in participation in the present study (88.74% of the sample are biologically women), identifying as bisexual may be more widespread in women than in men among the youth cohort. Sheets and Mohr (2009) also noted similar findings in their study on psychosocial functioning. They perceived social support from friends and family among bisexual college students ages 18–25 years, reporting that 85% of their participants were women ($n = 210$). Additionally, in an analysis by England and colleagues (2016) across U.S. cohorts, they observed increases in the proportion of women who report a bisexual identity, while no trends for men cohorts were found. Aside from that, in a study conducted by Smith (2019), biological sex was considered one of the intersectionalities, i.e., race, ethnicity, and sexual orientation, which illustrate the differences and variations in the prevalence of suicidal behavior. To further explain this, the study mentioned that suicide rates pose a significant difference by sex, with females found to be more likely to attempt suicide than males (Smith, 2019).

In conclusion, the present study investigated associations among less explored variables, bridging research gaps. In keeping with our literature review, concealment and its possible association with suicidality have been scarcely investigated. Suicide and its risk factors require more research, though existing literature primarily focused on concealment and its relationships with depression and anxiety. More importantly, the present study utilized bisexual participants, a population that has received little research. Our study follows the call for more evidence-based data considering bisexual experiences differently from other sexual minority groups to increase bi-visibility and support, further understand bisexuality, and empower this seemingly minority group within the LGBTQ + community.

Limitations and future directions

The use of self-report data is among the critical limitations of the present study. When people report their own experiences, they are often biased (Devaux & Sassi, 2016). Moreover, cognitive-related concerns (whether the individual answering the questionnaire understands the questions) and socio-related concerns (whether the person's environment influenced their responses) arise when examining this kind of data (Brener et al., 2004). The sampling technique used in this study also poses a weakness. The only way to generalize from a convenience sample to the population is if the sample was selected at random from that population (Andrade, 2020); hence we recommend utilizing a random sample if our study were to be replicated. In addition to the sampling technique, the characteristics of the participants limit the generalizability of our research. Participants were primarily women, college undergraduate students, and all belonged to a specific age group marked by inherent developmental attributes (McDonagh et al., 2018). Experiences of concealment and support may then vary across different bisexual populations, for example, bisexual children who may feel afraid of rejection because they are aware of their parents' attitudes against LGBT + people, delaying disclosure of their sexual orientation or gender identity until they can become independent, have a safe and secure dwelling, and a non-familial social support network to compensate for what may be compromised within their family may be beneficial (Mills-Koonce et al., 2018), and may then exhibit low parental support and high concealment levels.

As for social support dynamics, other facets or sources may be explored. Since results revealed no significant associations among the research variables, high suicidality scores might be attributed to other factors. Future studies may consider family support as a whole, and not only that of parents; there were studies that found family acceptance (parents or guardians) protected against suicidality (Ryan et al., 2010) and greater psychological distress (McConnell et al., 2016) among LGBT youth. Because we used the overall PSOS score for this study, we also recommend that sexual orientation support be explored separately in terms of mother and father support. In addition, the next researchers can look into support sources outside the family. Previous studies discovered that among sexual minority youth, feelings of connectedness to nonparental adults such as teachers and school belonging or safety at school had been found to reduce the risk of suicidality (Hatchel et al., 2018; Taliaferro & Muehlenkamp, 2017).

The research measure PSOS used in this study includes items that inquire into romantic relationships, and it may be fruitful to investigate this variable. The works of Blosnich and Bossarte (2012) and Smith (2019) determined that bisexual youth with dating violence experiences had a

higher suicide risk compared to their gay/lesbian and heterosexual counterparts. Our research findings also indicated that support for concealment and parental sexual orientation were moderately negatively associated. According to Meyer (2003/2013), LGB people who conceal their sexual orientation may also be likely to lack access to support resources; hence the negative association we recorded aligns with Meyer's work. We, therefore, recommend that future studies explore associations between these variables. It may also be worthy to examine loneliness in future studies regarding suicidality considering the COVID-19 pandemic, as the present study was conducted during this period. Lastly, to look deeper into the relationships among the research variables, we also suggest employing a qualitative or mixed-methods research design in future studies. Suicidality was one of the emergent themes that sexual and gender minorities most connected with concealment, according to a mixed-methods study by Brennan (2019). However, the author stated that the qualitative data could not be converged with the quantitative data because the outcome measures did not take suicidality into account. This illustrates the need to explore the research variables further. Utilizing qualitative or mixed-method techniques may also help investigate the specific experiences of bisexual individuals to a greater extent.

Data availability Not applicable.

Code availability Not applicable.

Declarations

Conflicts of interest/Competing interests The authors have no conflicts of interest to declare relevant to the content of this article.

Ethics approval All procedures performed in the present study that involved human participants were by the ethical standards of the Ethics Review Committee (ERC) of the College of Science, University of Santo Tomas.

Consent to participate Each participant in the current study gave informed consent before voluntary participation. In addition, participants were briefed on the nature of the study, were assured that all data collected would be kept confidential, and that participation was purely voluntary without remuneration.

Consent for publication Not applicable.

References

Alarie, M., & Gaudet, S. (2013). "I don't know if she is bisexual or if she just wants to get attention": Analyzing the various mechanisms through which emerging adults invisibilize bisexuality. *Journal of Bisexuality, 13*(2), 191–214. https://doi.org/10.1080/15299716.2013.780004

Andrade, C. (2020). The inconvenient truth about convenience and purposive samples. *Indian Journal of Psychological Medicine, 43*(1), 86–88. https://doi.org/10.1177/0253717620977000

Bilsen, J. (2018). Suicide and youth: Risk factors. *Frontiers in Psychiatry, 9*, 540. https://doi.org/10.3389/fpsyt.2018.00540

Bisexual Resource Center (2019). *Mental health in the bi + community* [Brochure]. https://biresource.org/wp-content/uploads/2019/03/Mental-Health-Brochure-2019.pdf. Accessed 14 May 2021.

Blosnich, J., & Bossarte, R. (2012). Drivers of disparity: Differences in socially-based risk factors of self-injurious and suicidal behaviors among sexual minority college students. *Journal of American College Health, 60*(2), 141–149. https://doi.org/10.1080/07448481.2011.623332

Bonet, L., Wells, B. E., Parsons, J. T. (2007). A positive look at adifficult time: A strength based examination of coming out for lesbian and bisexual women. *Journal of LGBT Health Research*, 3(1), 7–14. https://doi.org/10.1300/j463v03n01_02

Brener, N. D., Billy, J. O. G., & Gady, W. R. (2004). Assessment of factors affecting the validity of self-reported health-risk behavior among adolescents: Evidence from the scientific literature. *Journal of Adolescent Health, 33*(6), 436–457. https://doi.org/10.1016/S1054-139X(03)00052-1

Brennan, J. M. M. (2019). Navigating the closet: A mixed-methods approach to assessing the impact of concealment on psychological outcomes for sexual and gender minorities. *Graduate Student Theses, Dissertations, & Professional Papers*, 11359.https://scholarworks.umt.edu/etd/11359. Accessed 1 Apr 2021.

Brewster, M. E., & Moradi, B. (2010). Perceived experiences of anti-bisexual prejudice: Instrument development and evaluation. *Journal of Counseling Psychology, 57*(4), 451–468. https://doi.org/10.1037/a0021116

Bronfenbrenner, U., & Morris, P. A. (2007). The biological model of the human development. *Handbook of Child Psychology, 1*, 793–828. https://doi.org/10.1002/9780470147658.CHPSY0114

Burke, S. E., & LaFrance, M. (2016). Lay conceptions of sexual minority groups. *Archives of Sexual Behavior, 45*(3), 635–650. https://doi.org/10.1007/s10508-015-0655-5

Cassidy, S. A., Bradley, L., Bowen, E., Wigham, S., & Rodgers, J. (2018). Measurement properties of tools used to assess suicidality in autistic and general population adults: A systematic review. *Clinical Psychology Review, 62*, 56–70. https://doi.org/10.1016/j.cpr.2018.05.002

Chan, R. C. H., Operario, D., & Mak, W. S. W. (2020). Bisexual individuals are at greater risk of poor mental health than lesbians and gay men: The mediating role of sexual identity stress at multiple levels. *Journal of Affective Disorders, 260*, 292–301. https://doi.org/10.1016/j.jad.2019.09.020

Chard, A. N., Finneran, C., Sullivan, P. S., & Stephenson, R. (2015). Experiences of homophobia among gay and bisexual men: Results from a cross-sectional study in seven countries. *Culture Health & Sexuality, 17*(10), 1174–1189. https://doi.org/10.1080/13691058.2015.1042917

Cohen, J. E. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.). Lawrence Erlbaum Associates.

D'Augelli, A. R. (2005). Stress and adaptation among families of lesbian, gay and bisexual youth: Research challenges. *Journal of GLBT Family Studies, 1*(2), 115–135. https://doi.org/10.1300/J461v01n02_07

Devaux, M., & Sassi, F. (2016). Social disparities in hazardous alcohol use: Self-report bias may lead to incorrect estimates. *European Journal of Public Health, 26*(1), 129–134. https://doi.org/10.1093/eurpub/ckv190

Durso, L. E., & Meyer, I. H. (2012). Patterns and predictors of disclosure of sexual orientation to healthcare providers among lesbians, gay men, and bisexuals. *Sexuality Research*

and Social Policy, 10(1), 35–42. https://doi.org/10.1007/s13178-012-0105-2

Dyar, C., Feinstein, B. A., & London, B. (2014). Dimensions of sexual identity and minority stress among bisexual women: The role of partner gender. *Psychology of Sexual Orientation and Gender Diversity, 1*(4), 441–451. https://doi.org/10.1037/sgd0000063

Dyar, C., Feinstein, B. A., & London, B. (2015). Mediators of differences between lesbians and bisexual women in sexual identity and minority stress. *Psychology of Sexual Orientation and Gender Diversity, 2*(1), 43–52. https://doi.org/10.1037/sgd0000090

England, P., Mishel, E., & Claudilo, M. L. (2016). Increases in sex with same-sex partners and bisexual identity across cohorts of women (but not men). *Sociological Science, 3*(42), 951–970.

Fehling, K. B., & Selby, E. A. (2021). Suicide in DSM-5: Current evidence for the proposed suicide behavior disorder and other possible improvements. *Frontiers in Psychiatry, 11*. https://doi.org/10.3389/fpsyt.2020.499980

Feinstein, B. A., & Dyar, C. (2017). Bisexuality, minority stress, and health. *Current Sexual Health Reports, 9*(1), 42–49. https://doi.org/10.1007/s11930-017-0096-3

Friedman, M. R., Dodge, B., Schick, V., Herbenick, D., Hubach, R. D., Bowling, J., & Reece, M. (2014). From bias to bisexual health disparities: Attitudes toward bisexual men and women in the United States. *LGBT Health, 1*(4), 309–318. https://doi.org/10.1089/lgbt.2014.0005

Furlong, A. (2013). *Youth studies: An introduction*. Routledge.

Gilmour, H. (2019). Sexual orientation and complete mental health. *Health reports, Statistics Canada Canadian Centre for Health Information, 30*(11), 3–11. https://doi.org/10.25318/82-003-x201901100001-eng

GLAAD. (2014, September 21). *Erasure of bisexuality.* https://www.glaad.org/bisexual/bierasure. Accessed 30 Jan 2021

GLAAD. (2016, April 15). *Reporting on the bisexual community: A resource for journalists and media professionals*. https://www.glaad.org/sites/default/files/BiMediaResourceGuide.pdf. Accessed 30 Jan 2021

Gonzalez, K. A., Rostosky, S. S., Odom, R. D., & Riggle, E. D. B. (2012). The positive aspects of being the parent of an LGBTQ child. *Family Process, 52*(2), 325–337. https://doi.org/10.1111/famp.12009

Green, A. E., Price-Feeney, M., & Dorison, S. H. (2020, April 20). *Implications of COVID-19 for LGBTQ youth mental health and suicide prevention*. The Trevor Project. https://www.thetrevorproject.org/blog/implications-of-covid-19-for-lgbtq-youth-mental-health-and-suicide-prevention/. Accessed 26 Dec 2021

Hatchel, T., Merrin, G. J., & Espelage, D. L. (2018). Peer victimization and suicidality among LGBTQ youth: The roles of school belonging, self-compassion, and parental support. *Journal of LGBT Youth, 16*(2), 134–156. https://doi.org/10.1080/19361653.2018.1543036

Hottes, T. S., Bogaert, L., Rhodes, A. E., Brennan, D. J., & Gesink, D. (2016). Lifetime prevalence of suicide attempts among sexual minority adults by study sampling strategies: A systematic review and meta-analysis. *American Journal of Public Health, 106*(3), 391–575. https://doi.org/10.2105/AJPH.2016.303088

Ivey-Stephenson, A. Z., Demissie, Z., Crosby, A. E., Stone, D. M., Gaylor, E., Wilkins, N., & Brown, M. (2020). Suicidal ideation and behaviors among high school students — youth risk behavior survey, United States, 2019. *MMWR Supplements, 69*(1), 47–55. https://doi.org/10.15585/mmwr.su6901a6

Jackson, S. D., & Mohr, J. J. (2016). Conceptualizing the closet: Differentiating stigma concealment and nondisclosure processes. *Psychology of Sexual Orientation and Gender Diversity, 3*(1), 80–92. https://doi.org/10.1037/sgd0000147

Johnson, B. (2001). Toward a new classification of non-experimental quantitative research. *Educational Researcher, 30*(2), 3–13. https://doi.org/10.3102/0013189x030002003

Kann, L., Olsen, E. O., McManus, T., Harris, W. A., Shanklin, S. L., Flint, K. H., & Zaza, S. (2016). Sexual identity, sex of sexual contacts, and health-related behaviors among students in grades 9–12 — United States and selected sites, 2015. *MMWR Surveillance Summaries, 65*(9), 1–202. https://doi.org/10.15585/mmwr.ss6509a1

Katz-Wise, S. L., Rosario, M., & Tsappis, M. (2016). Lesbian, gay, bisexual, and transgender youth and family acceptance. *Pediatric Clinics of North America, 63*(6), 1011–1025. https://doi.org/10.1016/j.pcl.2016.07.005

Kibrik, E. L., Cohen, N., Stolowicz-Melman, D., Levy, A., Borucho-vitz-Zamir, R., & Diamond, G. M. (2018). Measuring adult children's perceptions of their parents' acceptance and rejection of their sexual orientation: Initial development of the parental acceptance and rejection of sexual orientation scale (PARSOS). *Journal of Homosexuality, 66*(11), 1513–1534. https://doi.org/10.1080/00918369.2018.1503460

Kiekens, W. J., & Mereish, E. H. (2021). The association between daily concealment and affect among sexual and gender minority adolescents: The moderating role of family and peer support. *Journal of Adolescent Health*, 1–8. https://doi.org/10.1016/j.jadohealth.2021.11.019

Kuyper, L., & Fokkema, T. (2011). Minority stress and mental health among Dutch LGBs: Examination of differences between sex and sexual orientation. *Journal of Counseling Psychology, 58*(2), 222–233. https://doi.org/10.1037/a0022688

Lehavot, K., & Simoni, J. M. (2011). The impact of minority stress on mental health and substance use among sexual minority women. *Journal of Consulting and Clinical Psychology, 79*(2), 159–170. https://doi.org/10.1037/a0022839

Lian, Q., Zuo, X., Lou, C., Gao, E., & Cheng, Y. (2015). Sexual orientation and risk factors for suicidal ideation and suicide attempts: A multi-center cross-sectional study in three Asian cities. *Journal of Epidemiology, 25*(2), 155–161. https://doi.org/10.2188/jea.JE20140084

Loi, B., Lea, T., & Howard, J. (2017). Substance use, mental health, and service access among bisexual adults in Australia. *Journal of Bisexuality, 17*(4), 400–417. https://doi.org/10.1080/15299716.2017.1401501

Manalastas, E. J. (2013). Sexual orientation and suicide risk in the Philippines: Evidence from a nationally representative sample of young Filipino men. *Psychological Association of the Philippines, 46*(1), 1–13.

Manalastas, E. J. (2016). Suicide ideation and suicide attempt among young lesbian and bisexual Filipina women: Evidence for disparities in the Philippines. *Asian Women Autumn, 32*(3), 101–120.

Manalastas, E. J., & Torre, B. (2016). LGBT psychology in the Philippines. *Psychology of Sexualities Review, 7*(1), 60–72.

Marks, C. (2012). *The relationship of parental attachment, parental support, and parental acceptance of LGB identity with self-compassion and emotional distress.* Oklahoma State University. https://shareok.org/bitstream/handle/11244/25681/Marks_okstate_0664M_13711.pdf?sequence=1&isAllowed=y. Accessed 23 Apr 2021.

Marshal, M. P., Dietz, L. P., Friedman, M. S., Stall, R., Smith, H., McGinley, J., & Brent, D. A. (2011). Suicidality and depression disparities between sexual minority and heterosexual youth: A meta-analytic review. *Journal Adolescence Health, 49*(2), 115–123. https://doi.org/10.1016/j.jadohealth.2011.02.005

McCann, E., Brown, M. J., & Taylor, J. (2020). The views and experiences of bisexual people regarding their psychosocial support needs: A qualitative evidence synthesis. *Journal of*

Psychiatric and Mental Health Nursing, 28(3), 430–443. https://doi.org/10.1111/jpm.12680

McConnell, E. A., Birkett, M., & Mustanski, B. (2016). Families matter: Social support and mental health trajectories among lesbian, gay, bisexual, and transgender youth. *Journal of Adolescent Health, 59*(6), 674–680. https://doi.org/10.1016/j.jadohealth.2016.07.026

McDonagh, J. E., Ambresin, A. E., Boisen, K. A., Fonseca, H., Kruse, P. J., Meynard, A., & Takeuchi, Y. L. (2018). The age of adolescence… and young adulthood. *The Lancet Child & Adolescent Health, 2*(4), e6. https://doi.org/10.1016/s2352-4642(18)30079-8

Meidlinger, P. C., & Hope, D. A. (2014). Differentiating disclosure and concealment in measurement of outness for sexual minorities: The Nebraska outness scale. *Psychology of Sexual Orientation and Gender Diversity, 1*(4), 489–497. https://doi.org/10.1037/sgd0000080

Mereish, E. H., Katz-Wise, S. L., & Woulfe, J. (2017). Bisexual-specific minority stressors, psychological distress, and suicidality in bisexual individuals: The mediating role of loneliness. *Prevention Science, 18*(6), 716–725. https://doi.org/10.1007/s11121-017-0804-2

Meyer, I. H. (2013). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychology of Sexual Orientation and Gender Diversity, 1*(S), 3–26. https://doi.org/10.1037/2329-0382.1.s.3 (Original work published 2003).

Michaels, M. S., Parent, M. C., & Torrey, C. L. (2016). A minority stress model for suicidal ideation in gay men. *Suicide and Life-Threatening Behavior, 46*(1), 23–34. https://doi.org/10.1111/sltb.12169

Miller, M., André, A., Ebin, J., & Bessonova, L. (2007). *Bisexual health: Model practices for HIV/STI prevention programming*. The National Gay and Lesbian Task Force Policy Institute. https://www.ilga-europe.org/sites/default/files/bisexual_health.pdf. Accessed 25 May 2022.

Mills-Koonce, W. R., Rehder, P. D., & McCurdy, A. L. (2018). The significance of parenting and parent-child relationships for sexual and gender minority adolescents. *Journal of Research on Adolescence, 28*(3), 637–649. https://doi.org/10.1111/jora.12404

Miranda-Mendizábal, A., Castellví, P., Parés-Badell, O., Almenara, J., Alonso, I., Blasco, M. J., & Alonso, J. (2017). Sexual orientation and suicidal behaviour in adolescents and young adults: Systematic review and meta-analysis. *The British Journal of Psychiatry, 211*(2), 77–87. https://doi.org/10.1192/bjp.bp.116.196345

Mitchell, K. J., Ybarra, M. L., Banyard, V., Goodman, K. L., & Jones, L. M. (2021). Impact of the COVID-19 pandemic on perceptions of health and wellbeing among sexual and gender minority adolescents and emerging adults. *LGBT Health*. https://doi.org/10.1089/lgbt.2021.0238

Mohr, J. J., & Fassinger, R. E. (2003). Self-acceptance and self-disclosure of sexual orientation in lesbian, gay, and bisexual adults: An attachment perspective. *Journal of Counseling Psychology, 50*(4), 482–495. https://doi.org/10.1037/0022-0167.50.4.482

Moore, S. E., Wierenga, K. L., Prince, D. M., Gillani, B., & Mintz, L. J. (2021). Disproportionate impact of the COVID-19 pandemic on perceived social support, mental health and somatic symptoms in sexual and gender minority populations. *Journal of Homosexuality, 68*(4), 577–591. https://doi.org/10.1080/00918369.2020.1868184

Movement Advancement Project, BiNet, U. S. A., & Bisexual Resource Center. (2014). *Understanding issues facing bisexual Americans*. https://www.lgbtmap.org/file/understanding-issues-facing-bisexual-americans.pdf. Accessed 31 Jan 2021.

Needham, B. L., & Austin, E. L. (2010). Sexual orientation, parental support, and health during the transition to young adulthood. *Journal of Youth and Adolescence, 39*(10), 1189–1198. https://doi.org/10.1007/s10964-010-9533-6

Osman, A., Bagge, C. L., Gutierrez, P. M., Konick, L. C., Kopper, B. A., & Barrios, F. X. (2001). The suicidal behaviors questionnaire-revised (SBQ-R): Validation with clinical and non-clinical samples. *Assessment, 8*(4), 443–454. https://doi.org/10.1177/107319110100800409

Pachankis, J. E., Bränström, R. (2018). Hidden from happiness: Structural stigma, sexual orientation concealment, and life satisfaction across 28 countries. *Journal of Consulting and Clinical Psychology*, 86(5), 403–415. https://doi.org/10.1037/ccp0000299

Pachankis, J. E., Mahon, C. P., Jackson, S. D., Fetzner, B. K., & Bränström, R. (2020). Sexual orientation concealment and mental health: A conceptual and meta-analytic review. *Psychological Bulletin, 146*(10), 831–871. https://doi.org/10.1037/bul0000271

Pennasilico, A., & Amodeo, A. L. (2019). The Invisi_les: Biphobia, bisexual erasure and their impact on mental health. *puntOorg International Journal, 4*(1), 21–28. https://doi.org/10.19245/25.05.pij.4.1.4

Persson, T. J., & Pfaus, J. G. (2015). Bisexuality and mental health: Future research directions. *Journal of Bisexuality, 15*(1), 82–98. https://doi.org/10.1080/15299716.2014.994694

Pew Research Center (2013). *A survey of LGBT Americans* [Data set]. https://www.pewresearch.org/social-trends/2013/06/13/a-survey-of-lgbt-americans/. Accessed 14 May 2021.

Pollitt, A. M., Muraco, J. A., Grossman, A. H., & Russell, S. T. (2017). Disclosure stress, social support, and depressive symptoms among cisgender bisexual youth. *Journal of Marriage and Family, 79*(5), 1278–1294. https://doi.org/10.1111/jomf.12418

Pompili, M., Lester, D., Forte, A., Seretti, M. E., Erbuto, D., Lamis, D. A., & Girardi, P. (2014). Bisexuality and suicide: A systematic review of the current literature. *The Journal of Sexual Medicine, 2*(8), 1903–1913. https://doi.org/10.1111/jsm.12581

Poushter, J., & Kent, N. (2020, June 25). *Views of homosexuality around the world*. Pew Research Center's Global Attitudes Project. https://www.pewresearch.org/global/2020/06/25/global-divide-on-homosexuality-persists. Accessed 26 Dec 2021.

Prell, E., & Traeen, B. (2018). Minority stress and mental health among bisexual and lesbian women in Norway. *Journal of Bisexuality, 21*(1), 278–298. https://doi.org/10.1080/15299716.2018.1518180

Psychological Association of the Philippines. (2011). Statement of the Psychological Association of the Philippines on non-discrimination based on sexual orientation, gender identity, and expression. *Philippine Journal of Psychology, 44*(2), 229–230.

Psychological Association of the Philippines (2020, August 14). *PAP statement upholding the basic human rights and wellbeing of LGBT persons based on the psychological science of SOGIE*. https://pap.ph/position-paper/12. Accessed 12 July 2021

Reyes, M. E., Davis, R. D., Dacanay, P. M., Antonio, A. S., Beltran, J. S., Chuang, M. D., & Leoncito, A. L. (2017). The presence of self-stigma, perceived stress, and suicidal ideation among selected LGBT Filipinos. *Psychological Studies, 62*, 284–290. https://doi.org/10.1007/s12646-017-0422-x

Reyes, M. E., Davis, R. D., David, A. J. A., Del Rosario, C. J. C., Dizon, A. P. S., Fernandez, J. L. M., & Viquiera, M. A. (2017). Stigma burden as a predictor of suicidal behavior among lesbians and gays in the Philippines. *Suicidology Online, 8*(26), 1–10.

Riggle, D. B. E., Rostosky, S. S., Black, W. W., & Rosenkrantz, D. E. (2017). Outness, concealment, and authenticity: Associations with LGB individuals' psychological distress and wellbeing. *Psychology of Sexual Orientation and Gender Diversity, 4*(1), 54–62. https://doi.org/10.1037/sgd0000202

Ritchie, H., Roser, M., & Ortiz-Ospina, E. (2015). *Suicide*. Our World in Data. https://ourworldindata.org/suicide#suicide-is-a-leading-cause-of-death-especially-in-young-people. Accessed 22 Feb 2021.

Rosario, M., Schrimshaw, E.W. (2013). The sexual identity development and health of lesbian, gay, and bisexual adolescents: An ecological perspective. In: C. J. Patterson A.R. D'Augelli (Eds.), *Handbook of psychology and sexual orientation* pp. 87–101.

Rosario, M. (2015). Implications of childhood experiences for the health and adaptation of lesbian, gay, and bisexual individuals: Sensitivity to developmental process in future research. *Psychology of Sexual Orientation and Gender Diversity, 2*(3), 214–224. https://doi.org/10.1037/sgd0000120

Ross, L. E., Dobinson, C., & Eady, A. (2010). Perceived determinants of mental health for bisexual people: A qualitative examination. *American Journal of Public Health, 100*(3), 496–502. https://doi.org/10.2105/AJPH.2008.156307

Ross, L. E., Salway, T., Tarasoff, L. A., MacKay, J. M., Hawkins, B. W., & Fehr, C. P. (2018). Prevalence of depression and anxiety among bisexual people compared to gay, lesbian, and heterosexual individuals: A systematic review and meta-analysis. *The Journal of Sex Research, 55*(4–5), 435–456. https://doi.org/10.1080/00224499.2017.1387755

Russell, S. T. (2003). Sexual minority youth and suicide risk. *American Behavioral Scientist, 46*(9), 1241–1257. https://doi.org/10.1177/0002764202250667

Ryan, C., Russell, S. T., Huebner, D., Diaz, R., & Sanchez, J. (2010). Family acceptance in adolescence and the health of LGBT young adults. *Journal of Child and Adolescent Psychiatric Nursing, 23*(4), 205–213. https://doi.org/10.1111/j.1744-6171.2010.00246.x

Salway, T., Ross, L. E., Fehr, C. P., Burley, J., Asadi, S., Hawkins, B., & Tarasoff, L. A. (2018). A systematic review and meta–analysis of disparities in the prevalence of suicide ideation and attempt among bisexual populations. *Archives of Sexual Behavior, 48*, 89–111. https://doi.org/10.1007/s10508-018-1150-6

Sarno, E. L., Newcomb, M. E., Feinstein, B. A., & Mustanski, B. (2020). Bisexual men's experiences with discrimination, internalized binegativity, and identity affirmation: Differences by partner gender. *Archives of Sexual Behavior, 49*(5), 1783–1798. https://doi.org/10.1007/s10508-020-01712-z

Schrimshaw, E. W., Siegel, K., Downing, M. J., & Parsons, J. T. (2013). Disclosure and concealment of sexual orientation and the mental health of non-gay-identified, behaviorally-bisexual men. *Journal of Consulting and Clinical Psychology Author Manuscript, 81*(1), 141–153. https://doi.org/10.1037/a0031272

Scroggs, B., & Vennum, A. (2020). Gender and sexual minority group identification as a process of identity development during emerging adulthood. *Journal of LGBT Youth*, 1–18. https://doi.org/10.1080/19361653.2020.1722780

Seegert, L. (2020, April 17). *COVID-19 is hitting older LGBTQ adults especially hard.* Association of Health Care Journalists. https://healthjournalism.org/blog/2020/04/covid-19-is-hitting-older-lgbtq-adults-especially-hard/. Accessed 26 Dec 2021.

Selya, A. S., Rose, J. S., Dierker, L. C., Hedeker, D., & Mermelstein, R. J. (2012). A practical guide to calculating Cohen's f2, a measure of local effect size, from PROC MIXED. *Frontiers in Psychology, 3*. https://doi.org/10.3389/fpsyg.2012.00111

Sheets, R. L., & Mohr, J. J. (2009). Perceived social support from friends and family and psychosocial functioning in bisexual young adult college students. *Journal of Counseling Psychology, 56*(1), 152–163. https://doi.org/10.1037/0022-0167.56.1.152

Slemon, A., Richardson, C., Goodyear, T., Salway, T., Gadermann, A., Pliffe, J. L., & Jenkins, E. K. (2022). Widening mental health and substance use inequities among sexual and gender minority populations: Findings from a repeated cross-sectional monitoring survey during the COVID-19 pandemic in Canada. *Psychiatry Research, 144*(327), 307. https://doi.org/10.1016/j.psychres.2021.114327

Smith, A. U. (2019). *The influence of intersectionality on bullying, teen dating violence, and suicide risk among bisexual adolescents* [Doctoral dissertation]. https://scholarship.miami.edu/discovery/fulldisplay/alma991031447198402976/01UOML_INST:ResearchRepository. Accessed 23 Dec 2021.

Taliaferro, L. A., & Muehlenkamp, J. J. (2017). Nonsuicidal self-injury and suicidality among sexual minority youth: Risk factors and protective connectedness factors. *Academic Pediatrics, 17*(7), 715–722. https://doi.org/10.1016/j.acap.2016.11.002

Tan, A. C. C., Reyes, M. E. S., & Davis, R. D. (2019). Parental attitude, internalized homophobia, and suicidal ideation among selected self-identified Filipino gay men in the Philippines. *Suicidology Online, 10*(8), 2078–5488.

Tomicic, A., Gálvez, C., Quiroz, C., Martínez, C., Fontbona, J., Rodríguez, J., & Lagazzi, I. (2016). Suicidio en poblaciones lesbiana, gay, bisexual y trans: Revisión sistemática de una década de investigación (2004–2014) [Suicide in lesbian, gay, bisexual and trans populations: Systematic review of a decade of research (2004–2014)]. *Revista Medica De Chile, 144*(6), 723–733. https://doi.org/10.4067/S0034-98872016000600006

Ulrich, L. (2011). *Bisexual invisibility: Impacts and recommendations*. San Francisco Human Rights Commission. https://sf-hrc.org//sites/default/files/Documents/HRC_Publications/Articles/Bisexual_Invisiblity_Impacts_and_Recommendations_March_2011.pdf. Accessed 30 Jan 2021.

United Nations Development Programme, & United States Agency for International Development (2014). Being LGBT in Asia: The Philippine country report. https://digital.library.unt.edu/ark:/67531/metadc949211/. Accessed 21 Feb 2021.

Whittington, C., Hadfield, K., & Calderón, C. (2020). *The lives & livelihoods of many in the LGBTQ community are at risk amidst COVID-19 crisis.* Human Rights Campaign Foundation. https://assets2.hrc.org/files/assets/resources/COVID19-IssueBrief-032020-FINAL.pdf?_ga=2.89560472.2076693721.1640498290-154966313.1640498290. Accessed 26 Dec 2021.

World Health Organization (2019, July 18). *Adolescent health in the South-East Asia region*. https://www.who.int/southeastasia/health-topics/adolescent-health. Accessed 4 July 2021

World Health Organization (2021, June 17). *Suicide*. https://www.who.int/news-room/fact-sheets/detail/suicide. Accessed 4 July 2021

Yildiz, E. (2018). Suicide in sexual minority populations: A systematic review of evidence-based studies. *Archives of Psychiatric Nursing, 32*(4), 650–659. https://doi.org/10.1016/j.apnu.2018.03.003

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