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DOI

[10.1080/00918369.2019.1656507](https://doi.org/10.1080/00918369.2019.1656507)

Publication date

2021

Document Version

Final published version

Published in

Journal of homosexuality

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Citation for published version (APA):

Shenkman, G., Stein, Y., & Bos, H. (2021). The Mediating Role of Attachment Avoidance in the Association between Sexual Orientation and Mental Health. *Journal of homosexuality*, 68(3), 461-475. <https://doi.org/10.1080/00918369.2019.1656507>

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The Mediating Role of Attachment Avoidance in the Association between Sexual Orientation and Mental Health

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ABSTRACT

The current study examined whether attachment avoidance mediates the association between being a sexual minority (gay men or lesbian women) and poorer mental health outcomes. For this purpose a community-dwelling sample of 350 gay men and lesbian women ($M = 30.39$, $SD = 6.82$) and 445 heterosexual men and women ($M = 26.95$, $SD = 3.11$) completed measures of attachment avoidance, depressive symptoms, anxiety symptoms and life satisfaction. Results showed that gay men and lesbians reported poorer mental health. Moreover, attachment avoidance had a mediating effect on the association between being a sexual minority and depressive symptoms, anxiety symptoms and life satisfaction. These findings are some of the first to suggest empirical support for the role of attachment avoidance in accounting for the mental health vulnerability of gay men and lesbians. The results contribute to a better understanding of the minority stress model and should be addressed by practitioners.

KEYWORDS

Mental health, attachment avoidance, sexual orientation, depressive symptoms, anxiety, life satisfaction

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Introduction

Gay men and lesbian women (GL) encounter hardships due to their minority status which expose them to stigma, prejudice, and discrimination. These adversities can negatively impact the mental health of GL individuals. Meyer's minority stress theory (Meyer, 2003) suggests that proximal stressors (e.g., difficulties in accepting one's sexual orientation) and distal stressors (e.g., harassment from family and peers) are related to poor mental health outcomes such as depression, anxiety disorders and alcohol dependence, as well as suicidal ideation and attempts. These mental health issues appear in higher rates among GL than in heterosexual individuals (King et al., 2008). While the association between sexual orientation and mental health has attracted growing research attention in the last two decades (e.g., Balsam, Beauchaine, Mickey, & Rothblum, 2005; Davis, Weiss, Tull, & Gratz, 2017), scant research has been conducted on the role of attachment orientation in this association (Rosario et al., 2014), despite calls for more studies (Cook & Calebs, 2016). The current work examines the mediating role of attachment avoidance in the association between sexual orientation and mental health. It contributes to the literature on minority stress by showing that mental health disparities between GL and heterosexual counterparts may be related in part to higher levels of attachment avoidance among GL individuals.

Epidemiological research has identified the multiple mental health burdens faced by members of sexual minorities (Cochran, 2001). Hatzenbuehler's psychological mediation framework (Hatzenbuehler, 2009) suggests that sexual minorities face increased exposure to stress resulting from stigma, and that this stigma-related stress leads to greater emotion dysregulation, social/interpersonal problems and cognitive processes

that heighten the risk of psychopathology. These processes in turn may mediate the relationship between sexual orientation and psychopathology. Although possible mediating variables in the association between sexual orientation and mental health have been studied, most of these variables have been interpersonal, such as family connectedness (Eisenberg & Resnick, 2006), and acceptance coping and social support (Safren & Heimberg, 1999). Fewer studies have explored the mediating role of intrapersonal psychological factors such as rumination and emotional awareness (Hatzenbuehler, McLaughlin, & Nolen-Hoeksema, 2008). Little attention has been paid to insecure attachment as a potential intrapersonal psychological mediator in the context of minority sexual orientation and mental health (Rosario et al., 2014).

Attachment avoidance and sexual orientation

According to attachment theory, individuals' repeated experiences with their significant caretaker from infancy result in the formation of relatively stable patterns of expectations, desires, feelings and behaviors in interpersonal interactions (Hazan & Shaver, 1987), and have a continuing effect on the individual's interpsychic organization (Mikulincer & Shaver, 2016). Attachment researchers usually categorize attachment into a secure attachment orientation and two insecure orientations known as attachment anxiety and attachment avoidance (Hazan & Shaver, 1994). While secure attachment assists individuals in maintaining their emotional balance in the face of distress (Bowlby, 1973), anxiously attached people tend to rely on emotionally-based coping mechanisms that increase distress and reduce their ability to regulate emotions (Mikulincer & Shaver, 2016). Individuals who are characterized as more attachment avoidant tend to be less trustful of others during times of need and show more excessive self-reliance strategies in situations of distress (Bowlby, 1988; Mikulincer & Shaver, 2016).

Whereas adult attachment research traditionally suggested that attachment style is relatively stable and even partially heritable (Picardi, Fagnani, Nisticò, & Stazi, 2011), researchers have also explored attachment instability and predictors of attachment style change, under the assumption that working models of attachment can vary in response to watershed experiences with significant others (Bowlby, 1988; Davila, Burge, & Hammen, 1997). In the context of sexual orientation, it was suggested that negative parental reactions to a child's coming out process may change his or her working models of attachment, leading to the adoption of a more avoidant viewpoint on the environment (Mohr & Fassinger, 2003; Mohr & Jackson, 2016). In the same vein, it was suggested that the hardships experienced by many members of sexual minorities such as harassment, bullying, and rejection, may lead to further reliance on avoidant strategies, which may eventually affect relationships through greater avoidance of intimacy and interdependence (Landolt, Bartholomew, Saffrey, Oram, & Perlman, 2004).

There are few comparative studies to date of heterosexuals and sexual minority individuals on attachment styles and most works have reported no differences in attachment styles between these populations (Kurdek, 2002; Ridge & Feeney, 1998). However, recent studies report more insecure attachment among GL in comparison to heterosexual counterparts with an emphasis on more attachment avoidance (Nematy & Oloomi, 2016; Shenkman, Bos, & Kogan, 2019). These differences were interpreted in light of the possible links between minority stress, discrimination and oppression and higher attachment avoidance (Mohr & Jackson, 2016).

Attachment avoidance as a mediator in the link between sexual orientation and mental health

The Cook and Calebs Integrated attachment and sexual minority stress model (Cook & Calebs, 2016) aims to elucidate the complex interactions between attachment and sexual minority stress across the life course. Given the current literature linking sexual minority status with more attachment avoidance (Mohr & Jackson, 2016; Shenkman et al., 2019), works associating higher levels of attachment avoidance with

impaired mental health (e.g., Hankin, Kassel, & Abela, 2005; Wei, Russell, & Zakalik, 2005), and the psychological mediation framework in the association between sexual orientation and psychopathology (Hatzenbuehler, 2009), here it was predicted that attachment avoidance would have a mediation effect on the association between being GL and mental health.

Specifically, the aim of the current study was to examine the mediating role of attachment avoidance in the association between sexual orientation and mental health. We hypothesized that (1) Gay men and lesbian women would report poorer mental health as indicated by more depressive symptoms, more anxiety symptoms, and less life satisfaction, in comparison to heterosexual counterparts; (2) Attachment avoidance would mediate mental health disparities by sexual orientation, such that the poorer mental health expected among gay men and lesbian women relative to heterosexual counterparts could be accounted for their greater attachment avoidance.

Method

Participants

The sample was composed of 795 individuals (52.83% women) ranging in age from 18 to 71 ($M_{\text{age}} = 28.46$, $SD_{\text{age}} = 5.36$) who were recruited via websites, e-mail, and social media to participate in a larger study on psychological coping with hardships. GL participants were recruited in a targeted sampling to ensure sufficient amount of participants (Watters & Biernacki, 1989). Of the total group 44.02% ($n = 350$) self-reported to be predominantly or exclusively gay or lesbian. Slightly more than half (54.8%, $n = 435$) of the total sample did not have a partner; 61.2% ($n = 486$) had an academic degree. Most participants (88.4%, $n = 702$) lived in a city, and had a mean score of 3.30 ($SD = 0.94$) on their self-rated economic status, indicating average income.

Procedure

From November 2016 to March 2018 GL and heterosexual participants were recruited via announcements on internet forums, social media, and an online newspaper which published an article asking both GL and heterosexual individuals to participate voluntarily and anonymously in a survey dealing with psychological coping with hardships. The announcement also included a link to an online web survey (using the Qualtrics online platform, www.qualtrics.com) that was filled out by 1,189 people. For the present study, only childless individuals who completed the questions on attachment avoidance and mental health (indicated by depressive symptoms, anxiety symptoms and life satisfaction), and also identified themselves as predominantly or exclusively gay/lesbian or exclusively heterosexual were included in the analyses. It should be noted that the rationale for including in the GL group participants that identified as predominantly or exclusively gay/lesbian participants was that among GL more sexual fluidity was documented in comparison to heterosexual counterparts (e.g., Katz-Wise, 2015). Only childless individuals were included, as same-sex parenthood has been shown to associate more strongly with mental health indicators among same-sex, in comparison to different-sex, parents (e.g., Erez & Shenkman, 2016; Shenkman & Shmotkin, 2019). Sixty-seven percent of the 1,189 people who filled in the online questionnaire met these inclusion criteria, which resulted in a total sample of 795. The study was approved by the ethics committee of the institutional review board of the Interdisciplinary Center (IDC) Herzliya.

Measures

Sexual orientation

Assessment of sexual orientation was made on a 7-point self-rating scale (the Kinsey scale; Kinsey, Pomeroy, & Martin, 1948) ranging from 0 (*exclusively heterosexual*) to 6 (*exclusively homosexual*). Individuals who self-reported to be exclusively homosexual (6 on the Kinsey scale) or predominantly

homosexual (5 on the Kinsey scale) were identified as being GL. The heterosexual participants in the study were those who indicated they were exclusively heterosexual.

Attachment avoidance

Attachment avoidance was assessed on a subscale of the Experiences in Close Relationships questionnaire (ECR; Brennan, Clark, & Shaver, 1998). Originally the ECR assessed experiences with recent romantic partners; however, researchers have broadened the ECR to “close relationships” (Mikulincer & Shaver, 2016). In the current study this version of the ECR indicated close relationships more broadly. The attachment avoidance scale consisted of 18 items (e.g., “I don’t feel comfortable opening up to other people in close relationships”). Participants rated the extent to which they agreed with each statement on a 7-point scale (1 = *not at all* – 7 = *very much*). The Cronbach alpha coefficient for attachment avoidance was .91. This instrument has been extensively used for research and clinical purposes worldwide (Mikulincer & Shaver, 2016).

Center for epidemiologic studies depression scale (CES-D)

CES-D was designed to assess self-reported symptoms associated with depression (Radloff, 1977). This measure consisted of 20 items describing major components of depressive symptomatology. For each item, respondents were asked to rate how often they had felt or behaved this way in the past week (e.g., “I felt that I could not shake off the blues even with help from my family or friends”). Ratings ranged from 1 (*rarely or none of the time*) to 4 (*most or all of the time*). Cronbach’s alpha coefficient was .91. This instrument has been extensively used for research and clinical purposes (Shenkman, 2012; Stanbury, Ried, & Velozo, 2006; Zhou & Li, 2017).

Anxiety symptoms

This scale was designed to assess self-reported symptoms associated with anxiety indicated by an abridged five item version of Beck’s inventory of clinical anxiety (Beck, Epstein, Brown, & Steer, 1988). Respondents were asked to rate how often they had felt this way in the past week (e.g., “nervous,” and “fear of dying”). Ratings ranged from 1 (*rarely*) to 4 (*most or all of the time*). Cronbach’s alpha coefficient was 0.76. This instrument has been extensively used for research (e.g., Creamer, Foran, & Bell, 1995).

Satisfaction with life scale (SWLS)

This measure was constructed to assess life satisfaction as the cognitive aspect of subjective well-being (Diener, Emmons, Larsen, & Griffin, 1985). The measure consists of five items referring to judgments of one’s life (e.g., “The conditions of my life are excellent”) and are rated by respondents on a scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Cronbach’s alpha coefficient of SWLS in the current sample was 0.87. The instrument was proved to have highly favorable psychometric properties (Pavot & Diener, 1993; Shenkman & Shmotkin, 2016).

Data analysis

Data analysis was conducted using SPSS 25. Preliminary analyses were conducted to identify potential covariates by examining sexual orientation differences in the demographic variables using chi-square tests and t-tests. To test the hypothesis that GL would report poorer mental health than heterosexual counterparts, univariate analyses of covariance (ANCOVAs) were performed (gender, age, place of residence, level of education, and relationship status were controlled for, as they significantly differentiated between groups). Then, to examine whether attachment avoidance had a mediating effect on the association between sexual orientation and depression, anxiety and life satisfaction, the PROCESS macro (model 4; Hayes, 2018) was

implemented. It assesses the significance of the cross product of the coefficients for the predictor to mediator relation (Path a) and the mediator to the outcome relation, controlling for the predictor (Path b). To test the significance of a mediation effect, we used Hayes' (2018) method and calculated 5,000 bootstrapped samples to estimate the 95% bias-corrected and accelerated confidence intervals (CIs) of the indirect effects of being a member of a sexual minority on depression, anxiety and life satisfaction through attachment avoidance. If the confidence intervals of the indirect effect do not include zero, there is a significant mediation effect. The ab cross product test is considered by many the best all-around available method to test mediation or indirect effects and is recommended over more traditional mediation approaches (Baron & Kenny, 1986; Hayes, 2009, 2018). Conditional process analysis (moderated mediation, model 7) was also conducted to examine whether the proposed mediation model differed as a function of gender.

Results

Preliminary analyses were conducted to identify potential covariates by examining sexual orientation differences in the demographic variables using chi-square tests (for gender, being in a relationship, place of residence, level of education, self-rated religiosity and family religion) and t-tests (for age and self-rated economic status). The findings are presented in Table 1. Among men there were more participants who reported being gay than those who reported being heterosexual, and among women there were more heterosexual than lesbian participants. This difference between men and women on sexual orientation was significant. Compared to the heterosexual participants, GL participants were significantly older, were less likely to be in a romantic relationship, lived more often in a city and fewer had a college degree or tertiary education (see Table 1). No significant difference was found between GL and heterosexual participants as regards their place of birth, self-rated economic status, self-rated religiosity, or family religion.

Table 1. Descriptive characteristics of the study groups (Table view)

Variable	Gay men and lesbian women (<i>N</i> = 350)	Heterosexual men and women (<i>N</i> = 445)	Difference test <i>t</i> / χ^2	<i>P</i>
Gender (%)			χ^2 (1) = 88.97	<.001
Men	66.0	32.4		
Women	34.0	67.6		
Age			<i>t</i> (793) = -8.76	<.001
<i>M</i>	30.39	26.95		
<i>SD</i>	6.82	3.11		
Place of birth (%)			χ^2 (1) = 1.13	.289
Israel	94.9	93.0		
Elsewhere	5.1	7.0		
Education (%)			χ^2 (1) = 8.81	.003
Academic degree	55.4	65.8		
No academic degree	44.6	34.2		
Currently in a relationship (%)			χ^2 (1) = 5.45	.020
In relationship	40.6	48.9		
Not in relationship	59.4	51.1		
Place of residence (%)			χ^2 (1) = 7.86	.005
City	92.0	85.6		
Other	8.0	14.4		

Variable	Gay men and lesbian women (<i>N</i> = 350)	Heterosexual men and women (<i>N</i> = 445)	Difference test <i>t</i> / χ^2	<i>P</i>
Self-rated economic status (%)			<i>t</i> (792) = .89	.371
Low	5.4	3.2		
Below average	12.9	11.5		
Average	41.7	42.8		
Above average	29.4	34.5		
High	10.6	8.1		
<i>M</i>	3.27	3.33		
<i>SD</i>	0.99	0.90		
Family religion (%)			χ^2 (1) = .24	.624
Jewish	97.4	96.8		
Other	2.6	3.2		
Self-rated religiousness (%)			χ^2 (1) = 1.32	.251
Secular	81.1	84.2		
Traditionalist/orthodox	18.9	15.8		

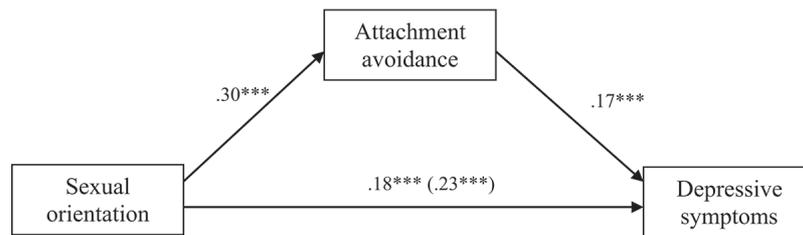
The t-tests regarding, age and self-rated economic status compared the respective means of the groups.

The ANCOVA revealed a higher level of depressive symptoms in the GL ($M = 1.85$, $SD = 0.57$) than the heterosexual ($M = 1.65$, $SD = 0.42$) group, $F(1, 787) = 36.74$, $p < .001$, partial $\eta^2 = .045$. Similarly, the ANCOVA revealed a higher level of anxiety symptoms in the GL ($M = 2.00$, $SD = 0.64$), than the heterosexual ($M = 1.85$, $SD = 0.50$) group, $F(1, 787) = 26.56$, $p < .001$, partial $\eta^2 = .033$. The ANCOVA for life satisfaction also revealed a lower level for GL ($M = 4.48$, $SD = 1.34$), in comparison to the heterosexual ($M = 5.00$, $SD = 1.16$) group, $F(1, 787) = 15.49$, $p < .001$, partial $\eta^2 = .019$.

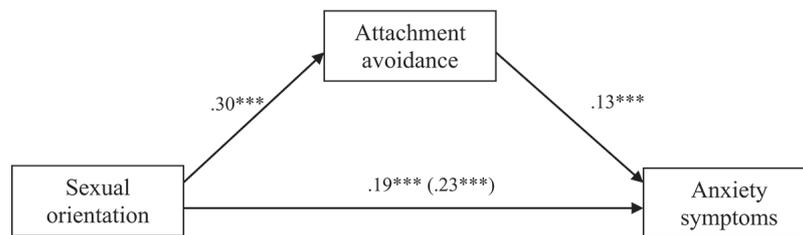
A comparison of the two groups on attachment avoidance revealed that GL reported higher levels of attachment avoidance ($M = 3.34$, $SD = 1.09$) than their heterosexual counterparts ($M = 2.97$, $SD = 0.98$), $F(1, 787) = 13.93$, $p < .001$, partial $\eta^2 = .017$.

Mediation analyses were then conducted to test the hypothesis that attachment avoidance would mediate the association between being a member of a sexual minority (GL) and depressive symptoms, anxiety symptoms, and life satisfaction. The results, as shown in Figure 1(a), indicated that being GL was associated with higher attachment avoidance, which in turn was associated with higher depressive symptoms. The analysis indicated that the confidence intervals of the indirect effect did not contain zero (mediated $b = .05$, $SE = .01$, 95% CI [.02, .08]); i.e., that attachment avoidance had a significant mediation effect on the association between being GL and depressive symptoms. A similar analysis was conducted to examine the mediation effect of attachment avoidance on the association between being GL and anxiety symptoms. As seen in Figure 1(b), being GL was associated with higher attachment avoidance, which in turn was associated with higher levels of anxiety symptoms. The analysis indicated that the confidence intervals of the indirect effect did not contain zero (mediated $b = .04$, $SE = .01$, 95% CI [.02, .07]), thus indicating that attachment avoidance had a significant mediation effect on the association between being GL and anxiety symptoms.

(1a)



(1b)



(1c)

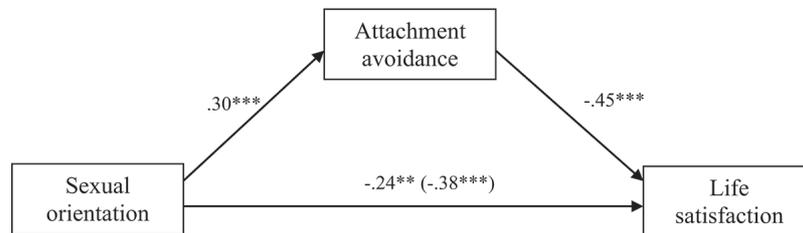


Figure 1. Attachment avoidance mediation effect on the association between sexual orientation and depressive symptoms (a), anxiety symptoms (b) and life satisfaction (c)

$N = 794$. Reported values are unstandardized regression coefficients (B s) for the pathways among sexual orientation (0 = Heterosexual, 1 = Sexual minority), attachment avoidance and depressive symptoms/anxiety symptoms/life satisfaction. Gender, age, place of residence, level of education and relationship status, served as covariates. Total effect of sexual orientation on depressive symptoms/anxiety symptoms/life satisfaction is reported in parenthesis. ** $p < .01$; *** $p < .001$.

Likewise, an analysis was conducted to examine the mediation effect of attachment avoidance on the association between being GL and life satisfaction. As seen in Figure 1(c), being GL was associated with higher attachment avoidance, which in turn was associated with lower levels of life satisfaction. The analysis indicated that the confidence intervals of the indirect effect did not contain zero (mediated $b = -.13$, $SE = .03$, 95% CI $[-.21, -.06]$); hence attachment avoidance had a significant mediation effect on the association between being GL and life satisfaction.

In order to examine whether gender moderated any of the paths of the proposed model we have used model 1 for simple moderation (Hayes, 2009). Results showed there was no significant moderation effect for gender in the association between sexual orientation and attachment avoidance ($B = 0.29$, $ns.$), the association between attachment avoidance and mental health (indicated by depressive symptoms, $B = -0.01$, $ns.$, anxiety symptoms, $B = 0.01$, $ns.$, and life satisfaction, $B = 0.09$, $ns.$) or the association between sexual orientation and mental health (indicated by depressive symptoms, $B = 0.06$, $ns.$, anxiety symptoms, $B = 0.07$, $ns.$, and life satisfaction, $B = 0.17$, $ns.$). In order to better examine whether the proposed mediation model as a whole differed as a function of gender, we also conducted conditional process analysis (moderated mediation), focusing on the possible moderation of gender in the association between sexual orientation and attachment avoidance (path a, model 7). The analyses indicated that the confidence intervals of the indexes of moderated mediation (Hayes, 2018) did contain zero when predicting depressive

symptoms (index = .05, $SE = .03$, 95% CI [-.00, .10]), anxiety symptoms (index = .04, $SE = .02$, 95% CI [-.00, .08]), and life satisfaction (index = -.13, $SE = .07$, 95% CI [-.27, .00]); hence the reported indirect effects were not related to gender and did not differ between men and women.

Discussion

Consistent with the first hypothesis, GL reported poorer mental health than their heterosexual counterparts, as indicated by higher levels of depressive and anxiety symptoms and lower levels of life satisfaction. Similarly, in line with the second hypothesis, attachment avoidance had a significant mediation effect on the associations between being GL and depressive symptoms, anxiety symptoms and life satisfaction.

To the best of our knowledge, the current study is one of the first to identify attachment avoidance as a mediator of mental health disparities by sexual orientation, such that the poorer mental health found among GL relative to their heterosexual counterparts is, to some extent, explained by more attachment avoidance among GL.

The poorer mental health exhibited by the GL in this sample, as indicated by higher levels of depressive and anxiety symptoms and lower levels of life satisfaction are congruent with the abundant literature that has reported similar findings worldwide (e.g., Cochran, Sullivan, & Mays, 2003; King et al., 2008), as well as in Israel (e.g., Shenkman & Shmotkin, 2010). These results are usually explained by Meyer's minority stress theory (Meyer, 2003), which suggests that the accumulated psychological stress faced by GL due to their stigmatized status, may result in adverse mental health outcomes such as depression, anxiety and decreased well-being. Herek's sexual stigma theory (2009), is also a relevant perspective in this context, as it suggests a path between felt stigma among sexual minorities and psychological distress.

The higher levels of attachment avoidance that were found in this study among GL in comparison to heterosexual counterparts are in line with recent preliminary findings demonstrating more insecure attachment among GL than their heterosexual counterparts (Nematy & Oloomi, 2016), and may be explained by the possible links between minority stress, effects of discrimination and oppression, and higher attachment avoidance (Mohr & Jackson, 2016). It has been argued that difficulties encountered by sexual minority individuals due to their sexual orientation, such discrimination, rejection, and harassment from peers and family, may lead to augmented incorporation of avoidant behaviors and perceptions, which could eventually affect relationships through greater avoidance of intimacy and interdependence (Landolt et al., 2004). This notion of change in working models of attachment in response to social stressors and experiences with significant others throughout the lifespan (Bowlby, 1988; Davila et al., 1997) has been specified for sexual minorities (Cook & Calebs, 2016). However, to date there have been few empirical studies on GL in comparison to heterosexual counterparts.

The findings here, notably the mediation effects of attachment avoidance on the associations between being GL and mental health indicators, point to the emerging role of attachment avoidance as a potential pathway to the augmented vulnerability in mental health sexual minorities are exposed to. These findings thus make a direct contribution to the psychological mediation framework, which suggests that stigma-related stress leads to increased emotion dysregulation, social/interpersonal problems and cognitive processes, which in turn mediate the relationship between stigma-related stress and poor mental health (Hatzenbuehler, 2009). Within this model, the mediating role of variables such as emotion dysregulation (Hatzenbuehler, Nolen-Hoeksema, & Dovidio, 2009) and family connectedness (Eisenberg & Resnick, 2006) have been explored; but not the mediating role of attachment avoidance.

These results also contribute to the minority stress model (Meyer, 2003), and are specifically relevant to proximal minority stress processes (expectations of rejections and concealment) which were suggested to link identifying as GL and mental health outcomes. Though the minority stress model does not directly refer to the possible contribution of attachment style, expectations of rejection, which are part of the model, are also core characteristics of attachment avoidance (Ciocca et al., 2015; Mikulincer & Shaver, 2016), and

future studies should explore how these two variables (expectations of rejection and attachment avoidance) interact within it.

The results regarding the mediating role of attachment avoidance in the association between sexual orientation and mental health are also consistent with findings showing the mediating role of insecure attachment in the association between sexual orientation and substance use (Rosario et al., 2014). However, while these findings focused on insecure attachment in general and not on attachment avoidance specifically and only explored substance use disparities between sexual minorities and heterosexual counterparts, the current work extends the mediating role of attachment avoidance to broader aspects of mental health; namely, depressive symptoms, anxiety symptoms and life satisfaction.

The mental health disparities between GL and their heterosexual counterparts described in the current study, alongside the identification of the mediating role of attachment avoidance in the association between sexual orientation and poorer mental health, have direct implications for clinicians and mental health professionals who work with sexual minorities. Specifically, being GL may be a possible terrain for the emergence of attachment avoidance which may lead to greater symptoms of depression, anxiety and lower life satisfaction. Therefore, mental health practitioners should take the potential effects of attachment style into consideration since it appears to be affected by social reactions to one's sexual orientation. They should be alert to the possible pathway between being a sexual minority, internal working models of attachment, and mental health.

The chief strength of the current study is its pioneering investigation of the mediating role of attachment avoidance in the association between sexual orientation and mental health. In contrast to many previous studies which simply described the mental health disparities between GL and heterosexual counterparts, the mediation analysis in the current study goes beyond the descriptive level to a more functional understanding of the relationships between sexual orientation and mental health and the specific role of attachment avoidance in this association.

Several limitations should also be mentioned. This study relied on self-reports, and thus possibly suffered from self-presentation biases. The groups were not based on a random or representative sampling, but rather on community-based sampling. The correlational design of the study does not allow for inferences about causal links between the variables and therefore the bi-directionality of mediations should be taken into account. Many of these methodological limitations echo the typical complications in studying sexual minority populations (McCormack, 2014). Also, while the reported statistical effects concerning differences between the GL and heterosexual groups on mental health and attachment avoidance were significant, it should be noted that the size of the effects were relatively small. In the present study, awareness of minority stigma or perceived social and family support was not assessed. Future studies could examine how these variables interact with the proposed mediation model. Future studies should also sample bisexual (which in our current sample were only few thus were removed from analyses) and transgender populations, and explore whether the proposed mediation model would appear in these samples. While the proposed mediation model in the current study did not differ between men and women, future studies should further explore the intersection between sexual orientation, gender, attachment, and mental health.

To conclude, our current results are some of the very first to show that attachment avoidance mediates the association between sexual orientation and mental health, such that the poorer mental health reported among GL relative to heterosexual counterparts can be accounted for by more attachment avoidance among GL. These findings may help to better understand the mental health vulnerability of GL.

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