Suicidality among sexual and gender minority youth

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CHAPTER 4

The moderating role of coping in the association between minority stress and suicidal ideation and suicide attempts among sexual and gender minority young adults

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Abstract

This study examined associations of minority stressors and coping styles with suicidal ideation and suicide attempts (suicidality) among sexual and gender minority (SGM) young adults, and whether coping style moderated these associations. Participants were recruited via LGBT organizations, social media, and suicide prevention websites. Data of 1,432 SGM young adults (18-29 years old) were included in the analyses. Logistic regression analyses were conducted for sexual minority and gender minority young adults, separately. The survey assessed minority stressors (i.e., victimization, internalized homonegativity, and stigma consciousness) and coping styles (i.e., active, avoidant, and passive coping). Minority stressors were associated with a higher likelihood of suicidality. Passive and avoidant coping were associated with higher odds of suicidality, and active coping was associated with lower odds of suicidality. Among sexual minority participants, avoidant coping buffered the association between low victimization, stigma, and lifetime suicide attempts, and enhanced the association between internalized homonegativity and lifetime suicide attempts. Among gender minority participants, passive coping enhanced the association between low victimization and lifetime suicidal ideation. This study underlines the importance of minority stress in relation to suicidality among SGM young adults and the need for more research regarding the role of coping.

Introduction

Rates of suicidal ideation and suicide attempts among sexual and gender minority (SGM) young adults are higher than among heterosexual, cisgender young adults (Salway et al., 2021; Williams et al., 2021). Mental health disparities for SGM individuals are often explained by constructs from the minority stress framework (Meyer, 2003) and extensions hereof (Hatzenbuehler, 2009; Hendricks & Testa, 2012). The literature posits that SGM individuals may experience stress related to their SGM identity and that excess stress explains disparities in mental health (Meyer, 2003; Testa et al., 2015). Studies have demonstrated that minority stressors are associated with mental health outcomes, including suicidal ideation and attempts (suicidality) (Hatchel, Polanin, et al., 2019; Testa et al., 2017; Williams et al., 2021). Research among SGM young people showed that stressors such as victimization, rejection by family or friends, and perceived stigma were risk factors for suicidality (Hatchel, Polanin, et al., 2019; Kaniuka et al., 2019; Mustanski & Liu, 2013; Rimes et al., 2018; Ryan et al., 2009). In addition, studies have demonstrated a link between internalized homophobia or transphobia and suicidal ideation (Gibbs & Goldbach, 2015; Kuper et al., 2018; Lea et al., 2014), but most studies did not find significant associations between internalized homophobia and suicide attempts (Gibbs & Goldbach, 2015; Lea et al., 2014; Puckett et al., 2017). Further, there are considerable individual differences in the impact of minority stress on suicidality; particularly how individuals cope with minority stress is relevant. However, limited research has been conducted among SGM young adults on the role of coping in the association between minority stress and suicidality. The current study examines links between minority stress, coping styles, and suicidal ideation and attempts among SGM young adults and whether coping styles moderate the associations between minority stress and suicidal ideation and attempts.

Coping and suicidality among SGM adolescents and young adults

Coping has been described as "action regulation under stress." Action regulation refers to "efforts to mobilize, manage, and direct physiology, emotion, attention, behavior and cognition in response to stress" (Skinner & Zimmer-Gembeck, 2007, p. 123). Previous studies, not specifically among SGM young people, suggest that passive and avoidant coping strategies are related to *higher* levels of suicidal ideation (Benatov et al., 2020; Ong & Thompson, 2019), while active and problem-oriented strategies are related to *lower* levels of suicidal ideation (Benatov et al., 2020; Speckens & Hawton, 2005).

To our knowledge, there are currently no studies examining associations between coping and suicidality among SGM individuals, however, several studies have examined coping and other mental health outcomes among SGM individuals. Qualitative research has identified various strategies that SGM individuals use to cope with minority stress. For example, (ethnically diverse) SGM youth might use avoidant

coping strategies such as hiding sexual orientation or gender identity or denial hereof (Goldbach & Gibbs, 2015; Kuper et al., 2014; van Bergen & Spiegel, 2014), and they might also ignore negative reactions (Kuper et al., 2014), or use direct problem-solving to manage minority stress (van Bergen & Spiegel, 2014).

In addition, quantitative research among SGM individuals has tested whether coping strategies were associated with poorer mental health. For example, avoidant coping (Bos et al., 2014; Budge et al., 2013), palliative reactions (e.g. seeking distraction), passive reactions (e.g. brooding) (Bos et al., 2014), cognitive strategies (e.g., distraction), alternative-seeking strategies (Toomey, Ryan, et al., 2018), emotion-oriented coping strategies (Grossman et al., 2011), and maladaptive coping (e.g., such as self-destruction and denial) (Lehavot, 2012) were all associated with poorer mental health among SGM individuals, including anxiety, psychological distress, and depressive symptoms.

Studies among SGM individuals have also identified coping strategies that are related to *better* mental health outcomes. For example, LGBT-specific coping (e.g., "looking for information on LGBT issues") (Toomey, Ryan, et al., 2018), active coping and problem-oriented coping (e.g., active problem-solving) (Bos et al., 2014; D'haese et al., 2016), and adaptive coping (such as planning and acceptance) (Lehavot, 2012) were all associated with better mental health outcomes, including less depressive symptoms and lower psychological distress. Further, contrary to findings of other studies (Bos et al., 2014; Budge et al., 2013), avoidant coping was found to be associated with better mental health outcomes among lesbian, gay, and bisexual (LGB) individuals (D'haese et al., 2016).

Besides a direct effect of coping on suicidality, coping may also mitigate or enhance the impact of minority stress on mental health (Meyer, 2003). In line with this, the integrated motivational-volitional model of suicidal behavior (IVM) theorizes that coping responses may affect feelings of entrapment, which subsequently may influence suicidal ideation (O'Connor & Kirtley, 2018). Taken together, coping styles may affect the development of suicidal ideation or attempts. To our knowledge, there is currently no study among SGM young adults on the strength of the association between minority stressors and suicidality by coping strategy. Nevertheless, there are some studies on the role of coping in the association between minority stress and mental health. For example, one study among LGB adults showed that emotion-oriented coping, problem-oriented coping or avoidant coping did not moderate the relation between homophobic violence and mental health (D'haese et al., 2016). In line with this, studies among sexual minority individuals found no moderating effect of avoidant coping on the association of heterosexist events and psychological distress among men (Szymanski, 2009), and no moderating effect of avoidant or problem-solving coping on the association between internalized heterosexism and psychological distress among women (Szymanski &

Owens, 2008). Another study, among sexual minority adolescents and young adults, examined problem-solving coping skills as a moderator between minority stressors and depression with perceived burdensomeness and thwarted belongingness as mediators. These associations were not significantly buffered by problem-solving coping skills (Baams, Dubas, et al., 2018). Although these studies did not find that coping ameliorated or exacerbated the associations of minority stress and mental health, the role of coping in suicidality among SGM young adults is still unclear.

Current study

In the current study, we examined to what extent forms of minority stress (e.g., internalized homonegativity, stigma consciousness, victimization) were associated with suicidality among SGM young adults. Based on prior research (Hatchel, Polanin, et al., 2019; Testa et al., 2017; Williams et al., 2021), we hypothesized that minority stress would be associated with a higher likelihood of suicidal ideation and attempts. In addition, we examined to what extent active, avoidant, and passive coping styles were independently associated with suicidal ideation and attempts. Based on previous findings (Benatov et al., 2020; Bos et al., 2014; Budge et al., 2013; Ong & Thompson, 2019; Speckens & Hawton, 2005), we hypothesized that active coping would be associated with a lower likelihood of suicidal ideation and attempts, and avoidant coping and passive coping would be associated with a higher likelihood of suicidal ideation and attempts. Last, we explored whether avoidant, passive, or active coping styles moderated the associations between minority stressors and suicidal ideation and attempts.

Method

Procedure and participants

This study used data from 2,625 SGM participants aged between 18 and 80 years old from Flanders (Belgium) (collected September 2015-March 2016), and the Netherlands (collected October 2016-February 2017). All participants completed online questionnaires in Dutch. Participants were recruited mostly online via social media and LGBT organizations, and through two suicide prevention websites in Flanders and the Netherlands; snowballing techniques were also used. Additionally, flyers advertising the study were distributed to LGBT and mental health organizations and distributed at LGBT events.

For the present study, participant data from SGM young adults between 18 and 29 years were included. This resulted in a sample of N = 1,451 SGM young adults. Data of 19 participants who identified as “man or woman who engages in cross-dressing” were excluded, because it was not clear whether they (also) self-identified as transgender or genderqueer. The final sample consisted of N = 1,127 cisgender sexual minority young adults between ages 18 and 29 (M = 22.12, SD = 3.20) and N = 305 gender minority

young adults between ages 18 and 29 (*M* = 21.76, *SD* = 3.21). See Table 4.1 and Table 4.2 for sample demographics. Ethical approval was given by the ethics committee of the Department of Pedagogy and Educational Sciences of the University of Groningen, and the Ghent University Hospital. All participants provided informed consent.

Table 4.1 Sample characteristics

	Sexual minority young adults (*n* = 1,127)	Gender minority young adults (*n* = 305)
Lifetime suicidal ideation	60.6%	82.0%
Past-year suicidal ideation	28.9%	49.8%
Lifetime suicide attempts	17.2%	36.1%
Past-year suicide attempts	3.5%	10.2%
Sex assigned at birth		
Female	61.6%	78.4%
Male	38.4%	21.6%
Gender identity		
Cisgender	100%	
Trans man	--	27.9%
Trans woman	--	12.1%
Genderqueer	--	51.8%
Other[a]	--	8.2%
Education[b]		
Lower	23.5%	39.7%
Higher	76.5%	60.3%
Country of residence		
Belgium	35.4%	36.1%
The Netherlands	64.6%	63.9%

Note. [a.] For example, demigender, agender, or not sure.
[b.] Educational level was assessed as high or low, depending on whether they had completed college or university or not.

Table 4.2 Sexual attraction by gender identity

	Cisgender woman *(n)*	Cisgender man *(n)*	Transgender man *(n)*	Transgender woman *(n)*	Gender queer *(n)*	Other *(n)*
Only to women	30.3% (210)	0% (0)	18.8% (16)	5.4% (2)	20.3% (32)	12% (3)
Mostly to women, rarely to men	31.8% (221)	0.9% (4)	18.8% (16)	27.0% (10)	22.3% (35)	20% (5)
A little more to women than to men	14.1% (98)	0.5% (2)	3.5% (3)	2.7% (1)	6.3% (10)	4% (1)
Equally to men and women	8.2% (57)	1.8% (8)	4.7% (4)	10.8% (4)	3.2% (5)	8% (2)
A little more to men than to women	6.8% (47)	2.8% (12)	10.6% (9)	0% (0)	5.7% (9)	8% (2)
Mostly to men, rarely to women	1.0% (7)	25.9% (112)	8.2% (7)	2.7% (1)	7.0% (11)	8% (2)
Only to men	0% (0)	65.8% (285)	11.8% (10)	18.9% (7)	3.8% (6)	8% (2)
Neither	0.9% (6)	0% (0)	4.7% (4)	8.1% (3)	5.1% (8)	8% (2)
Gender (man or woman) is not important to me	6.3% (44)	2.1% (9)	17.6% (15)	21.6% (8)	24.7% (39)	20% (5)
I do not know	0.6% (4)	0.2% (1)	1.2% (1)	2.7% (1)	1.9% (3)	4% (1)

Measures

Suicidality

Lifetime suicidal ideation was assessed with the question: “Have you ever seriously thought about ending your life?” Response options “yes, multiple times”, “yes, once”, and, “no, never”, were dichotomized into yes (1) and no (0). When a participant answered yes, they received the follow-up question: “Have you had these [suicidal] thoughts during the past 12 months?” Answer options were “yes” (1) and “no” (0). Participants who answered *no* to lifetime suicidal ideation were also assigned (0).

Lifetime suicide attempts was assessed with the question “Have you ever attempted suicide?” Response options “yes, multiple times”, “yes, once”, and “no, never” were dichotomized into yes (1) and no (0). When a participant answered yes, they received the follow-up question: “Have you attempted suicide in the past 12 months?” Answer options were “yes” (1) and “no” (0). Participants who answered *no* to lifetime suicide attempts were also assigned (0).

Minority stressors

Internalized homonegativity was assessed with a nine-item scale (Cronbach’s α = 0.78). These items were derived from the Internalized Homonegativity Inventory (Mayfield, 2001). An example item is: “I sometimes feel embarrassed because of my sexual orientation.” The scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). Internalized homonegativity is only included in the analyses for the sexual minority group.

LGB and trans-related victimization was assessed with the single item: “Have you ever been a victim of homophobic or transphobic violence?” Response options were: 1) never, 2) once in a while, 3) about once a month, 4) several times a month, 5) about once a week, 6), several times a week and 7) daily. This was categorized into: never (1), low (2), high (3 through 7).

Stigma consciousness was assessed with the stigma consciousness questionnaire (SCQ; Pinel, 1999). This questionnaire consists of 10 items (sexual minority (SM) sample Cronbach’s α = 0.74; gender minority (GM) sample Cronbach’s α = 0.80). The questionnaire was adapted for gender identity so it applied to experiences of gender minority individuals. For example, “I never worry that my behavior will be viewed as stereotypical for transgender individuals.” The scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*).

Coping

Coping was assessed with The Utrechtse Coping Lijst (UCL) (Schreurs et al., 1993). For the current study, we included the following three coping styles that based on the literature were most likely to be related to suicidality (Benatov et al., 2020; Ong & Thompson, 2019; Speckens & Hawton, 2005): active coping, avoidance, and passive

reactions. Active coping consisted of six items (SM Cronbach's α = 0.83; GM Cronbach's α = 0.82) and refers to actively approaching the problem to solve it. An item in this scale is: "think of different possibilities to solve a problem." Avoidant coping consisted of eight items, however, after a reliability analysis, it was decided to delete one item from this scale (SM Cronbach's α = 0.74; GM Cronbach's α = 0.78) and refers to avoiding situations. An item in this scale is: "avoiding difficult situations as much as possible." Passive coping consisted of seven items (SM Cronbach's α = 0.80; GM Cronbach's α = 0.77) and refers to brooding and feeling like not being able to cope. An item in this scale is: "not feeling capable to do something." The scale ranged from 1 (*rarely or never*) to 4 (*very often*).

Sexual orientation and gender identity

Sexual orientation was assessed with the question "Throughout your life, who are you sexually attracted to?" Response options were "only to women", "mostly to women, rarely to men", "a little more to women than to men", "equally to men and women", "a little more to men than to women", "mostly to men, rarely to women", "only to men", "neither", "gender (man or woman) is not important to me", "I do not know".

Gender identity was assessed with the question "For some people, sex assigned at birth does not (fully) match their identity as male or female. Could you tell us how you currently identify?" Answer categories were "man", "woman", "man who cross-dresses", "woman who cross-dresses", "trans man", "trans woman", "genderqueer, poly gender, or gender fluid", "different, namely". Participants who stated to be assigned male at birth and identified as men, and participants who stated to be assigned female at birth and identified as women, were recoded into cisgender and not included in the gender minority models.

Demographics

Sex assigned at birth was assessed with the question "At birth, you were assigned as:" Answer options were "male" and "female". Age was asked in number of years. Participants' educational level was assessed as *high* or *low*, depending on whether they had completed college or university or not. Country was assessed by the question in which country the participants lived at the moment of filling out the questionnaire (*Belgium* or *the Netherlands*). Data from participants not residing in one of those two countries were removed from the analyses.

Analysis

Analyses were conducted using IBM SPSS Statistics (version 26). Three outcomes were assessed in logistic regression analyses: lifetime suicidal ideation, lifetime suicide attempts, and past-year suicidal ideation. To assess the independent associations

between coping styles, minority stress, and suicidality, we ran one model including all minority stressors and ran three models including each coping style separately (active, avoidant, and passive coping). For sexual minority participants, minority stressors included internalized homonegativity, victimization, and stigma consciousness. For gender minority participants, minority stressors included victimization and stigma consciousness. Interaction effects between the minority stressors and coping style were added to the models, along with minority stressors and coping style. To probe significant interaction effects, simple slopes analyses (Hayes, 2018) were conducted. Age and sex assigned at birth were added as control variables in all models because both were significantly correlated with key study variables (see Table 4.3).

Because of too few events in past-year suicide attempts, the associations between minority stressors, coping styles, and past-year suicide attempts were assessed with multi- and univariate analyses. MANOVA analyses were conducted for differences in stigma, internalized homonegativity (only sexual minority participants), active coping, avoidant coping, and passive coping by past-year suicide attempt. Further, Chi-Square tests were performed to assess the association between victimization and past-year suicide attempts. Post hoc pairwise comparisons with Bonferroni correction were utilized to assess which groups differed from another.

Table 4.3 Correlations and descriptives for key variables

	Sexual minority young adults		Gender minority young adults		1	2	3	4	5	6	7	8
	n	*M (SD)*	*n*	*M (SD)*								
1. Age	1,127	22.12 (3.20)	305	21.76 (3.21)	--	.17**	0	0.06	n/a	.12*	-0.04	-0.06
2. Sex assigned at birth[a]					.15**	--	--	0.01	n/a	-0.1	0	.14*
3. Victimization[b]					0.03	--	--	.12*	n/a	0	0.01	0.11
4. Stigma	1,123	2.77 (0.59)	269	3.19 (0.68)	0.02	.13**	.29**	--	n/a	-.12*	.24**	.26**
5. Internalized homonegativity	1,123	2.23 (0.61)	--	--	-.07*	0.01	-0.05	.32**	--	n/a	n/a	n/a
6. Active coping	1,127	2.43 (0.62)	305	2.29 (0.60)	.14**	.14**	-.06*	-.14**	-.23**	--	-.24**	-.44**
7. Avoidant coping	1,127	2.26 (0.52)	305	2.39 (0.59)	-.08**	-.07*	-0.02	.11**	.23**	-.33*	--	.55**
8. Passive coping	1,127	2.23 (0.64)	305	2.51 (0.64)	-.11**	-.11**	.13**	.28**	.28**	-.52**	.50**	--

Note. Sex assigned at birth (0 = female; 1 = male); victimization (1 = never; 2 = low; 3 = high). Above the diagonal correlations for the gender minority sample are shown and below the diagonal correlations for the sexual minority sample are shown. N/a = not applicable; internalized homonegativity was not assessed among gender minority participants.

[a] Point biserial correlation

[b] Spearman's correlation (all other correlations were Pearson's)

* $p < .05$

** $p < .01$

Results

Descriptives

Correlations between key variables are shown in Table 4.3.

Associations between minority stressors, coping and suicidality for sexual minority individuals

Lifetime suicidal ideation

Table 4.4 shows the results of the logistic regression analyses for sexual minority participants. Results demonstrated that compared to no victimization, participants who reported low victimization or high victimization were more likely to report lifetime suicidal ideation. In addition, participants who reported higher levels of internalized homonegativity or higher levels of stigma consciousness were more likely to report lifetime suicidal ideation.

Further, sexual minority participants who reported higher levels of active coping were less likely to report lifetime suicidal ideation, and participants who reported higher levels of avoidant coping or passive coping were more likely to report lifetime suicidal ideation. Interaction effects between minority stressors and coping styles in relation to lifetime suicidal ideation were non-significant.

Lifetime suicide attempts

Participants who reported high victimization (compared to no victimization), or reported higher levels of stigma consciousness were more likely to report lifetime suicide attempts. The association between internalized homonegativity and lifetime suicide attempts was non-significant. In addition, participants who reported higher levels of active coping were less likely to report lifetime suicide attempts, and participants who reported higher levels of avoidant coping or passive coping were more likely to report lifetime suicide attempts.

Last, analyses including interaction effects between minority stressors and coping styles demonstrated that three out of 36 interaction terms were significant (see Supplementary Table S4.1). Avoidant coping significantly moderated the associations between low victimization (OR = 0.39; 95% CI [0.18, 0.84]), internalized homonegativity (OR = 2.07; 95% CI [1.25, 3.43]), stigma (OR = 0.58; 95% CI [0.35, 0.98]) and lifetime suicide attempts. More specifically, avoidant coping buffered the association between victimization and lifetime suicide attempts. When avoidant coping was low (b = 1.23, SE = 0.33, p < .001) or average (b = 0.73, SE = 0.21, p < .001) there was a significant association between low victimization (versus no) and lifetime suicide attempts. When avoidant coping was high (b = -0.24, SE = 0.25, p = .341) there was a non-significant association between low victimization and lifetime suicide attempts (see Figure 4.1).

Table 4.4. Results logistic regression analyses

	Lifetime suicidal ideation	Lifetime suicide attempts	Past-year suicidal ideation
Sexual minority young adults			
Minority stress	aOR [95% CI]	aOR [95% CI]	aOR [95% CI]
Victimization			
Low	**1.92 [1.46, 2.53]**	**1.83 [1.24, 2.70]**	1.14 [0.84, 1.55]
High	**2.28 [1.50, 3.47]**	**3.41 [2.11, 5.53]**	1.54 [1.00, 2.36]
Internalized homonegativity	**1.53 [1.22, 1.92]**	1.10 [0.84, 1.44]	**2.38 [1.87, 3.02]**
Stigma consciousness	**1.78 [1.39, 2.26]**	**1.58 [1.17, 2.13]**	**1.50 [1.16, 1.95]**
Coping styles	aOR [95% CI]	aOR [95% CI]	aOR [95% CI]
Active coping	**0.44 [0.36, 0.55]**	**0.57 [0.44, 0.74]**	**0.29 [0.22, 0.37]**
Avoidant coping	**1.89 [1.49, 2.40]**	**1.37 [1.02, 1.85]**	**2.66 [2.04, 3.46]**
Passive coping	**6.39 [4.89, 8.34]**	**3.11 [2.41, 4.01]**	**6.41 [4.92, 8.35]**
Gender minority young adults			
Minority stress	aOR [95% CI]	aOR [95% CI]	aOR [95% CI]
Victimization			
Low	**3.88 [1.72, 8,77]**	1.87 [0.89, 3.93]	**2.16[1.08, 4.32]**
High	**2.82 [1.18, 6.73]**	**3.57 [1.64, 7.76]**	**2.34 [1.11, 4.96]**
Stigma consciousness	1.34 [0.79, 2.25]	1.26 [0.86, 1.84]	**2.15 [1.43, 3.25]**
Coping styles	aOR [95% CI]	aOR [95% CI]	aOR [95% CI]
Active coping	**0.56 [0.34, 0.92]**	**0.58 [0.38, 0.87]**	**0.54 [0.36, 0.81]**
Avoidant coping	**1.93[1.14, 3.27]**	**1.37 [0.92, 2.05]**	**2.22 [1.46, 3.37]**
Passive coping	**2.71 [1.65, 4.48]**	**2.16 [1.45, 3.24]**	**3.76 [2.43, 5.81]**

Note. To assess the independent associations between minority stress, coping styles, and suicidality, models for minority stress and coping styles were assessed separately. In addition, all three coping styles were assessed separately. Controlling for sex assigned at birth and age. Bold estimates are significant, $p < .05$. aOR = adjusted odds ratio; CI = Confidence Interval; low victimization = sometimes; high victimization = once per month or more.

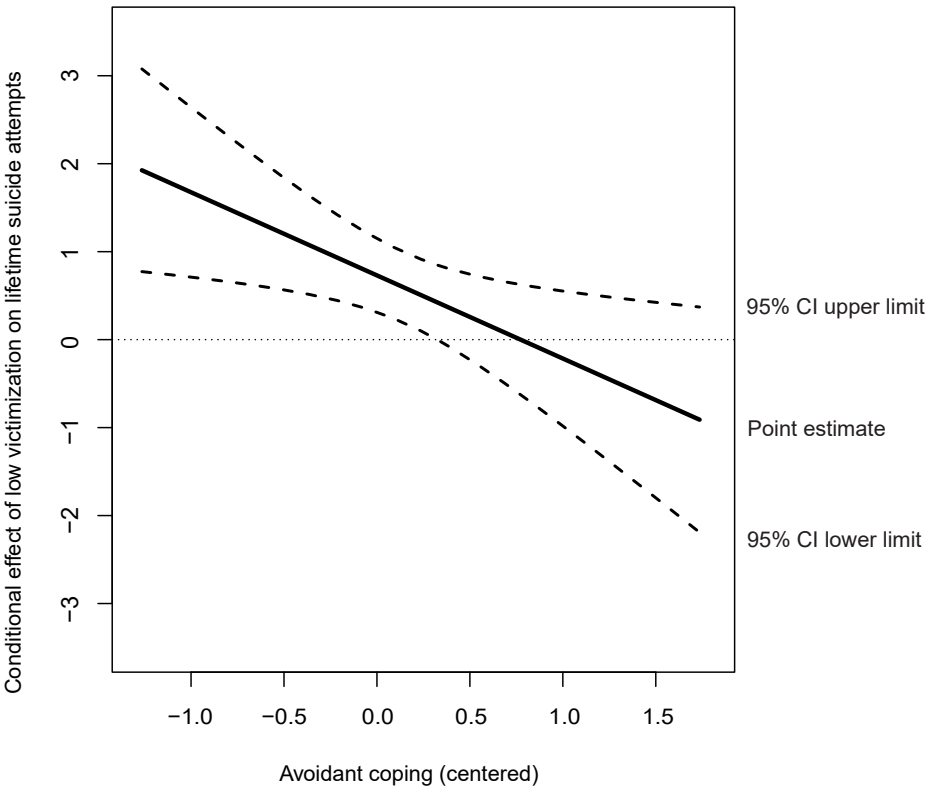

Figure 4.1 Conditional effect of low victimization on lifetime suicide attempts at values of the moderator avoidant coping expressed in log odds among sexual minority young adults. CI = confidence interval.

Further, the interaction between coping and internalized homonegativity showed that avoidant coping enhanced the association. When avoidant coping was high (*b* = 0.52, *SE* = 0.36, *p* = .040) there was a significant association between internalized homonegativity and lifetime suicide attempts. When avoidant coping was low (b = -0.52, *SE* = 0.15, *p* = .086) or average (*b* = 0.00, *SE* = 0.15, *p* = .908) there was a non-significant association between internalized homonegativity and lifetime suicide attempts (see Figure 4.2).

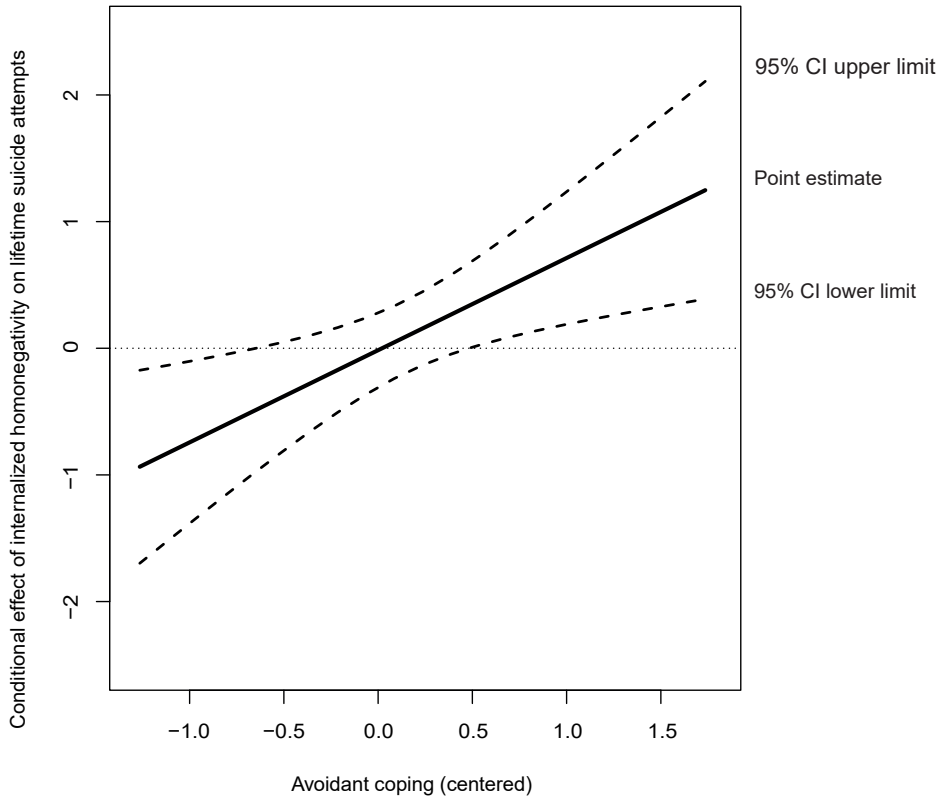

Figure 4.2 Conditional effect of internalized homonegativity on lifetime suicide attempts at values of the moderator avoidant coping expressed in log odds among sexual minority young adults. CI = confidence interval.

Last, the interaction between coping and stigma showed that avoidant coping buffered the association. When avoidant coping was low (b = 0.73, SE = 0.22, p < .001) or average (b = 0.44, SE = 0.15, p = .004) there was a significant association between stigma and lifetime suicide attempts. When avoidant coping was high (b = 0.16, SE = 0.20, p = .426) there was a non-significant association between stigma and lifetime suicide attempts (see Figure 4.3).

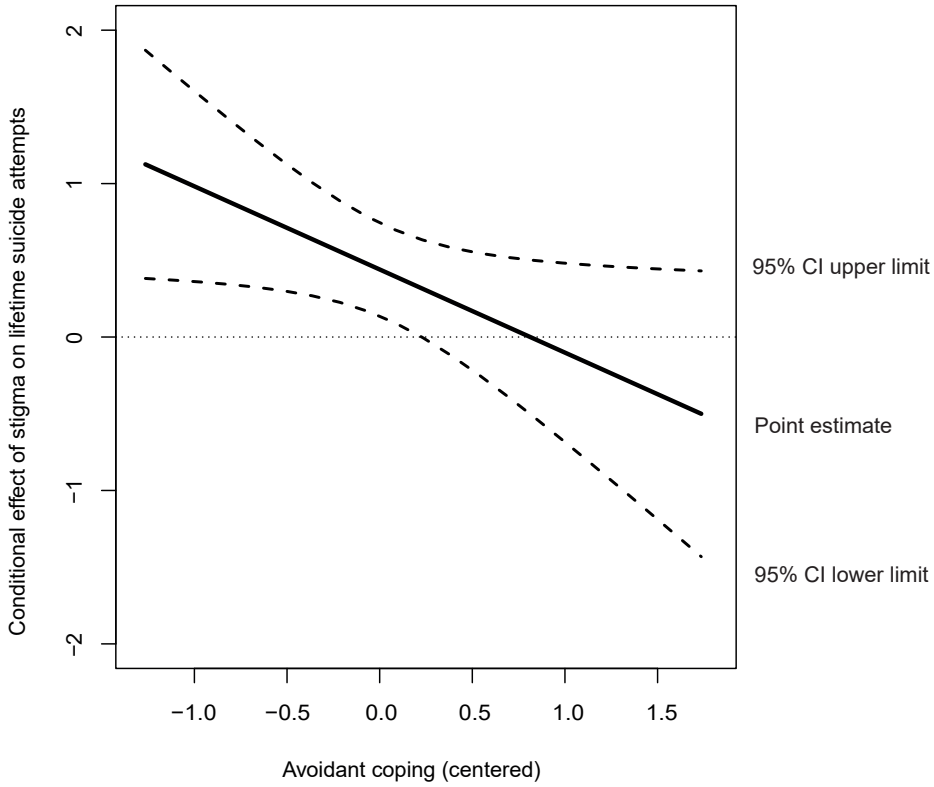

Figure 4.3 Conditional effect of stigma consciousness on lifetime suicide attempts at values of the moderator avoidant coping expressed in log odds among sexual minority young adults. CI = confidence interval.

Past-year suicidal ideation

Participants who reported higher levels of internalized homonegativity and stigma consciousness were more likely to report past-year suicidal ideation. The association between victimization and past-year suicidal ideation was non-significant. In addition, participants who reported higher levels of active coping were less likely to report past-year suicidal ideation, and participants who reported higher levels of avoidant coping or passive coping were more likely to report past-year suicidal ideation. Interaction effects between minority stressors and coping styles were non-significant.

Past-year suicide attempts

Results of the MANOVA analyses and Chi-Square tests are shown in Table 4.5.

Table 4.5. Results of MANOVA analyses and Chi-Square tests for past-year suicide attempts

	Past-year suicide attempt no	Past-year suicide attempt yes			
Sexual minority young adults					
Victimization			χ^2 (2, *N* = 1,127) = 19.10, *p* < .001		
Never	98.2% (*n* = 436)	1.8% (*n* = 8)			
Low	96.9% (*n* = 500)	3.1% (*n* = 16)			
High	91.0% (*n* = 152)	9.0% (*n* = 15)			
	M (SD)	*M (SD)*	*df*	*F*	*p*
	n = 1,084	*n* = 39			
Internalized homophobia	2.22 (0.61)	2.61 (0.72)	1121	15.36	<.001
Stigma	2.76 (0.59)	3.11 (0.68)	1121	13.85	<.001
Active coping	2.44 (0.61)	1.94 (0.61)	1121	25.77	<.001
Avoidant coping	2.25 (0.52)	2.46 (0.56)	1121	5.73	.017
Passive coping	2.20 (0.63)	2.83 (0.67)	1121	36.90	<.001
Gender minority young adults					
Victimization			χ^2 (2, *N* = 305) = 5.36, *p* = .069		
Never	93.7% (*n* = 59)	6.3% (*n* = 4)			
Low	91.9% (*n* = 137)	8.1% (*n* = 12)			
High	83.9% (*n* = 78)	16.1% (*n* = 15)			
	M (SD)	*M (SD)*	*df*	*F*	*p*
	n = 243	*n* = 26			
Stigma	3.14 (0.66)	3.67 (0.72)	267	15.31	<.001
Active coping	2.33 (0.58)	1.98 (0.68)	267	8.18	.005
Avoidant coping	2.41 (0.59)	2.37 (0.55)	267	0.15	.702
Passive coping	2.48 (0.63)	2.78 (0.65)	267	5.39	.021

Note. M = mean; *SD* = standard deviation

Participants who reported past-year suicide attempts had a higher mean level of internalized homonegativity, stigma consciousness, avoidant coping, and passive coping, and a lower mean level of active coping than participants who did not report past-year suicide attempts. A Chi-Square test demonstrated that victimization was significantly associated with past-year suicide attempts. Participants who reported high victimization reported past-year suicide attempts more often than participants who reported no victimization.

Associations between minority stressors, coping and suicidality for gender minority individuals

Lifetime suicidal ideation

Table 4.4 shows the results of the logistic regression analyses for gender minority participants. Participants who reported low victimization, or high victimization were more likely to report lifetime suicidal ideation. The association between stigma consciousness and lifetime suicidal ideation was non-significant. In addition, participants who reported higher levels of active coping were less likely to report lifetime suicidal ideation, and participants who reported higher levels of avoidant coping or passive coping were more likely to report lifetime suicidal ideation.

Last, analyses including interaction effects between minority stressors and coping styles demonstrated that one out of 27 interaction terms were significant (see Supplementary Table S4.2). Passive coping significantly moderated the association between low victimization and lifetime suicide ideation (OR = 4.10; 95% CI [1.05, 16.05]). Passive coping enhanced the association between victimization and lifetime suicidal ideation. When passive coping was low (b = 0.88, SE = 0.49, p = 0.075) there was a non-significant association between low victimization and suicidal ideation. When passive coping was average (b = 1.78, SE = 0.50, $p < .001$) or high (b = 2.67, SE = 0.80, $p < .001$) there was a significant association between low victimization and lifetime suicidal ideation (see Figure 4.4).

Lifetime suicide attempts

Compared to no victimization, participants who reported high victimization were more likely to report lifetime suicide attempts. The associations between low victimization, stigma consciousness, and lifetime suicide attempts were non-significant. In addition, participants who reported higher levels of active coping were less likely to report lifetime suicide attempts, and participants who reported higher levels of passive coping were more likely to report lifetime suicidal attempts. The association between avoidant coping and lifetime suicide attempts and interaction effects between minority stressors and coping styles were non-significant.

Past-year suicidal ideation

Compared to no victimization, participants who reported low victimization, high victimization, or who reported higher levels of stigma consciousness were more likely to report past-year suicidal ideation. In addition, participants who reported higher levels of active coping were less likely to report past-year suicidal ideation, and participants who reported higher levels of avoidant coping or passive coping were more likely to report lifetime suicidal ideation. Interaction effects between minority stressors and coping styles were non-significant.

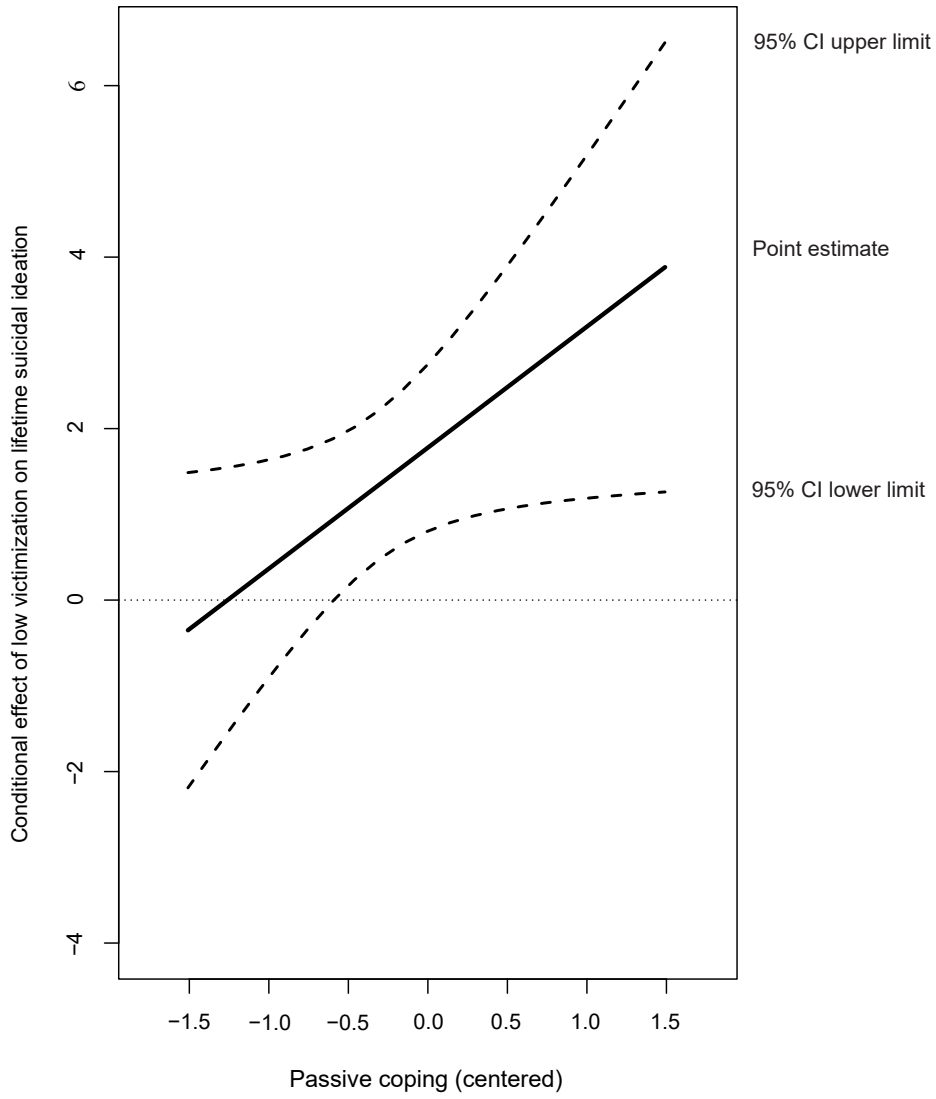

Figure 4.4 Conditional effect of low victimization on lifetime suicidal ideation at values of the moderator passive coping expressed in log odds among gender minority young adults.

Past-year suicide attempts

Results of the MANOVA analyses and Chi-Square tests are shown in Table 4.5. Participants who reported past-year suicide attempts reported higher mean levels of stigma consciousness, and passive coping, and reported lower levels of active coping. A Chi-Square test demonstrated that victimization was not significantly associated with past-year suicide attempts.

Discussion

The present study investigated to what extent several forms of minority stress and coping styles were associated with past-year and lifetime suicidal ideation and suicide attempts among SGM young adults. In addition, we examined whether the relationship between minority stress and suicidal ideation or suicide attempts was moderated by coping style.

In line with our hypotheses and previous research (Hatchel, Polanin, et al., 2019; Kuper et al., 2018; Puckett et al., 2017; Testa et al., 2017; Williams et al., 2021) we found that minority stressors were associated with suicidality among SGM young adults. Among sexual minority young adults, victimization and stigma consciousness were associated with (past-year) suicidal ideation and lifetime suicide attempts. Internalized homonegativity was only associated with suicidal ideation, and not with lifetime suicide attempts. The integrated motivational-volitional model of suicidal behavior (IVM) (O'Connor & Kirtley, 2018) suggests that suicidal behavior may be dependent on several volitional factors. It may be possible that there is no direct relationship between internalized homonegativity and suicide attempts, but that other factors play a role in the relation between internalized homonegativity and suicide attempts, such as impulsivity or past behavior. Among gender minority young adults, victimization and stigma consciousness were also associated with (past-year) suicidal ideation, but only high victimization was associated with lifetime suicide attempts. Both sexual and gender minority participants who were victimized once or more per month were around 3.5 times more likely to report ever having attempted suicide.

Next, in line with our expectations and previous research (Benatov et al., 2020; Ong & Thompson, 2019), our results showed that avoidant coping was associated with a higher likelihood of lifetime and past-year suicidal ideation among SGM young adults, and with a higher likelihood of lifetime suicide attempts (among sexual minority young adults). Active coping was associated with a lower likelihood of suicidality among SGM young adults. In addition, passive coping was found to be associated with a higher likelihood of suicidality among SGM young adults. Cognitive processes related to passive coping are similar to rumination, which is also an important contributor to suicidal ideation in the IVM model (O'Connor & Kirtley, 2018). A meta-analytic review on rumination and suicidality underlined that rumination can be an important risk factor for suicidal ideation (Rogers & Joiner, 2017). The findings of the current study underscore that it is important to increase active coping and to decrease avoidant and passive coping in young SGM individuals. In particular, passive coping is an important maladaptive coping style for SGM young adults and should be targeted in prevention and intervention efforts for SGM young adults.

We also examined whether coping mitigated or exacerbated the associations between minority stress and suicidality. The results of this study demonstrated that among gender minority individuals, passive coping moderated the relation between

low victimization and lifetime suicidal ideation. Low victimization was more strongly associated with suicidal ideation for gender minority young adults with a relatively average or high level of passive coping. Among sexual minority young adults, avoidant coping moderated the relations between victimization, stigma, internalized homonegativity, and lifetime suicide attempts. Victimization and stigma were less strongly associated with suicide attempts for young adults with a relatively high level of avoidant coping, while internalized homonegativity was more strongly associated with suicide attempts for young adults with a relatively high level of avoidant coping. As previously proposed (D'haese et al., 2016; White Hughto et al., 2017), this may be best explained by the context of victimization. Individuals who regularly experience LGBT-related victimization may avoid certain situations or individuals, and as a result, their mental health is temporarily less impacted. Avoidant coping seems to be protective in some situations and the short term, but it is not clear how this affects mental health in the long term. Moreover, avoiding situations or individuals may limit opportunities for affirmation of one's sexual orientation, and the link between internalized homonegativity and poorer mental health may remain intact. Moreover, studies that examined mechanisms found that internalized homophobia was related to higher levels of maladaptive coping, which in turn was related to higher levels of psychological distress among sexual minority women (Kaysen et al., 2014; Szymanski et al., 2014). It is possible that SGM young adults develop maladaptive coping styles in response to experiencing minority stress. With the current data, we were unable to test these associations over time.

Finally, in line with our hypotheses, among SGM young adults who attempted suicide in the past year, we found higher rates of low and high victimization, higher levels of internalized homonegativity, stigma, avoidant coping, and passive coping, and lower levels of active coping. Among gender minority individuals who reported a past-year suicide attempt, we found higher levels of stigma and passive coping, and lower levels of active coping. No mean level differences for avoidant coping were found and no association was found for victimization. These findings underline the importance of further examining the role of coping in individuals with recent suicide attempts.

Strengths, limitations and future research

To our knowledge, this is one of the first studies to assess coping styles as moderators of the associations between minority stress and suicidality among SGM young adults. In addition, we assessed our hypotheses among sexual minority and gender minority individuals separately, which allowed for a comprehensive perspective of their unique experiences with minority stress.

This study also has some limitations. First, because of the cross-sectional design, we were unable to make statements about temporal effects. Although we assume that SGM young adults apply their coping styles to cope with potential minority stress

experiences, it is also possible that experiences with minority stress affect the coping styles that individuals develop and utilize. In addition, it is unclear how coping styles relate to short-term or long-term mental health outcomes, including suicidal ideation and attempts in adulthood. Longitudinal research, across multiple years, is necessary to study the development of both minority stress, coping styles, and suicidality. With such a study, we would be able to tease apart the temporal order of these concepts and better understand what the most optimal time to intervene is. Second, recruitment of participants was partly done via suicide prevention websites to collect sufficient data on the outcome of suicide attempts. The findings of the current study regarding the high rates of suicidality may therefore not be generalizable to the overall SGM young adult population in Flanders and the Netherlands. Third, due to power limitations, we were unable to assess past-year suicide attempts in our predictive models. Univariate and multivariate analyses did give some insight into differences in minority stress and coping styles regarding past-year suicide attempts. However, these results need to be interpreted with caution, because the number of individuals who reported past-year suicide attempts was small. Finally, for minority stress, we were limited to the assessment of internalized homonegativity —a measure of internalized trans negativity was not assessed.

For future research, we would advise the inclusion of multiple measures of minority stress, specific to the sexual or gender minority group. In addition, it would be informative for interventions to investigate SGM-specific coping styles in relation to suicidality. For example, Meyer (2003) suggests that a connection with the LGB community can protect an individual against poor mental health, and in a previous study LGB-specific coping was indeed associated with less depressive symptoms (Toomey, Ryan, et al., 2018).

Clinical implications

Insight from this research should inform (preventive) intervention efforts and support for SGM young adults with (or at risk for) suicidal ideation. Our findings suggest that increasing adaptive coping styles and decreasing maladaptive coping styles could decrease suicidality in SMG young adults. Some existing interventions target coping skills in SGM young individuals (Coulter et al., 2019; Craig et al., 2019), but these do not specifically target suicidality and/or exclude participants with active suicidal ideation (Craig et al., 2019). Moreover, a meta-analytic review on suicide prevention interventions for young people showed that few interventions focused on SGM young people (Robinson et al., 2018), while a study also suggests that SGM young people search for SGM affirming crisis services (Goldbach et al., 2019). Taken together, it is important that mental health services or interventions are SGM affirming and target coping skills and suicidality.

In addition, mental health professionals should learn and be able to utilize

safety-planning interventions. Safety-planning interventions can include coping strategies that individuals can use in times of crisis (Stanley & Brown, 2012). Safety-planning interventions are widely implemented and effective in suicide prevention and are a promising tool for suicide prevention among SGM young adults as well (Nuij et al., 2021; Stanley & Brown, 2012).

Conclusion

This study addressed a gap in the literature by examining the association between minority stress, coping styles, and suicidal ideation and attempts among SGM young adults. Our findings underline the importance of coping styles in relation to suicidal ideation and attempts. Furthermore, our findings highlight the need for further research into coping styles and suicidality to optimize suicide prevention interventions and mental healthcare for SGM young adults with suicidal ideation.

Supplementary material

Table S4.1 Results of moderation analyses for sexual minority young adults

	Lifetime suicidal ideation	Lifetime suicide attempts	Past-year suicidal ideation
	aOR [95% CI]	aOR [95% CI]	aOR [95% CI]
Active coping × low victimization	1.24 [0.77, 2.01]	0.87 [0.46, 1.65]	1.33 [0.75, 2.37]
Active coping × high victimization	1.82 [0.90, 3.69]	0.84 [0.38, 1.86]	1.25 [0.56, 2.82]
Active coping × internalized homonegativity	0.97 [0.67, 1.41]	0.80 [0.52, 1.24]	1.00 [0.65, 1.56]
Active coping × stigma consciousness	0.86 [0.57, 1.28]	1.14 0.70, 1.84]	0.78 [0.48, 1.26]
Avoidant coping × low victimization	0.82 [0.47, 1.45]	**0.39 [0.18, 0.84]**	0.73 [0.39, 1.36]
Avoidant coping × high victimization	0.67 [0.30, 2.05]	0.55 [0.22, 1.34]	1.07 [0.46, 2.51]
Avoidant coping × internalized homonegativity	1.30 [0.82, 2.05]	**2.07 [1.25, 3.43]**	0.89 [0.54, 1.45]
Avoidant coping × stigma consciousness	0.79 [0.49, 1.26]	**0.58 [0.35, 0.98]**	1.06 [0.64, 1.77]
Passive coping × low victimization	1.00 [0.54, 1.85]	0.91 [0.49, 1.72]	0.79 [0.42, 1.48]
Passive coping × high victimization	0.55 [0.25, 1.24]	1.27 [0.57, 2.84]	0.57 [0.25, 1.30]
Passive coping × internalized homonegativity	1.66 [1.01, 2.74]	1.01 [0.65, 1.58]	0.97 [0.60, 1.57]
Passive coping × stigma consciousness	0.95 [0.59, 1.55]	0.81 [0.51, 1.28]	1.06 [0.65, 1.72]

Note. All three coping styles were assessed separately. Controlling for sex assigned at birth and age. Bold estimates are significant, $p < .05$. aOR = adjusted odds ratio; CI = confidence interval; low victimization = sometimes; high victimization = once per month or more.

Table S4.2 Results of moderation analyses for gender minority young adults

	Lifetime suicidal ideation	Lifetime suicide attempts	Past-year suicidal ideation
	aOR [95% CI]	aOR [95% CI]	aOR [95% CI]
Active coping × low victimization	0.38 [0.09, 1.54]	0.95 [0.24, 3.85]	1.41 [0.37, 5.39]
Active coping × high victimization	0.90 [0.19, 4.31]	1.79 [0.42, 7.57]	1.56 [0.37, 6.63]
Active coping × stigma consciousness	0.70 [0.29, 1.68]	1.07 [0.57, 2.04]	0.92 [0.47, 1.82]
Avoidant coping × low victimization	0.90 [0.24, 3.43]	0.98 [0.30, 3.17]	0.67 [0.20, 2.26]
Avoidant coping × high victimization	1.10 [0.23, 5.29]	1.02 [0.28, 3.72]	0.57 [0.15, 2.17]
Avoidant coping × stigma consciousness	0.78 [0.35, 1.77]	1.02 [0.55. 1.90]	0.86 [0.43, 1.73]
Passive coping × low victimization	**4.10 [1.05, 16.05]**	2.23 [0.71, 6.95]	1.39 [0.41, 4.65]
Passive coping × high victimization	1.67 [0.40, 7.14]	1.86 [0.54, 6.37]	0.90 [0.25, 3.30]
Passive coping × stigma consciousness	1.31 [0.60, 2.87]	0.85 [0.44, 1.63]	0.66 [0.32, 1.37]

Note. All three coping styles were assessed separately. Controlling for sex assigned at birth and age. Bold estimates are significant, $p < .05$. aOR = adjusted odds ratio; CI = confidence interval; low victimization = sometimes; high victimization = once per month or more.