

# Stigma and Health

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# “I Can’t Stop Thinking About It”: The Mental and Behavioral Health Correlates of Disclosure Rumination Among Sexual Minorities

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Among sexual minority individuals (SMs), concealment of one’s sexual identity has been associated with adverse mental and behavioral health outcomes, though the mechanisms underlying this association remain underexamined. The present research examined a novel mechanism linking higher sexual identity concealment to poorer mental health and a greater likelihood of using substances to cope with stress. Specifically, disclosure rumination (i.e., the extent to which participants felt fixated on disclosure experiences, including feeling overwhelmed by thinking about disclosing their identity to others) was examined with survey items adapted from prior brooding rumination scales. As hypothesized, SMs ( $N = 362$ ) who concealed their identity to a greater extent spent more time ruminating about disclosure, contributing to poorer self-reported mental health and a greater likelihood of substance use coping in our cross-sectional mediation analyses. Additional moderation analyses suggest that these associations were more pronounced for SMs who experience greater sexual orientation-based discrimination. Interventions to reduce disclosure rumination among SMs are suggested to combat SM’s mental health and substance use disparities.

### **Clinical Impact Statement**

Sexual minority individuals who conceal their sexual orientation are at greater risk of developing mental and behavioral health disorders compared to their less concealed counterparts. The present research suggests that disclosure rumination (i.e., a fixation on thinking about the act of identity disclosure) is an underexamined mechanism underlying the adverse consequences of sexual orientation concealment. Efforts to reduce stress surrounding disclosure, for example, by reframing cognitions toward pondering about positive rather than negative outcomes of disclosure, may be a fruitful avenue to improve the mental and behavioral health of concealed sexual minority individuals, perhaps especially among those in more supportive environments.


**Keywords:** concealment, sexual minority, disclosure, mental health, substance use coping

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Compared to heterosexual people, sexual minority individuals (SMs; i.e., those who identify as lesbian, gay, bisexual, or with another sexual identity that is not heterosexual) are estimated to be significantly more likely to experience psychological disorders in their lifetime (Gmelin et al., 2022; Hatzenbuehler et al., 2008). In addition, large survey trends indicate persistent substance use patterns among SM populations over time, despite a greater decrease

in substance use among heterosexual populations (e.g., Watson et al., 2018). The literature explaining SMs disparities in mental and behavioral health has extensively relied on minority stress models (see Meyer, 2003; Rich et al., 2020), which position disparities as an outcome of minority stressors like discrimination and identity concealment (e.g., Bränström & Pachankis, 2018; Lee et al., 2016). These unique stressors that SMs face are argued to thwart needs for

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Data for the present study are posted on the Open Science Framework link at [https://osf.io/m8vvt/?view\\_only=61584188a2c64ebbb11f7dabd6723cb6](https://osf.io/m8vvt/?view_only=61584188a2c64ebbb11f7dabd6723cb6). When this article was drafted, all four authors of this work identified as queer/lesbian/bisexual women. The authors note that their identification with the lesbian, gay, bisexual, transgender, and queer/questioning community informed the creation of the present research questions and that their research background as social and health psychologists informed the design of the present study and theoretical groundings. The authors report no conflicts of interest.

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belonging, lower self-esteem, consume cognitive and affective resources, and ultimately diminish one's ability to adaptively deal with stressors (Hatzenbuehler, 2009; Lattanner & Hatzenbuehler, 2023; Le Forestier et al., 2024; Pachankis, 2007) and increasing their likelihood of hazardous substance use (including by self-medicating to reduce negative affect; e.g., Villarreal et al., 2021; Woodford et al., 2012). For instance, relative to SMs who are "out" about their identity, SMs who conceal their identity report lower life satisfaction, poorer mental health, and greater substance use problems (Brennan et al., 2021; Livingston et al., 2020; Pachankis & Bränström, 2018; Pachankis et al., 2020).

A growing body of literature has focused on elucidating targetable mechanisms linking minority stressors to mental and behavioral health disparities, including research focused on the emotion regulation correlates of sexual identity concealment (e.g., negative self-directed rumination; Dyar, 2024; Hatzenbuehler, Nolen-Hoeksema, & Dovidio, 2009). The present work proposes rumination about sexual identity disclosure, that being a cognitive fixation on the act of sexual identity disclosure, as a novel targetable mechanism linking sexual identity concealment to SMs' higher likelihood of poor mental health and use of substances to cope.

### Minority Stressors as Predictors of Mental Health and Substance Use

Concealment and anti-LGBTQ discrimination are two widely examined minority stressors that negatively impact the mental and behavioral health of SMs (e.g., Hatzenbuehler et al., 2015; Layland et al., 2022; Pachankis et al., 2015). While concealment of sexual orientation can be conceptualized as a protective mechanism in some contexts (i.e., "hiding" oneself from encountering bias; see Shepherd et al., 2024), concealing one's lesbian, gay, bisexual, transgender, and queer/questioning (LGBTQ) identity is more often identified as harmful to mental health. For example, in an encompassing meta-analysis, greater sexual identity concealment was associated with higher anxiety and depression among SMs (Pachankis et al., 2020), and identity concealment was associated with lower life satisfaction across SM samples in 28 European countries (Pachankis & Bränström, 2018). Similarly, lived experiences of discrimination (e.g., being verbally harassed or subject to physical violence) increase SMs' use of substances to cope with negative affect resulting from minority stressors (Dyar et al., 2022; Feinstein & Newcomb, 2016).

Those who more actively try to conceal their SM identity (e.g., by avoiding interactions, changing one's presentation to be more typical of their assigned sex) report greater substance use (e.g., alcohol, tobacco) and are more likely to have a diagnosis of a substance use disorder (e.g., Brennan et al., 2021; Cortopassi et al., 2017). Concealing predicts negative affect on a daily level (e.g., Kiekenes & Mereish, 2022). Indeed, the act of concealment imbues a cognitive burden (e.g., when trying to avoid becoming known as LGBTQ; Critcher & Ferguson, 2014; Slepian, 2022), lowers feelings of authenticity (i.e., being able to be oneself with others; Newheiser & Barreto, 2014; Newheiser et al., 2017), and reduces access to social support that can be drawn on in times of coping with distress (e.g., Bry et al., 2017; Ehlke et al., 2020; Slepian & Moulton-Tetlock, 2019).

Without social support, more concealed SMs may lack social resources and feelings of safety that aid in the "coming out" process (Diamond & Alley, 2022), perpetuating a cycle of concealment and poor mental and behavioral health. The choice of whether or not to

disclose one's identity is a substantial one, and many SMs report struggling with disclosure decisions (e.g., how or when to disclose, what to say; Mallory et al., 2021; Omarzu, 2000). Disclosure opportunities occur regularly as one interacts with new social groups and can be a significant stressor among more concealed individuals (Pollitt et al., 2017). While rejecting disclosure experiences can increase distress and likelihood of substance use (e.g., Goldbach et al., 2014), some research suggests that the majority of SMs' disclosure experiences are neutral or positive in affect (e.g., Cipollina et al., 2022, 2023). Indeed, supportive disclosure experiences have a notable positive impact on the mental health of those early in the coming out process (e.g., Chaudoir & Quinn, 2010). Disclosure can be a protective factor for SMs through validating one's identity and increasing access to LGBTQ circles (Heck et al., 2013). Despite the documented benefits of identity disclosure, considerations regarding how to reduce the stress surrounding concealment and disclosure events are minimal in the minority stress literature.

### Emotion Regulation in the Minority Stress Model

The minority stress model argues that SM individuals encounter stressors at distal (e.g., structural and interpersonal discrimination) and proximal (e.g., stigma internalization and concealment) that their majority counterparts do not experience (Meyer, 2003). These minority stressors are identified factors explaining health disparities (Bränström & Pachankis, 2018; Lee et al., 2016; Rich et al., 2020). In extensions to Meyer's widely cited minority stress model, emotion regulation is positioned as a mechanism through which minority stressors reduce SMs' mental health (Hatzenbuehler, 2009; Pachankis, 2007). For instance, studies suggest that SMs who keep their identity concealed are likely to have lower access to varied resources (e.g., social support) that enable them to cope with stress adaptively, thereby increasing the use of coping approaches that are maladaptive or detrimental to the user's well-being (e.g., via self-medication with alcohol and other drugs; Brennan et al., 2021; Goldbach et al., 2014; Villarreal et al., 2021).

Seminal research has documented that maladaptive emotion regulation strategies (e.g., rumination, expressive suppression) underlie the link between minority stressors and poor mental health for SMs (e.g., Hatzenbuehler, 2009; Hatzenbuehler, Nolen-Hoeksema, & Dovidio, 2009). For instance, SMs who conceal their sexual orientation are more likely to utilize emotional suppression, during which SMs inhibit emotion-expressive behavior (e.g., not displaying emotions when overhearing negative comments about SM people; Singh et al., 2023). More concealed SMs are also noted to be more likely to engage in brooding rumination (e.g., Hatzenbuehler, Nolen-Hoeksema, & Dovidio, 2009), a repetitive self-focused reflection of one's experiences and circumstances (e.g., "why am I feeling this way?"; Treynor et al., 2003). Because emotion suppression and rumination do not aid in regulating distress, more frequent use of these emotion regulation strategies predicts poorer mental health among SMs, including heightened anxiety and depression symptoms (e.g., Hatzenbuehler, Dovidio, et al., 2009; Szymanski et al., 2014). Emotion regulation deficits among those who are more concealed may be particularly pronounced when SMs live in areas with more negative attitudes toward SMs (Hollinsaid et al., 2023; Villarreal et al., 2021), as the burden of monitoring one's emotions related to concealment and contending with bias toward SMs may be additive.

Expanded minority stress theories that position emotion regulation as a key mechanism to target mental and behavioral health disparities (e.g., Singh et al., 2023) have yet to identify emotion regulation approaches specifically used in the context of identity concealment. For instance, rumination assessments capture an individual's general tendency to passively and repetitively focus on one's distress and the circumstances surrounding it irrespective of the nature of specific stressors (Nolen-Hoeksema et al., 2008; Treynor et al., 2003; e.g., "Why do I always react this way?"). Critically, rumination about sexual identity disclosure (e.g., "I often become overwhelmed with thoughts about disclosing my identity") reflects a repetitive cognitive focus on the act of disclosure, not a fixation on the potential negative reactions that others may have to disclosure, a construct perhaps more akin to anticipated stigma (e.g., Quinn & Chaudoir, 2009). The extent to which SMs engage in rumination about their identity concealment or instances of identity disclosures (e.g., ruminating about not disclosing to someone, ruminating about how to disclose, ruminating about how one would change a previous disclosure experience) has yet to be explored despite the importance of this stressor in SMs daily lives.

## Present Research

Consistent with prior research, we hypothesized that identity concealment would be associated with greater psychological distress (i.e., depression, anxiety, and stress) and substance use coping. Extending prior research, we further anticipated that these associations would be mediated by disclosure rumination, such that greater identity concealment would be associated with greater rumination about disclosure, which in turn would be associated with greater psychological distress and substance use coping. We suggest that disclosure rumination is an uncaptured maladaptive emotion regulation approach employed by SMs in response to concealment stress. See the proposed model in Figure 1.

Further, as greater experiences of discrimination have been shown to reduce coping resources (e.g., Ehlke et al., 2020) and the frequency of ruminating about disclosure may vary based on the presence of sexual orientation-based discrimination in one's life, we also tested for a moderating effect of sexual orientation-based discrimination in the relationship between concealment and disclosure rumination. Specifically, we anticipated that identity concealment would be more strongly associated with disclosure rumination and, in turn, psychological distress and substance use coping, among those with more frequent experiences of sexual orientation-based discrimination compared to those with

less frequent experiences of sexual orientation-based discrimination. Our support for this hypothesis is bolstered by innovative new research that considers how concealment and sexual orientation-based discrimination may interact to reduce SMs' mental health. Particularly, research by Livingston et al. (2020) suggests that discrimination experiences produce greater reactivity and resulting anxious and depressed mood among those with higher levels of identity concealment. Together, exploring the interactive effect of concealment and experiences of discrimination may promote a more complex understanding of the role of varied minority stressors on disclosure rumination and SMs mental health.

## Method

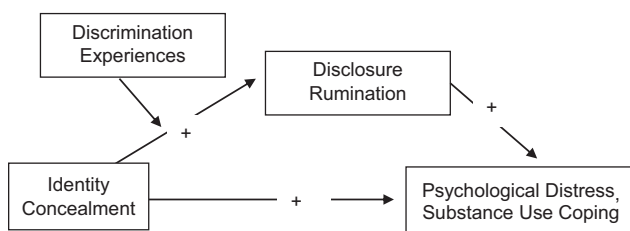
### Participants and Procedure

Sexual minority participants currently residing within the United States were recruited using Prolific's research platform. Prolific's survey platform has a record of quality data relative to other online recruitment tools (see Douglas et al., 2023), with unique participant identifiers, IP address checks, and bot detection built into the platform. Interested participants were eligible for the study, if they identified with a sexual orientation other than heterosexual on Prolific's demographic screening questions, were over the age of 18 years old, were able to answer survey questions in English, and were residing within the United States at the time of survey participation. Participants were unaware of the eligibility criteria. Any respondents who failed eligibility checks (i.e., identifying as heterosexual in our survey;  $n = 5$ ) or who failed two or more attention check questions (e.g., "select strongly agree as your answer choice for this question";  $n = 3$ ) were removed from the data set. All data entries were checked for inconsistencies, for example, multiple entries with the same IP address and irregular text (e.g., in text box entries).

Institutional review board approval for this study was granted from the University of Connecticut Arts and Sciences institutional review board (Protocol Number: H22-0012). Participants first provided informed consent and reported on their demographics followed by questions regarding their beliefs about their identity and concealment, items assessing disclosure rumination, coping with substances, and psychological distress. Participants' sexual orientation and gender identity were reported in the survey using two questions and an inclusive set of multiple-choice options reflected in Table 1. The survey took about 6 min to complete. At the end of participation, participants were granted monetary compensation at a fair hourly rate (\$1.50; \$15 per hour) alongside a debriefing with varied mental health resources.

The analytic sample of 362 participants exceeded our desired sample size of 360, which was determined using G\*Power statistical software (Faul et al., 2009). An a priori power analysis was calculated to find a small interaction effect size ( $d = 0.1-0.2$ ) in a multiple regression at 80% power. Post hoc power analyses were conducted using Webpower (Xu et al., 2024) to document identified power in our moderated mediation analyses. With the sample size of 362, we achieved 92% power for identifying the conditional indirect effect. The sample ( $M_{\text{age}} = 34.17$ ,  $SD_{\text{age}} = 11.48$ ) was majority cisgender (80.6%), non-Hispanic White (64.1%), and plurisexual (i.e., attracted to people of more than one gender; >68%). See Table 1 for full sample demographics.

**Figure 1**  
*Proposed Moderated Mediation Linking Concealment to Distress and Substance Use Coping*



**Table 1**  
*Sample Demographic Characteristics*

Demographic category	<i>n</i> (%)
Gender	
Cisgender woman	158 (43.6)
Cisgender man	138 (38.1)
Nonbinary	39 (10.8)
Transgender man	12 (3.3)
Transgender woman	10 (2.8)
Genderqueer	2 (0.6)
Agender or genderfluid	3 (0.8)
Race/ethnicity	
Non-Hispanic White	232 (64.1)
Black/African/Caribbean American	50 (13.8)
Biracial or selected or than one answer	34 (9.4)
Asian American	23 (9.4)
Hispanic/Latino/a/x	22 (6.1)
American Indian or Alaska Native	1 (0.3)
Sexual orientation	
Bisexual	173 (47.8)
Lesbian/gay	93 (25.7)
Pansexual	40 (11.0)
Queer	29 (8.0)
Asexual	14 (3.9)
Questioning/not sure	9 (2.5)
Rather define myself (e.g., demisexual)	4 (1.1)

Note. *N* = 362.

## Measures

### Discrimination Experiences

As a measure of discrimination experiences, participants responded to a validated 10-item measure of heterosexist harassment, rejection, and discrimination (Feinstein, Khan, et al., 2023). Participants recalled how often in the past year they, for example, were “verbally insulted” or were “treated unfairly by family” because of their LGBTQ identity on a scale of 1 (*never happened in the past year*) to 5 (*happened all of the time*). The items were reliable ( $a = .89$ ) and were averaged.

### Identity Concealment

Participants responded to three items assessing the concealment of their sexual identity. Specifically, there were two items assessing concealment motivations (Mohr & Kendra, 2011; e.g., “I prefer to keep information about my sexual orientation private from others”) and one principal investigator (PI)-added item (i.e., “I actively lie or mislead others so that they do not find out about my sexual identity”) adapted from a growing literature on active concealment (Quinn et al., 2017), that were asked on a scale of 1 (*strongly disagree*) to 6 (*strongly agree*). The items were reliable as a scale ( $a = .79$ ), loaded onto one factor in an exploratory factor analysis (Oblimin Rotation, principal axis factoring), and were averaged with higher values indicating greater identity concealment.

### Disclosure Rumination

Participants answered a seven-item PI-created measure of disclosure rumination with scale items adapted from past work on brooding rumination (Treyner et al., 2003). The items, for example, “How often do you become overwhelmed with thoughts about disclosing your identity?” were answered on a 1 (*never*) to 5 (*great*)

*deal*) scale. The items were reliable as a scale ( $a = .91$ ), fell onto one factor in an exploratory factor analysis (Oblimin Rotation, principal axis factoring), and were averaged. See the Appendix for all scale items and the Supplemental Material for interitem correlations.

### Psychological Distress

Participants answered a 21-item measure of psychological distress assessing symptoms of stress, anxiety, and depression (Lovibond & Lovibond, 1995). The items, for example, “I found it difficult to relax” and “I felt that life was meaningless,” were answered on a 1 (*did not apply to me at all*) to 4 (*applied to me very much or most of the time*) scale. The items were reliable as a scale ( $a = .95$ ) and were averaged with higher scores indicating greater distress.

### Coping With Substances

Participants responded to two items from Carver’s (1997) Brief-Coping Orientation to Problems Experienced (Brief-COPE) substance use subscale. The two items, that is, “I have been using alcohol or drugs to help me feel better” and “I have been using alcohol or drugs to help me get through stressful times,” were rated on a 1 (*I have not been doing this at all*) to 4 (*I have been doing this a lot*) scale. Responses on these items were not normally distributed as more than 54% of the sample responded as never engaging in substance use coping across both items. As follows, responses were dichotomized, such that those who reported that they used substances to cope “a little bit,” “some of the time,” or “a lot” were coded as one, with those who have not been substance use coping coded as zero. The two recoded items were then combined creating a substance use coping outcome measure. Analyses reveal the same pattern of results if the measure is not dichotomized.

### Data Analysis Strategy

To test our primary hypotheses that disclosure rumination mediates the association of identity concealment with psychological distress and substance coping, with discrimination experiences moderating the association between identity concealment and disclosure rumination, two cross-sectional moderated mediation analyses were conducted with 10,000 bootstrapped samples. The moderated mediation analyses were conducted using Hayes’ (2012) Process Macro for SPSS (Model 7). There were 23 cells of missing data across 15,566 cells (<0.15%). These missing cells were considered missing at random and were not imputed.

The first cross-sectional mediation analysis examined disclosure rumination as a mediator of the relationship between identity concealment and psychological distress; the second examined disclosure rumination as a mediator of the relationship between identity concealment and coping with substances. Both mediation analyses examined the moderating impact of discrimination experiences on the indirect (i.e., mediation) effect, by probing for an interaction between identity concealment and disclosure rumination. Both cross-sectional mediation analyses controlled for participant gender (coded: cisgender  $n = 296$ , transgender and gender diverse  $n = 66$ ), race (coded: non-Hispanic White  $n = 232$ , participant of color  $n = 130$ ), sexual orientation (coded: lesbian or gay  $n = 74$ , bisexual and all else  $n = 268$ ), and age (coded: under 34  $n = 225$ , and 35+  $n = 137$ ), to account for demographic influences

on all model variables. Demographic variables were dichotomized for statistical power and interpretation of effects when dealing with smaller sized demographic groups.

## Results

See Table 2 for descriptive statistics and correlations between all variables. As hypothesized, identity concealment was positively and significantly associated with disclosure rumination and psychological distress. While disclosure rumination was significantly and positively associated with psychological distress, it was not significantly associated with substance use coping. Reports of experiencing sexual orientation-based discrimination in the past month were positively and significantly associated with identity concealment, disclosure rumination, psychological distress, and substance use coping.

See Figure 2 for mediation paths and Table 3 for mediation indirect and direct effects. As hypothesized, identity concealment was associated with greater disclosure rumination,  $p = .01$ , 95% CI [0.02, 0.34], which was, in turn, associated with greater psychological distress,  $p < .001$ , 95% CI [0.18, 0.35]. The interaction of identity concealment and discrimination on disclosure rumination was significant,  $p = .04$ , 95% CI [0.01, 0.21], such that identity concealment was a stronger predictor of disclosure rumination at higher levels of experienced discrimination (+1 *SD*, 95% CI [0.33, 0.50]) when compared to those at lower levels of experienced discrimination (−1 *SD*; 95% CI [0.22, 0.37]),  $ps < .001$ . The identified indirect effect was also significantly moderated by sexual orientation-based discrimination, index of moderated mediation:  $B = 0.02$ ,  $SE = 0.01$ , 95% CI [0.005, 0.043], such that the indirect effect was significantly stronger at higher levels of discrimination (+1 *SD*; 95% CI [0.06, 0.16]) when compared to at lower levels of discrimination (−1 *SD*; 95% CI [0.04, 0.12]).

In the second cross-sectional mediation analysis, identity concealment was again associated with greater disclosure rumination which was, in turn, associated with a greater likelihood of coping with substances,  $p = .02$ , 95% CI [0.003, 0.14]. This indirect effect was also significantly moderated by sexual orientation-based discrimination, index of moderated mediation:  $B = 0.006$ ,  $SE = 0.003$ , 95% CI [0.002, 0.014], such that the indirect effect was significantly stronger at higher levels of discrimination (95% CI [0.002, 0.06]) than at lower levels of discrimination (95% CI [0.001, 0.04]).

Participant age, gender, race, and sexual orientation were not significantly related to disclosure rumination or coping with substances. Removing gender, race, and sexual orientation from the model did not change the pattern of significant findings. Sexual

orientation was the only demographic covariate that was significantly associated with psychological distress, such that bisexual people and people of other sexual orientations that are not lesbian or gay reported greater psychological distress.

## Discussion

Extending prior research on the mental and behavioral health correlates of SMs identity concealment, the present study sought to examine disclosure rumination as a mechanism linking identity concealment to psychological distress and substance use coping. SM participants with greater identity concealment reported engaging in more disclosure rumination. Greater disclosure rumination was in turn associated with greater psychological distress and a higher likelihood of using substances to cope. Identity concealment was a stronger predictor of disclosure rumination among sexual minorities who experienced greater sexual orientation-based discrimination in the past year relative to those who experienced lower levels of discrimination, suggesting the importance of context in understanding the impact of identity concealment on psychological distress and coping with substances. Such exploration into the interactive effects of two types of minority stressors (i.e., distal and proximal stressors), rather than positioning stressors as independent, adds to innovative research identifying the minority stressors as moderators of more widely identified relationships (e.g., see Livingston et al., 2020).

The present research findings offer novel insights into the emotion regulation strategies and processes that unfold for SMs whose SM identity is more concealed. Expanding emotion regulation extensions to the minority stress model (e.g., Hatzenbuehler, 2009), the present research argues that part of concealment stress is due to increased rumination about the act of disclosure, a concept previously untapped in the psychological literature. Specifically, the present data-identified identity concealment may contribute to greater psychological distress and substance use coping in part due to increased rumination that occurs as a product of deliberating about and reflecting on identity disclosure experiences. As such, the present research not only expands prior work on the link from concealment to substance use and psychological distress (e.g., Cortopassi et al., 2017) but also further elucidates the role of emotion regulation in minority stress models (e.g., Dyar, 2024; Hollinsaid et al., 2023).

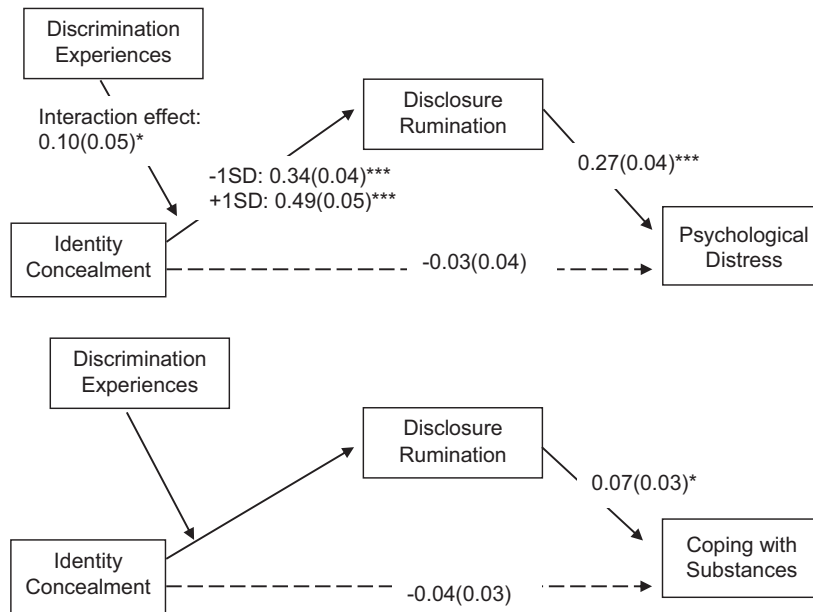
Notably, a potentially similar phenomenon related to SMs' experiences of minority stress, hypervigilance, or heightened salience of one's sexual minority identity (or being seen as a sexual minority) due to fears of sexual orientation-based discrimination, has been identified in prior work as a contributor to poor mental health among SMs (e.g., Riggle et al., 2023). However, while research on

**Table 2**  
*Measure Descriptive Statistics and Pearson's Correlation Coefficients*

Scale	<i>M (SD)</i>	Range	1	2	3	4	5
1. Identity concealment	3.37 (1.19)	1–6	—	.53***	.18**	−.003	.16**
2. Disclosure rumination	2.09 (0.88)	1–5		—	.34***	.08	.51***
3. Psychological distress	1.94 (0.67)	1–4			—	.27***	.31***
4. Substance coping	0.44 (0.48)	0–1				—	.18***
5. Discrimination exp.	1.46 (0.61)	1–4					—

Note. Exp. = experience.  
\*\*  $p < .01$ . \*\*\*  $p < .001$ .

**Figure 2**  
Moderated Mediation Analyses



Note. Unstandardized betas and standardized errors are presented. Dashed lines are not significant. Demographic covariates (described in the text) are included in the presented models.  
\*  $p < .05$ . \*\*\*  $p < .001$ .

hypervigilance reflects a cognitive indicator of avoidant coping with bias, it does not capture one's cognitions related to identity concealment or disclosure processes. We contend that disclosure rumination is a unique emotion regulation process that SMs must navigate, particularly for those who are more concealed and facing greater discrimination.

### Limitations and Future Directions

The present study has several limitations. First, the cross-sectional nature of these data prevents causal conclusions about the directionality of model variables. Specifically, our conceptualization

of disclosure rumination as a mechanism linking concealment to psychological distress and substance use may be bidirectional, such that those who struggle with disclosure rumination (and ruminative responses to stress more generally; Treynor et al., 2003) may be less likely to disclose their sexual orientation to others (Chaudoir & Fisher, 2010). As such, future research should utilize longitudinal methods to clarify relationships between our model variables while reducing these sources of recall bias. Second, the present work utilized two items from the well-validated Brief COPE questionnaire to assess coping with substances (Carver, 1997). While the brevity of these items was helpful in reducing participant burden, future research should utilize longer substance use assessments to

**Table 3**  
Indirect and Direct Effects Linking Concealment to Distress and Substance Use Coping

Mediation pathway	B (SE)	95% CI
Concealment to psychological distress		
Overall indirect: Conceal → disclosure rumination → distress	0.11 (0.02)	[0.06, 0.16]
Moderated indirect (-1 SD): Conceal → disclosure rumination → distress	0.09 (0.02)	[0.05, 0.14]
Moderated indirect (+1 SD): Conceal → disclosure rumination → distress	0.13 (0.03)	[0.07, 0.19]
Direct: Conceal → distress	-0.03 (0.04)	[-0.11, 0.05]
Total: Conceal → distress	0.08 (0.03)	[0.02, 0.14]
Concealment to substance coping		
Indirect: Conceal → Disclosure rumination → substance coping	0.03 (0.01)	[0.003, 0.06]
Moderated indirect (-1 SD): Conceal → disclosure rumination → substance coping	0.02 (0.01)	[0.002, 0.05]
Moderated indirect (+1 SD): Conceal → disclosure rumination → substance coping	0.03 (0.02)	[0.003, 0.07]
Direct: Conceal → substance coping	-0.04 (0.03)	[-0.10, 0.02]
Total: Conceal → substance coping	-0.004 (0.02)	[-0.05, 0.04]

Note. Unstandardized betas and standardized errors presented. Effects with confidence intervals that do not cross over 0 are statistically significant. SE = standard error; CI = confidence interval.

examine the impact of disclosure rumination on drinking motives, substance use frequency, and perceived consequences.

While we have strong conceptual reasons to believe that disclosure rumination might uniquely impact the mental and behavioral health of SMs based on the well-documented challenges surrounding navigating disclosure decisions and opportunities (Mallory et al., 2021; Omarzu, 2000; Pollitt et al., 2017), we were not able to empirically examine its distinct impact relative to general rumination. Future efforts to disentangle the impact of disclosure-specific and general rumination processes in the context of sexual identity concealment can inform the development of minority stress-coping interventions designed to mitigate the adverse mental and behavioral health outcomes among SMs by addressing targetable mechanisms such as emotion regulation (e.g., Pachankis et al., 2022). If disclosure rumination is shown to predict psychological distress and substance use coping above and beyond general rumination among concealed SMs, for example, researchers should consider adding specific intervention content that focuses on the challenges of navigating identity disclosure across various contexts (e.g., reframing one's cognition to focus on positive vs. negative disclosure outcomes in supportive environments).

The present study recruited a nonclinical sample of sexual minority adults across the United States. As such, baseline rates of substance use coping within the sample were not particularly high (around 50% of the sample reported never engaging in substance use coping). If the recruitment strategy focused on sexual minority adults who report using substances or alcohol regularly (an approach used by other researchers in this context; e.g., Dyar et al., 2021, 2022), the identified small effect between disclosure rumination and substance use coping may have been larger. Such recruitment of those who report using substances would enable further conclusions regarding how disclosure rumination may impact reliance on substance use coping in times of stress.

In addition, there are many studies pointing to different substance use risks among SMs of varied genders, sexual orientations, and racial backgrounds (e.g., Hughes et al., 2020; Schuler et al., 2018; Slater et al., 2017). The present study was not powered to examine small subgroup differences or intersectional stressors that may impact model pathways; our dichotomized demographic correlates suggested few between-group differences (i.e., lesbian and gay participants in this research reported lower psychological distress than those who identified as bisexual, pansexual, or with another minority sexual orientation as found in prior literature; e.g., Ehlke et al., 2020; Feinstein, Hurtado, et al., 2023). Critically, our novel disclosure rumination scale included items specific to sexual orientation disclosure with other items regarding disclosing "LGBTQ+ identity." Some participants in the present sample (~16%) may have also been reflecting on gender disclosure rumination. Future work should consider differences in sexual orientation-based and gender-based concealment, discrimination experiences, and disclosure rumination as predictors of LGBTQ+ subgroup disparities in mental health and substance use coping with strategic subgroup recruitment.

While the present work suggests that identity concealment contributes to a greater likelihood of substance use coping, some research points to greater substance use among more "out" SMs (e.g., Feinstein et al., 2017; Thiede et al., 2003). Differences in these research findings are likely explained by differences in substance use driven by social or coping purposes (Felner et al., 2020; McDavitt et al., 2008). Specifically, whereas some SMs who are less concealed

may engage in drinking for social motives (e.g., as part of engagement in LGBTQ bar and hookup culture; Green & Feinstein, 2012), SMs who are more concealed may engage in hazardous drinking as a method to self-medicate and cope with negative emotions (Rosenthal et al., 2023). Future research should consider extending the present findings to capture differences in hazardous drinking with social and coping motives as related to identity concealment disclosure rumination.

## Conclusion

Maladaptive emotion regulation strategies (e.g., expressive suppression and brooding rumination) have been identified as links between sexual minority stressors (e.g., concealment and discrimination experiences) and SM's disparities in mental health and substance use. The present research contributes to this existing literature by providing initial evidence of the role of disclosure-specific rumination as a mechanism linking identity concealment to poorer mental and behavioral health among SMs. Additional findings underscored the exaggerated impact that experiences of sexual orientation-based discrimination may have on more concealed SMs' emotion regulation, such that more concealed SMs who experience greater discrimination may be most at risk of engaging in disclosure-specific rumination. Together, findings suggest the potential utility of targeting disclosure rumination in SM mental health and substance use prevention efforts to reduce the burden of concealment on SMs' mental and behavioral health.

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## Appendix

### Disclosure Rumination Scale

1 (*never*), 2 (*rarely*), 3 (*occasionally*), 4 (*a moderate amount*), 5 (*a great deal*)

1. How often do you spend time deciding whether or not to disclose your sexual orientation to others?
2. How often do you worry about how other people will react to your sexual orientation if you disclosed it?
3. How often do you become overwhelmed with thoughts about disclosing your identity?
4. How often do you become fixated thinking about what is the “correct” or “right” way to disclose your LGBTQ+ identity to someone?
5. How often do you think about how much you regret disclosing your identity to a specific person?
6. How often do you think about a previous disclosure conversation and wish you said something different?
7. How often do you think “why do I have such a hard time telling others about my LGBTQ+ identity”?

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