



Emotion regulation and OCD among sexual minority people: Identifying treatment targets

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ABSTRACT

Sexual minority individuals experience higher rates of psychopathology, such that sexual minority people are nine times more likely to receive a diagnosis or treatment for obsessive-compulsive disorder (OCD) compared to heterosexual people. Poor emotion regulation capacity is a risk factor for OCD, but little is known about sexual orientation differences in dimensions of emotion regulation and how dimensions of emotion regulation relate to OCD severity among sexual minority people. The aims of the current study include 1) comparing sexual minority to heterosexual people on OCD severity and emotion regulation capacity upon admission to treatment for OCD, and 2) examining emotion regulation in relation to OCD severity among sexual minority people. Participants ($N = 470$) were adults in partial hospital/residential treatment with an average stay of 59.7 days ($SD = 25.3$), including 22 % sexual minority people. Sexual minority people reported a lower emotion regulation capacity. Among the largest three subgroups (heterosexual, bi+, and gay/lesbian), bi+ individuals reported a lower emotion regulation capacity compared to heterosexual but not gay/lesbian people. Results suggest there are sexual orientation differences in emotion regulation capacity, and that bi+ people have the most difficulty with ER. There is a need for OCD treatment to directly target emotion regulation strategies and be affirming of sexual minority identities.

Sexual minority (e.g., gay, lesbian, bisexual) individuals report higher rates of psychopathology compared to heterosexual individuals (Brooks, 1981; Eaton, 2014; Meyer, 2003; Semlyen et al., 2016; Wittgens et al., 2022). These higher rates of psychopathology may be explained through the minority stress theory, which posits that sexual minority individuals experience unique stressors related to their stigmatized social status which in turn contribute to their disproportionate rates of psychopathology (Meyer, 2003). Importantly, discrimination continues to be a concern for sexual minority people despite progress made at institutional and local levels (Casey et al., 2019). Meyer (2003) described various minority stress experiences, ranging from distal (e.g., prejudice, microaggressions, discriminatory laws and policies) to proximal experiences (e.g., internalization of negative societal attitudes, expectations of rejection, identity concealment).

Initial evidence suggests these disparities may be particularly striking for obsessive-compulsive disorder (OCD), with sexual minority

individuals being nine times more likely to receive a diagnosis or treatment for OCD compared to heterosexual individuals in a sample of undergraduate US Armed Services members (Pelts & Albright, 2015). Additionally, one study found that sexual minority adults represent 18 % of people receiving residential treatment for OCD (Bezhler et al., 2022), which is substantially higher than the proportion of sexual minority individuals in the general population (3.5–7.1 %; Gates, 2011; Jones, 2022). Further, one study found that sexual minority people reported higher OCD severity compared to heterosexual people in a clinical sample (Bezhler et al., 2022), although their sample was small ($n = 34$ sexual minority people; $n = 157$ heterosexual people). However, other studies have not replicated these disparities in samples of undergraduate students and patients (Pinciotti & Orcutt, 2021; Pinciotti et al., 2023). While the minority stress model (Meyer, 2003) is not OCD specific, it can be utilized to understand why rates of OCD diagnoses and symptom severity may be higher among sexual minority populations. Last, while

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the specific mechanisms describing the increased risk of OCD among sexual minority compared to heterosexual people remain mixed in findings, shame and stigma are experienced both by sexual minority individuals due to minority stress and by individuals with OCD. For example, symptom dimensions of OCD which are more likely to be stigmatized and lead individuals to feel shame about symptoms, include unacceptable thoughts related to sex and violence, and are also more likely to be endorsed by sexual minority compared to heterosexual people (Pinciotti & Orcutt, 2021).

Despite evidence that sexual minority individuals may be at increased risk for OCD, little is known about risk factors for OCD severity in this population. Identifying how sexual minority and heterosexual individuals differ in known risk factors for OCD severity, such as poor emotion regulation and distress tolerance, could highlight potential treatment targets unique to this population. Emotion regulation refers to the broad capacity an individual has at a given moment to respond to a specific emotion (e.g., fear, worry; Gross, 1999, 2015). Poor emotion regulation specifically predicts OCD symptom severity above and beyond other documented risk factors such as anxiety and depression (Yap et al., 2018), and it is posited to be an important factor in maintaining OCD (Stern et al., 2014). For example, prior research in a community sample has identified that OCD is significantly associated with emotion regulation difficulties such as expressive suppression, impulse control, and emotional clarity (Fergus & Bardeen, 2014). Although few studies have examined sexual orientation differences in emotion regulation, there is some evidence that sexual minority individuals with eating pathology report more emotion regulation difficulties compared to heterosexual individuals (Gillikin et al., 2021) and that emotion regulation difficulties mediate the association between sexual orientation and adverse mental health outcomes (e.g., self-injury; Kapatais et al., 2022).

Further, as described in the Psychological Mediation Framework (Hatzenbuehler, 2009), emotion regulation difficulties may function as a mechanism linking sexual orientation-related stress and internalizing psychopathology (e.g., anxiety, depression). Given that sexual minority individuals experience unique sexual orientation-related stressors that can contribute to emotion regulation difficulties (Hatzenbuehler, 2009; Meyer, 2003), and that stress is generally associated with emotion regulation difficulties and OCD severity (McDonald et al., 2022; Myruski et al., 2019), it is likely that sexual minority individuals will report worse emotion regulation and greater OCD symptoms than heterosexual individuals. Thus, while emotion regulation likely plays an important role in multiple forms of psychopathology, it is important to explore its role in OCD severity among sexual minority individuals.

Emotion regulation difficulties include a number of subdomains such as lack of emotional clarity, inability to engage in goal-directed behaviors when distressed, difficulties controlling impulsive behaviors when distressed, limited access to emotion regulation strategies perceived as effective, and nonacceptance of negative emotions (Gratz & Roemer, 2004), which are all associated with more severe OCD (Yap et al., 2018). Specifically, nonacceptance of negative emotions and difficulties engaging in goal-directed behaviors when distressed are most strongly associated with OCD (Fergus & Bardeen, 2014; Yap et al., 2018). However, no prior studies have examined whether these subdomains of emotion regulation differ between sexual minority and heterosexual individuals with OCD. Given that certain subdomains of emotion regulation are more strongly associated with OCD severity, examining sexual orientation differences in these subdomains could help to identify treatment targets in this population.

Additionally, distress tolerance has been conceptualized as another facet of emotion regulation (Leyro et al., 2010; Jeffries et al., 2016), and it may play a particularly important role in OCD. Distress tolerance refers to the ability an individual has to tolerate negative emotions (Simons & Gaher, 2005; Zvolensky et al., 2010), with lower distress tolerance being associated with more severe OCD symptoms (Cogle et al., 2011; Robinson & Freeston, 2014). Although there is some

evidence that distress tolerance is associated with anxiety and related psychopathology among sexual minority individuals (Reitzel et al., 2017), only one study has examined sexual orientation differences in distress tolerance among individuals with OCD. Recently, Bezahlter et al. (2022) explored sexual orientation differences in distress tolerance among individuals with OCD, identifying a slightly lower distress tolerance capacity among sexual minority individuals compared to heterosexual individuals, with a small to medium effect. However, this group difference was not statistically significant, likely the result of the small number of sexual minority individuals in their sample. In sum, little is known about potential sexual orientation differences in emotion regulation and its subdomains, including distress tolerance, as well as their role in OCD severity among sexual minority individuals.

Finally, there has been a lack of attention to the heterogeneity of the sexual minority population (e.g., differences between gay/lesbian and bi+ individuals) in research on psychopathology, including OCD. Historically, researchers have treated sexual minority individuals as a homogenous group, but accumulating evidence suggests that bisexual, pansexual, and other multi-gender attracted individuals (i.e., bi+ individuals) experience higher rates of psychopathology compared to other sexual minority individuals (e.g., gay/lesbian individuals; Ross et al., 2018). For example, while sexual minority populations are generally at increased risk for mood and anxiety disorders compared to heterosexual individuals (Meyer, 2003; Semlyen et al., 2016; Wittgens et al., 2022), studies have consistently found that bi+ individuals are at increased risk for depression and anxiety compared to both heterosexual and gay/lesbian individuals (Beard et al., 2017; Borgogna et al., 2019; Horwitz et al., 2020; Ross et al., 2018). Although few studies have examined risk for OCD in subgroups of sexual minority individuals, emerging evidence suggests that bisexual men are twice as likely to be diagnosed or treated for OCD compared to gay men (Batchelder et al., 2021). The increased mental health burden experienced by bi+ individuals is theorized to be due to the unique forms of minority stress they experience from both heterosexual and gay/lesbian individuals (e.g., stereotypes that they are confused about their sexual orientation; Feinstein & Dyar, 2017). As such, understanding whether there are differences in known risk factors for OCD severity (e.g., difficulties with emotion regulation and distress tolerance) among bi+ individuals compared to heterosexual and gay/lesbian individuals is critical to understanding sexual orientation-related disparities in OCD.

1. Current study

Understanding similarities and differences in risk factors for OCD severity between people of different sexual orientations has the potential to advance our understanding of the mechanisms underlying disparities in OCD and to inform treatment targets for populations at increased risk. Thus, the current study aimed to examine differences in ER, its subdomains, distress tolerance, and OCD symptom severity between sexual minority and heterosexual individuals. First, we compared all sexual minority individuals (inclusive of gay, lesbian, bisexual, pansexual, asexual, and queer individuals, as well as those who indicated that their sexual orientation was not listed) to heterosexual individuals. We hypothesized that sexual minority individuals would report worse emotion regulation (total scores and all subdomain scores) and worse OCD severity. Then, to be able to draw more nuanced conclusions, we compared the three largest sexual orientation groups in our sample (heterosexual, gay/lesbian, and bi+) on emotion regulation, distress tolerance, and OCD severity, hypothesizing that bi+ individuals would demonstrate worse emotion regulation (total scores and all subdomain scores) and greater OCD severity compared to both heterosexual and gay/lesbian individuals. Last, if sexual orientation differences in OCD severity were identified in our sample, we planned to examine whether they persisted after accounting for emotion regulation and distress tolerance.

2. Method

2.1. Participants

This study was reviewed and approved by the hospital system’s Institutional Review Board. Participants ($N = 470$) were adults in a partial hospital/residential treatment program, located in the Northeast United States. The average age of participants was 29.2 ($SD = 10.7$) and participants were either self-referred or referred to the treatment center for a higher level of care from an outpatient provider. Participants met criteria for the current study if they were receiving treatment at the setting, were adults, and consented for their data to be added to a de-identified database. Data were collected from April 2018 to December 2022, and the average stay in treatment was 59.7 days ($SD = 25.3$). Of participants with available diagnostic data, 94 % ($n = 310$) received a primary diagnosis of OCD, while the remaining 6 % ($n = 20$) received a primary diagnosis of an OC-related (e.g., body dysmorphic disorder, hoarding disorder), anxiety, or mood disorder. Additionally, 3 % ($n = 8$) met criteria for a secondary diagnosis of OCD (see Table 1 for all primary and secondary diagnoses). All participants were screened by a master’s level clinician who determined that they were likely to benefit in the OCD treatment setting (i.e., that their symptoms would be appropriately targeted via exposure-based treatment). On average, participants’ OCD symptoms were categorized as moderate to severe on the self-report

Table 1
Primary and Secondary DSM-5 Diagnoses.

Primary DSM-5 Diagnosis	N (%) ^a
Obsessive-Compulsive Disorder	310 (93.9 %)
Bipolar Disorder I	1 (0.3)
Body Dysmorphic Disorder	1 (0.3)
Excoriation	2 (0.6)
Generalized Anxiety Disorder	2 (0.6)
Major Depressive Disorder	2 (0.6)
Panic Disorder	2 (0.6)
Persistent Depressive Disorder	2 (0.6)
Posttraumatic Stress Disorder	3 (0.9)
Social Anxiety Disorder	3 (0.9)
No Primary Diagnosis	1 (0.3)
Undetermined	1 (0.3)
Secondary/Comorbid DSM-5 Diagnosis	N (%)
Obsessive-Compulsive Disorder	8 (2.4)
Adjustment Disorder	1 (0.3)
Agoraphobia	2 (0.6)
Alcohol Use Disorder	1 (0.3)
Anorexia Nervosa	2 (0.6)
Attention Deficit/Hyperactive Disorder	2 (0.6)
Bipolar Disorder I	11 (3.3)
Bipolar Disorder II	6 (1.8)
Body Dysmorphic Disorder	19 (5.8)
Bulimia Nervosa	2 (0.6)
Cyclothymic Disorder	1 (0.3)
Excoriation Disorder	8 (2.4)
Generalized Anxiety Disorder	15 (4.5)
Hoarding Disorder	9 (2.7)
Major Depressive Disorder	79 (23.9)
Panic Disorder	5 (1.5)
Persistent Depressive Disorder	42 (12.7)
Posttraumatic Stress Disorder	19 (5.8)
Schizoaffective Disorder	2 (0.6)
Specific Phobia	3 (0.9)
Social Anxiety Disorder	31 (9.4)
Trichotillomania	4 (1.2)
No Secondary Diagnosis	54 (16.4)
Undetermined	4 (1.2)

Note. Individuals could only have one primary and one secondary diagnosis.

^a Most participants (70 %, $n = 313$) completed the Structured Clinical Interview for DSM-5 Disorders (SCID-5) to categorize primary and co-morbid diagnoses, however, the SCID-5 was not able to be administered to the remaining 30 % ($n = 135$) of the sample due to logistical or COVID-19 related challenges. Percentages above reflect participants with a given diagnosis based on all available SCID-5 data ($n = 313$ instead of 448).

version of the Yale-Brown Obsessive-Compulsive Scale (described below; $M = 24.70$, $SD = 6.33$).

The sample included 22 % sexual minority individuals ($n = 104$): 6 % gay or lesbian ($n = 28$), 8 % bi+ (bisexual or pansexual, $n = 36$), 3 % asexual ($n = 12$), 2 % queer ($n = 11$), and 3 % a sexual orientation that was not listed ($n = 15$). Thus, the three largest sexual orientation groups in the sample were heterosexual (78 %), bi+ (8 %), and gay/lesbian (6 %). For individuals who did not wish to disclose their sexual orientation (2 %, $n = 9$), their data were not analyzed. The majority of the sample (96 %) identified as cisgender men and women ($n = 451$), while the remaining individuals identified as gender non-conforming ($n = 7$), transgender ($n = 4$), nonbinary ($n = 4$), or a gender that was not listed ($n = 4$). The majority of participants were White (80 %, $n = 376$) and not Latinx (96 %, $n = 452$); see Table 2 for full demographic information. A small proportion of individuals (14 %, $n = 67$) had participated in the treatment program at least once before.

2.2. Measures

2.2.1. Demographic questionnaire

Demographic information was collected at program admission in a self-report assessment. Several changes to data collection procedures occurred over the five-year study time frame. Of particular relevance to the current study, in February 2022, the demographic form was updated with two additional response options for sexual orientation. The older form, administered from April 2018 to February 2022, included six response options for sexual orientation (gay, lesbian, bisexual, heterosexual, queer, and not listed), whereas the updated form also included pansexual and an option for “prefer not to answer” (previously participants were required to answer).

Table 2
Demographic Characteristics (N = 470).

	M (SD) or N (%)
Age	29.2 (10.7)
Length of treatment (days)	59.7 (25.3)
Gender ^a	
Gender Non-conforming	7 (1.5)
Man	213 (45.3)
Nonbinary	4 (0.9)
Not listed	4 (0.9)
Transgender	4 (0.9)
Woman	238 (50.6)
Race/Ethnicity	
African American/Black	10 (2.1)
Asian	20 (4.3)
Do not know	12 (2.6)
Latin/x	18 (3.8)
Middle Eastern	8 (1.7)
Native American/Alaskan Native	2 (0.4)
Not listed	24 (5.1)
White	376 (80.0)
Education	
8th grade or less	1 (0.2)
Some high school	8 (1.7)
High school graduate/GED	61 (13.0)
Some college	151 (32.1)
Associate degree	26 (5.5)
Bachelor’s degree	155 (33.0)
Graduate or professional degree	68 (14.5)

^a Gender may not be truly reflective of participants’ identities as we did not initially include adequate response options in our demographic form to allow participants to endorse a range of transgender and nonbinary identities. We have since modified our demographic form to be more inclusive. Specifically, before February 2022, response options included: male, female, transgender, gender non-conforming, and not listed. After February 2022, response options were updated to include: woman, man, transgender woman, transgender man, gender non-conforming, genderqueer, nonbinary, not listed, and prefer not to answer.

2.2.2. Structured clinical interview for DSM-5 disorders (SCID-5; [First et al., 2015](#))

The SCID-5 is a structured clinical interview that assesses DSM-5 diagnoses and was administered by trained research staff and graduate students under the supervision of a licensed clinical psychologist at program admission. Agreement between the SCID-5 and unstructured diagnostic assessment is high (73–97 %; [Osório et al., 2019](#)). Most participants (70 %, $n = 330$) completed the SCID-5 to categorize primary and comorbid diagnoses. However, it was not administered to 30 % of the sample ($n = 140$) due to scheduling constraints or COVID-19 precautions.

2.2.3. Yale-Brown obsessive-compulsive scale, self-report (Y-BOCS-SR; [Goodman et al., 1989](#); [Steketee et al., 1996](#))

The Y-BOCS-SR was administered at program admission to measure OCD symptom severity. Five questions address obsessions (e.g., “How much of your time is occupied by obsessive thoughts?”) and five questions address compulsions (e.g., “How much time do you spend performing compulsive behaviors?”). In total, the 10 questions are rated on a 5-point Likert-type scale from 0 (not at all/none) to 4 (extreme), yielding a total score of 0–40. Severity levels have been established based on Y-BOCS-SR scores, including: mild (0–13), moderate (14–25), moderate-severe (26–34), and severe (35–40; [Storch et al., 2015](#)). The Y-BOCS-SR is commonly utilized ([Steketee et al., 1996](#)) and displays medium to large positive correlations with the clinician-administered interview version ([Federici et al., 2010](#); [Hauschildt et al., 2019](#); [Storch et al., 2017](#)). There is strong support for convergent and divergent validity and high reliability for the Y-BOCS-SR ([Steketee et al., 1996](#)). Internal consistency in the current sample was high ($\alpha = 0.87$).

2.2.4. Difficulties in emotion regulation scale-16 (DERS-16; [Gratz & Roemer, 2004](#); [Bjureberg et al., 2016](#))

The shortened version of the Difficulties in Emotion Regulation Scale (DERS-16) was administered at program admission, consisting of 16 items that assess the following dimensions of emotion regulation difficulties: Lack of emotional clarity (two items; e.g., “I have no idea how I’m feeling”), Inability to engage in goal-directed behaviors when distressed (three items; e.g., “When I’m upset, I have difficulty getting work done”), Difficulties controlling impulsive behaviors when distressed (three items; e.g., “When I’m upset I become out of control”), Limited access to emotion regulation strategies perceived as effective (five items; e.g., “When I’m upset I believe I will feel that way for a very long time”), and Nonacceptance of negative emotions (three items; e.g., “When I’m upset, I become embarrassed for feeling that way”). Respondents rate the extent to which each item applies to them on a 5-point Likert-type scale from 1 (almost never) to 5 (almost always). Total scores can range from 16 to 80, with higher scores reflecting greater levels of emotion regulation difficulties (i.e., emotion dysregulation). Similar to the original DERS, the DERS-16 displays high reliability ($\alpha = 0.92$) and good convergent and divergent validity ([Bjureberg et al., 2016](#)). In the current sample total DERS-16 displays high reliability ($\alpha = 0.94$), including the following subscales: lack of emotional clarity ($\alpha = 0.92$), inability to engage in goal-directed behaviors when distressed ($\alpha = 0.76$), difficulties controlling impulsive behaviors ($\alpha = 0.85$), limited access to emotion regulation strategies ($\alpha = 0.89$), and nonacceptance of negative emotions ($\alpha = 0.88$).

2.2.5. Distress tolerance scale, short form (DTS-SF; [Simons & Gaher, 2005](#))

The DTS-SF was administered at program admission and is a 15-item measure of DTS-SF that focuses on beliefs about feeling distressed or upset (e.g., “Feeling upset or distressed is unbearable to me”). Items are rated on a 5-point Likert-type scale from 1 (strongly agree) to 5 (strongly disagree). Lower scores on the DTS-SF suggest that an individual has a lower ability to withstand negative emotions. The DTS-SF demonstrates convergent and divergent validity ([Simons & Gaher, 2005](#)). Internal

consistency in the current sample was high ($\alpha = 0.93$).

2.3. Data Analytic Plan

All analyses were completed using R ([R Core Team, 2021](#)), an open-source statistical software program. First, to examine differences between all sexual minority individuals and heterosexual individuals in emotion regulation (total and subscale scores), distress tolerance, and OCD severity, a series of t -tests was conducted. Then, to examine differences between the three largest sexual orientation groups in our sample (heterosexual, bi+, and gay/lesbian), we conducted a series of analysis of variance (ANOVA) and post-hoc Tukey tests to examine differences between each group. Last, if sexual orientation differences in OCD severity were identified in our sample, we conducted a series of multivariate linear regression analyses using the *lme4* package ([Bates et al., 2015](#)) to examine if sexual orientation differences in OCD severity persisted after accounting for emotion regulation and distress tolerance.

3. Results

3.1. Comparisons of all sexual minority individuals and heterosexual individuals

First, there was a significant difference in overall emotion regulation capacity between sexual minority and heterosexual individuals, $t(434) = -2.20, p = .028$, with a small effect size ($d = -.25$), indicating that sexual minority individuals reported greater difficulty regulating emotions at program admission. Moreover, sexual orientation differences were observed for two emotion regulation subscales—Strategies, $t(434) = -2.28, p = .023, d = -.26$, and Nonacceptance, $t(434) = -2.55, p = .011, d = -.30$ —indicating that sexual minority individuals reported a lower ability to implement effective strategies when distressed and higher nonacceptance of negative emotions compared to heterosexual individuals. In contrast, there were not significant sexual orientation differences in the other emotion regulation subscales: Clarity, $t(434) = -.48, p = .628, d = -.06$; Goals, $t(434) = -1.66, p = .098, d = -.19$; and Impulse, $t(434) = -1.32, p = .187, d = -.15$. Second, there was a significant difference in distress tolerance between sexual minority and heterosexual individuals, $t(433) = 2.41, p = .015$, with a small effect size ($d = .28$), indicating that sexual minority individuals reported lower distress tolerance. Last, the difference in OCD severity between sexual minority and heterosexual individuals was small ($d = -.21$) and not statistically significant, $t(467) = -1.93, p = .054$. See [Table 3](#) for descriptive information (means and standard deviations) for each construct of interest as a function of sexual orientation.

Given that the two-category sexual orientation variable was significantly different regarding overall emotion regulation, distress tolerance, and there was a small effect size difference for OCD severity, we tested a model that simultaneously examined sexual orientation, overall emotion regulation, and distress tolerance as predictors of OCD severity. The linear regression model was significant, $F(3, 431) = 24.15, p < .001$. Results indicated that worse emotion regulation ($B = -.11, p < .001, \eta^2 = .13$) and lower distress tolerance ($B = -.07, p = .010, \eta^2 = .02$) were each significantly associated with greater OCD severity. Within the model sexual orientation was not significant in its association with OCD severity ($B = .52, p = .441, \eta^2 < .001$).

3.2. Comparisons of Bi+, gay/lesbian, and heterosexual individuals

First, there was a significant difference between our three-category sexual orientation variable and overall emotion regulation capacity, $F(2, 396) = 8.75, p < .001, d = .04$. Tukey post-hoc tests indicated that bi+ individuals ($M = 57.94, SD = 12.31$) reported worse overall emotion regulation capacity compared to both heterosexual ($M = 47.07, SD = 15.62, p < .001$) and gay/lesbian individuals ($M = 47.62, SD = 13.04, p = .034$). In contrast, there was not a significant difference between gay/

Table 3
Means and Standard Deviations for Constructs of Interest as a Function of Sexual Orientation.

Measure	Sample size	Construct of Interest	Total <i>M (SD)</i>	Sexual Minority <i>M (SD)</i>	Heterosexual <i>M (SD)</i>	<i>t</i> -test
YBOCS-SR	<i>N</i> = 469	OCD severity	24.70 (6.30)	25.75 (5.24)	24.40 (6.58)	<i>t</i> (467) = -1.93, <i>p</i> = .054, <i>d</i> = -0.21
DERS-16 Total	<i>N</i> = 436	Difficulty with emotion regulation	47.93 (15.34)	50.96 (14.00)	47.07 (15.62)	<i>t</i> (434) = -2.20, <i>p</i> = .028, <i>d</i> = -.25
DERS - Clarity	<i>N</i> = 436	Lack of emotional clarity	5.41 (2.39)	5.51 (2.10)	5.38 (2.47)	<i>t</i> (434) = -.48, <i>p</i> = .628, <i>d</i> = -.06
DERS - Goals	<i>N</i> = 436	Inability to engage in goal-directed behaviors when distressed	11.36 (3.13)	11.82 (3.04)	11.22 (3.15)	<i>t</i> (434) = -1.66, <i>p</i> = .098, <i>d</i> = -.19
DERS - Impulse	<i>N</i> = 436	Difficulties controlling impulsive behaviors when distressed	7.06 (3.46)	7.47 (3.64)	6.94 (3.40)	<i>t</i> (434) = -1.32, <i>p</i> = .187, <i>d</i> = -.15
DERS - Strategies	<i>N</i> = 436	Limited access to ER strategies perceived as effective	15.61 (5.72)	16.78 (4.98)	15.28 (5.88)	<i>t</i> (434) = -2.28, <i>p</i> = .023, <i>d</i> = -.26
DERS - Nonacceptance	<i>N</i> = 436	Nonacceptance of negative emotions	8.50 (3.84)	9.36 (3.82)	8.25 (3.81)	<i>t</i> (434) = -2.55, <i>p</i> = .011, <i>d</i> = -.30
DTS-SF	<i>N</i> = 435	Distress tolerance	38.46 (14.22)	35.36 (11.67)	39.33 (14.76)	<i>t</i> (433) = 2.41, <i>p</i> = .015, <i>d</i> = .28

Note. YBOCS-SR = Yale-Brown Obsessive Compulsive Scale, Self-Report. DERS-16 = Difficulty with Emotion Regulation Scale (shortened version). DTS-SF = Distress Tolerance Scale-Short Form.

lesbian and heterosexual individuals in overall emotion regulation capacity ($p = .978$). Similarly, our three-category sexual orientation variable was significantly different with two emotion regulation subscales—Strategies, $F(2, 396) = 6.54, p = .002, d = .03$, and Nonacceptance $F(2, 396) = 7.23, p < .001, d = .04$). Tukey post-hoc tests indicated that bi+ individuals ($M = 18.79, SD = 4.16$) reported a lower ability to implement effective strategies when distressed compared to heterosexual individuals ($M = 15.28, SD = 5.88, p < .001$), but not gay/lesbian individuals ($M = 15.29, SD = 4.90, p = .062$); there was not a significant difference between heterosexual and gay/lesbian individuals ($p = .999$). Bi+ individuals ($M = 10.68, SD = 3.59$) also reported higher nonacceptance of negative emotions compared to heterosexual individuals ($M = 8.25, SD = 3.81, p < .001$), but not gay/lesbian individuals ($M = 8.57, SD = 2.73, p = .096$); there was not a significant difference between heterosexual and gay/lesbian individuals ($p = .923$). Second, there was a significant difference between our three-category sexual orientation variable and distress tolerance, $F(2, 395) = 5.74, p = .004, d = .03$. Tukey post-hoc tests indicated that bi+ individuals ($M = 31.18, SD = 10.19$) reported a lower distress tolerance compared to heterosexual ($M = 39.33, SD = 14.76, p = .003$), but not gay/lesbian individuals ($M = 36.81, SD = 11.15, p = .312$); there was not a significant difference between heterosexual and gay/lesbian individuals ($p = .721$). Last, there were no differences between our three-category sexual orientation variable and OCD severity, $F(2, 428) = 1.87, p = .155, d < .001$, indicating that our three largest sexual orientation groups did not significantly differ in OCD severity at admission. Given that our three-category sexual orientation variable was not significantly different with respect to OCD severity, we did not test this association controlling for emotion regulation and distress tolerance.

4. Discussion

Inconsistent with hypotheses, we found that sexual minority individuals (combining all sexual minority identities) presented with a non-significant difference in OCD severity compared to heterosexual individuals at program admission, with a small effect size. Similarly, when we compared the three largest sexual orientation groups in our sample (heterosexual, bi+, and gay/lesbian), OCD severity was not significantly different between groups. Together, these findings suggest that among our sample, OCD severity did not depend on sexual orientation, in line with prior research (Pinciotti & Orcutt, 2021; Pinciotti et al., 2023) but incongruent with our pilot findings (Beahler et al., 2022). Additionally, while a previous study found that bisexual men were at increased risk for OCD compared to gay men (Batchelder et al.,

2021), our results did not support increased OCD severity among this subsample, thus, these findings may not translate to a sample of individuals who meet OCD severity thresholds to be admitted to a partial hospital/residential treatment program.

While few studies have compared emotion regulation capacity between sexual minority and heterosexual individuals, there is some evidence that sexual minority individuals report worse emotion regulation capacity (Kapatais et al., 2022; Hatzenbuehler, 2009), which is theorized to be a result of minority stress (Meyer, 2003). Similarly, our findings support worse overall emotion regulation capacity among sexual minority compared to heterosexual individuals, extending past findings to a clinical sample with OCD. Additionally, the current paper extended past research (Yap et al., 2018) by documenting that, among a larger clinical sample, poor emotion regulation is significantly associated with OCD severity. With respect to emotion regulation subdomains, past research suggests that nonacceptance of emotions and difficulties engaging in goal-directed behaviors when distressed are most strongly associated with OCD severity (Yap et al., 2018; Fergus & Bardeen, 2014). Our results suggest that sexual minority individuals report higher nonacceptance of negative emotions and worse access to emotion regulation strategies perceived as effective compared to heterosexual individuals.

Further, when examining our three largest sexual orientation groups, our results suggest that bi+ individuals report significantly worse emotion regulation capacity overall and in two subdomains (Nonacceptance and Strategies) compared to heterosexual individuals. In contrast, bi+ individuals did not significantly differ in terms of overall emotion regulation capacity, or its subdomains compared to gay/lesbian individuals. In sum, our findings point to potential unique treatment targets for sexual minority individuals, especially bi+ individuals, with OCD, such as worse access to emotion regulation strategies perceived as effective and nonacceptance of negative emotions. Consistent with the limited prior research examining distress tolerance between sexual minority and heterosexual individuals (Beahler et al., 2022), we found that sexual minority individuals, especially bi+ individuals, reported lower distress tolerance compared to heterosexual individuals. In contrast, there were no significant differences observed in distress tolerance between bi+ and gay/lesbian individuals. Similar to our findings for emotion regulation, our findings for distress tolerance highlight that distress tolerance may be an important treatment target for sexual minority individuals, especially bi+ individuals, with OCD.

Last, due to results suggesting small effect size, but not statistically significant difference in OCD severity between sexual minority and heterosexual individuals, we examined whether this small effect

persisted after accounting for emotion regulation capacity and distress tolerance. Results indicated that sexual orientation was not significantly associated with OCD severity when controlling for emotion regulation capacity and distress tolerance. This suggests that sexual orientation differences in emotion regulation capacity and distress tolerance may drive small effects of disparities in OCD severity.

5. Limitations

There were several limitations to the current study. First, studying sexual orientation differences in a naturalistic setting is challenging, given that participants are not recruited based on their sexual orientation. As such, although we were able to compare three sexual orientation groups (heterosexual, bi+, and gay/lesbian), we could not examine potential differences between other sexual minority groups (e.g., asexual, queer). Prior research has demonstrated that individuals who identify as asexual, demisexual, and pansexual experience increased rates of discrimination and resulting psychopathology compared to other sexual minority and heterosexual individuals (Feinstein et al., 2021; McInroy et al., 2020; Shearer et al., 2016). As such, it will be important for future studies to examine potential differences in emotion regulation, distress tolerance, and OCD severity among these other sexual minority groups. Additionally, 4% ($n = 12$) of the sample did not receive a primary or secondary diagnosis of OCD from a trained assessor, yet self-selected into care at an OCD treatment program and were admitted based on a clinical determination that obsessive-compulsive related symptoms were present; thus they were likely to benefit from ERP-focused treatment. Therefore our results may in some ways be more generalizable to the population of individuals seeking treatment for OCD in comparison to laboratory-focused research.

Another limitation of our analyses was uneven group sizes comparing bi+, gay/lesbian, and heterosexual people; as such, future research should replicate our findings in a larger sample with more similar group sizes. Relatedly, our measure of sexual orientation was updated in February 2022, giving participants two additional options (pansexual and prefer not to answer). Therefore, there may have been more participants in earlier years of data collection who would have selected these response options should they have been available at that time.

Second, the majority of participants in the current study were cisgender, White, and non-Latinx. Given that transgender and nonbinary individuals as well as racially and ethnically minoritized individuals experience unique stressors related to their identities (Pinciotti, Nuñez et al., 2022; Testa et al., 2015; Williams et al., 2015), it will be critical for future research to examine the intersections between sexual orientation and these other minoritized identities to better understand the roles of emotion regulation and distress tolerance in OCD severity in diverse sexual minority samples. Third, although we identified sexual orientation differences in emotion regulation and distress tolerance, we could not examine the extent to which these differences were related to sexual orientation-related stress because it was not measured. Given prior evidence that emotion regulation mediates the association between sexual orientation-related stress and internalizing psychopathology (Hatzenbuehler, 2009), and that increased stress is associated with emotion dysregulation, distress intolerance, and OCD severity (Adams et al., 2018; Robinson & Freeston, 2014; Yap et al., 2018), it will be important to measure and examine the influences of sexual orientation-related stressors on OCD as well as their underlying mechanisms. Last, it is unclear if a lower emotion regulation capacity and distress tolerance predict higher OCD severity or if higher OCD severity predicts lower emotion regulation capacity and distress tolerance. Future research should implement a longitudinal design to test the direction of the proposed effects among an OCD population.

6. Conclusions

Our findings suggest that sexual minority people report lower emotion regulation capacity and distress tolerance at program admission for partial hospital/residential treatment for OCD compared to heterosexual people. Given that sexual orientation, emotion regulation, and distress tolerance were each associated with OCD symptom severity, we highlight the importance of considering these factors in treatment. First, providers of exposure and response prevention (ERP), the first-line treatment for OCD, should consider addressing the impacts of minority stressors while targeting negative cognitions, obsessions, and resulting compulsions. In general, research has demonstrated the efficacy of targeting minority stressors to improve mental and behavioral health among sexual minority individuals (Pachankis et al., 2020, 2022). However, it remains unknown whether targeting minority stressors would improve OCD severity. While ERP may overtly or covertly target emotion regulation, it may be important to more directly target specific emotion regulation strategies in ERP for sexual minority people, especially difficulties accessing strategies perceived as effective and accepting negative emotions as well as distress tolerance.

Last, our results highlight that bi+ individuals experience significantly worse emotion regulation capacity, including distress tolerance, than heterosexual individuals. Treatment recommendations for bi+ individuals with OCD include special attention to implementing identity-affirming care, seeing as bi+ people face additional stress compared to gay/lesbian and heterosexual people. When addressing emotion regulation skills and distress tolerance, providers should directly incorporate modules related to minority stress and how it may exacerbate OCD symptoms. Our untested hypothesis, which warrants future inquiry, is that minority stressors impact OCD severity among sexual minority people. Identity-affirming treatment, which acknowledges and targets the impact of minority stressors for sexual minority people, may help alleviate the disparities found in our sample.

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Declaration of Competing Interest

None.

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Public significance statement

The current study demonstrates that sexual minority people experience challenges with emotion regulation, which relate to their OCD severity. Specific treatment recommendations for this population are provided.

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