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Examining the associations of sexual minority stressors and past-year depression with overeating and binge eating in a diverse community sample of sexual minority women

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Abstract

Sexual minority stressors (e.g., stigma consciousness, internalized homophobia, discrimination) are posited to contribute to higher prevalence of overeating and binge eating among sexual

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minority women (SMW) relative to heterosexual women. Few studies have examined psychosocial mediators of the associations of minority stressors with overeating and binge eating in SMW. Using data from a diverse, community-based sample of SMW, we examined these associations, including the potential mediating effects of past-year depression. We also conducted exploratory analyses to determine if the associations of sexual minority stressors with overeating and binge eating differed by sexual identity or by race and ethnicity.

The sample included 607 SMW (38.2% White, 37.1% African American; 24.7% Latina) with a mean age of 39.7 years. Approximately 17% and 9% of SMW reported overeating and binge eating, respectively, in the past 3 months. Greater stigma consciousness was associated with higher odds of overeating (AOR 1.31, 95% CI = 1.03–1.66). We found no significant associations between minority stressors and binge eating. Past-year depression did not mediate associations between minority stressors and overeating or binge eating. Although we found no sexual identity differences, stigma consciousness among Latina SMW was associated with higher odds of overeating relative to White SMW (AOR 1.95, 95% CI = 1.21–3.12) and African American SMW (AOR 1.99, 95% CI = 1.19–3.31).

Findings highlight the importance of screening SMW for stigma consciousness as a correlate of overeating and considering racial and ethnic differences in overeating and binge eating in this population.

Keywords

Sexual minority; binge eating; overeating; minority stress; depression; mediation

Introduction

Overeating and binge eating are important public health concerns as people who engage in these behaviors are at increased risk for negative health outcomes. Overeating is defined as the consumption of a large quantity of food within a two-hour time period.[1] Binge eating is characterized by the recurrent consumption of a large quantity of food (i.e., overeating) with loss of control (LOC) over eating.[1,2] Individuals who overeat and/or binge eat have a higher risk of developing chronic health conditions such as diabetes, hypertension, and obesity.[3–5] Among those who binge eat, the experience of LOC is considered more significant than the amount of food consumed.[6] Individuals who engage in binge eating experience significant distress,[7] impairment,[8] and negative psychological outcomes,[9] independent of overeating without LOC, highlighting differences in health outcomes severity between overeating and binge eating.[10] However, in a longitudinal study of young adults, participants who reported both overeating and binge eating in adolescence were more likely to use marijuana and other substances than those who did not—indicating the importance of examining both overeating and binge eating simultaneously.[11]

Compared to men, women report greater eating-disorder symptomology (including dietary restraint, eating concern, shape concern, and weight concern) and depressive symptoms.[12] Because of this, an examination of the associations of sexual minority stressors and past-year depression with overeating and binge eating among women is warranted. Overeating

and binge eating are not uncommon among women in the general population. A study conducted in the United States (N = 3,714 women) found that 18% of women reported overeating, and 10% reported binge eating at least once/week.[13] In a large (N = 589), diverse, community-based sample of middle-aged women, 11% reported binge eating at least two to three times per month.[14]

Studies have found that sexual minority women (SMW; e.g., lesbian, bisexual or other non-heterosexual women) have a higher prevalence of eating disorders than heterosexual adults.[15,16] For example, a recent meta-analysis of 21 studies found that lesbian and "mostly heterosexual" women were more likely than heterosexual women to binge eat.[17] Similarly, Laska and colleagues found that lesbian and bisexual college students were more likely than their heterosexual counterparts to report past-year binge eating.[18] Research shows that binge eating is associated with overweight and obesity among lesbian women in particular.[19] However, few studies have examined correlates of overeating and binge eating among SMW.

Minority stress theory is the prevailing explanation for sexual orientation-related health disparities. It is hypothesized that minority stress (i.e., excess stress experienced by individuals from stigmatized social groups) contributes to the higher prevalence of binge eating among SMW.[20–23] Sexual minority stressors exist at the individual (e.g., stigma consciousness, internalized homophobia), interpersonal (e.g., discrimination), and structural (e.g., policies that restrict the rights of sexual minorities) levels.[24] Researchers have found that stigma consciousness (i.e., the anticipation of being stereotyped and rejected by others)[25] is associated with binge eating among SMW.[26] Similarly, internalized homophobia[24] has been linked to binge eating and risk factors for binge eating, such as body dissatisfaction.[21,27,28] At the interpersonal level, exposure to sexual orientation-based discrimination has been positively associated with binge eating among SMW.[26] Overeating has been studied much less than binge eating among SMW. However, one study found that sexual orientation concealment (another interpersonal minority stressor) was positively associated with the number of overeating episodes within a 5-day period among SMW.[29]

Minority stress may also help explain why sexual minority adults are more likely than heterosexual adults to have had a mental health diagnosis prior to the development of an eating disorder.[30] A recent systematic review found a statistically significant direct association between depression and binge eating among SMW.[27] In a sample of SMW living in New York City (n = 195), investigators found that lifetime diagnosis of depression was associated with lifetime diagnosis of an eating disorder. However, data were not disaggregated by specific eating disorders (e.g., binge eating disorder, anorexia nervosa).[30] Similarly, data from a longitudinal study of sexual minority young adults (n = 1,461) found that depressive symptoms were associated with binge eating among young lesbian women.[31] Overeating was not assessed.

The affect regulation model can guide examination of associations between overeating and binge eating with mental health. The model posits that individuals engage in these behaviors in response to negative affect (e.g., depressive symptoms).[32,33] Research suggests that SMW who engage in binge eating have an urge to eat that is strongly associated with depression, anxiety, and anger.[34] Recent findings of the relationship between negative affect

and binge eating among lesbian women also support these associations.[26,35] However, to our knowledge, no study has examined negative affect and overeating among SMW.

Studies examining depression as a potential mediator of the associations between sexual minority stressors and binge eating in SMW have produced inconsistent findings. Mason and Lewis found that individual-level sexual minority stressors were indirectly associated with binge eating via negative affect (i.e., depression and anxiety) in a sample of 164 SMW.[26] In contrast, another study of SMW (n = 138) found that depression did not mediate the relationship between internalized homophobia and binge eating.[36]

Most research on eating behaviors in SMW has been conducted with small samples of primarily young, White SMW. Few studies have examined overeating (vs. binge eating) in SMW, and even fewer have examined sexual identity (lesbian vs. bisexual) and racial and ethnic differences in the associations of sexual minority stressors with overeating and binge eating.[18,26,27,35–38] Findings related to sexual identity differences are mixed. For instance, Von Schell and colleagues found a higher prevalence of binge eating in bisexual women than their lesbian peers,[39] whereas Bayer and colleagues found no difference in the proportions of lesbian and bisexual women who reported binge eating.[36] Although researchers have not previously described racial and ethnic differences in overeating and binge eating among SMW, there is evidence that African American[40] and Latina women[41] in the general population engage in overeating and binge eating at higher rates than their White counterparts.

Informed by the minority stress theory and the affect regulation model (Figure 1),[22,23,33] we sought to address knowledge gaps by examining the associations of individual-level (i.e., stigma consciousness and internalized homophobia) and interpersonal-level (i.e., experiences of discrimination) sexual minority stressors with overeating and binge eating among SMW. We also investigated whether these associations were mediated by past-year depression. Although overeating and binge eating behaviors differ in severity,[10] given that both are linked to weight-related health outcomes[10] and SMW are more likely to have a body mass index (BMI) above 25 kg/m^2 (i.e., be overweight) compared to their heterosexual counterparts,[42–45] we examined both outcomes. We hypothesized that (1) sexual minority stressors would be positively associated with overeating and binge eating, and (2) past-year depression would partially mediate these associations. To address gaps in the literature, we also conducted exploratory analyses of potential sexual identity and racial and ethnic differences.

Methods

Sample

The Chicago Health and Life Experiences of Women study (CHLEW; N = 723) is a 20-year longitudinal study of cisgender SMW's health. Since 2000, four waves of data have been collected from a non-probability, community-based sample. Wave 1 included 447 lesbian women ages 18 or older recruited from the Chicago metropolitan area. In Wave 3 (2010–2012), 353 women (79%) from Wave 1 were retained, and a supplemental sample of 373 women was added to increase the number of bisexual women, African American and

Latina SMW, and younger SMW (ages 18–25). In Waves 1–3, structured interviews were conducted in person. Recruitment methods are described elsewhere.[46,47] The current study used Wave 3 data because this was the only wave that included measures of overeating and binge eating.

Although only women who identified as lesbian (in Wave 1 and Wave 3) or bisexual (Wave 3) were eligible to participate in the study, over time some participants reported different sexual identities. Given their small sample sizes, we excluded women who (in Wave 3) identified as mostly heterosexual ($n = 8$), only heterosexual ($n = 6$), or "other" ($n = 14$). An additional 67 women were excluded because they responded "don't know" or "refused" to questions about stigma consciousness ($n = 16$), internalized homophobia ($n = 8$), past-year discrimination ($n = 15$), body dissatisfaction ($n = 5$), childhood trauma ($n = 14$), BMI (kg/m^2) ($n = 7$), overeating ($n = 1$), or binge eating ($n = 1$). We also excluded 21 women who identified their race and ethnicity as something other than African American, Latina, or White, again due to small sample sizes. The final sample included 607 cisgender SMW who identified as lesbian or bisexual.

Measures

Sexual minority stressors.

Stigma consciousness: Stigma consciousness was assessed using a validated scale that measured participants' awareness of and sensitivity to stigma.[25] This scale has been found to be reliable in prior research with SMW (Cronbach's $\alpha = 0.76$).[48] Given previous research suggesting that lesbian and bisexual women have different experiences of stigma, separate but parallel measures specific to the participant's sexual identity were used for lesbian and bisexual participants. Lesbian and bisexual women were asked the same 10 items with the wording of each item corresponding to a participant's sexual identity. Response options were on a Likert scale of 1 = "strongly agree;" 5 = "strongly disagree." Example items are "Stereotypes about lesbians/bisexuals have not affected me personally" and "My being lesbian/bisexual does not influence how people act with me." Bisexual women were also asked an additional 11^{th} item: "I feel others view my bisexual identity as 'untrue' or not a real identity." Several items were reverse coded so that higher scores reflect higher stigma consciousness. To account for the different number of items asked of lesbian and bisexual women, the scale scores were standardized and used in all regression analyses. Cronbach's alphas for lesbian ($\alpha = 0.85$) and bisexual women ($\alpha = 0.84$) in the present sample were good.

Internalized homophobia: Internalized homophobia was assessed using a measure tested in previous work with sexual minority men and women ($\alpha = 0.71–0.83$).[49–51] In the present study, women were asked to indicate on a 5-point Likert scale (1 = "strongly disagree;" 5 = "strongly agree") their level of agreement with 10 statements about their sexual identity (e.g., "I have no regrets about being lesbian/gay/bisexual" and "I tried to stop being attracted to women in general").[52] Positive statements were reverse-coded, and responses were summed so that higher scores indicate greater internalized homophobia ($\alpha = 0.80$).

Past-year sexual orientation discrimination: Past-year sexual orientation discrimination was assessed by asking participants whether they experienced six types of sexual orientation-based discrimination in the past 12 months (e.g., in public, when accessing healthcare).[53] The types reported were summed to create a count measure (0–6). Cronbach's alpha in the present sample was 0.69, which is consistent with previous work.[53]

Negative affect.

Past-year depression: Past-year depression was assessed using questions that reflect diagnostic criteria of the National Institute of Mental Health Diagnostic Interview Schedule.[54] Depressive episodes were defined as 1) feeling sad, blue, or depressed for greater than two weeks, and 2) co-occurring persistence of three or more symptoms of depression (e.g., feelings of worthlessness, diminished ability to think or concentrate) for at least two weeks. Women who reported at least one depressive episode within one year of their interview date were categorized as having had past-year depression (Yes/No).

Overeating and binge eating—Overeating and binge eating were assessed using items adapted from the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)[1] that are described in the diagnostic criteria for bulimia nervosa. To assess *overeating*, participants were asked whether in the past three months they had eaten what other people would consider an unusually large amount of food in a short period of time, such as within two hours (Yes/No; from DSM-IV Criterion 1a). To assess *binge eating*, women who responded affirmatively to the overeating question were asked a follow-up question: "Did you experience loss of control over your eating at the time? (Yes/No; adapted from DSM-IV Criterion 1b).

Covariates.

Studies have shown than SMW who report childhood trauma (e.g., sexual and physical abuse) are more likely to report higher odds of overeating [55] There is also a large body of evidence that body dissatisfaction is positively associated with binge eating in SMW.[20,21,27,28,56,57] We selected these and other covariates based on prior findings of significant relationships with overeating or binge eating in women.[18,20,21,27,28,40,41,55–58]

Sexual identity—Sexual identity was assessed with a single item: "How do you define your sexual identity? Would you say that you are…" only lesbian, mostly lesbian, bisexual, mostly heterosexual, or only heterosexual. As mentioned above, women who identified as only lesbian, mostly lesbian, or bisexual were included in the present study. We also assessed *age* (in years), *race and ethnicity* (African American; Latina; White), *education* (less than high school; high school or GED; some college; Bachelor's degree; graduate degree), and self-reported height and weight (to calculate *BMI*).

Body dissatisfaction—Body dissatisfaction was assessed using the 9-item version of the body dissatisfaction sub-scale of the Eating Disorders Inventory-3. This scale has been shown to be reliable in women with and without eating disorders, both in the general population and among SMW (Cronbach's $\alpha > 0.90$).[59,60] Women were asked to respond to 9 statements using a 6-point Likert scale (1 = "never" to 6 = "always"). Sample items

included “I think that my stomach is too big” and “I feel satisfied with the shape of my body.” Positive statements were reverse scored so that higher scores reflect greater body dissatisfaction (α = 0.87). *Childhood trauma* asked about experiences before the participant was age 18. Childhood sexual abuse was measured using established criteria[61] and coded dichotomously (Yes/No). Childhood physical abuse was assessed by asking “Do you feel that you were physically abused by your parents or other family members when you were growing up?” (Yes/No), and parental neglect was assessed by asking participants if they felt their parents neglected their basic needs when they were growing up (Yes/No). We summed responses to these three items (range 0–3)—a method that has been used in previous CHLEW research.[55,62]

Statistical Analyses

Analyses were conducted using MPlus Version 7.4. Because we identified no differences in key variables between lesbian and mostly lesbian women in preliminary analyses, these groups were combined in comparisons with bisexual women. We examined sexual identity and racial and ethnic differences using Chi-square for categorical variables and independent sample *t*-test for continuous variables. For bivariate analyses, we used a Bonferroni correction to select an *a priori p*-value of < 0.001 to account for multiple comparisons.

To test our two main hypotheses that: (1) sexual minority stressors (i.e., stigma consciousness, internalized homophobia, and sexual orientation-based discrimination) would be positively associated with overeating and binge eating; and (2) past-year depression would partially mediate these associations, we used path analyses to obtain the direct, indirect (mediated), and total associations of sexual minority stressors with overeating and binge eating. Analyses were adjusted for age, sexual identity, race and ethnicity, education, body dissatisfaction, childhood trauma, and BMI. Bootstrapping was used to obtain robust standard errors and confidence intervals for indirect paths, which permitted significance testing of the indirect paths of sexual minority stressors on overeating and binge eating.[63,64] Using bias-corrected bootstrapping, 1,000 bootstraps were used to generate confidence intervals for these indirect paths.[64,65]

We also conducted exploratory analyses to determine whether associations between sexual minority stressors and overeating and binge eating differed by sexual identity or by race and ethnicity. These models were adjusted for age, education, body dissatisfaction, childhood trauma, and BMI. We first added interaction terms to the previously described models to test for interactions between each sexual minority stressor and sexual identity (lesbian [referent] vs. bisexual). In separate models, we added interaction terms to test for interactions between each sexual minority stressor and race and ethnicity to compare White women [referent] to African American and Latina women, separately. We also compared African American [referent] to Latina women.

Results

The final sample included 607 SMW (mean age 39.7 years; SD = 14.2); 74.6% identified as lesbian and 25.4% as bisexual. Table 1 presents racial and ethnic and sexual identity differences across study variables. The sample was racially and ethnically diverse (38.2%

White, 37.1% African American; 24.7% Latina). Approximately 48% of the sample reported having a college education or higher. Nearly a third (30.8%) of SMW met criteria for past-year depression, and 79% reported at least one type of childhood trauma (i.e., sexual or physical abuse or neglect). Lesbian women had lower internalized homophobia scores than bisexual women ($p < 0.001$). More than one-third of the sample reported at least one type of sexual orientation-based discrimination in the past year. Overeating in the previous 3 months was reported by 17.5% of SMW, whereas only 9.2% endorsed an episode of binge eating within that timeframe.

Table 2 presents results of the path analysis examining the direct, indirect, and total associations of sexual minority stressors with overeating and binge eating. Regarding covariates, SMW who reported higher body dissatisfaction (AOR 1.04, 95% CI = 1.01–1.07) and a higher count of types of childhood trauma (AOR 1.55, 95% CI = 1.17–2.05) had higher odds of overeating. The direct, indirect, and total associations of internalized homophobia and sexual orientation-based discrimination with overeating were not significant. However, the direct (AOR 1.31, 95% CI = 1.03–1.66) and total (AOR 1.32, 95% CI = 1.04–1.67) associations of stigma consciousness were associated with higher odds of overeating.

Regarding covariates, SMW who reported higher body dissatisfaction (AOR 1.06, 95% CI = 1.03–1.10), a higher count of types of childhood trauma (AOR 1.58, 95% CI = 1.10–2.28), and past-year depression (AOR 3.04, 95% CI = 1.61–5.74) had higher odds of binge eating. We found no direct associations between sexual minority stressors and binge eating. Also, past-year depression did not mediate the association of any of the sexual minority stressors with overeating or binge eating.

Results of exploratory analyses indicated there were no significant sexual identity differences in the direct or indirect associations of sexual minority stressors with overeating or binge eating (data not shown). Similarly, there were no significant differences in the associations of sexual minority stressors with overeating and binge eating between African American and White SMW. However, the association of stigma consciousness with overeating was stronger among Latina than White SMW (AOR 1.95, 95% CI = 1.21–3.12, $p = 0.01$) and African American SMW (AOR 1.99, 95% CI = 1.19–3.31, $p = 0.01$).

Discussion

In this diverse sample of SMW, we found that higher levels of stigma consciousness were associated with higher odds of overeating. Internalized homophobia and sexual orientation-based discrimination were not associated with overeating, and no sexual minority stressor was significantly associated with binge eating. Past-year depression did not mediate associations of sexual minority stressors with overeating or binge eating. We found no sexual identity differences in associations between minority stressors and overeating or binge eating. We did, however, find that greater stigma consciousness was associated with higher odds of overeating in Latina SMW relative to both White and African American SMW.

This is one of few studies to document stigma consciousness, or one's awareness of and sensitivity to stigma, as a minority stressor associated with overeating in SMW. Our findings of a significant relationship between overeating and stigma consciousness, but not internalized homophobia, may be explained in part by nature of the sample. Women who volunteered to participate in the CHLEW study were likely more comfortable with their sexual identity than those who did not. Indeed, levels of internalized homophobia were quite low in our sample. In addition, although a good deal of research with sexual minority people has included measurement of internalized homophobia, most of this research has focused on sexual minority men, and findings have been mixed.[66,67] Our internalized homophobia measure was adapted from a version most commonly used with men. On the other hand, stigma consciousness has been investigated in a broad range of samples, including many studies of women (see e.g., Pinel, 1999). Stigma consciousness can be thought of as sensitivity to social rejection, or the expectation of being stereotyped or stigmatized. It is a form of anticipatory anxiety (or dread) about an event that will or may happen in the future. Story and colleagues (2014) illustrated how the anticipation or dread of pain can be as uncomfortable as the experience of pain itself.[68] The anticipation of being stereotyped or stigmatized may be a more potent stressor than internalized homophobia—and may result in overeating as a means of coping.

Further, prior research has linked anticipated weight stigma (i.e., heightened awareness of the threat of mistreatment due to weight)[69] with overeating and binge eating.[70,71] This anticipation of stigma (in relation to both sexual minority status and weight) may be a driver of the significant associations between stigma consciousness and overeating in our study.[72,73]. Lastly, it is possible that past-year sexual orientation-based discrimination may be too distal to affect day-to-day eating behaviors among SMW, as this minority stressor was not associated with either outcome in this study.

Previous studies have focused on the link between stigma consciousness (among other sexual minority stressors) and binge eating,[26,27] but not overeating. Given that overeating is a component of binge eating and a significant health concern as it contributes to overweight and obesity, considering how aspects of minority stress may be associated with overeating in SMW is warranted. Contrary to our hypotheses, we did not find any associations between stigma consciousness, internalized homophobia, and past-year discrimination and binge eating, which was operationalized as at least one episode of overeating with LOC of eating during the last three months. One potential explanation for these unexpected null findings is that binge eating in this sample was low, with only 9.2% of the sample (or 56 women) reporting a binge episode in the last three months, relative to the rate of overeating, which was higher at 17.5% of the sample (106 women). Therefore, it is possible that we were underpowered to detect binge eating effects. Other studies among younger SMW have reporting binge eating rates of 15.0–21.2%,[26,36,39] and in one study, the rate of past-month overeating was 25.0% for lesbian women and 38.1% for bisexual women.[39] In a recent literature review, authors found that the prevalence of eating disorders was lower in middle and older age women than in younger women.[74] Further, SMW in our study were older (mean age = 39.7 years) compared to most studies that focus on binge eating in young SMW.[26,36,39] This could account for the discrepancy in the rates of overeating and binge eating and help explain our null findings related to associations between minority stressors

and binge eating. Lastly, because White women are more likely to engage in binge eating than Latina and African American women,[75] the fact that only 38% of our sample is White may have also contributed to null findings.

To our knowledge, this is the first study to document higher odds of overeating associated with stigma consciousness in Latina SMW. However, previous studies have identified psychosocial factors associated with overeating and binge eating in Latino/a adults in the general population. Acculturative stress (i.e., stress related to differences between one's culture of origin and host culture) has been associated with eating disorder symptoms among Latina female undergraduates[76] and emotional eating among Latino adolescents.[77] This is of note because analyses of representative data from the Latino Health and Wellbeing Study found that among Latino/a adults, emotional eating was associated with higher odds of overeating, operationalized as eating 500 calories over one's daily caloric needs.[78] Further, in another study, Alegria and colleagues found that Latino adults with higher acculturation and those with lower educational attainment were more likely to report binge eating at least twice a week for at least several months.[79] Acculturative stress, through its relation to emotional eating, may help explain why the association between stigma consciousness and overeating was stronger among Latina SMW compared to White and African American SMW in our study. It is also important to note that neither the Latino Health and Wellbeing Study nor Alegria and colleagues' study disaggregated data for Latino adults by sex or sexual identity, and hence minority stressors like stigma consciousness were not measured.[78,79] Future studies should examine the differential impacts of multiple psychosocial factors (e.g., acculturative stress) on overeating and binge eating by sex and sexual identity.

Our finding that negative affect, in the form of past-year depression, did not mediate the relationships between sexual minority stressors with overeating and binge eating in SMW is consistent with the work of Bayer and colleagues.[36] In contrast, Mason and Lewis found that individual-level sexual minority stressors were indirectly associated with binge eating via negative affect among SMW.[26] There are several potential explanations for these inconsistencies. First, Mason and Lewis used a composite measure that captured multiple dimensions of negative affect as their mediator.[26] This could account for greater variance than depression alone, thereby potentially contributing to their statistically significant finding.[26] In addition, Mason and Lewis used a more recent (past 4 weeks) timeframe for negative affect than the past-year timeframe that we and Bayer and colleagues[36] used. Mason and Lewis' sample was also predominately White and included SMW between the ages of 18–40;[26] our sample was more diverse in race and ethnicity and age. Future work should examine whether theoretical models tested among predominately young, White samples of SMW are appropriate for older and racial and ethnic minority samples. An intersectionality lens, taking into account stressors related to multiple marginalized identities, would improve future research on racial and ethnic differences in overeating and binge eating among SMW.[80,81]

Our findings have important implications for clinical practice. Greater body dissatisfaction and childhood trauma histories were associated with higher odds of overeating and binge eating in SMW. In addition, we found that approximately 79% of SMW reported at least one

type of childhood trauma, a finding that is consistent with previous work.[82–84] Primary care and mental health clinicians should regularly screen for childhood trauma, depression, and body dissatisfaction, as well as sexual minority stressors (particularly stigma consciousness), to help identify SMW who are at risk for overeating and binge eating. Educating SMW about healthy coping strategies to deal with stigma consciousness may help reduce their risk of engagement in overeating in particular.

Limitations

Despite its strengths, this study has several limitations. Although the CHLEW is a longitudinal study, we used cross-sectional data from the only study wave (Wave 3) in which overeating and binge eating were assessed. Prospective studies are needed to better understand predictors and consequences of overeating and binge eating in SMW. In contrast to the discrimination measure that assessed past-year exposure, measures of stigma consciousness and internalized homophobia were not anchored to a specific timeframe. Our analyses did not include a measure of sexual identity disclosure, which may have affected the minority stress experiences of women in the study.[85,86] Moreover, our measure of BMI was self-reported, which is common,[87] but may have introduced measurement error. Future studies should investigate these associations using objectively-measured BMI. Our use of single-item measures to assess overeating and binge eating is also a limitation. Multi-item scales to assess overeating and binge eating may more adequately capture nuances between overeating, LOC, and binge eating.[26,35,88] Future research using validated scales to assess overeating and binge eating specifically among SMW is needed. Lastly, our study did not include sufficient numbers of women who identify as something other than lesbian or bisexual to include them in analyses. The CHLEW also included too few SMW from racial and ethnic groups other than African American, Latina, or White to permit even exploratory analyses. Given the limited research on binge eating in SMW of color, future studies should include larger numbers of Asian and other SMW of color.

Conclusions

In a diverse sample of SMW, we found that stigma consciousness was positively associated with overeating. Past-year depression did not mediate the associations of sexual minority stressors with overeating and binge eating. Exploratory analyses revealed the association of stigma consciousness with overeating was stronger among Latina SMW compared to White and African American SMW. These findings emphasize the need to further examine psychosocial correlates of overeating and binge eating among SMW. Future research should use an intersectionality lens to focus on minority stressors that may be specific to multiple marginalized identities, as well as other psychosocial factors that may contribute to overeating and binge eating.

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Highlights

- Our study included a diverse, community-based sample of sexual minority women (SMW)
- Stigma consciousness in Latina SMW was associated with higher odds of overeating
- Links between stigma consciousness with overeating were not explained by depression
- Discrimination was not linked with overeating or binge eating
- Internalized homophobia was not linked with overeating or binge eating

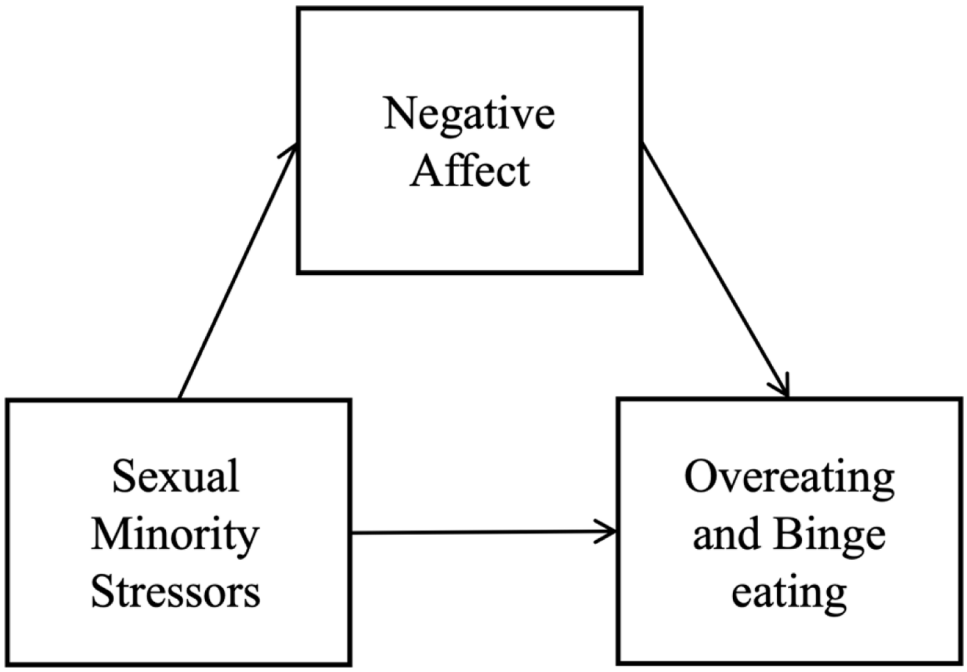

Figure 1.
A conceptual model of the independent (i.e., sexual minority stressors: stigma consciousness, internalized homophobia, sexual orientation-based discrimination), dependent (i.e., overeating and binge eating), and mediator (i.e., depression) variables.

Table 1

Racial and ethnic and sexual identity differences across study variables ($N = 607$).

		Race and ethnicity					Sexual identity		
	Total Sample (*N* = 607)	**White (*n* = 232)**	**African American (*n* = 225)**	**White vs. African American**	**Latina (*n* = 150)**	**White vs. Latina**	**Lesbian (*n* = 453)**	**Bisexual (*n* = 154)**	**Lesbian vs. Bisexual**
	Mean (SD)/*N* (%)			***p*-value**	**Mean (SD)/*N* (%)**	***p*-value**	**Mean (SD)/*N* (%)**		***p*-value**
Demographic/ clinical characteristics									
Age (range 18–82)	39.7 (14.2)	42.9 (16.0)	39.4 (13.1)	0.01	35.3 (11.2)	<0.001*	41.6 (14.2)	34.1 (12.4)	<0.001*
Sexual identity				0.53		0.30	–	–	–
Lesbian	453 (74.6)	178 (76.7)	167 (74.2)		108 (72.0)				
Bisexual	154 (25.4)	54 (23.3)	59 (25.8)		42 (28.0)				
Race and ethnicity									0.58
White	232 (38.2)	–	–	–	–	–	178 (39.3)	54 (35.0)	
African American	225 (37.1)						167 (36.9)	58 (37.7)	
Latina	150 (24.7)						108 (23.8)	42 (27.3)	
Education				<0.001*		<0.001*			<0.01
High school or less	122 (20.1)	9 (3.9)	77 (34.2)		36 (24.0)		76 (16.7)	46 (29.9)	
Some college	196 (32.3)	55 (23.7)	87 (38.7)		54 (36.0)		148 (32.7)	48 (31.2)	
Bachelor's degree	128 (21.1)	66 (28.5)	34 (15.1)		28 (18.7)		101 (22.3)	27 (17.5)	
Graduate degree	161 (26.5)	102 (43.9)	27 (12.0)		32 (21.3)		128 (28.3)	33 (21.4)	
Body mass index (range 16.3–58.2 kg/m^2)	29.1 (7.6)	27.1 (7.4)	31.8 (7.9)	<0.001*	28.1 (6.3)	0.19	29.3 (7.9)	28.3 (6.8)	0.18
Psychosocial factors									
Past-year depression	187 (30.8)	72 (31.0)	67 (29.8)	0.77	48 (32.0)	0.84	140 (30.9)	47 (30.5)	0.93
Body dissatisfaction (range 0–36)	13.3 (8.9)	13.4 (9.7)	13.5 (8.3)	0.88	12.6 (8.2)	0.37	13.3 (8.9)	13.1 (8.8)	0.74
Count of types of childhood trauma				<0.001*		0.02			0.24
0	129 (21.3)	74 (31.9)	24 (10.7)		31 (20.7)		91 (20.1)	38 (24.7)	
1	231 (38.0)	88 (37.9)	85 (37.8)		58 (38.7)		169 (37.3)	62 (40.3)	
2	207 (34.1)	51 (22.0)	105 (46.7)		51 (34.0)		159 (35.1)	48 (31.1)	

		Race and ethnicity					Sexual identity		
	Total Sample (*N* = 607)	**White (*n* = 232)**	**African American (*n* = 225)**	**White vs. African American**	**Latina (*n* = 150)**	**White vs. Latina**	**Lesbian (*n* = 453)**	**Bisexual (*n* = 154)**	**Lesbian vs. Bisexual**
	Mean (SD)/*N* (%)			***p*-value**	**Mean (SD)/*N* (%)**	***p*-value**	**Mean (SD)/*N* (%)**		***p*-value**
3	40 (6.6)	19 (8.2)	11 (4.8)		10 (6.6)		34 (7.5)	6 (3.9)	
Sexual minority stressors									
Stigma consciousness in lesbian women (range 12–48)	28.1 (5.9)	28.6 (5.4)	28.5 (6.0)	0.93	26.9 (6.6)	0.02	–	–	–
Stigma consciousness in bisexual women (range 11–51)	27.7 (8.6)	29.1 (8.7)	27.7 (7.8)	0.42	26.1 (9.5)	0.11	–	–	–
Internalized homophobia (range 10–38)	14.7 (5.4)	13.9 (4.6)	15.1 (5.6)	0.02	15.2 (6.0)	0.02	13.7 (4.7)	17.3 (6.1)	<0.001*
Sexual orientation-based discrimination				0.80		0.20			0.42
0	392 (64.6)	145 (62.5)	147 (65.3)		100 (66.7)		285 (62.9)	107 (69.5)	
1–2	169 (27.7)	65 (28.0)	60 (26.7)		44 (29.3)		130 (28.7)	39 (25.3)	
3–4	39 (6.4)	19 (8.2)	14 (6.2)		6 (4.0)		32 (7.1)	7 (4.6)	
5–6	7 (1.1)	3 (1.3)	4 (1.8)		0 (0.0)		6 (1.3)	1 (0.6)	
Eating behaviors									
Overeating	106 (17.5)	39 (16.8)	38 (16.9)	0.98	29 (19.3)	0.53	77 (17.0)	29 (18.8)	0.61
Binge eating	56 (9.2)	27 (11.6)	16 (7.1)	0.10	13 (8.7)	0.35	42 (9.3)	14 (9.1)	0.95

Note. Stigma consciousness for lesbian and bisexual women were measured with separate scales with a different number of items. Unstandardized stigma consciousness scores are presented for lesbian and bisexual women.

* $p < 0.001$.

Table 2

Direct, indirect, and total associations of sexual minority stressors with overeating and binge eating in SMW *(N* = 607).

Paths	Overeating	Binge eating
	AOR (99% CI)	AOR (95% CI)
Direct associations		
Stigma consciousness	1.31 (1.03–1.66) *	1.22 (0.87–1.70)
Internalized homophobia	1.02 (0.97–1.06)	1.01 (0.96–1.08)
Sexual orientation-based discrimination	1.05 (0.85–1.30)	0.86 (0.60–1.24)
Sexual identity		
Lesbian	Ref	Ref
Bisexual	0.91 (051–1.63)	0.96 (0.14–2.09)
Age	0.96 (0.94–098) **	0.98 (0.96–1.01)
Race and ethnicity		
White	Ref	Ref
African American	0.58 (0.30–1.10)	0.33 (0.14–0.78) *
Latina	0.83 (0.45–1.55)	0.52 (0.17–1.25)
Education	0.84 (0.68–1.04)	0.87 (0.64–1.19)
Body mass index	1.02 (0.98–1.06)	1.03 (0.99–1.07)
Body dissatisfaction	1.04 (1.01–1.07) **	1.06 (1.03–1.10) ***
Childhood trauma	1.55 (1.17–2.05) **	1.58 (1.10–2.28) *
Past-year depression	1.57 (0.96–2.56)	3.04 (1.61–5.74) **
Indirect associations		
Past-year depression		
Stigma consciousness → depression	1.01 (0.98–1.03)	1.02 (0.97–1.07)
Internalized homophobia → depression	1.00 (0.99–1.01)	1.00 (0.99–1.02)
Past-year discrimination → depression	1.02 (0.99–1.05)	1.04 (0.99–1.10)
Total associations		
Stigma consciousness	1.32 (1.04–1.67) *	1.24 (0.89–1.73)
Internalized homophobia	1.02 (0.98–1.06)	1.02 (0.96–1.09)
Count of past-year discrimination type	1.07 (0.87–1.32)	0.90 (0.62–1.32)

Note. AOR = adjusted odds ratios. All models adjusted for age, sexual identity, race and ethnicity, education, body dissatisfaction, childhood trauma, and BMI. Stigma consciousness scores were standardized to account for the different number of items asked to lesbian- and bisexual-Identified women.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.