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Investigating the influence of shame, depression, and distress tolerance on the relationship between internalized homophobia and binge eating in lesbian and bisexual women

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ABSTRACT

There is limited research evidence about the specific factors influencing disordered eating for lesbian and bisexual women. Therefore, this study investigated relationships among binge eating, internalized homophobia, shame, depression, and distress tolerance in a sample of lesbian ($n = 72$) and bisexual women ($n = 66$). Two hypotheses were tested. First, it was hypothesized that shame and depression would mediate the relationship between internalized homophobia and binge eating. Second, it was hypothesized that distress tolerance would moderate the relationship between shame and binge eating and the relationship between depression and binge eating in the mediation relationships proposed in the first hypothesis. Results indicated that shame was a significant mediator for the relationship between internalized homophobia and binge eating, that depression was not a significant mediator, and that distress tolerance did not moderate the significant mediation relationship between shame and binge eating. The data in this study also indicated that the proportions of lesbian and bisexual participants who reported binge eating and compensatory behavior did not differ significantly, but that bisexual participants reported significantly more depression and shame than lesbian participants.

Eating disorder symptoms are common among lesbian and bisexual women (Feldman & Meyer, 2007; Heffernan, 1996; Koh & Ross, 2006; Lakkis, Ricciardelli, & Williams, 1999; Siever, 1994; Strong, Williamson, Netemeyer, & Geer, 2000), but previous research has been inconsistent regarding the prevalence of eating disorder symptoms in lesbian and bisexual women. Some studies have found a greater prevalence of eating disorders among lesbian (Heffernan, 1996) or bisexual women (Koh & Ross, 2006) than among heterosexual women. In contrast, other studies have found equivalent rates of eating disorder symptoms in lesbian, bisexual, and heterosexual women (Feldman & Meyer, 2007; Strong et al., 2000) or have found higher rates of eating disorder symptoms in heterosexual women (Lakkis et al., 1999; Siever, 1994). Despite that inconsistency, previous research has found that binge eating is the most prominent aspect of disordered eating for lesbian and bisexual women (Austin et al., 2009; Boehmer, Bowen, & Bauer, 2007; French, Story, Remafedi, Resnick, & Blum, 1996; Heffernan, 1996; Herzog, Newman, Yeh, & Warshaw, 1992; Striegel-Moore, Tucker, & Hsu, 1990). Therefore, the purpose of the present study was to extend previous research by investigating how a few related variables may interact to help explain the likelihood of binge eating among lesbian and bisexual women.

Several related areas of research, including relevant studies of heterosexual women and gay men, led to the hypotheses for the present study. For example, previous research has found that heterosexual women who report more distressing emotions, such as shame and depression, also report more binge eating (e.g., Presnell, Stice, Seidel, & Madeley, 2009; Sanftner & Crowther, 1998). One important source of emotional distress for lesbian and bisexual women is internalized homophobia – the internalization of negative stereotypes about lesbians, which may lead them to feel negatively about themselves (Heffernan, 1996). A relationship between internalized homophobia and binge eating in lesbian and bisexual women has been repeatedly hypothesized (Beren, Hayden, Wilfley, & Grilo, 1996; Brown, 1987; Pitman, 1999), and internalized homophobia has been shown to be associated with disordered eating attitudes and behaviors in gay men (Williamson, 1999; Williamson & Spence, 2001). Furthermore, internalized homophobia has been found to be associated with correlates of disordered eating in lesbian women, including self-objectification and body shame (Haines et al., 2008). Thus, it seems highly likely that internalized homophobia increases the risk of binge eating for lesbian and bisexual women.

Internalized homophobia has been found to be related to shame and depression in lesbian and bisexual women (Allen & Oleson, 1999; Szymanski, Chung, & Balsam, 2001). Therefore, because greater levels of shame and depression are associated with a higher frequency of

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binge eating, higher levels of internalized homophobia may also be associated with higher levels of binge eating. One possible explanation for these associations is that binge eating may be a means for lesbian and bisexual women to regulate negative emotions that result from internalized homophobia. Specifically, internalized homophobia may be associated with binge eating through its relationship with shame and depression. Thus, the following hypothesis was proposed.

Hypothesis 1. For lesbian and bisexual women, the positive relationship between internalized homophobia and binge eating will be mediated by shame and by depression. Specifically, greater levels of internalized homophobia will be associated with greater levels of shame and depression, which will be associated with greater amounts of binge eating.

Binge eating may be used as a means to escape negative emotions (Anestis, Fink, Smith, Selby, & Joiner, 2011). In previous research, low distress tolerance was associated with the avoidance of directly and effectively coping with negative emotions, with eating disorder attitudes (Corstorphine, Mountford, Tomlinson, Waller, & Meyer, 2007), and with emotional eating (Kozak & Fought, 2011). Anestis, Selby, Fink, and Joiner (2007) found that lower levels of distress tolerance were associated with higher levels of bulimic behaviors, even when controlling for depressive symptoms and several other covariates (e.g., anxiety symptoms and body dissatisfaction). Lesbian and bisexual women who cannot tolerate the negative emotions associated with internalized homophobia may engage in binge eating. In contrast, those who have higher distress tolerance may be able to cope with the negative emotions associated with internalized homophobia in more adaptive ways. This reasoning led to the following hypothesis.

Hypothesis 2. In the mediation models proposed in Hypothesis 1, the relationship between shame and binge eating and the relationship between depression and binge eating will be moderated by distress tolerance. Specifically, higher levels of shame and depression will be associated with higher levels of binge eating when an individual has a low level of distress tolerance, but not when an individual has a high level of distress tolerance.

1. Method

1.1. Procedure

Lesbian and bisexual women were recruited for participation in this study in two ways. Organizations geared towards gay, lesbian, and bisexual individuals (e.g., PFLAG, GSA) distributed information about the study to their members through flyers, e-mail, or posts on their organization's website or Facebook page. Participants were also recruited in general psychology courses at Texas Tech University, but only four participants were recruited this way. The students received course credit for research participation, but otherwise participants were not provided with any compensation. In order to have adequate statistical power (0.80), data were needed from at least 64 lesbian and 64 bisexual participants (Cohen, 1992).

Approval from the Institutional Review Board at Texas Tech University was obtained prior to data collection. Participants were provided with a web-based link (using Qualtrics Data Collection software) that contained information about the purpose of the study, instructions for the study's questionnaires, and access to the questionnaires. Initially, participants read statements telling them that their participation was voluntary, that their responses would remain anonymous, and that completing the questionnaires would take about 20–30 min. After completing the questionnaires, participants were thanked for their participation and asked to forward the link to the study website to anyone else who might qualify for and be interested in participating.

1.2. Measures

1.2.1. Demographic questionnaire

Participants responded to questions about their age, gender, sexual orientation, and ethnicity.

1.2.2. Eating disorder behaviors

A shortened version of the Eating Disorder Examination-Questionnaire (EDE-Q; Fairburn & Beglin, 1994), composed of the six questions asking about the frequency of binge eating and inappropriate compensatory behaviors over the past 28 days, was used in this study. Although the original EDE-Q has separate questions for the purging behaviors it assesses (i.e., vomiting, using laxatives, using diuretics), the current study included a single question that asked about the frequency of any of those behaviors.

Previous research has indicated that the EDE-Q is an internally consistent ($\alpha = 0.90$ for the total score) and valid measure of symptoms of eating disorders (Mond, Hay, Rodgers, Owen, & Beumont, 2004; Peterson et al., 2007). To ensure that participants understood what was meant by the statements "an unusually large amount of food" and "a loss of control over eating," they were given standard definitions used in previous research (EDE-Q-I; Goldfein, Devlin, & Kamenetz, 2005). Objective binge eating was defined as a participant indicating that she eats what other people would consider an unusually large amount of food with a sense of having lost control while eating. Subjective binge eating was defined as having a sense of loss of control over an eating episode that did not involve eating an unusually large amount of food.

1.2.3. Internalized homophobia

A shorter (39 items), bisexual-inclusive version of the Lesbian Internalized Homophobia Scale (LIHS; Szymanski & Chung, 2001) was used to measure internalized homophobia (Balsam & Szymanski, 2005; Piggot, 2004, cited in Szymanski, Kashubeck-West, & Meyer, 2008). Participants rated the extent to which they agreed with statements (e.g., "I feel bad for acting on my lesbian desires.") on a scale ranging from 1 (strongly disagree) to 7 (strongly agree). Only the Personal Feelings about Being Lesbian/Bisexual subscale was used in this study because it appears to assess the core aspects of homophobia. High scores on this subscale indicate that the individual experiences negative feelings about being lesbian or bisexual (e.g., self-hatred, placing superior value on heterosexuality over homosexuality, and internalized beliefs about being unworthy, sick, or defective because one is lesbian or bisexual). Low scores indicate that the individual feels positive about and is accepting of her lesbian or bisexual identity (e.g., affirming one's identity as lesbian or bisexual, having a strong sense of pride about being lesbian or bisexual; Szymanski & Chung, 2001).

The shorter version of the LIHS has been found to be internally consistent ($\alpha = 0.79$ for the Personal Feelings about Being a Lesbian subscale), to have cross-cultural validity in sexual minority women from 20 different countries, and to correlate positively with measures of depression and negatively with measures of self-esteem and psychosexual adjustment (Piggot, 2004, cited in Szymanski et al., 2008).

1.2.4. Shame

The Personal Feelings Questionnaire (PFQ-2; Harder & Zalma, 1990) is a 22-item measure of shame proneness and guilt proneness. In this study, participants responded only to the 10 items of the Shame subscale (e.g., "feeling stupid") and to six filler items with feeling words that do not describe shame or guilt (e.g., "sadness"). Items are rated on a 5-point scale for how often the individual experiences the feeling listed (0 = you never experience the feeling; 4 = you experience the feeling continuously or almost continuously). The Shame subscale has shown adequate internal consistency ($\alpha = 0.78$) and excellent 2-week test-retest reliability ($r = 0.91$; Harder & Zalma, 1990).