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SEXUAL VICTIMIZATION AND ASSOCIATED RISKS AMONG LESBIAN AND BISEXUAL WOMEN

Amy L. Hequembourg,

1021 Main Street, Research Institute on Addictions, University at Buffalo, Buffalo, New York, 14203-1016

Jennifer A. Livingston, and

Research Institute on Addictions, University at Buffalo

Kathleen A. Parks

Research Institute on Addictions, University at Buffalo

Amy L. Hequembourg: ahequemb@ria.buffalo.edu; Jennifer A. Livingston: livingst@ria.buffalo.edu; Kathleen A. Parks: parks@ria.buffalo.edu

Abstract

This study examines relationships among childhood sexual abuse (CSA), risky alcohol use, and adult sexual victimization among bisexual and lesbian women. Half (51.2%) of women reported CSA and 71.2% reported adult sexual victimization. Perpetrators were generally male, and 56.4% of women's most recent adult sexual victimization incidents occurred after coming-out. Regression results indicated that adult sexual victimization severity was associated with a bisexual identity, more severe CSA history, more lifetime sexual partners, and higher alcohol severity scores. Compared to lesbians, bisexual women reported more severe adult sexual victimization experiences, greater revictimization, riskier drinking patterns, and more lifetime male sexual partners.

Keywords

lesbian women; bisexual women; childhood sexual abuse; adult sexual victimization; risky drinking; revictimization

Sexual violence against women continues to be an ongoing public health concern (Office on Violence Against Women, 2011), with 18% of women reporting an experience of rape in their lifetimes (Tjaden & Theonnes, 2006). Sexual victimization can occur in childhood or adulthood and may include unwanted sexual contact, sexual coercion, attempted rape, or completed rape (Koss et al., 2007). Although studies of sexual victimization risks among heterosexual women have proliferated, much less is known about sexual victimization rates and associated risks among sexual minority women (i.e., lesbian and bisexual women; Abbey, Jacques-Tiura, & Parkhill, 2010). With a few exceptions (e.g., Bernhardt, 2000), an emerging body of empirical evidence suggests that sexual minority women may be at even greater risk for lifetime sexual victimization than exclusively-heterosexual women (Balsam, Rothblum, & Beauchaine, 2005; Balsam, Lehavot, & Beadnell, 2011; Hughes et al., 2010a, 2010b; Long, Ullman, Long, Mason, & Starzynski, 2007; Scheer et al., 2003). According to Hughes, et al. (2010a), 78% of bisexual and 66% of exclusively lesbian women reported lifetime sexual victimization (i.e., including childhood and adult sexual victimization), compared to 38% of exclusively heterosexual women. Rothman, Exner, and Baughman (2011) conducted a systematic review of the literature pertaining to sexual assault against sexual minority men and women, finding that the prevalence of sexual assault for sexual

minority women ranged from 11% to 53% across studies. Research also suggests that, like heterosexual women, sexual minority women most often experience sexual victimization at the hands of male perpetrators, who are often known to them as family members or someone with whom they have had a romantic relationship (Balsam et al., 2005; Bradford, Ryan, & Rothblum, 1994; Long et al., 2007; Morris & Balsam, 2003). In general, however, there is a dearth of information regarding factors that elevate sexual victimization risks and other characteristics of sexual victimization incidents (e.g., timing in relation to coming-out, role of alcohol in incidents) experienced by sexual minority women.

RISKY ALCOHOL USE AND SEXUAL VICTIMIZATION

Patterns of risky alcohol use and alcohol-related problems among sexual minority women may play a significant role in elevating sexual victimization vulnerability among this group. Heavy episodic alcohol use (> 4 drinks in one episode) has been identified as a significant risk factor for adult sexual victimization among women in the general population (for a review, see Abbey, Zawacki, Buck, Clinton, & McAuslan, 2004). Approximately one-half of all heterosexual women's sexual assaults involve alcohol consumption by the perpetrator or by the female victim (Abbey et al., 2004). Heavy episodic alcohol use has emerged as a primary risk for sexual assault as it impacts perpetrators' behaviors and expectations, as well as women's abilities to perceive risks or extricate themselves from dangerous situations (Abbey, Zawacki, Buck, Clinton, & McAuslan, 2010; Ullman, 2003). Further, heavy episodic drinking has been directly implicated in incapacitated rape, by rendering women unconscious or otherwise unable to refuse or resist unwanted sex (Testa, Livingston, VanZile-Tamsen, & Frone, 2003; Testa & Livingston, 2009).

Studies pertaining to hazardous alcohol use among sexual minorities have become increasingly sophisticated over the past decade, including a growing number of population-based studies (e.g., Drabble, Midanik, & Trocki, 2005; Scheerer, Parks et al., 2003). Findings from these studies indicate that sexual minority women drink at greater frequency, consume alcohol in larger amounts, and have higher rates of alcohol dependency symptoms than heterosexual women (Cochran, Keenan, Schober, & Mays, 2000; Drabble et al., 2005; Diamant, Wold, Spritzer, & Gelberg, 2000; Hughes, 2003; Hughes, et al., 2010a; Wilsnack et al., 2008).

However, despite an ever-growing body of studies pertaining to alcohol risks among sexual minorities, fewer studies have examined the relationship between risky alcohol use and adult sexual victimization. Hughes et al. (2010a; 2010b) reported that sexual victimization may predict substance abuse among sexual minorities. Balsam, Lehavot, and Beadnell (2011) also found that a history of lifetime victimization was associated with greater alcohol use among gay men, lesbian women, and heterosexual women, but the extent to which victimization type (i.e., no lifetime, childhood *or* adult, or childhood *and* adulthood victimization) predicted alcohol use did not differ among their three comparison groups. The larger body of research examining the link between alcohol and sexual victimization among (presumably) heterosexual women indicates that heavy episodic alcohol use is one of the strongest predictor for sexual assault at the event level (see Abbey et al., 2004; Testa & Livingston, 2009 for reviews). Although the direction and nature of the complex relationship between alcohol use and sexual victimization has yet to be examined thoroughly among sexual minority women, these issues are of critical importance for this group because patterns of alcohol use have been identified as more hazardous than those found among heterosexual women (Cochran et al., 2000; Drabble et al., 2005; Hughes et al., 2010a; 2010b; Trocki & Drabble, 2008).

CHILDHOOD SEXUAL ABUSE AND SEXUAL REVICTIMIZATION IN ADULTHOOD

History of childhood or adolescent sexual abuse has been identified as one of the most significant risk factors for adult sexual victimization among heterosexual women (for reviews, see Classen, Palesh, & Aggarwal, 2005; Messman-Moore & Long, 2003). In a metaanalysis of 19 empirical studies of sexual revictimization (i.e., history of CSA and adult sexual victimization), Roodman and Clum (2001) found an overall moderate effect size ($d = 0.59$) for revictimization, indicating a “definite relationship” between CSA and adult sexual victimization among (presumably) heterosexual women. With a few exceptions (e.g., Descamps, Rothblum, Bradford, & Ryan, 2000; Neisen & Sandall, 1990), studies have reported higher rates of childhood sexual abuse among sexual minority women compared to heterosexual women. Rates of CSA in previous studies have ranged from 9% to 29% among heterosexual women compared to rates from 15% to 76% among bisexual women and from 18% to 60% among lesbian women (Austin et al., 2008; Balsam et al., 2005; Hughes, Johnson, & Wilsnack, 2001; Hughes et al., 2010a; 2010b; Stoddard, Dibble, & Fineman, 2010). In their review of sexual assault studies among sexual minorities, Rothman et al. (2011) found rates of CSA among sexual minority women range from 15% to 76% across studies. However, despite a pernicious pattern of revictimization among heterosexual female CSA survivors, little is known about patterns of revictimization among sexual minority women with histories of CSA. The small number of studies that do exist suggest that sexual minority women with a history of CSA are at higher risk than non-victims for experiencing sexual victimization in adulthood (Balsam et al., 2011; Hughes et al., 2010a; Morris & Balsam, 2003).

DIFFERENTIAL RISK FACTORS AMONG LESBIAN AND BISEXUAL WOMEN

Researchers have historically subsumed bisexuals into samples of gay men or lesbian women in health disparities research among sexual minorities without looking at each group individually for unique risks (Hughes, 2005). However, an emerging body of research has included separate groups of self-identified lesbian and bisexual women in their studies and have found that bisexual women appear to be at higher risk for a variety of negative health outcomes compared to lesbian and heterosexual women (Balsam et al., 2005; Conron et al., 2010; Drabble et al., 2005; Fredriksen-Goldsen, Hyun-Jun, Barkan, Balsam, & Mincer, 2009; Heidt, Marx, & Gold, 2001; Hughes et al., 2010a; 2010b; Long et al., 2007; McCabe et al., 2005; Trocki et al., 2005; 2009). In particular, the prevalence of risky alcohol use and alcohol-related problems are higher among bisexual women compared to other women (Hughes et al., 2010a; 2010b; McCabe, Hughes, & Boyd, 2004; McCabe, Hughes, Bostwick, West, & Boyd, 2009). Although there are few attempts to compare bisexual women’s experiences of sexual victimization with reports from other women, there is evidence that indicates higher rates of adult sexual victimization among bisexual women compared to lesbian and exclusively heterosexual women (Balsam et al., 2005; Heidt et al., 2005; Hughes et al., 2010a; 2010b; for an exception, see Long et al., 2007). Hughes et al. (2010a) found that bisexual women may be particularly vulnerable to sexual revictimization (CSA + adult sexual victimization), although the reasons for their elevated vulnerability are not yet well understood. Some studies also have found that sexual minority women, particularly bisexual women, report more lifetime sexual partners than heterosexual women (Gonzales et al., 1999; Goodenow, Szalacha, Robin, & Westhemier, 2008; Morrow & Allsworth, 2000; Scheer et al., 2002). Based on research findings from heterosexual women, having a greater numbers of sexual partners, and therefore increased likelihood of exposure to potential aggressors, is a risk factor for sexual victimization (e.g., Abbey, Ross, McDuffie, & McAuslan, 1996; Koss & Dinero, 1989; Testa, VanZile-Tamsen & Livingston, 2007); therefore, greater numbers of lifetime sexual partners reported by bisexual women

may play a particularly important role in explaining their elevated vulnerability to sexual victimization compared to lesbian women.

PURPOSE OF THE STUDY

The purpose of this study was to examine prevalence rates and relationships among lifetime histories of sexual victimization, risky alcohol use, and numbers of lifetime sexual partners among 98 self-identified bisexual and 107 self-identified lesbian women. An important focus of this study was the examination of sexual identity differences (lesbian versus bisexual) in lifetime sexual victimization history, risky drinking patterns (heavier episodic drinking rates, greater problem severity), and lifetime numbers of male and female sexual partners.

Based on previous studies of sexual victimization risks, particularly those among women in the general population discussed above (e.g., Abbey et al., 1996; 2004; Classen et al., 2005; Koss & Dinero, 1989; Messman-Moore & Long, 2003; Testa et al., 2007), we hypothesized that adult sexual victimization vulnerability would be heightened among sexual minority women with a history of childhood sexual abuse, risky alcohol use, and more lifetime sexual partners. Given findings from previous studies (Balsam et al., 2005; Bradford et al., 1994; Long et al., 2007; Morris & Balsam, 2003), we expected that the majority of women would report male perpetrators in adult sexual assault incidents, although we did not have any specific hypothesis regarding sexual identity differences in these incident characteristics. Based on previous studies (Balsam et al., 2005; Drabble et al., 2005; Hughes et al., 2010a; 2010b; McCabe et al., 2005; Trocki et al., 2005; 2009) we also hypothesized that bisexual women would report higher rates of victimization and riskier drinking patterns than lesbian women. We also explored characteristics of sexual victimization incidents, including the gender of the perpetrator and the relationship between the timing of sexual identity disclosure and sexual victimization.

METHODS

Participants

The sample included 98 lesbian and 107 bisexual women ($N = 205$) with an average age of 24.5 ($SD = 4.4$) years. Participants reported an average of 13.8 ($SD = 2.8$) years of education. The largest racial/ethnic group was White (non-Hispanic, 65.9%), followed by Black (non-Hispanic, 21.0%), and Hispanic/Latino (4.9%). The remaining participants were from other racial/ethnic groups. Racial/ethnic composition for the current sample was similar to that found in the greater Buffalo, New York metropolitan area. The majority (84.4%) of the women reported annual individual incomes below \$25,000. Sixty-two percent of women were employed, but only working an average of 32 hours per week, and 36.6% of participants were students. The average age of sexual identity disclosure to others was 17.7 years old ($SD = 4.7$) years. Lesbian women reported higher educational levels, $F(1, 203) = 9.2$, $p < .05$, and more were currently attending school, $\chi^2(1, n = 204) = 4.5$, $p < .05$, compared to bisexual women.

Procedures

Recruitment was conducted in Buffalo, New York as part of a larger study about risk and protective factors associated with substance use and victimization among sexual minority men and women. Respondent-Driven Sampling (RDS; Heckathorn, 1997) was used to recruit the majority of the participants for the study. RDS is a sampling strategy that utilizes a participant-driven referral incentive system to decrease sampling bias in the recruitment of hidden populations that are not accessible using conventional random sampling techniques (Heckathorn, 1997; Ramirez-Valles et al., 2005; Salganik & Heckathorn, 2004). RDS began

with initial (eligible) “seed” respondents, who were asked to recruit a maximum of three lesbian, gay, or bisexual friends to the study. Recruitment flyers sought individuals, between the ages of 18–35 years, who would be interested in sharing their stories “about everyday hassles you experience and the ways you manage them.” Although participants were told to use their coupons to recruit their gay, lesbian, or bisexual friends to the study, the actual recruitment flyer did not refer to sexual identity in order to avoid inadvertently ‘outing’ someone who had the coupon in his/her possession. Participants told their friends about the study and provided the information to their friends so that they could voluntarily contact the study by telephone. Therefore, the friend’s contact information was not directly gathered by project staff. If that friend called to learn more about the study, the participant who referred him/her received a small referral incentive. Based on nominal referral fee structures utilized in other RDS studies (Heckathorn, Broadhead, & Sergeyev, 2001; Ramirez-Valles et al., 2005; Robinson et al., 2006), participants were offered \$10 each for three referral coupons plus an additional \$5 if they referred one self-identified bisexual man or woman (i.e., total possible referral fees = \$35).

However, in the current study, the referral system was not as effective as anticipated and further flyers and advertisements for volunteers via a local entertainment newspaper were required to stimulate recruitment. Consequently, over half of the female sample (63.2%) participated in response to a referral from a friend, and the remainder of the sample was recruited after responding to a newspaper advertisement or a flyer. Seed participants (including initial seeds and those recruited via supplemental ads) and women referred through RDS coupons from their friends did not differ significantly, with the exception that those who were referred via a coupon were more likely to be employed than seed participants, $\chi^2(1, n=204) = 6.8, p < .01$.

Eligibility criteria included being 18–35 years old and self-identified as lesbian or bisexual. Transgender men and women were ineligible. The age range for participation in this project was chosen because national data indicate that recent binge and heavy drinking is highest among 18-to 25-year-olds (Department of Health and Human Services, 2011) and sexual victimization peaks between ages 12–24 years (Tjaden & Thoennes, 2006).

Following a brief telephone screening to determine eligibility, participants were scheduled to visit the Research Institute to participate in an assessment that included a battery of self-administered and interviewer-administered measures. Consent procedures—approved by the University at Buffalo’s Institutional Review Board—were conducted prior to participation. Each assessment began with an interviewer-administered portion that included the *Timeline Followback* (Sobell & Sobell, 1992) to assess drinking patterns and victimization for the past 180 days. Participants then were asked to complete a series of self-administered survey measures and participate in a follow-up interview about their most recent sexual victimization experience, when applicable. Assessments lasted 2 to 3 hours and participants were remunerated \$50 for their time. The data for the current study were collected as part of these assessments and constitute an independent analysis of a subset of those data.

Measures

Sexual identity and disclosure—Participants were asked to self-identify their sexual identities, with the sample for the current study consisting of those women who identified as lesbian or bisexual. Women also were asked to provide an estimated age at which they recalled that they had generally come-out in their lives.

Childhood sexual abuse—CSA (i.e., unwanted sexual experiences prior to age 14) was assessed using a self-administered measure adapted from the work of Miller, Downs, and Testa (1993) and Finkelhor, Hotaling, Lewis, and Smith (1990). Six items assessed CSA

experiences ranging from inappropriate touching through forced sexual intercourse. CSA experiences were characterized by three levels of severity for the current study: sexual exposure (i.e., showing/exposing sexual organs), sexual touching (i.e., inappropriate sexual touching of breasts or genitals, sexual hugging/kissing), and sexual penetration (i.e., vaginal or anal penetration by penis or object). This measure had excellent internal consistency reliability in the current study ($\alpha = .88$).

Adult sexual victimization prevalence, severity, and characteristics—Adult sexual victimization, defined as unwanted sexual experiences occurring after age 14, was assessed using the most recent 10-item version of the self-administered *Sexual Experiences Survey* (SES-SFV; Koss et al., 2007; 2008). The revised version includes gender-neutral language that allows for assessment of both male and female participants who may have been assaulted by male or female perpetrators. Participants were asked how many times they had experienced a variety of sexually aggressive behaviors in the past 6 months and since age 14 (not counting past 6 months). Incidents ranged in severity from unwanted contact to rape. For example, one question used to assess unwanted contact asked participants if, “Someone fondled, kissed, or rubbed up against the private areas of my body (lips, breast/chest, crotch, or butt) or removed some of my clothes without my consent (but did not attempt sexual penetration) by showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn’t want to.” An example of a question assessing rape was, “Someone had oral sex with me or made me have oral sex with them without my consent by threatening to physically harm me or someone close to me.” Answers ranged from 0 (“none”) to 4 (“3 or more times”). For the purposes of the current study, SES-SFV data were used to compute the *most severe* type of sexual victimization experienced by participants (Koss, Gidycz, & Wisniewski, 1987), resulting in five mutually exclusive comparison groups of women (i.e., no victimization, unwanted sexual contact, sexual coercion, attempted rape, or rape). Internal consistency reliability for the SES-SFV was excellent (i.e., $\alpha = .94$). As part of the SES-SFV, participants also were asked to report the gender of the perpetrator for the *most recent incident* for each type of assault (e.g., ‘What was the gender of person in the most recent incident where someone had oral sex with you or made you have oral sex with them without your consent by threatening to physically harm you or someone close to you?’).

Participants also were asked to report experiences of sexual victimization that occurred in the 180 days prior to the interview. Those data (in addition to daily reports of alcohol use, as described below) were collected using the *Timeline Followback* (TLFB; Sobell & Sobell, 1992) and participants’ daily reports were used to determine the prevalence and characteristics of sexual victimization among participants during the past 6 months.

Sexual revictimization (CSA + adult sexual victimization)—In the current study, “sexual revictimization” is understood to mean a combination of unwanted sexual experiences in childhood (prior to age 14) and sexual victimization in adulthood (age 14 or after) as reported on the SES-SFV. Therefore, a history of sexual revictimization was computed by combining the two primary measures of lifetime sexual victimization in childhood and adulthood to result in four comparison groups of women: those with no history of sexual victimization, a history only of CSA, a history only of adult sexual victimization, or a history of revictimization (CSA + adult sexual assault).

Heavy episodic alcohol use—As described above, participants’ daily reports of alcohol consumption were collected for the past 180 days using the *Timeline Followback* (TLFB; Sobell & Sobell, 1992) and used to compute the number of heavy episodic drinking days (i.e., 4 drinks in a single episode; Department of Health and Human Services, 2004) in the past 6 months. The TLFB has been used in numerous settings to collect detailed information

about daily alcohol use, and has demonstrated sound psychometric properties (Sobell & Sobell, 1992).

Hazardous alcohol use and possible dependence—The 10-item *Alcohol Use Disorders Identification Test* (AUDIT; Babor, Higgins-Biddle, Saunders, & Monteiro, 2001) was administered to identify hazardous or harmful patterns of drinking (Babor et al., 2001). Total scores were computed, with scores greater than or equal to 7 indicating hazardous alcohol consumption and scores greater than 19 indicating possible alcohol dependence for women (Babor et al., 2001; Donovan, Kivlahan, Doyle, Longabaugh, & Greenfield, 2006). Internal consistency reliability was excellent ($\alpha = .88$).

Lifetime sexual partners—*Number of lifetime male and number of lifetime female sexual partners* were assessed by asking participants “thinking about your lifetime, approximately how many female/male partners have you ever had sex with.” Answers ranged from 0 (“none”) to 8 (“> 100 lifetime male/female partners”). Five categories were coded to indicate number of lifetime sexual partners (i.e., 1 to 2, 3 to 4, 5 to 10, 11 to 20, or 21 to 100 partners).

Data Analysis

We were interested in examining the relationships among alcohol use, CSA, and adult victimization for sexual minority women in general, and then separately based upon sexual identity. For ease of presentation, results for the group as a whole are presented first, followed by sexual identity comparisons. Descriptive statistics are presented for each variable of interest. Following the presentation of findings for the full sample for each variable of interest in the text, we also present results from ANOVA and chi-square comparisons to indicate whether lesbian and bisexual women differed in rates and various dimensions of CSA, adult sexual victimization, and revictimization, as well as risky drinking indicators (i.e., heavy episodic drinking, problem severity). Lastly, a hierarchical linear regression analysis was conducted to better understand how much of the variance in adult sexual victimization severity was explained by education, sexual identity, CSA severity, lifetime male or female sexual partners, and alcohol severity. In order to inform the regression analysis, bivariate Pearson correlations were computed to assess the direction and strength of associations among the variables of interest.

RESULTS

Victimization History

Childhood sexual abuse—Half (51.2%) of the women in this sample reported at least one unwanted sexual experience in childhood. Almost 9% of women reported that the most severe form of CSA they experienced was sexual exposure, while 18.0% reported unwanted touching, and 24.4% reported that they experienced forced vaginal or anal penetration in childhood. No significant differences were found between lesbian and bisexual women in the severity of CSA experienced

Prevalence of adult sexual victimization—Nearly three-quarters (71.2%) of the women reported at least one incident of sexual aggression since their 14th birthday. Among women reporting at least one sexual victimization experience, 64.9% reported unwanted sexual contact, 39.0% reported sexual coercion, 32.2% reported attempted rape, and 43.4% reported at least one incident of rape. Among women reporting a history of adult sexual victimization, 12.7% reported that the most severe type of adult sexual victimization they experienced was unwanted sexual contact, 9.3% reported sexual coercion, 5.9% reported

attempted rape, and 43.4% reported rape. Bisexual women reported more severe adult sexual victimization experiences than lesbian women (Table 2).

Characteristics of recent adult sexual victimization incidents—Results of the SES-SFV indicated that the mean age of women at their most recent sexual victimization incident was 22.2 years old ($SD = 4.8$; range: 14–35 years). Over three-quarters (79%) of the most recent incidents reported by women involved male perpetrators. Significantly more of the incidents experienced by bisexual women (96%) involved male perpetrators than incidents experienced by lesbian participants (81%), $\chi^2(1, n = 146) = 8.9, p < .01$. Significantly more of the incidents reported by lesbians involved a female perpetrator (50%) than incidents reported by bisexual women (28%), $\chi^2(1, n = 146) = 7.4, p < .01$.

We also assessed differences between lesbian and bisexual women in the gender of the perpetrator and the type of the most recent incident reported on the various dimensions of the SES-SFV. In other words, among those women who reported a sexual victimization experience, we compared lesbian and bisexual women's responses to whether a man or woman did something sexual to them that they did not consent to, such as forcing them to have oral sex by threatening to physically harm them or someone close to them. We found that, compared to lesbian women, bisexual women reported a significantly greater proportion of male perpetrators who forced them to (1) fondle or be kissed without their consent by using verbal pressuring, $\chi^2(1, n = 80) = 4.6, p < .05$; (2) fondle or be kissed when they were too drunk to consent, $\chi^2(1, n = 88) = 5.5, p < .05$; (3) have oral sex without consent by using verbal pressuring, $\chi^2(1, n = 36) = 5.6, p < .05$; or have oral sex when they were too drunk to consent, $\chi^2(1, n = 41) = 6.2, p < .05$. Compared to lesbian women, bisexual women also reported a significantly greater proportion of male perpetrators who *tried* to force them to have oral sex when they were too drunk to consent, $\chi^2(1, n = 30) = 10.4, p < .01$.

According to the results of the SES-SFV, over half of the women (56.4%) with a history of sexual victimization reported that their most recent sexual victimization experience occurred after they came-out in their social networks. There were no significant differences between lesbian and bisexual women in their ages at the time of the most recent incidents nor in terms of the timing of the incidents in relation to their sexual identity disclosures.

Based on responses to the TLFB questionnaire, 37% of women in the study ($n = 75$; 50 bisexual and 25 lesbian women) reported a sexual victimization incident in the 6 months prior to their interview, and 79% of these incidents were perpetrated by a man. Sexual victimization severity scores were significantly higher for bisexual ($M = 3.4, SD = 1.1$) than lesbian women ($M = 2.9, SD = 1.3$; $F(1, 74) = 3.5, p = .07$), with experiences of rape reported by more bisexual women (76%) than lesbian women (52%).

Sexual revictimization—Following procedures outlined by Hughes et al. (2010a), codes were created based on a two-way classification system that resulted in four comparison groups, including women with: (0) no history of sexual victimization, (1) a history only of CSA, (2) a history only of adult sexual assault, or (3) a history of revictimization that included CSA and adult sexual assault. These results obtained from the SES-SFV indicated that 10.7% of women reported experiencing only CSA, 30.7% reported only adult sexual victimization, and 40.5% reported sexual victimization in childhood and adulthood (i.e., revictimization). Bisexual women were significantly more likely than lesbian women to report a history of revictimization (Table 2).

Heavy Episodic Alcohol Use

Results of the TLFB indicated that 75.2% of women reported at least one day of heavy episodic drinking (i.e., 4 or more drinks on a single day) in the past 6 months. The number of heavy drinking days in the past 6 months ranged from 0 to 72 ($M = 14.2$, $SD = 17.0$). Bisexual women reported significantly more heavy episodic drinking days than lesbian women (Table 2).

Alcohol Severity Scores

Based on alcohol severity scores derived from the AUDIT, 55.6% of women reported hazardous alcohol use (scores ranging from 7–19), and 10.7% reported possible alcohol dependence (scores > 19). Nearly half (43.4%) of the women's AUDIT scores indicated past alcohol-related problems. Participants' total AUDIT scores ranged from 0 to 32 ($M = 10.2$, $SD = 6.8$). We found no significant sexual identity differences in these scores (Table 2).

Lifetime Sexual Partners

Over half (54.7%) of the participants reported between 1 and 4 female sexual partners in their lifetimes, with only 3.4% reporting no female sexual partners. Lesbian women reported significantly more lifetime female partners than bisexual women (Table 2).

Nearly one-third (28.8%) of the participants reported between 1 and 4 male partners, but 16.6% reported no male lifetime partners. Thirty-four percent of lesbian women reported no male sexual partners in their lifetimes. Bisexual women reported significantly more lifetime male partners than lesbian women (Table 2).

Associations among Variables

Bivariate Pearson correlation results (Table 3) indicated a significant, but weak, positive association between CSA severity and adult sexual victimization severity. Greater CSA severity also was significantly but weakly associated with more lifetime male and female sexual partners. Greater adult sexual victimization severity was weakly to moderately associated with heavier drinking days, greater alcohol severity scores, and more lifetime male sexual partners. Higher alcohol severity scores were weakly associated with more lifetime female and male sexual partners. Greater numbers of reported heavy episodic drinking days in the past 6 months was weakly associated with greater numbers of lifetime male sexual partners. Having more female sexual partners was weakly associated with greater alcohol severity scores, fewer male partners, and more severe CSA.

Factors Contributing to Adult Sexual Victimization Vulnerability

A hierarchical linear regression was conducted to test whether sexual identity, level of education, CSA severity, numbers of lifetime male or female sexual partners, and alcohol severity scores were associated with adult sexual victimization severity (Table 4). Education and sexual identity were entered in Step 1. Results indicated a significant association between education and adult sexual victimization severity, and trend toward a significant association between bisexual identity and adult sexual victimization severity. The change in R^2 in step 1 was significant, $F = 7.3$, 2/197 df, $p < .01$. CSA severity was entered in Step 2. Greater CSA severity was significantly associated with greater adult sexual victimization severity, and the change in R^2 for CSA severity was significant, $F = 9.3$, 3/196 df, $p < .001$. In Step 3, more lifetime male sexual partners was significantly associated with greater risk for severe adult sexual victimization, and the change in R^2 was significant, $F = 9.1$, 4/195 df, $p < .001$. In Step 4, we entered lifetime female sexual partners and found a trend toward greater numbers of lifetime female partners predicting adult sexual victimization severity. The change in R^2 was significant, $F = 8.5$, 5/194 df, $p < .001$. In Step 5, we entered alcohol

severity scores and found higher alcohol severity scores were significantly associated with greater adult sexual victimization severity. The change in R^2 for Step 5 was significant, $F = 23.1$, 6/193 df, $p < .001$. The final regression model accounted for 20.5% (adjusted R^2) of the variance in adult sexual victimization severity.

DISCUSSION

Findings from the current study reflect the sexual victimization experiences of a community sample of young (ages 18–35 years old) sexual minority women. Many of the participants were students and employed part-time, which perhaps helps explain the women's low reported incomes. We acknowledge that larger random samples are needed to better understand how the patterns observed among these study participants generalize to other sexual minority women. However, findings from the current study—indicating that nearly three-quarters of women reported adult sexual victimization—were consistent with or higher than rates of victimization found in other studies of sexual minority women (Balsam et al., 2005; Hughes et al, 2010a; 2010b; Rothman et al., 2011). Although differences in measurement and study design make it difficult to compare across studies, rates of adult sexual victimization also appeared to be higher than those reported by heterosexual women. According to population-based data in the U.S. (Basile, Chen, Black, & Saltzman, 2007; Tjaden & Thoennes, 2006), between 11% and 17% of women report an experience of sexual assault during their lifetimes. Using the SES to assess sexual victimization experiences in a community sample of heterosexual women from the same small metropolitan area from which the current study was sampled, Testa, VanZile-Tamsen, Livingston, and Koss (2004) found that 7% of women reported that their most severe unwanted lifetime sexual experience involved unwanted touching and 10% reported sexual coercion. These rates were similar to those found among sexual minority women in the current sample (12.7% and 9.3%, respectively); however, reports of rape were much higher among sexual minority women in the current study (43%) compared to heterosexual women in the Testa et al. study (18%). The rates of sexual victimization among sexual minority women in the current study also were higher than rates of sexual victimization found among high-risk samples of heterosexual women (e.g., bar drinkers in Parks & Miller, 1997).

Our findings provide important insights into the characteristics of sexual victimization incidents experienced by sexual minority women. Consistent with prior research (Balsam et al., 2005; Bradford et al., 1994; Long et al., 2007; Morris & Balsam, 2003), we found that the majority of sexual minority women's most recent sexual victimization experiences involved male perpetrators. Compared to lesbian women, bisexual women reported a greater number of recent sexual victimization incidents involving men.

The current study findings also provide novel insights into sexual victimization events that occurred at different times in lesbian and bisexual women's lives (e.g., CSA, most recent sexual victimization incident since age 14, incidents occurring in past 6 months) and relevant characteristics of recent incidents (e.g., gender of perpetrator). For example, when examining the characteristics of the sexual victimization experiences occurring in the 6 months preceding the interviews, in addition to reporting more male perpetrators, bisexual women also reported more severe incidents than lesbian women. Bisexual women were more likely to report forced or coerced vaginal penetration than lesbian women in these recent incidents. However, when comparing bisexual and lesbian women's rates of sexual abuse in childhood, we found no significant differences. Over half of the women in the study experienced sexual aggression after coming-out as bisexual or lesbian, but there were no differences in timing between lesbian and bisexual women. Lastly, in comparisons between lesbian and bisexual women, we found that significantly more of the bisexual women's most recent adult sexual victimization incidents involved male perpetrators and significantly more

of the incidents reported by lesbians involved a female perpetrator. These findings provide preliminary insights into the ways that victimization incidents differ in terms of frequency and characteristics, as well as timing in relation to sexual identity disclosure, over the course of young adult sexual minority women's lives. However, as suggested by Rothman et al. (2011), future studies should seek greater details about the characteristics of multiple experiences across the lifetime among this population, such as characteristics of the perpetrators (e.g., relationship to participants, sexual identity, age). We would add that it also is important for future research to examine the setting/context of the incident, physical and psychological consequences, and sexual minority women's post-assault help-seeking behaviors. For example, do lesbian and bisexual women differ in the actual settings (e.g., bars, house parties, at partner's homes) where the incidents take place? What bearing does context have on risky drinking and vulnerability to sexual victimization among this population? Unfortunately, due to the complexity of capturing multiple sexual victimization events of varying severity in a single measure, the SES-SFV does not include questions that can help us identify these important characteristics (see Koss et al., 2007).

Prior to this study, the SES-SFV has been utilized in only a few studies of sexual victimization among sexual minority women (e.g., Balsam et al., 2005; Balsam et al., 2011; Heidt et al., 2005). Other studies have used a variety of different ways to assess sexual victimization, thereby making it difficult to form conclusions across studies about the prevalence and characteristics of sexual victimization history among sexual minority women. The cut-off age for assessing "adult" sexual victimization, for example, ranges across studies from age 14 to 18 (Balsam et al., 2011; Heidt et al., 2005; Hughes et al., 2010b; Kalichman et al., 2001; Morris & Balsam, 2003), and some researchers ask a single question about sexual violence (e.g., Hughes et al., 2010b). The current study contributes to a growing recognition of the importance of using the SES-SFV to assess sexual victimization among diverse populations and also indicates the need for additional assessment methods in future studies that could complement the data collected using the SES-SFV.

Although we did not assess women's relationship to the perpetrators of these incidents, it seems plausible, based on our results, that bisexual women may be more likely to experience recent sexual assault at the hands of men with whom they are having sexual or romantic relationships. However, given that many of the lesbian women in this study experienced sexual violence during adulthood that was perpetrated by men, future research is warranted to better understand the nature of the relationship between sexual minority women and their attackers. Are lesbian women more likely to be victimized by strangers or male friends and acquaintances than bisexual women? As indicated above, more research is needed to elucidate the qualitative characteristics of these events in order to better understand and inform prevention programs targeting the unique risks faced by lesbian and bisexual women.

Consistent with Hughes et al.'s findings (2010a) regarding revictimization among sexual minority women (Hughes et al., 2010a), we found that sexual minority women experienced a cycle of violence that began in childhood and continued into adulthood. Half of the participants reported a history of CSA. Furthermore, 40% of women were sexually victimized in childhood and then later revictimized in adulthood, with bisexual women at greater risk than lesbian women for revictimization. The regression findings indicated that adult sexual victimization severity was associated with a combination of risk factors, including a bisexual identity (which approached significance in the model), more severe CSA experiences, more lifetime male and female sexual partners, and higher alcohol severity scores. However, given the cross-sectional nature of our data, our findings should not be construed as indicating a causal link. Future studies using longitudinal designs are necessary to identify the mechanisms that are associated with the relationship between CSA

and adult revictimization among sexual minority women. The current study findings suggest that risky alcohol use or greater numbers of sexual partners may serve as potential starting points in identifying those mechanisms.

Risky Alcohol Use Patterns and Sexual Victimization

Study findings indicate the need for greater research attention to the relationship between risky alcohol use and sexual victimization among sexual minority women. Our regression analysis found that alcohol severity scores were significantly associated with adult sexual victimization severity. Hughes et al.'s (2010a) found that a history of sexual victimization predicted hazardous drinking among sexual minority women. Studies of sexual victimization risk among heterosexual women suggest that alcohol is more likely to serve as a proximal risk factor for sexual victimization, rather than as a consequence of sexual victimization (Testa, Livingston, & Hoffman, 2007). The complicated nature of the association between sexual victimization and alcohol underscores the importance of devoting further attention to understanding the strength and direction of the relationship between risky alcohol use and sexual victimization for sexual minority women.

In the current study, we found that three-quarters of the women reported heavy episodic drinking in the past 6 months, with bisexual women reporting a significantly greater number of heavy episodic drinking days in that time period than lesbian women. Our correlation analysis revealed only a weak relationship between heavy episodic drinking days in the past 6 months and adult sexual victimization. Unfortunately, these data are limited in that they do not reveal the exact timing of the drinking in relation to the sexual victimization incident nor do they allow us to determine the intoxication level of the participant at the time of the incident. Therefore, these findings are suggestive of a possible proximal link between sexual victimization and alcohol among sexual minority women, but further studies—particularly those utilizing daily diary—would help shed more light on the temporal relationship between intoxication and sexual assault. The measurement of risky drinking behaviors and sexual victimization on a daily basis also would reduce recall bias associated with retrospective accounts of behavior (Shiffman, Stone, & Hufford, 2008). Qualitative event-based interviews about sexual victimization incidents occurring in different developmental periods (e.g., adolescence versus adulthood) among sexual minority women are also needed to provide insights about variations in sexual victimization experiences and associated risks over time.

Patterns of Elevated Risks among Bisexual Women

Our inclusion of separate groups of bisexual and lesbian women in the current study contribute to a growing body of research attending to heterogeneity of experiences among sexual minority women. As already mentioned, bisexual women in the study reported greater severity of adult sexual victimization incidents, and were more likely to report being sexually revictimized (CSA + adult sexual victimization) than lesbian women. Bisexual women also reported a number of behaviors that may have elevated their risks for more severe sexual victimization experiences, including heavier episodic drinking and more lifetime male sexual partners. Coming-out as lesbian is often associated with significantly fewer sexual interactions with men, which may reduce risks for sexual victimization in adulthood for lesbian women, while bisexual women may remain at higher risk for sexual victimization due to continued sexual interactions with men. This pattern of higher risk among bisexual women deserves further inquiry.

While sexual minority stress (Meyer, 2003) has been posited as an underlying mechanism associated with widespread health disparities among all sexual minority individuals, it has been theorized that bisexuals may uniquely experience sexual minority stress due to stigma

experienced from both heterosexual and gay/lesbian communities (i.e., biphobia; Burleson, 2005; Hequembourg & Brallier, 2009; Rust, 1995). Bisexual identities remain less socially visible or accepted in mainstream culture than gay or lesbian identities, and bisexuals sometimes experience hostility from members of the gay and lesbian community who view bisexuality as a transitional/temporary position between exclusive heterosexuality or a gay/lesbian identity (Burleson, 2005; Rust, 1995). Bisexual women report experiences of stigma that manifest in negative stereotypes about promiscuity and indecisiveness, which may be associated with vulnerability to unwanted sexual contact (Hequembourg & Brallier, 2009). Future studies are needed to better examine the possible role that sexual minority stress-related variables play in the relationships among CSA, risky alcohol use, and adult sexual victimization. For example, if bisexual women suffer greater sexual minority stress and related risks, as suggested by previous studies (e.g., Burleson, 2005; Goodenow et al., 2008; Hequembourg & Brallier, 2009; Hughes et al., 2010a; 2010b; McCabe et al., 2004; Rust, 1995; Scheer et al., 2002), elevated adult sexual victimization rates among bisexual women may be associated with unique sexual minority stressors. Lehavot and Simone (2011) found that sexual minority stress indirectly effected health outcomes among sexual minority women. McCabe, Bostwick, Hughes, West, and Boyd (2010) found that experiences of sexual identity, racial, and gender discrimination increased the odds of past year substance use disorders among sexual minority men and women. Future studies, therefore, should test possible indirect relationships between sexual minority stress and adult sexual victimization, as well as identify intervening mechanisms (e.g., risky alcohol use) that may mediate that relationship among sexual minority women. Furthermore, given our focus on self-identified sexual identity for the current study, we suggest that future research also should consider how sexual victimization risk may differ among women who may not self-identify as lesbian or bisexual but whose sexual behaviors or desires are not exclusively heterosexual.

Results from the current study hold practical clinical implications for health care providers working with sexual minority clients. For example, findings regarding the association between CSA and adult sexual victimization underscore the importance of evaluating CSA history, including severity of the incident(s), among women who self-identify as a sexual minority. Given the multiple burdens of sexual identity stigma and sexual violence trauma, counselors working with sexual minority women should assess women's histories of perceived stigma and sexual violence in sensitive ways and use that knowledge to help women manage the psychological consequences of those traumatic events. Our findings also suggest the need for greater public health attention to the nature of bisexual women's sexual and intimate relationships in order to help them identify warning signs for sexual victimization. Broad public health efforts should target sexual minority women (particularly bisexual women) to lower risk factors, such as heavy episodic drinking, to reduce vulnerability to adult sexual victimization. Future studies that seek further details about the characteristics of sexual identity incidents among this population of women (e.g., relationship to perpetrator) also would aid in identifying specific risk factors that elevate vulnerability.

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Biographies

Amy L. Hequembourg, Ph.D. is a senior research scientist at the State University of New York at Buffalo's Research Institute on Addictions and assistant adjunct professor of sociology at SUNY Buffalo. Her research seeks to identify factors that contribute to health disparities among sexual minority men and women. She is particularly interested in the role of sexual minority stigma and other mechanisms as they impact alcohol use and sexual victimization risk among lesbian and bisexual women. She currently serves as research consultant for the Lesbian, Gay, Bisexual, and Transgender Domestic Violence Committee of Western New York.

Jennifer A. Livingston, Ph.D. is a Senior Research Scientist at the State University of New York at Buffalo's Research Institute on Addictions. Her research focuses on the role of alcohol use in women's sexual risk, particularly as it relates to sexual victimization. She is currently studying the development of alcohol use and sexual risk behavior among adolescent girls.

Kathleen A. Parks, PhD is a senior research scientist at the State University of New York at Buffalo's Research Institute on Addictions. Her research focuses on women's substance use and associated negative consequences, including physical and sexual victimization and risky sexual behavior. Her work has predominantly focused on the role of the drinking context and social interactions as factors influencing risk for negative consequences.

Table 1

Selected Demographic Characteristics of Study Participants by Sexual Identity

	Lesbian Women (<i>n</i> =98)	Bisexual Women (<i>n</i> = 107)
Mean Age in Years (<i>SD</i>)	25.1 (4.5)	23.9 (4.3)
Mean Years of Education (<i>SD</i>)	14.4 (2.7)	13.2 (2.8) *
Ethnicity (%)		
<i>White/Not Hispanic</i>	66.3	65.4
<i>African-American/Not Hispanic</i>	20.4	21.5
<i>Hispanic/Latino</i>	3.1	6.5
<i>Asian</i>	0	< 1
<i>Am. Indian or Alaskan</i>	< 1	< 1
<i>Multi-Ethnic</i>	9.2	4.7
Currently in School (%)	43.9	29.9 *
Currently Employed (%)	68.4	56.1
Annual individual income (%)^t		
<\$10,000	42.9	53.3
\$10,001–25,000	37.8	34.6
\$25,001–50,000	16.3	6.5
\$50,001–75,000	3.1	< 1

Note: *N* = 205.

* *p* < .05,

^t total for bisexual women does not equal 100% due to 5 missing cases.

Table 2

Sexual Victimization, Alcohol-related Variables, and Risk Factors by Sexual Identity

	Lesbian Women (n = 98)	Bisexual Women (n = 107)	Sexual Identity Differences (ANOVA or Chi-Square)
Childhood Sexual Assault (CSA) Severity (<i>M</i>, [<i>SD</i>])			
	1.0 (1.2)	1.3 (1.3)	<i>ns</i>
Adult Sexual Victimization Severity (<i>M</i>, [<i>SD</i>])			
	1.9 (1.7)	2.6 (1.7)	$F(1, 204) = 8.6^{**}$
Revictimization Patterns (%)			
			$\chi^2(3, n = 205) = 9.3^*$
CSA only	15.3	6.5	
Adult victimization only	34.7	27.1	
Revictimization	30.6	49.5	
Alcohol Use & Related Problems (<i>M</i>, [<i>SD</i>])			
Alcohol severity	9.8 (7.1)	10.6 (6.6)	<i>ns</i>
Heavy episodic drinking days			
	11.9 (14.4)	16.4 (19.0)	$F(1, 204) = 3.7^{\dagger}$
Lifetime Female Partners (%)			
			$\chi^2(7, n = 205) = 42.5^{***}$
None	2.0	4.7	
1–2 partners	13.2	38.3	
3–4 partners	20.4	35.5	
5–10 partners	41.8	12.1	
11–20 partners	17.3	4.7	
21–100 partners	5.1	4.9	
Lifetime Male Partners (%)			
			$\chi^2(7, n = 200) = 75.1^{***}$
None	34.7	1.0	
1–2 partners	22.1	5.8	
3–4 partners	19.0	13.4	
5–10 partners	12.6	39.0	
11–20 partners	7.4	25.7	
21–100 partners	4.2	15.2	

*
 $p < .05$,**
 $p < .01$,***
 $p < .001$, †
 $p = .06$

Table 3

Pearson Correlations among Key Variables

	Sexual Identity	Child Sexual Abuse	Adult Sexual Vic.	Heavy Drink Days	Alcohol Severity	Lftm. Female Partners	Lftm. Male Partners
Sexual Identity	—	.11	.20**	.13	.06	-.36**	.60**
Childhood Sexual Abuse		—	.24**	-.12	-.01	.15*	.21**
Adult Sexual Victimization			—	.17*	.26**	.13	.29**
Heavy Drinking Days				—	.28**	-.01	.16*
Alcohol Severity					—	.17*	.15*
Lifetime Female Partners						—	-.16*
Lifetime Male Partners							—

Note: $N = 205$. Sexual Identity: 1 = lesbian, 2 = bisexual; Child Sexual Abuse: higher scores = more severe sexual experiences prior to age 14; Adult Sexual Victimization: higher scores = more severe sexual experiences age 14 years and after; Heavy Drinking Days: higher scores = more days consuming 4 or more drinks in past 6 months; Alcohol Severity: higher scores = greater lifetime alcohol-related problems; Lifetime Male or Female Partners: higher scores = more male or female sexual partners in lifetime.

* $p < .05$;

** $p < .01$

Table 4

Hierarchical Regression Analyses Predicting Adult Sexual Victimization Severity (N = 205)

Variable	B (SE)	β	ΔR^2
Step 1			0.07**
Sexual Identity	0.51 (0.30)	0.15 [†]	
Education	0.14 (0.04)	0.22**	
Step 2			0.06**
CSA (Severity)	0.28 (0.09)	0.20**	
Step 3			0.03**
Lftm. Male Partners	0.13 (0.06)	0.18*	
Step 4			0.02*
Lftm. Female Partners	0.12 (0.07)	0.12 [†]	
Step 5			0.05**
Alcohol Severity	0.06 (0.02)	0.23**	

N = 205.

Note: Sexual Identity: 1=lesbian women, 2=bisexual women.

*
 $p < .05$,**
 $p < .01$,***
 $p < .001$,[†]
 $p = .09$