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Exploring the Relationships of Women's Sexual Assault Disclosure, Social Reactions, and Problem Drinking

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Abstract

The goal of this exploratory study was to examine correlates of sexual assault disclosure and social reactions in female victims with and without drinking problems. An ethnically diverse sample of sexual assault survivors was recruited from college, community, and mental health agencies. Ethnic minority women were less likely to disclose assault, and women with a greater number of traumatic life events disclosed assault more often. Although there were no differences in disclosure likelihood by drinking status; of those disclosing, problem drinkers told more support sources and received more negative and positive social reactions than nonproblem drinkers. Correlates of receiving negative social reactions were similar for normal and problem drinkers; however, negative social reactions to assault disclosure were related to more problem drinking for women with less frequent social interaction. Implications for future research and possible support interventions with problem-drinking victims are provided.

Keywords

women; sexual assault; disclosure; social reactions; problem drinking

Research shows that sexual assault is related to a higher risk of problem drinking in women (Burnam et al., 1988; Kilpatrick, Acierno, Resnick, Saunders, & Best, 1997; Wilsnack, Vogeltanz, Klassen, & Harris, 1997). According to Wekerle and Hall's (2002) literature review, 49% to 75% of women with addiction problems have histories of sexual victimization. Social support appears to be an important resource for women who experience sexual assault as well as for women with drinking problems (Timko, Finney, & Moos, 2005; Ullman, 1999). Social support may help sexual assault victims recover from their assaults (Ullman, 1999) and may be related to fewer drinking problems in general samples of women, although results are mixed (Cooper, Frone, Russell, & Peirce, 1997; Green, Freeborn, & Polen, 2001; Peirce, Frone, Russell, Cooper, & Mudar, 2000; Timko et al., 2005). Unfortunately, little research has explored possible social factors that may improve our understanding of these relationships and provide guidance for developing interventions with problem-drinking female victims.

To provide background in these areas of research, we first review past studies on (a) correlates of sexual assault disclosure, (b) correlates of social reactions to assault disclosure, and (c) social support and women's drinking. Given that both problem drinking (Blume, 1991) and sexual assault (Davis, Brickman, & Baker, 1991; Ullman, 1996b) are stigmatized in women (Imhof, 1996), it is important to understand how these problems interrelate to provide better treatment and intervention for victims depending on their drinking histories. Therefore, after reviewing past research, we discuss how these areas may be brought together and present results from an exploratory study of the relationships of disclosure, social support, and drinking in a large sample of female victims.

Correlates of Sexual Assault Disclosure

Although most research has focused on correlates of police reporting of sexual assault (Fisher, Daigle, Cullen, & Turner, 2003), two-thirds of women eventually disclose sexual assault to informal systems, usually family, friends, or romantic partners (Anderson, Martin, Mullen, Romans, & Herbison, 1993; Fisher et al., 2003; Golding, Siegel, Sorenson, Burnam, & Stein, 1989). Past research has examined the correlates of sexual assault disclosure, but drinking has not been a focus of this work. This work shows that various factors may affect the likelihood of sexual assault disclosure and receipt of negative social reactions. For example, more stereotypic assaults characterized by weapons, physical violence, stranger assailants, and injuries are more likely to be disclosed to both informal and formal support sources (Campbell, Wasco, Ahrens, Sefl, & Barnes, 2001; Fisher et al., 2003; Ullman & Filipas, 2001). Furthermore, demographic factors such as younger age, White race, and lower socioeconomic status may be related to greater likelihood of sexual assault disclosure.

Correlates of Negative and Positive Social Reactions to Sexual Assault Disclosure

A substantial amount of research has shown that sexual assault victims receive significant negative reactions including being blamed and disbelieved when disclosing assault and that these reactions are related to poorer psychological and physical health outcomes (Campbell et al., 1999; Davis et al., 1991; Ullman & Filipas, 2001; Ullman & Siegel, 1995). Victims of more violent sexual assaults receive more negative reactions than victims of less violent assaults (Ullman, 2000; Ullman & Siegel, 1995). Certain demographic factors may also be important, given some evidence that ethnic minority women may receive more negative social reactions (Ullman & Filipas, 2001). Research also shows that certain factors relate to receiving positive reactions on assault disclosure. In a convenience sample of 155 female sexual assault victims from the community, receiving positive social reactions from others was related to higher income, less physical injury, less self-blame, less postassault distress, and reporting that a friend or relative or rape crisis center was helpful (Ullman, 1996a).

Social Support and Women's Problem Drinking

Research suggests that social support may be related to fewer drinking problems in women from the general population and lower relapse rates following alcohol treatment (see McCrady, 2004, for a review). In a study of formal treatment seeking, Timko, Moos, Finney, and Connell (2002) studied men and women problem drinkers for 8 years and found that women were more likely to participate in Alcoholics Anonymous (AA) than men and that women attending AA had more positive drinking outcomes than men, likely because of greater support obtained through AA. Another recent longitudinal study showed that female alcoholics in treatment with more nonaccepting family members who distanced themselves from the women were less likely to be abstinent (McCrady & Epstein, 2005). Tucker et al. (in press) studied 402 women in shelters in Los Angeles County and found that low social support and greater avoidance coping predicted greater problem drinking at a 6-month follow up. In a longitudinal study of sexual harassment in university employees, Richman, Rospenda, Flaherty, and Freels (2001) found that coworker support did not protect female university employees from drinking problems; however, this was a higher functioning sample with fewer drinking problems (e.g., not all alcoholics). These findings suggest that supportive social networks and formal help seeking may be related to lower rates of both problem drinking and relapse following treatment in women alcoholics, although results vary according to sample type and specific sources and types of social support. Social network size, specific network member (e.g., friend, family member, spouse), quality of

support, as well as alcohol-specific support (e.g., support for abstinence) all contribute to drinking outcomes (McCrary, 2004).

Sexual Assault, Social Support Networks, and Women's Drinking

Many issues faced by sexual assault survivors are likely to be exacerbated for problem drinkers. Representative community studies show that women with sexual assault histories are less likely to be married and have less frequent contact with and support from their social networks (Golding, Wilsnack, & Cooper, 2002). Significant research also shows that stigma and negative social reactions are common problems for sexual assault victims disclosing to others (Campbell et al., 2001; Ullman, 1996a; Ullman & Filipas, 2001; Ullman, Filipas, Townsend, & Starzynski, in press) and that female problem drinkers face significant stigma as a group (Blume, 1991; Gombert, 1988).

Histories of sexual victimization in childhood and adulthood are both associated with greater risk of subsequent drinking problems in women (Burnam et al., 1988; Kilpatrick et al., 1997; Wilsnack et al., 1997). Furthermore, female sexual assault victims with drinking problems appear to be more likely to have other comorbid psychological symptoms, especially PTSD, than victims without drinking problems (Najavits, Weiss, & Shaw, 1997; Ouimette & Brown, 2003; Stewart & Israeli, 2001). Although research shows that social support is important and protective for female drinkers (McCrary, 2004), research has yet to focus on correlates of support in female drinkers. It is likely that women, and female problem drinkers in particular, who have fewer resources (e.g., less education, income) and rely on more avoidance coping also have lower levels of support (Cooper et al., 1997; Tucker et al., in press). Among male and female problem drinkers, both avoidance coping and lack of social resources are related to more drinking and negative consequences of drinking (Holahan, Moos, Holahan, Cronkite, & Randall, 2001; Timko, et al., 2005).

In summary, research reviewed here shows clear links between (a) social support and women's drinking and (b) social support and sexual assault, yet little research has actually examined these three factors together. Because problem-drinking victims are likely to face greater stigma and difficulty getting help, empirical data are needed to understand the unique social support needs of problem-drinking victims and to develop support interventions tailored to victims' drinking status.

Present Study

The present exploratory study of adult female sexual assault survivors examined the role of assault disclosure and social reactions women receive from others in relationship to their drinking status. We explored three questions: (a) What are the correlates of disclosing sexual assault for normal drinkers and problem drinkers? (b) What are the correlates of receiving negative and positive social reactions for normal and problem drinkers? (c) What is the relationship of both social network variables and assault-specific support to women's drinking outcomes following sexual assault? Given the exploratory nature of the study, we chose to look at drinking as a dichotomous independent variable in some analyses (e.g., to compare normal vs. problem drinkers) and as a continuous dependent variable in other analyses (e.g., to look at correlates of alcohol problem symptoms). This study builds on past work by examining demographic, assault-related, and psychosocial variables in a large, diverse sample of sexual assault victims, yet goes beyond past work by studying normal and problem drinkers separately.

Based on past literature, we developed five general hypotheses. First, it was expected that younger age, lower education, and minority race might be related to less sexual assault disclosure (Fisher et al., 2003; Ullman, 1999), with no differences expected between

problem and normal drinkers. Second, greater assault severity, stranger rape, and more extensive trauma histories beyond rape were expected to relate to greater assault disclosure, consistent with past work (Fisher et al., 2003, Ullman, 1999) for normal drinkers but not for problem drinkers. Female problem drinkers (especially those with more severe assault and trauma histories) may feel more stigmatized overall (Gomberg, 1988) and may have received negative support in the past, which may lead them to try to avoid being detected by support providers, because of denial or trying to hide their alcohol problems. Third, avoidance coping with sexual assault, self-blame for the assault, lower current support in general, and more PTSD symptoms were expected to relate to receiving more negative social reactions for both groups of drinkers based on past work on sexual assault victims generally (Ullman, 1999). Fourth, based on McCrady and Epstein's (2005) research, it was expected that women with smaller social networks or with less social network contact who received more negative social reactions when disclosing assault would have more drinking problems. Fifth, having fewer confidantes, less social network contact, and more negative social reactions were expected to be associated with more drinking problems.

Method

Sample

The present study analyzed mail survey data from the first wave of a longitudinal study of sexual assault survivors' recovery. Fliers, advertisements and notices were distributed over a 1-year period in the Chicago metropolitan area on college campuses, in the community, and at mental health agencies and rape crisis centers. Women age 18 and older with unwanted sexual experiences since age 14 were recruited for a 45-minute confidential mail survey. In addition to the survey, women were sent study information, a community resource list for women survivors of violence, and a postcard asking if they wished to be recontacted regarding participation in a followup survey and/or interview. Of 1,200 women who called requesting a survey, 1,084 (90%) returned it. They were sent \$20 and a summary of the results. Only women reporting they had drunk alcohol in the past year were included in this study ($N = 857$).

Measures

Demographic information assessed included age (in years), race (White, Black, Hispanic, Asian or Pacific Islander, American Indian or Alaskan Native, other), household income (six ordinal categories ranging from \$10,000 or less to \$50,000 or more), education (four ordinal categories ranging from less than 12th grade to college graduate or beyond), current employment (no or yes), current school status (in school or not), and marital status (single, married, divorced or separated, widowed, or cohabitating).

Assault characteristics and trauma-related outcomes—A modified version of the Sexual Experiences Survey (SES; Koss & Gidycz, 1985) was used to identify lifetime prevalence of completed rape, attempted rape, sexual coercion, and unwanted sexual contact. The questions assessed adult sexual victimization from age 14 on, the age criteria used in the SES. Following Koss, Gidycz, and Wisniewski (1987), women also answered each SES question with respect to whether they had each experience before age 14 to assess child sexual assault. The SES has reported internal consistency reliability of .69 and test-retest reliability at 1 week apart of 93% (Koss & Gidycz, 1985). Highest severity of sexual victimization was coded continuously according to Koss et al.'s (1987) guidelines. Women reporting multiple experiences on the SES were asked to answer assault-related questions about their most serious assault including age at the time of the incident, relationship to the perpetrator (stranger, nonromantic acquaintance, casual or first date, romantic acquaintance, husband, relative), physical injuries (ranging from mild soreness to knife or gunshot

wounds), sexual acts (fondling, oral penetration, vaginal penetration), coercive tactics used by the perpetrator (ranging from verbal insistence to weapon use), perceived life threat during assault (no or yes), and degree of upset right after assault.

Lifetime histories of traumatic events were assessed with Goodman, Corcoran, Turner, Yuan, and Green's (1998) Stressful Life Events Screening Questionnaire (SLESQ), a brief self-report measure of 10 behaviorally specific items assessing a variety of traumatic events of an interpersonal nature. Because many of these traumatic events are related to psychological distress and PTSD (Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993; Resnick, Kilpatrick, & Lipovsky, 1991), this measure was scored as the summed number of events experienced by each respondent (excluding adult and child sexual assault, which were already assessed by the SES). Respondents were also asked if they reported the same incident under more than one item. If so, it was counted as one event. Psychometric data are excellent with good test-retest reliability (median kappa = .73), adequate convergent validity (with a lengthier interview) with a median kappa of .64, and good discrimination between Criterion A and non-Criterion A events. Prevalence rates for specific events were similar to those reported by Norris (1992) and Kessler, Sonnega, Bromet, Hughes, and Nelson (1995) in two large probability samples.

Current social support measures—Respondents were asked about their current social support network using measures of social contact and social resources from the Social Activities Questionnaire of the Rand Health Insurance Experiment (Donald & Ware, 1984). Social contact items included the number of close friends you feel you can confide in (coded continuously as number of confidants) and one question about how well you are getting along with people these days (three ordinal categories). Social resources were assessed by frequency of social contact with informal and formal social network members in the past month (mean of five Likert-type items about frequency of contact with friends and relatives, and religious service attendance).

Assault-specific social support measures—Women were asked if they had ever told anyone about the assault (no or yes), timing of their first disclosure (five ordinal categories ranging from immediately after the assault to more than 1-year postassault), whether they had talked with each of several sources about the assault (e.g., friend or relative, mental health professional, clergy, police, rape crisis center, and others), and whether each of these sources was helpful (no or yes).

Perceived social reactions to assault disclosure—The Social Reactions Questionnaire (SRQ; Ullman, 2000) was administered to victims who had disclosed their assaults to others. They were asked about how often they received 48 different reactions from other persons told about the assault (five ordinal categories from *never* to *always*). No time frame was specified so that respondents could report on all reactions they received since the assault. The mean number of positive social reactions (tangible aid/information support, emotional support, validation or belief; overall $M = 1.98$, $s = .80$), and the mean number of negative social reactions (taking control of the victim's decisions, blaming the victim, treating the victim differently or stigma, distraction or discouraging talking, egocentric responses; overall $M = 1.03$, $s = .66$) were computed for analyses. A recent study ($N = 323$) of the psychometric characteristics of the SRQ (Ullman, 2000) using a recruitment strategy similar to that used in the present study showed good test-retest reliability (correlations ranged from .68 to .77). Construct validity was demonstrated with factor analysis, convergent validity with expected correlations of positive and negative social reactions with other social support and psychological symptom measures and concurrent validity by correlating SRQ subscales with corresponding social reactions coded from open-

ended data from questions about helpful and unhelpful responses to sexual assault disclosure (Ullman, 2000).

Self-blame attributions were assessed with Frazier's (2003) Rape Attribution Questionnaire (RAQ), a valid and reliable self-report measure of attributions made by sexual assault victims about why assault occurred. In this study, two 5-point Likert-type scales assessed two types of self-blame attributions made in the past 30 days: behavioral self-blame and characterological self-blame. Reliability data have been reported by Frazier (2002) in female victims entering an emergency room after being sexually assaulted and sexual assault survivors identified by a random telephone survey. Subscale alpha coefficients range from .77 to .89, and test-retest reliability coefficients ranged from .68 to .80.

Coping strategies—A composite measure of reliance on avoidance coping strategies used in the past 30 days to cope with the assault was computed from six Likert-type items consisting of behavioral disengagement, denial, and self-distraction subscale items of the Brief COPE, a 28-item self-report scale of coping strategies (Carver, Scheier, & Weintraub, 1989). The COPE has been widely used in studies of stressed populations and has adequate internal consistency reliability (all subscales alphas .60 or greater except for one) and test-retest reliability (correlations of .46 to .86).

Posttraumatic Stress Disorder symptom severity—The Posttraumatic Stress Diagnostic Scale (PDS) was used to assess PTSD symptom severity (see Foa, 1995, for reliability and validity). The PDS is a 17-item brief self-report instrument used to provide a reliable diagnosis of PTSD based on the *DSM-IV* (American Psychiatric Association, 1994) criteria and quantification of the severity of PTSD symptoms according to recommendations provided by Foa (1995). This scale was selected because it has been validated with sexual assault victims unlike other available measures (Foa, Cashman, Jaycox, & Perry, 1997). Instructions were modified to ask respondents to rate how often each symptom has bothered them in the past month for their specific sexual assault experience on a 4-point scale from 0 = *not at all* to 3 = *almost always*. Many women qualified for the PTSD diagnosis in the study (69%). Because the average time since the assault was 12.02 years ($s = 9.99$), this high level of PTSD suggests that there may not be a linear relationship of PTSD and time since assault in our sample. For the analyses, the summed PTSD symptom severity score (0 to 51) was computed by summing response weights to individual items corresponding to re-experiencing, numbing and avoidance, and arousal criteria symptoms.

Problem drinking—The Michigan Alcoholism Screening Test (MAST; Selzer, 1971) was used to assess past-year drinking problems. The MAST is a 25-item widely used, standardized self-report screening instrument for alcohol abuse and dependence. The number of alcohol problems (no or yes) was a summed continuous measure of total past year drinking problems. This measure was also dichotomized to differentiate those with and without a drinking problem in the past year. Those endorsing five or more items on the MAST were classified as having a drinking problem, in accordance with guidelines by Selzer (1971). The mean number of alcohol problems was 6 ($s = 9.77$) with a range of 0 to 65. Of past-year drinkers, more than one-third had a drinking problem (38.3%).

Sample Demographics

Characteristics of past-year drinkers ($N = 857$) are presented. Most women were currently unmarried (88.9%) and self-identified as ethnic minority (60%). Just under half were African American (42.2%), and more than one-third were White (40%). Women were an average of 31.5 years old ($s = 10.33$) and 39.8% had children. Forty-one percent had attended some college, one-third had completed college or beyond, and one-third had a high

school degree or less. Half were employed, and most had incomes of \$10,000 a year or less (37.8%) or \$10,000 to \$30,000 (35.9%), with one-quarter earning more than \$30,000.

Results

More than two-thirds of women's adult sexual assaults were completed rapes (64.4%) with the remainder reporting other forms of sexual victimization. In addition, more than half had child sexual abuse histories (53.8%). Most women (89.5%) had also experienced one (17.4%), two (16.6%), or three (16.7%) additional traumatic events in their lifetimes. In terms of current social support, women had an average of 4.95 confidants ($s = 4.93$), and more than half were getting along with others the same as usual (56%), whereas fewer were getting along better than usual (25%). Based on a summary measure created from several ordinally scaled items, women's frequency of social contact with friends, family, relatives, and religious services ranged from between several times a week and 2 to 3 times per month depending on the specific support source (overall frequency of contact, $M = 3.98$, $s = 1.10$). Women's most serious assaults occurred at an average age of 19.36 years ($s = 7.84$). Fewer than half of the attacks were by acquaintances (47.2%), 23% by romantic partners or husbands, 18% by strangers, and 11.8% by relatives. Approximately two-thirds of assaults involved some form of physical attack, ended in completed vaginal intercourse (64%), and resulted in minor, physical injury, such as soreness, bruises, and cuts (79%). A majority of women were very or extremely upset after the assault (76%) and told someone about it (83.7%). One-third (32.6%) disclosed immediately after the assault, 31.6% waited days to weeks after, and more than a third (35.8%) told a year or more later. Women told various support sources about the assault, with most telling a friend (85.1%) followed by a romantic partner (66.6%). Almost half had told relatives (47.2%) and mental health professionals (44.9%), whereas 38.4% told parents. Fewer than one-third told doctors, police, clergy, or rape crisis support sources. About two-thirds of women telling each support source said they were helpful, except for police and parents who were helpful in only half or less than half of cases.

Preliminary bivariate analyses were conducted to compare past-year normal with past-year problem drinkers (results not shown, but available upon request). Problem drinkers had lower socioeconomic status, were more often ethnic minority, had more lifetime traumatic events, had more severe child sexual abuse, and had more severe adult sexual assault, characterized by greater life threat, and physical injury. Problem drinkers had more assaults by strangers, whereas normal drinkers had more acquaintance rapes, with no differences in assaults by romantic partners or husbands or relatives for the two groups. Problem drinkers also reported more PTSD symptoms, selfblame, and avoidance coping with assault. Overall, there were no differences in likelihood of disclosing versus not disclosing the assault to anyone according to drinking status. However, of those disclosing, problem drinkers told more informal and formal support sources about the assault and were more likely to say that formal sources were helpful than were normal drinkers. However, problem drinkers also received more negative and positive social reactions to their assault disclosures. Analyses of specific support sources showed that problem drinkers were more likely to tell family members, medical personnel, rape crisis centers, and police about their assaults than normal drinkers. Problem drinkers reported less satisfaction with support from romantic partners and friends than normal drinkers, but more satisfaction with support from other professionals.

Because there were extensive differences in these initial comparisons of current problem and normal drinkers, it made sense to examine correlates of assault disclosure and social reactions within these groups to identify possible differences. The backward method was used in all regressions, because our analyses were exploratory in nature and intended to

identify relevant predictors of assault disclosure and social reactions from others (Tabachnick & Fidell, 2001).

Correlates of Disclosure of Assault

Backward logistic regressions examined the relative contributions of demographic, preassault, assault, and postassault factors to disclosure of sexual assault in current normal drinkers and problem drinkers (see Table 1). Both models were statistically significant. In both models, demographics of age, education, and marital status were unrelated to assault disclosure, but ethnic minority victims were less likely to disclose sexual assault for problem drinkers. History of other traumatic events was related to more disclosure of sexual assault in normal drinkers, and a marginally significant trend ($p < .10$) suggested a negative relationship for problem drinkers. This suggests that although traumas increased assault disclosure for normal drinkers, they may decrease disclosure among problem drinkers. More severe child sexual abuse was related to less disclosure of adult sexual assault for normal drinkers only. Assault characteristics of victim-offender relationship and physical injury were unrelated to sexual assault disclosure, but more violent assaults were related to greater disclosure for the problem drinkers. Degree of upset after assault was unrelated to disclosure as was current social support, whereas current PTSD symptoms were related to more disclosure for normal drinkers. Self-blame was unrelated to disclosure, and avoidance coping was related to less assault disclosure for problem drinkers only.

Correlates of Negative and Positive Social Reactions to Assault Disclosure

Backward multiple linear regressions were conducted to identify correlates of receiving negative and positive reactions from others when disclosing assault for both normal and problem drinkers separately (see Table 2). More PTSD symptoms, self-blame, avoidance coping, and informal sources told about assault were all related to more negative social reactions in both drinker groups. Assaults with more offender violence were met with more negative reactions for normal drinkers, but not for problem drinkers. Life threat was related to more negative reactions for problem drinkers. More frequent social contact with informal social networks was related to fewer positive social reactions for problem drinkers, but not for normal drinkers. Having more confidantes and telling more informal and formal support sources about assault were related to more positive social reactions for normal drinkers, but not for problem drinkers. Perceived life threat was related to more positive reactions for problem drinkers only.

Role of Social Support in Relation to Problem Drinking

In final analyses of all past-year drinkers, two-way ANOVAs tested the hypothesis that negative social reactions would predict more drinking problems for women with smaller social networks and less frequent social contact. In the first ANOVA, number of confidantes (dichotomized) as an indicator of network size and negative social reactions (dichotomized) showed no significant interaction on alcohol symptoms. However, a second ANOVA showed more alcohol symptoms for women receiving negative reactions, only if they had less frequent social contact ($M = 8.72$) than for women with more social contact ($M = 6.11$), $F(1, 336) = 12.07, p = .001$. There was no difference in problem drinking for women receiving fewer negative reactions by frequency of network contact (M 's = 4.46 vs. 4.37 for less contact and more contact, respectively). Finally, a regression predicting total alcohol symptoms in the past year from social support variables (confidantes, frequency of social contact, positive and negative social reactions, and the interaction of frequency of contact with negative reactions) showed both positive and negative social reactions to assault disclosures were related to more symptoms of problem drinking (b 's = .11**, .60***, $p < .01$, respectively), $F(5, 594) = 13.70, p = .000$, Adjusted $R^2 = .10$. Number of confidantes

was marginally negatively related to drinking ($b = -.07, p < .10$), and frequency of social contact was marginally positively related to drinking ($b = .14, p < .10$). A significant interaction term in the regression model showed that more negative social reactions for women with less frequent social contact were related to greater problem drinking ($b = -.36^*, p < .05$). A parallel regression model testing the interaction of number of confidantes by negative social reactions was again nonsignificantly related to drinking.

Discussion

This exploratory study showed that social support networks play important roles for female sexual assault victims with and without drinking problems. Drawing on past sexual assault research, we explored a range of domains (e.g., demographics, trauma histories, assault characteristics, postassault social cognitive, and interpersonal factors) that may affect assault disclosure and negative and positive social reactions to such disclosures in female sexual assault survivors varying in drinking status. The study consisted of an ethnically and socioeconomically diverse, urban sample of sexual assault survivors. Preliminary analyses showed that problem drinkers had more adverse experiences than normal drinkers, including more extensive trauma histories, more violent sexual assaults by strangers, more PTSD, and more negative reactions from others told about the assault. We examined correlates of sexual assault disclosure and negative social reactions in normal and problem drinkers, given the differences found between these groups.

Overall, most women in this sample told someone about sexual assault, which is likely an artifact of the volunteer, convenience sample recruitment methods used in this study. Few demographic or assault factors were related to assault disclosure, but ethnic minority women were less likely to disclose. This is consistent with some past arguments suggesting possible underdisclosure in minority women may underlie lower estimates of sexual assault prevalence (Wyatt, 1992). Possibly, fear of being disbelieved underlies lower assault disclosure found in this sample, which had a large proportion of minority women (62.9%). Past research shows more negative social reactions to sexual assault disclosure in ethnic minority women (Ullman & Filipas, 2001), so it would not be surprising if they were more hesitant to tell others about sexual assaults. It is striking that even in a sample of volunteers doing a survey on sexual assault, we still find this difference in disclosure. Clearly, ethnic minority women may be less willing to disclose and more likely to face negative responses from others, which may hinder their help seeking.

Although some assault characteristics, such as victim-offender relationship, did not relate to disclosing assault, victims of more violent assaults, those with physical injuries, and those with more PTSD symptoms disclosed more often. This is not surprising given that violent assaults may be more likely to lead to distress and need for help, and greater PTSD symptoms typically prompt greater mental health seeking (Ullman & Brecklin, 2002). Other analyses of these data (Ullman et al., in press) and past research (Ullman, 1996a) show that delayed disclosure can be related to more severe current PTSD symptoms. Thus although women who are distressed may be more likely to disclose assault and seek help; this does not mean that they will do so promptly, and delayed help seeking may in fact lead to more chronic PTSD. Problem drinkers were more likely to disclose assault, which may be because of their greater contact with formal sources for their drinking or other associated problems.

Despite the fact that problem drinkers disclosed more overall, some correlates of disclosure differed by drinking status. For example, trauma history predicted likelihood of disclosure differently for normal versus problem drinkers. For normal drinkers, having a history of more traumatic events led to greater likelihood of disclosing sexual assault, but for problem drinkers, the effect was just the opposite. For current problem drinkers, having more traumas

led to marginally less sexual assault disclosure, because they fear further stigmatization or blame because of their drinking problems (Gomberg, 1988). This finding suggests that interventions to treat and prevent sexual assault must take into account women's histories of other childhood and adult traumatic events. Possibly, socioeconomically disadvantaged women including those with drinking problems who had more trauma exposure overall were less able and/or willing to talk with others about their assaults. They may have had other current adversity that outweighed the importance of the assault or simply did not have space in their lives to deal with sexual assault (Fine, 1984). Alternatively, they may have used drinking to cope with their trauma histories instead of disclosing assault and/or help seeking. Unlike nonsexual trauma history, more severe child sexual abuse was related to less disclosure of adult assault for normal drinkers in the reduced model only but was unrelated to disclosure for problem drinkers, suggesting that the role of child sexual abuse in relationship to later disclosure of adult sexual assault may be unique and different from that of other traumas, as well as for normal versus problem drinkers. This finding could also be an artifact of our sample, so more research is needed to replicate this result with broader samples.

As expected, greater reliance on avoidance coping generally was related to less assault disclosure, but only for normal drinkers. Women who are avoiding thinking about sexual assault would be expected to avoid talking about it with others and seeking help generally from either informal or formal social support sources. Unfortunately, avoidance coping is associated with greater distress and may in fact lead to worse symptoms over time. It may be particularly difficult to reach women whose ways of coping explicitly preclude disclosure and support seeking. Such women may receive more negative social reactions from others when they do disclose assault, and/or their avoidance coping (or associated psychological symptoms) may lead to more negative reactions from others (Ullman, 1996b; Ullman et al., in press), reinforcing a pattern of withdrawal, isolation, and untreated symptoms that may become chronic in some survivors. The current results are consistent with other recent longitudinal and cross-sectional studies of rape victims showing the negative impact of avoidance coping on women's adjustment to rape (Frazier, Mortenson, & Steward, 2005; Ullman, 1996b; Valentiner, Riggs, Foa, & Gershuny, 1996).

For both drinker groups studied, correlates of receiving negative social reactions included more PTSD symptoms, self-blame, avoidance coping, and telling more informal sources about the assault. These findings are supported by some past research showing that more symptomatic victims and those telling more people and engaging in self-blame and avoidance coping may receive less support and more negative social reactions (Andrews, Brewin, & Rose, 2003; Ullman, 1996b; Ullman, Townsend, Filipas, & Starzynski, 2007). It should be noted that it is not yet clear if individual survivor responses are engendered by the negative reactions they receive from others or if self-blame and avoidance coping lead to further negative responses from support sources. Thus far, evidence suggests that negative social reactions lead to more PTSD symptoms, whereas initial symptoms do not elicit more negative reactions (Andrews et al., 2003; Campbell et al., 1999; Zoellner, Brigidi, & Foa, 1999), but further data are needed.

Violent assaults were related to receiving more negative social reactions for normal drinkers, and life threat was related to more negative reactions for problem drinkers. These findings require replication but suggest that those who suffer more severe adult sexual assault (e.g., characterized by violence, life threat), may receive more negative social reactions on disclosure, a finding supported by previous research (Ullman & Filipas, 2001). That offender violence and perceived life threat were related to negative and positive reactions differently by drinker status also requires more research and could be an artifact of this sample. Clearly, assault characteristics must be examined, given that more violent assaults

are related to more negative social reactions in sexual assault victims (Ullman, 2000; Ullman & Siegel, 1995). More research is needed to understand the finding of more negative social reactions to minority victims and the source(s) of these negative reactions. Possibly, such victims disclose to less supportive sources or are viewed in terms of racist rape stereotypes that more harshly judge minority sexual assault victims (Washington, 2001). Alternatively, they may have other personal or assault characteristics, such as lower socioeconomic status or more severe assaults (Wyatt, 1992) that lead them to be blamed more often. An interesting finding is that different general social support measures varied in their relationships to receipt of positive social reactions when women disclosed assault. Not surprisingly, having more confidantes and telling more support sources were related to more positive reactions, but having more frequent contact with social networks was related to fewer positive reactions. The first finding is consistent with research showing more positive reactions to sexual assault disclosure for those telling informal support sources (Ullman, 1996a). This study builds on those results in that results differed depending on drinking status. More frequent social contact and disclosure yielded more positive reactions for victims who were normal drinkers, but not for problem drinkers. These results in combination with the finding showing that problem drinkers' social networks responded with more negative social reactions suggest that this subgroup is at risk for a poor support network response following assault disclosure. Such negative social reactions may contribute to increased risk of PTSD symptoms (Andrews et al., 2003; Ullman et al., in press), avoidance coping, self-blame, and worse health (Ullman, 1996b; Ullman et al., 2007; Ullman & Siegel, 1995).

Given the overlap of victimization and problem drinking in females, future studies should look at both positive and negative alcohol-specific reactions and victimization-specific social reactions from social network members and formal support sources in conjunction with social network characteristics (e.g., size, quality, and frequency of contact; McCrady, 2004). This study's results were partially consistent with McCrady and Epstein's (2005) findings showing that social network size and negative support (regarding drinking) both relate to worse drinking outcomes in female alcoholics. Although we found no significant effect of social network size (measured as number of confidantes), we did find that women with less frequent social contact who received more negative reactions when disclosing assault had more drinking problems. This implies that both general social network characteristics and specific positive and negative social interactions regarding stigmatized conditions (e.g., problem drinking, victimization status) are important for understanding women's problem drinking.

Results of this exploratory study should be considered in light of its strengths and limitations. This sample was diverse in terms of both race and socioeconomic status, unlike many past studies of rape victims. Measures were standardized with known validity and reliability, which is an improvement over past research (Ullman, 1996b). Most importantly, this study examined a broad set of psychosocial factors in addition to demographic, assault-related factors, and trauma-related outcomes. This allowed for simultaneous assessment of the relative impact of various variables on likelihood of disclosure and receipt of social reactions. The study was limited, however, by its crosssectional design and nonrepresentative sample, which preclude making generalizations to representatively sampled rape victims. A significant proportion of women in this study were poor, socially isolated, ethnic minority, urban dwellers, which is likely to be a more stressed portion of this population. There were also limitations presented by the measures that were used. Because this study will ultimately be longitudinal, we assessed some constructs with a past 30-day time frame to be able to assess change in attributions and coping. Although assessing current perceptions may involve less recall bias, it may not capture all of the attributions and coping that women engaged in since their assaults, some of which occurred years ago. Similarly,

measures of general social support and problem drinking were assessed at the time of the survey, not at the time of assault.

In conclusion, results showed that women's experiences of disclosure and receipt of negative reactions may be affected by their drinking status. More research is needed comparing problem drinkers, normal drinkers, and abstainers in their recovery from sexual assault, including their disclosure experiences. McCrady and Epstein (2005) have shown that responses from social network members can affect the likelihood of relapse in women alcoholics. Given the high prevalence of sexual victimization among female drinkers and the clear links between alcohol problems and both sexual assault (Abbey, Zawacki, Buck, Clinton, & McAuslan, 2001; Ullman, 2003) and social support factors, both McCrady and Epstein's (2005) results and our findings suggest more attention be given to studying modifiable social factors that may enhance our ability to treat and prevent negative assault-related sequelae for all victims. Social network interventions that address negative social reactions commonly experienced by women with both of these problems may be needed to help women recover from sexual assault and problem drinking.

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Biographies

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Laura Starzynski is a doctoral student in criminal justice at the University of Illinois at Chicago. Her research interests include the role of informal and formal support providers to victims of sexual assault including social reactions women receive from different support sources when disclosing their assault experiences to mental health providers. Her work combines qualitative and quantitative approaches to studying women's experiences of help seeking from mental health professionals following sexual assault.

Susan Long is a doctoral student in the Community and Prevention Division of the psychology department at the University of Illinois at Chicago. Her research interests include violence against women and women in poverty.

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LaDonna Long is a doctoral student in criminal justice at the University of Illinois at Chicago. Her research interests include race, class, and gender perspectives on violence against women, including the role of informal and formal support providers to victims of sexual assault. Her research focuses on African American women's experiences of sexual victimization in relationship to their trauma histories, coping strategies, and use of substances.

Table 1
Logistic Regressions Predicting Assault Disclosure in Normal and Problem Drinkers

Predictor	Normal Drinker (N = 351)			Problem Drinker (N = 207)		
	Beta	OR	Beta	OR	Beta	OR
Age	-.02	.98			.02	1.02
Race	-.42	.65			-.78†	.46
Education	.09	1.09			-.35	.70
Marital status	.28	1.33			-.56	.57
Traumatic events	.30**	1.35	.24**	1.27	-.21+	.81
Child sexual abuse	-.15	.86	-.18*	.84		-.17†
Social support	-.13	.88			-.07	.94
Perceived life threat	-.29	.75			-.18	.83
Offender violence	.22+	1.25			.96+	.38
Victim-offender relationship	-.70	.50			.40*	1.49
Physical injury	.22†	1.25			-.28	.76
Postassault upset	-.07	.93			.40*	1.49
Character self-blame	.04	1.04			-.09	.91
Avoidance coping	-.13*	.88			.03	1.03
PTSD symptoms	.06*	1.06	.06**	1.06	-.07	.94
-2 × LLR	290.09		302.18		.03	1.03
χ ²	50.83		37.23		160.50	170.10
P	.001		.001		25.13	21.13
					.133	.009

Note: OR = odds ratio; LLR = log likelihood ratio statistic; Beta = Unstandardized beta coefficients.

† $p < .10$.

* $p < .05$.

** $p < .01$.

Table 2

Backward Multiple Regressions Predicting Negative and Positive Social Reactions to Disclosure

Significant Predictors Remaining in Models at Final Step Predictor (betas)	Negative Reactions		Positive Reactions	
	Normal Drinker (N = 263)	Problem Drinker (N = 156)	Normal Drinker (N = 257)	Problem Drinker (N = 160)
Perceived life threat		.19**		.29**
Offender violence	.15**			
Character self-blame	.16**	.13 [†]		
Avoidance coping	.14*	.27**		
PTSD symptoms	.20**	.16**		
Freq. social contact				-.30***
# of confidantes			.20*	
# informal sources told	.25**	.24**	.14*	
# formal sources told			.20*	
Alcohol symptoms			.16*	
<i>F</i>	14.70	13.15	11.93	15.93
<i>df</i>	5, 263	6, 156	3, 257	2, 160
<i>P</i>	.000	.000	.000	.000
Adjusted <i>R</i> ²	.20	.31	.12	.16

Note: Variables in negative social reactions models at Step 1: number of confidantes, age, education, life threat, education, traumatic events, social support, child sexual abuse severity, victim offender relationship, offender violence, PTSD symptoms, self-blame, avoidance coping, # informal sources told, # formal sources told, married, race, sexual orientation, gang rape, alcohol symptoms. Variables in positive social reactions models at Step 1: number of confidantes, age, education, life threat, education, traumatic events, social support, child sexual abuse severity, victim offender relationship, offender violence, PTSD symptoms, self-blame, avoidance coping, # informal sources told, # formal sources told, married, race, sexual orientation, gang rape, alcohol symptoms.

[†]
p < .10.

*
p < .05.

**
p < .01.

p < .001.