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Measuring Social Reactions to Female Survivors of Alcohol-Involved Sexual Assault: The Social Reactions Questionnaire-Alcohol (SRQ-A)

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Abstract

For women who disclose sexual assault, social reactions can affect post-assault adjustment (Ullman, 2000). Approximately half of sexual assaults of adult women involve alcohol use (Abbey et al., 2004). Experimental studies indicate that people put more blame on women who were drinking before the assault, yet no studies have assessed how often actual survivors receive social reactions specific to their alcohol use. This study presents a new measure to assess alcohol-specific social reactions for survivors of sexual assault (The Social Reactions Questionnaire – Alcohol, SRQ-A). Factor analyses of a large community sample indicated that women often receive both positive and negative alcohol-specific reactions when disclosing assault. Discriminant validity confirmed that such reactions are distinct from other types of assault-related social reactions. Against predictions, alcohol-specific reactions were not associated with depression, post-traumatic stress symptoms, binge drinking, or intoxication. However, in support of hypotheses, alcohol-specific reactions were related to increased characterological self-blame and alcohol problems. Notably, such reactions had both positive and negative relationships with self-blame, indicating a potential avenue for intervention. Implications for researchers and practitioners are discussed.

Keywords

sexual assault; disclosure; alcohol; social reactions; social support

Women who disclose sexual assault to others receive social reactions that can affect their post-assault adjustment (see Ullman, 2010, for review). Women who receive negative responses report higher rates of depression, post-traumatic stress, maladaptive coping, and self-blame (Jacques-Tiura, Tkatch, Abbey, & Wegner, 2010; Littleton, 2010; Matthews, 2011; Orchowski, Untied, & Gidycz, 2013; Relyea & Ullman, 2013; Ullman, 1996; Ullman & Najdowski, 2011; Ullman, Townsend, Filipas, & Starzynski, 2007). Conversely, positive reactions are associated with more adaptive coping, more perceived social support, and less self-blame (Orchowski et al., 2013; Relyea & Ullman, 2013; Sullivan, Schroeder, Dudley, & Dixon, 2010; Ullman, 2000; Ullman & Najdowski, 2011). To understand how social reactions affect women's post-assault adjustment, researchers have focused on several types

of reactions (e.g., blaming). Yet, one potentially important gap in the literature concerns reactions specific to survivors' use of alcohol prior to the assault.

About half of sexual assaults involve survivors using alcohol (for review, see Abbey, Zawacki, Buck, Clinton, & McAuslan, 2004), with prevalence varying by population. Alcohol-involved assaults appear more common among White, college-aged women (Gross, Winslett, Roberts, & Gohm, 2006; Krebs, Lindquist, Warner, Fisher, & Martin, 2009; Walsh, DiLillo, Klanecky, & McChargue, 2013). In a study across 119 colleges, 72% of female survivors reported intoxication during assault (Mohler-Kuo, Dowdall, Koss, & Wechsler, 2004). Although alcohol can be given without consent or when women feel pressured, the majority of pre-assault alcohol use is voluntary (Lawyer, Resnick, Bakanic, Burkett, & Kilpatrick, 2010). Survivors who tell others about their assaults may find it difficult to avoid mentioning their pre-assault alcohol use if the assault occurred after being somewhere where drinking is common (e.g., dates, bars, parties). In sum, the high rates of drinking, likelihood of disclosure, and importance of social reactions underscore the need to understand how pre-assault alcohol use may affect social reactions.

Disclosing pre-assault alcohol use may affect the social reactions survivors receive from others. Pre-assault alcohol use is predictive of women telling more people about their assault (Orchowski & Gidycz, 2012; Ullman, Starzynski, Long, Mason, & Long, 2008). Unfortunately, both formal (e.g., legal) and informal (e.g., friends) respondents may react negatively to women's drinking. Campbell (1998) found the legal system was less likely to provide effective or desired responses to women who drank prior to an assault. Additionally, studies show that survivors of alcohol-involved assaults report receiving more negative social reactions (Ullman, 2000; Ullman & Filipas, 2001; Ullman & Najdowski, 2010). Although one study found no differences in negative social reactions according to pre-assault drinking (Littleton, Grills-Taquechel, & Axsom, 2009), the authors still found that survivors who drank reported feeling more stigma and self-blame. The authors concluded that these feelings may have been due to survivors' self-cognitions rather than social reactions. An alternative hypothesis could be that the study measures did not adequately assess for reactions specific to alcohol use. None of these studies assessed whether respondents knew about the survivors' alcohol use and all measures assessed only for general social reactions rather than alcohol-specific reactions. Further, there are many differences between alcohol and non-alcohol involved assaults (Ullman & Najdowski, 2010) that could affect general social reactions. Therefore, it remains unknown whether women receive alcohol-specific social reactions and, if so, what those reactions are.

Assaults involving alcohol are more often perpetrated by known men, often in risky social situations such as bars or parties, and involve less physical force, whereas non alcohol related assaults are more often perpetrated by intimate partners or strangers, in nonsocial situations, and involve greater physical force by perpetrators (see Ullman, 2003 for a review). All of these differences may contribute to social reactions women receive from others. Prior research suggests that that alcohol-specific social reactions, will likely be negative. In experimental studies using sexual assault scenarios, people are more likely to blame survivors and hold them responsible when presented with information that survivors had been drinking (Cameron & Strizke, 2003; Norris & Cubbins, 1992; Richardson &

Campbell, 1982; Schuller & Stewart, 2000; Sims, Noel, & Maisto, 2007; Stormo, Lang, & Stritzke, 1997; Untied, Orchowski, Mastroleo, & Gidycz, 2012). Victim blame partly depends on the perpetrators' alcohol use. People are most likely to believe that a situation is "rape" if only the survivor or the perpetrator was drinking, yet the least likely to consider it rape when both had been drinking (Norris & Cubbins, 1992). Although this would imply a protective effect for survivors who were drinking when perpetrators were not, very few cases of sexual assault involve drinking by women only (Abbey, Ross, McDuffie, & McAuslan, 1996; Brecklin & Ullman, 2001; Ullman, 2003). Therefore, respondents may be less likely to label alcohol-involved assaults as rape and more likely to believe women who drink are blameworthy. Yet, all studies investigating blame used experimental designs with scenarios of hypothetical women, rather than actual cases of survivors reporting alcohol-specific blaming reactions. Even if people blame women *in general* for alcohol-involved assaults, it does not mean they would blame those they know. In short, these studies indicate that alcohol-specific reactions are likely to be negative and blaming if women receive them, but do not indicate whether women receive them.

If women receive negative reactions to their alcohol use, such reactions are likely harmful for survivors' psychological well-being. Use of alcohol prior to an assault is associated with greater self-blame and decreased likelihood of labeling one's experience as sexual assault (Koss, Figueredo, & Prince, 2002; Littleton et al., 2009; Macy, Nurius, & Norris, 2006). One source of this self-blame may be social reactions. Survivors who receive negative social reactions report more self-blame (Littleton & Bretkopf, 2006; Relyea & Ullman, 2013; Ullman et al., 2007). Therefore, if respondents do give alcohol-specific blaming reactions, survivors will likely experience greater self-blame.

Alcohol-specific negative reactions may also have a harmful effect on psychological distress. In one study, survivors of alcohol-involved assaults were more likely to report depressive symptoms and problem drinking (Ullman & Najdowski, 2010), yet the reason for this is unknown. As stated above, general negative social reactions are associated with increased depression and post-traumatic stress symptoms. It is plausible that women who receive alcohol-specific negative reactions will have additional distress. In one sample, Littleton et al. (2009) found equivalent levels of depression and PTSD among survivors with and without alcohol impairment during assault; similarly, binge drinking before assault was not associated with PTSD (Littleton & Henderson, 2009). However, the authors note that impaired survivors should have less distress given lower rates of violence during their assaults and the stress dampening effects of alcohol. Therefore, the authors suggest that the equivalent rate of distress may have been due to self-blame and stigma increasing distress. Because negative reactions are associated with self-blame, which is associated with distress (Koss et al., 2002), alcohol-specific reactions may have an indirect effect on distress through self-blame. However, tests of mediation with general social reactions have not supported this theory. Two studies found that the pathway between negative reactions and distress was accounted for by maladaptive coping rather than self-blame (Ullman, 1996; Ullman et al., 2007), and one study found that this pathway was predicted by shame (Matthews, 2011). Therefore, it appears more likely that alcohol-specific reactions could have a direct effect, rather than indirect effect, on post-assault distress.

Alcohol-specific social reactions may have a cyclical relationship with survivors' alcohol use. People may respond negatively or inappropriately to a survivor who has alcohol problems. Alternatively, negative reactions may increase alcohol use either directly or indirectly. Negative reactions have been associated with increased drinking to cope (Peter-Hagene & Ullman, in press). In a study of incest survivors, those who got help when they disclosed their incest had decreased chances of developing alcohol problems (Hurley, 1990); therefore a failure of support may be associated with increased chances of alcohol problems. As negative reactions are associated with psychological distress, which is in turn associated with drinking to cope (Fossos, Kaysen, Neighbors, Lindgren, Hove, 2011; Messman-Moore, Ward, and Brown, 2009; Ullman, Filipas, Townsend, & Starzynski, 2005; Walsh et al., 2013), negative reactions may have an indirect effect on alcohol use. Given these links, Ullman (2003) called for researchers to examine whether social reactions affect later alcohol use.

In summary, studies have not assessed how often survivors receive alcohol-specific reactions nor assessed what those reactions are. Further, we do not know if such reactions have effects on post-assault outcomes beyond the effects of other social reactions to the assault. The current study sought to further research in this area with a new measure assessing social reactions specific to survivors' alcohol use – the Social Reactions Questionnaire-Alcohol (SRQA). In addition to performing preliminary psychometrics of the SRQ-A, we assessed for the predictive utility of alcohol-specific social reactions on psychological distress and alcohol use.

Development of the SRQ-A

The SRQ-A was developed to assess negative social reactions to survivors' disclosures of alcohol-related sexual assault. Because studies indicate that people blame survivors for alcohol-related assaults, we theorized that there may be negative alcohol-related social reactions that the original SRQ (Social Reactions Questionnaire; Ullman, 2000) would not be sensitive to. To create the SRQ-A, we relied on multiple expert opinions. First, our research team developed a battery of social reaction items derived from past research on alcohol-related assaults, conceptually related SRQ items, and our own knowledge of what responses may affect survivors. After revising the list until achieving consensus, we sent the items to 10 research experts in the area of alcohol and sexual assault. We asked the experts to suggest revisions and potential additional items. After incorporating their feedback, our research team revised the list and eliminated redundant items until again reaching a total of 10 items. As we believed that alcohol-specific reactions would be almost entirely negative, eight items were worded so that a higher score indicated a higher frequency of negative reactions. The other two items were worded positively with the intention that these would be reverse-scored. We kept the format and scale of items equivalent to the SRQ. Additionally, the instructions told survivors to skip the SRQ-A if they had not been drinking during their unwanted sexual experiences or to skip if no one knew they had been drinking.

The measure, along with the rest of our survey, was piloted with a small sample of 25 sexual assault survivors who had participated in a previous study. We made two revisions after piloting. First, because two pilot participants incorrectly followed the skip instructions, we

reformatted the instructions to make them more prominent. Second, we added two additional negatively worded items. Although most women reported that telling people about their alcohol use made things worse, survivors were reporting fairly low frequency of receiving some of the negative items. Similarly, research on the SRQ indicates that negative reactions occur less frequently than positive ones. Thus, to increase variance, we added two negatively worded items. We used this final 12-item version for the current study.

Based on the literature, we posited the following hypotheses. (1) Participants will receive alcohol-specific reactions and (2) perceive that such reactions were mostly negative. (3) Correlations and regressions will show the discriminant validity of alcohol-specific reactions separate from general social reactions. (4) Negative general social reactions will be related to increased self-blame, depression, and symptoms of posttraumatic stress disorder (PTSD). (5) Negative alcohol-specific reactions will be related to additional increases in self-blame, depression and PTSD. (6) Negative social reactions related to alcohol use will be more related to alcohol problems, either because those with alcohol problems were more likely to be drinking prior to assault or because survivors not receiving support may be more likely to drink to cope.

Methods

Participants

The sample included 1863 adult women, ages 18 to 71 ($M = 36.51$, $SD = 12.54$) from the Chicago area who responded to a mail survey. Over half (57%) were unemployed and most (68%) reported household incomes below \$30,000. Participants had varying levels of education (32% college degree or higher, 42% some college education, and 26% high school degree or less). The sample was diverse in race/ethnicity (45% African-American, 35% White, 2% Asian, 7% multiracial, and 11% other, unknown/unreported); 13% Latina/Hispanic. The subsample used for analyses included the 20.8% ($n = 388$) of women who answered the SRQ-A and reported that potential support providers knew of their pre-assault alcohol use. Out of the full sample, 560 (31%) women reported pre-assault alcohol use. A total of 403 (72%) of those women reported that respondents knew of their alcohol use; yet, only 388 filled out items on the SRQ-A (i.e., 4% missing). Although we do not know why 4% omitted filling out the SRQ-A, errors of omission are common on self-administered mail surveys with skip instructions. The final 388 used for analyses included 340 (88%) who disclosed alcohol use and 48 (12%) who stated that respondents already knew of their alcohol use.

Tests revealed that the subsample used for analyses was more likely to be White, slightly younger, and of higher socio-economic status than the rest of the sample. The average age was lower ($M = 32.61$, $SD = 11.12$) than other participants ($M = 37.55$, $SD = 12.70$), $t(668) = 7.49$, $p < .001$ (equal variances not assumed) and racially different, $\chi^2(6, N = 1863) = 137.13$, $p < .001$. Compared to the rest of the sample, the subsample consisted of more women who were White (59% to 29%) and fewer who were African-American (23% to 51%). However, the subsample was similar in terms of ethnicity (15% to 14% Latina/Hispanic), $\chi^2(1, N = 1783) = .48$, $p = .501$. The subsample was less likely to have incomes below \$30,000 (62% to 74%), $\chi^2(5, N = 1781) = 30.42$, $p < .001$, more likely to be employed

(51% to 43%), $\chi^2 = (1, N = 1828) = 11.98, p < .001$, and more likely to be higher educated, $\chi^2 (3, N = 1832) = 32.44, p < .001$. Most had some college education (41% college degree or higher, 44% some college education and 15% high school education or less). The demographic differences in this community sample appear similar to previous studies that found higher rates of alcohol-involved assaults among White, college-aged women (Gross et al., 2006; Krebs et al., 2009; Walsh, et al., 2013). However, most studies have examined alcohol involved assaults in college-aged students, whereas this community sample is older and more diverse in terms of education. Similar to prior studies, few assaults involved only the survivors drinking; out of cases where women knew whether or not the perpetrator had used substances ($n = 315$; 81%), only 5% ($n = 16$) involved only survivor drinking. The other 95% ($n = 299$) involved both the perpetrators and survivors using substances, with perpetrators using alcohol ($n = 175$; 55.6%), drugs ($n = 8$; 2.5%), or both alcohol and drugs ($n = 116$; 36.8%).

Recruitment used online and print materials. Ads stated that we were recruiting women for a study to “understand women's reactions to unwanted sexual experiences” and were looking for women who were “at least 18 years old”, “had an unwanted sexual experience since age 14,” and had told “someone about the experience.” Trained female graduate research assistants used a telephone script to screen volunteers. Eligibility required that women have a) an unwanted sexual experience at the age of 14 or older, b) be 18 or older at the time of participation, and c) have previously told someone about their unwanted sexual experience. We mailed eligible participants the survey, cover letter, and informed consent document, as well as a list of community resources for survivors and a stamped return envelope for the completed survey. All materials were in English. If the survey was not returned within 4 to 6 weeks, research assistants called participants to confirm they received the survey and to give participants a chance to ask questions. If women had misplaced or not received a survey, we sent another. If women no longer wished to participate, they were thanked for their time. Women who returned surveys were paid \$25. The return rate of surveys was 85%.

Measures

All means, standard deviations, and alphas for study measures are reported for the current sample.

Social Reactions—The Social Reactions Questionnaire-Alcohol (SRQ-A) scale consisted of *alcohol-specific social reaction* items developed based on a review of the literature and consultation with ten scientific experts in the area of alcohol and sexual assault. The scale consists of 12 items that indicated social reactions to survivors' disclosures of alcohol-related sexual assaults (see Table 1). Participants were asked how often they received each reaction. Responses were measured on a Likert scale from 0 (*never*) to 4 (*always*). The scale also had one additional global rating item (“Overall, do you feel that telling someone that you were drinking when this happened made things better or worse?”) rated on Likert scale from 1 (*much worse*) to 5 (*much better*). General social reactions to disclosing sexual assault were assessed with the Social Reactions Questionnaire (SRQ; Ullman, 2000), a valid and reliable instrument. Directions asked participants to rate, on a Likert scale from 0 (*never*) to 4 (*always*), how often they received each of the 48 reactions on the SRQ, when they told

other people about their unwanted sexual experiences. In addition to seven subscales, the scale contains three primary scales (Relyea & Ullman, 2013): positive reactions ($M = 2.18$, $SD = 0.89$, $\alpha = .92$), reactions of turning against the survivor ($M = .81$, $SD = .86$, $\alpha = .91$), and reactions of unsupportive acknowledgment ($M = 1.00$, $SD = .73$, $\alpha = .82$).

Drinking—Alcohol screening measures vary in their sensitivity and specificity at capturing drinking problems among women drinkers. Because this was the first study to examine alcohol-specific social reactions in relation to survivors' drinking, we included multiple indicators of problem drinking that have varying levels of specificity and sensitivity. Participants reporting alcohol use in the past year ($N = 330$) indicated whether they experienced *drinking problems* over the past 12 months on the 25-item Michigan Alcoholism Screening Test (MAST, Selzer, 1971), a self-report screening questionnaire for assessing problem drinking. Items were summed ($M = 4.25$, $SD = 4.83$, $\alpha = .90$). The MAST has good reliability from .83 to .93 (Gibbs, 1983). On the MAST, problem drinkers are indicated by scoring greater than or equal to 5 (Selzer, 1971), with 31% of our subsample scoring as problem drinkers. Participants were also screened for problem drinking with the TWEAK (T- tolerance, W-Worry about drinking, E-eye-opener, A-Amnesia/ blackouts, K-Cut down; Russell, 1994), a brief measure that is sensitive to problem drinking in women, particularly in racially diverse populations (Bradley, Boyd-Wickizer, Powell, & Burman, 1998; Chan et al., 1993). On the TWEAK, we used the cutoff of ≥ 3 using the “*how many drinks before passing out*” criteria (i.e., “hold” criteria), with 62% scoring as problem drinkers, confirming the higher sensitivity of the TWEAK than the MAST in this sample. *Drinking to cope* with negative affect was assessed with the 5-item drinking to cope scale (Cooper, 1994). Participants answered how often during the past 12 months they drank to cope with types of negative affect on a Likert scale from 0 (*I didn't do this at all*) to 3 (*I did this a lot*). Items are averaged ($M = 1.39$, $SD = .91$, $\alpha = .89$). To assess *frequency of heavy episodic drinking*, we computed a rating of how often participants drank 4 or more drinks during the past 12 months by combining answers to two questions. First, participants answered a modified version of Calahen et al.'s (1969) question to assess the greatest number of drinks consumed on a single day during the past 12 months. Participants who drank less than 4 drinks were given a score of 0. Second, we used a modified question from Wilsnack, Klassen, Schur, and Wilsnack (1991) that asked how often participants drank 4 or more drinks a day during the past year with options from 1 (less than once a month but at least once during the past year) to 5 (*every day*). These questions were combined for a range of 0 to 5. *Frequency of intoxication* over the past 12 months was assessed with a modified question from Wilsnack et al. (1991): “How often did you drink to the point of intoxication or drunkenness (e.g., drinking noticeably affected your thinking, talking, and behavior; feeling dizzy, ill, or out of control; or passing out; etc.)?” Responses were made on Likert scale from 0 (I never drank to the point of being drunk in the past 12 months) to 5 (*Every day*) (Wilsnack et al., 1991).

Psychological symptoms—*Depressive symptoms* were assessed using the 7-item version of the Center of Epidemiologic Studies Depression Scale (CESD-7; Mirowsky and Ross, 1990). Participants rated past 12 month depressive symptoms using a 5-point Likert scale from 0 (*never*) to 5 (*always*). Items were averaged ($M = 1.97$, $SD = .38$, $\alpha = .84$).

Posttraumatic stress symptoms were measured with the 17-item Posttraumatic Stress Diagnostic Scale (PDS; Foa, 1995), a valid and reliable measure with sexual assault survivors (Foa, Cashman, Jaycox, & Perry, 1997). Participants rated the frequency of symptoms over the past 12 month related to their most serious sexual assault on a Likert scale from 0 (*never or only one time*) to 3 (*almost always*). Items were summed ($M = 19.92$, $SD = 12.02$, $\alpha = .92$). *Characterological self-blame* was assessed with the 5-item Rape Attribution Questionnaire (RAQ; Frazier, 2003). Although we also assessed behavioral self-blame (RAQ; Frazier, 2003), only characterological self-blame was used for analyses as studies indicate that negative reactions are predictive of characterological self-blame, but not behavioral self-blame (Ullman, 1996; Ullman & Najdowski, 2011), and that characterological self-blame is more related to psychological distress than behavioral self-blame (Koss et al., 2002; Ullman et al, 2007). Participants rated whether over the past 12 months they believed the assault was related to their own character traits. Items are on 5-point Likert scales from 1 (*strongly disagree*) to 5 (*strongly agree*). Items were averaged, with higher scores indicating greater self-blame ($M = 2.65$, $SD = .73$, $\alpha = .76$).

Data Analysis Plan

All analyses were performed using SPSS 17 unless otherwise noted. First we performed exploratory factor analyses of the SRQ-A. To assess whether factor analysis was warranted, we ensured the sample was of sufficient size, items were correlated, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was above .5, and the Bartlett's test of Sphericity was significant. For sample size, we followed Bryant and Yarnold's (1995) criteria that the subject to variables ratio should be 5 or greater and at least 100. To determine the number of factors, we used a combination of statistical procedures and theoretical judgment. Procedures included parallel, very simple structure (VSS), and Velicer's minimum average partial (MAP) tests, all performed using the psych package in the statistical software R . After deciding the number of factors, we ran a principal axis factor analysis with Promax rotation to determine whether items should be deleted and the amount of variance explained. We then created composite scales based on the results of factor analyses. Next, we calculated the frequency of each alcohol-specific social reaction. For discriminant validity, we performed bivariate correlations between SRQ-A scales and general social reactions; discriminant validity is in part determined by correlations less than .8. Finally, to assess hypotheses regarding the relationships among general and alcohol-specific social reactions, psychological distress, and drinking, we performed hierarchical linear regressions on outcome variables, entering SRQ primary scales (turning against, unsupportive acknowledgment, and positive reactions) in the first step and SRQ-A scales in the second step.

Results

Psychometric Analyses

Preliminary analyses revealed that exploratory factor analysis of the SRQ-A was warranted. The sample was sufficiently large ($N = 388$). The correlation matrix had many values in the .4 to .7 range. The KMO was .90 indicating a great deal of common variance and Bartlett's test of Sphericity was significant. The number of factors to retain was based on theoretical

and empirical evidence. A parallel test revealed two components and five factors rising above chance. The VSS had the best fit at a complexity of 2 with three factors (.90) yet a two factor solution yielded a similar fit (.88) with all other solutions much lower (>.79). Finally, Velicer's MAP achieved a minimum of .02 with one factor. Though the evidence was inconsistent, the scree plot appeared to contain two factors, the parallel test showed two components, the Kaiser rule indicated two factors, and the VSS appeared to have a similar maximum at two and three factors. Based on these tests and parsimony given the number of items, we retained two factors.

To see if factors were robust and theoretically sensible, we ran a principal axis factor analyses with Promax rotation set to two factors. This solution explained 48% of the variance. We then dropped one item (item 12) that had loadings less than .5 and a low communality. As the two factors only correlated at -.17, we re-ran analyses with Varimax rotation to increase interpretability. The analysis indicated that 50% of the variance was explained. The two factors appeared theoretically sound: One factor consisted of positive reactions and the other of negative reactions, a distinction similar to the positive and negative scales on the original SRQ (Ullman, 2000). Negative items loaded between .65 and .79. Positive items loaded at .46 and .73. The lower loading positive item was retained as the loading could be low because there were only two positive items. As stated above, we initially believed all items would be negative (with two reverse scored) and therefore had not created more than two positively worded items. As factors typically have three or more items, we intend to add items to the positive scale in future analyses (see Discussion). Based on factor analyses, we created two scales. The SRQ-A positive reactions scale consisted of two items ($M = 1.84$, $SD = 1.30$). The SRQ-A negative reactions scale consisted of nine items ($M = .79$, $SD = .91$). Reliability of the SRQ-A negative reactions scale was good ($\alpha = .91$). Reliability of the SRQ-A positive reactions scale was low ($\alpha = .52$); however, alpha is affected by the number of items and the correlation was moderate, so the scale was retained.

Frequency of social reactions

Item frequencies and factor loadings are reported in Table 1. We hypothesized that women would receive alcohol-specific reactions and report that disclosing pre-assault alcohol use would have a negative effect. In support of the first hypothesis, the majority of women report receiving alcohol-specific reactions. Similar to the original SRQ, women reported experiencing SRQ-A positive reactions more often (81%) than SRQ-A negative reactions (72%). In partial support of the second hypothesis, most participants felt that disclosing alcohol-use made things worse (43%) or made no difference (46%). Even though positive reactions were more common, only 11% felt that disclosing alcohol use made things better.

Discriminant Validity Tests

Table 2 shows correlations between SRQ-A scales and other variables. In support of discriminant validity, correlations between the SRQ-A and SRQ scales were all below .8. In relationship to general sexual assault-related social reactions, SRQ-A negative reactions were strongly related to reactions of being turned against and moderately related to unsupportive acknowledgment, whereas SRQ-A positive reactions were moderately related to general positive reactions. Both scales were positively associated with receiving

unsupportive acknowledgment. In relation to the SRQ subscales (not shown in table), SRQ-A negative reactions were moderately to strongly correlated with blame ($r = .75$), control ($r = .74$), stigma ($r = .63$), and distraction ($r = .51$) as well as weakly correlated with tangible support ($r = .14$) and egocentric reactions ($r = .25$). SRQ-A positive reactions were moderately correlated with emotional support ($r = .46$) and weakly correlated with tangible support ($r = .28$) and egocentric reactions ($r = .20$); all other correlations were less than .10. SRQ-A negative reactions also had small correlations with perceiving fewer benefits of disclosing pre-assault alcohol use, as well as with increased problem drinking, drinking to cope, alcohol problems, PTSD, depression, and self-blame. The SRQ-A positive reactions were related to less self-blame. Perceiving a greater benefit to having disclosed pre-assault alcohol use was weakly related to fewer PTSD symptoms.

In the first step of hierarchical regressions of psychological distress and attribution variables, we examined the effects of the SRQ general scales (see Table 3). We had predicted that receiving negative reactions (being turned against and unsupportive acknowledgment) would be associated with depression, PTSD, and self-blame. This prediction was supported for self-blame. Yet, in this subsample, only unsupportive acknowledgment was predictive of PTSD and neither reaction was associated with depression. Similarly, and against predictions, neither SRQA positive nor SRQ-A negative reaction scales were related to PTSD or depression after controlling for general social reactions. Yet, controlling for general social reactions, SRQ-A negative reactions were related to increased characterological self-blame. Conversely, SRQ-A positive reactions were related to decreased characterological self-blame. Notably, once alcohol-specific reactions were entered into the model, the general social reactions were no longer significant. Overall, it appears in the sample of women who were drinking prior to assault, SRQA reactions were related to self-appraisals though not psychological distress.

The association between SRQ-A reaction scales and problem drinking also partially supported hypotheses (see Table 4). Against predictions, when controlling for SRQ primary scales, neither the SRQ-A positive nor SRQ-A negative scales were related to drinking to cope, the frequency of binge drinking, the frequency of intoxication, or reaching the cutoff score for problem drinking on the TWEAK. Yet, receiving more SRQ-A negative reactions were related to reaching the cutoff for problem drinking on the MAST and reporting a greater number of alcohol problems on the MAST. In both cases of significant results, the SRQ-A negative reactions had higher beta weights than any of the SRQ-general reactions.

Discussion

This study examined a new measure of alcohol-specific social reactions (SRQ-A) to survivor disclosures of sexual assault. Results indicate that alcohol-specific social reactions are common, distinct from general social reactions to assault disclosures, and have unique effects not captured by those general reactions. Given the high frequency of alcohol-specific reactions and that one study found no association between general social reactions and pre-assault alcohol use (Littleton et al., 2009), alcohol-specific reactions likely need to be assessed independently.

Results support hypotheses that alcohol-specific reactions are often harmful and blaming; yet unexpectedly, we found such reactions can also be positive and potentially reduce blame. Despite receiving positive reactions more often, women reported that disclosing alcohol use had positive outcomes in only 11% of cases. Similar to findings with general social reactions, this implies that negative reactions may be more impactful than positive ones (see Ullman, 2010, for a review). In support of studies showing that people are likely to blame survivors more who were drinking, the negative SRQ-A scale was related to turning against reactions (i.e., blame, stigma, and infantilizing) and a perception that disclosing alcohol use made things worse. Controlling for general social reactions, SRQ-A negative reactions were predictive of increased alcohol problems and characterological self-blame. Conversely, SRQ-A positive reactions were related to receiving emotional support and were predictive of decreased characterological self-blame. Similar to the more overtly negative and positive SRQ scales (Relyea & Ullman, 2013), both positive and negative SRQ-A reactions were related to receiving unsupportive acknowledgment.

The finding that alcohol-specific social reactions were not predictive of psychological symptoms was surprising given the literature showing general social reactions to assault are related to symptomatology. However, our recent findings with the full sample (that included nondrinkers) found that unsupportive acknowledgment was more related to PTSD than turning against reactions (Relyea & Ullman, 2013), and SRQ-A negative reactions were strongly related to turning against reactions. Curiously, no social reactions were related to depression. Our brief depression scale may not have captured all depressive symptoms. Alternatively, social reactions may not be as predictive of depression for alcohol-involved assaults given the many characteristic differences from other assaults. Future studies should continue to examine social reactions and psychological distress among survivors of alcohol-involved assaults.

The finding that alcohol-specific reactions can have positive or negative associations with self-blame is important, as self-blame is a predictor of revictimization (Katz, May, Sorenson, & DelTosta, 2010). Women may blame themselves even without receiving negative reactions (Littleton et al., 2009), and the findings here indicate that negative reactions may exacerbate victim blame. This is troubling as prior studies indicate people are likely to blame survivors who were drinking. In the current study almost half of survivors (47%) said they were told the experience was their fault because they were drinking when it happened. Conversely, it is heartening that the most common reaction (65%) was to tell survivors it was not their fault, and that positive alcohol-specific reactions were associated with decreased self-blame. Future research is necessary to determine how to teach community members to go beyond simply not blaming survivors and instead give anti-blaming statements. Furthermore, treatment providers should be aware that survivors may receive a diversity of reactions from others to their alcohol use and survivors may in turn respond to those reactions in diverse ways. For example, some women may experience distress from such reactions, whereas other women may not. Clinicians should explore women's own appraisals of the assault, their perceptions of others' reactions to them, and how the impact of those reactions has affected how women view themselves and the assaults.

In our study, alcohol-specific social reactions were related to alcohol problems using the MAST. We had posited two ways these may be related. First, reactions could lead to distress and thus drinking to cope with that distress. This theory was not supported as alcohol-specific reactions did not predict higher rates of distress. Although participants may drink to deal with distress from the assault, they do not appear to feel additional distress from alcohol-specific social reactions. The second potential link we posited between alcohol problems and reactions was that those with alcohol problems were more likely to receive negative reactions. This possibility should be examined in future research, but makes sense given that women, particularly drinkers, report societal stigma against women's drinking (Nolen-Hoeksema & Hilt, 2006). Also, alcohol-specific reactions were not related to frequency of intoxication, binge drinking, or problem drinking on the TWEAK, further indicating it is unlikely that such reactions lead to alcohol use. Given the MAST is an index of problems acquired through the regular use of alcohol, it may be that the MAST identified drinkers with more extensive histories of alcohol use. These long-term drinkers may have been more likely to have alcohol problems before the assault to which respondents reacted. This would also need to be assessed in future studies.

This study had multiple limitations. Most importantly, findings are cross-sectional. We are in the process of conducting a multi-wave yearly longitudinal study and hope to determine the direction of causality between reactions and other variables, in particular to assess the hypothesized links between blame, alcohol-specific reactions, and problem drinking. Also, the SRQ-A positive scale only had two items as we were not initially expecting positive reactions to alcohol disclosures. Therefore, we have added two more items to improve variability and reliability. Also, we did not ask whether alcohol use was voluntary and thus do not know how voluntariness may have affected outcomes or reactions. This differentiation may be important as one study found that drug-or alcohol-facilitated rape (where alcohol is given by perpetrators), but not incapacitated rape (where consumption was voluntary), was associated with PTSD (Zinzow, Resnick, Amstadter, McCauley, Ruggiero, & Kilpatrick, 2010). Although we could not account for this distinction, research indicates that most alcohol consumption is voluntary (Lawyer et al., 2010). Finally, on the SRQ-A, participants were averaging the frequency of responses across all support providers, and reactions may vary widely across support providers. Future research should allow participants to fill out the SRQ-A for each support provider to determine the frequency of response from various sources (e.g., formal providers such as counselors or informal providers such as friends).

Overall, it appears that most women who drank prior an assault either told respondents, or indicated respondents already knew, about their alcohol use. Such women were likely to receive both negative and positive alcohol-specific reactions, and such reactions were predictive of self-blame and problem drinking. Future research on alcohol-involved sexual assault should include alcohol-specific reactions when assessing social reactions from support providers. Hopefully, by uncovering this additional link to self-blame and problem drinking, future researchers will be able to determine the necessary protective factors needed to break these links and decrease women's likelihood of revictimization.

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Table 1

SRQ-Alcohol factor loadings and frequencies

Item	Factor 1	Factor 2	Endorsed
1. Told you the experience was your fault because you were drinking when it happened	.703		47.4 %
2. Said that you should have known better than to be drinking/drunken in that situation	.744		51.3 %
3. Said that you should have been able to go out and have a drink without worrying about something like this happening		.728	64.2%
4. Said your experience could not really have been unwanted because it happened while you were drinking	.777		27.2%
5. Treated you in some way that made you feel worse because you were drinking when it happened	.777		45.5%
6. Called you a nasty name for having this experience while drinking.	.752		16.6%
7. Said it was not your fault or you were taken advantage of because you were too drunk to give consent		.461	65.0%
8. Minimized the seriousness of your experience because you were drinking when it happened	.721		43.7%
9. Said you must have acted like you wanted sex at the time (e.g., led him on), but regret it now because you were drinking/drunken	.788		30.3%
10. Asked you how you could remember what happened if you were drinking when it happened; that is, they questioned your memory	.681		37.9%
11. Said you shouldn't blame the perpetrator just because you made bad choices while drinking	.672		21.4%
12. Said you need to stop drinking because it gets you into situations like this	NA	NA	44.6%

Note: Item 12 was dropped prior to the final factor analyses. Factor loadings were based on a principle axis factoring with varimax rotation.

Table 2

Correlations reactions, alcohol problems, and psychological distress

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
1. SRQ-ALC NEG	-													
2. SRQ-ALC POS	.12*	-												
3. Benefit to Telling	-.24***	.08	-											
4. Turning Against	.75***	-.03	-.21***	-										
5. Unsupportive Acknowledgment	.51***	.17***	-.10***	.60***	-									
6. Positive Reactions	-.02	.46***	.20***	-.04	.34***	-								
7. Prob. Drinking MAST	.13*	.01	.01	.07	.15**	.07	-							
8. Prob. Drinking TWEAK	.05	.09	.02	.00	.11*	.07	.47***	-						
9. Drinking to Cope	.17**	.06	-.09	.13	.18**	.10	.51***	.54***	-					
10. MAST	.17**	.05	-.05	.09	.15**	.07	.78***	.49***	.58***	-				
11. Freq. of Intoxication	.07	.05	-.04	.05	.10	.00	.34***	.48***	.54***	.53***	-			
12. Freq. Binge Drinking	.06	.02	-.06	.07	.13	.00	.36***	.51***	.50***	.51***	.74***	-		
13. PTSD	.25***	.07	-.13*	.29***	.36***	.08	.30***	.29***	.41***	.34***	.28***	.24***	-	
14. Depression	.15**	.04	-.09	.19***	.19***	.03	.25***	.23***	.44***	.28***	.25***	.24***	.62***	-
15. Self-Blame	.26***	-.12*	-.09	.27***	.22***	-.05	.17**	.13*	.29***	.21***	.08	.09	.40***	.31***

Note:

*
 $p < .05$ **
 $p < .01$ ***
 $p < .001$.

Table 3

Hierarchical Regressions with Psychological Distress Variables

	Depression			PTSD			Self-Blame		
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Block 1									
Positive Reactions	.04	.05	.01	-.56	.76	-.04	-.08	.06	-.08
Unsupportive Acknowledgment	.10	.07	.11	5.34	1.15	.33***	.18	.09	.15*
Turning Against	.10	.05	.12 [†]	1.27	.93	.09	.19	.07	.18**
Block 2									
Positive Reactions	-.01	.05	-.01	-.76	.84	-.06	-.01	.06	-.01
Unsupportive Acknowledgment	.10	.07	.11	5.26	1.16	.32***	.17	.09	.14 [†]
Turning Against	.10	.07	.13	.92	1.18	.07	.06	.09	.06
ALC Positive Reactions	.01	.03	.03	.33	.53	.04	-.11	.04	-.16**
ALC Negative Reactions	.00	.06	.00	.49	1.02	.04	.16	.08	.17*
Block 1 R^2			.05			.14			.09
Block 2 R^2			.05			.15			.11
R^2			.00			.00			.03**

Note:

[†]
 $p < .10$ *
 $p < .05$ **
 $p < .01$ ***
 $p < .001$

Table 4

Hierarchical Regressions with Alcohol Variables

	Problem Drinking MAST>=5			Problem Drinking TWEAK>=3			Drinking to Cope			MAST			Frequency of Intoxication			Freq of >4 drinks		
	B	SE	β	B	SE	β	B	SE	β	B	SE	β	B	SE	β	B	SE	β
Block 1																		
PR	.01	.03	.02	.01	.04	.01	.06	.06	.05	.19	.34	.04	-.07	.08	-.05	-.10	.10	-.07
UA	.11	.05	.17 [*]	.11	.05	.16 [*]	.16	.10	.13 ⁺	.84	.52	.12	.22	.13	.13 [†]	.30	.15	.16 [*]
TA	-.02	.04	-.03	-.06	.04	-.10	.06	.08	.06	.15	.43	.03	-.05	.10	-.04	-.04	.12	-.02
Block 2																		
PR	.02	.04	.04	-.01	.04	-.01	.06	.07	.06	.27	.38	.05	-.09	.09	-.07	-.11	.11	-.07
UA	.10	.05	.15 [†]	.10	.05	.15 [†]	.14	.10	.11	.66	.52	.10	.20	.13	.12	.30	.15	.15 [*]
TA	-.10	.05	-.18 [†]	-.08	.06	-.14	-.04	.10	-.04	-.74	.55	-.12	-.13	.13	-.09	-.06	.16	-.04
ALC-P	-.02	.02	-.05	.02	.02	.06	-.01	.04	-.01	-.06	.24	-.02	.04	.06	.04	.01	.07	.01
ALC-N	.11	.04	.21 [*]	.04	.05	.07	.14	.09	.14	1.21	.47	.22 [*]	.10	.12	.08	.03	.14	.02
Block 1 R^2			.025			.018			.035			.024			.011			.018
Block 2 R^2			.043			.023			.043			.044			.015			.018
R^2			.018 [*]			.005			.008			.020 [*]			.004			.000

Note: PR = Positive Reactions, UA = Unsupportive Acknowledgment, TA = Turning Against, ALC-P = SRQ-Alcohol Positive Reactions, ALC-N = SRQ-Alcohol Negative Reactions

** $p < .01$

*** $p < .001$.

[†] $p < .10$

* $p < .05$