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Exploring Correlates of Alcohol-Specific Social Reactions in Alcohol-Involved Sexual Assaults

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Abstract

Disclosing pre-assault drinking may influence reactions sexual assault survivors receive from their support networks. Such reactions likely affect survivor's post-assault adjustment. Thus, it is important to identify assault and disclosure characteristics related to disclosing one's drinking and receiving social reactions that specifically comment on pre-assault alcohol use. This exploratory study examined demographic, assault, and disclosure factors as predictors of both survivors' decisions to disclose their pre-assault alcohol use and social reactions survivors received related to their pre-assault alcohol use. Out of survivors who were drinking at the time of the assault, those with more education and who reported greater alcohol impairment or resistance during the assault were more likely to disclose pre-assault alcohol use. As expected, this study found that of women disclosing pre-assault drinking, those with more education and more violent assaults received more negative social reactions specifically commenting on their use of alcohol prior to the assault. Such negative reactions were more common for those telling parents, police, or medical professionals. Women with less education received more positive and negative social reactions that commented specifically on their use of alcohol prior to the assault. Interestingly, results showed that disclosing pre-assault alcohol use in greater detail was related to positive social reactions specific to preassault drinking and experiencing greater alcohol impairment at the time of the assault was associated with *both* positive and negative social reactions specific to pre-assault alcohol use. Implications for research and intervention are provided for survivors disclosing alcohol-related sexual assaults.

Keywords

sexual assault; social reactions; disclosure; women; pre-assault alcohol use

About half of sexual assaults involve survivors drinking alcohol before the assault (see Abbey, Zawacki, Buck, Clinton, & McAuslan, 2004; Orchowski & Gidycz, 2012; Orchowski, Untied, & Gidycz, 2013). Although most sexual assault survivors do not tell anyone about their assault immediately after the incident, approximately two-thirds tell

someone at some point (Koss, Dinero, Seibel, & Cox, 1988), though disclosure may vary based on the presence of pre-assault alcohol use. Women who disclose assaults to others often receive negative social reactions that can harm post-assault adjustment, particularly if they disclose their pre-assault alcohol use (Relyea & Ullman, 2015). Despite the prevalence of alcohol-involved assault, most research examines assault disclosure and reactions generally without considering how assault-related drinking or disclosing alcohol use influence social reactions made to survivors. Experimental studies show that women who drink are perceived more negatively by observers, with women being viewed as more sexually available (see Abbey et al., 2014 for a review). The present study explores demographic, situational, and interpersonal social network factors predicting alcohol use disclosure and the social reactions survivors receive that specifically comment on the survivor's pre-assault drinking, labeled *alcohol-specific social reactions* (Relyea & Ullman, 2015). Alcohol-specific social reactions differ from general social reactions because they are specific to the survivor's pre-assault alcohol use. For example, a general negative social reaction may involve blaming the survivor for precipitating the assault whereas a negative alcohol-specific social reaction would blame the survivor specifically because *she was drinking prior to the assault* (for more specific examples used in this study, see Measures section). Given the growing prevalence of alcohol-involved sexual assault – particularly on college campuses – it is important to explore the factors related to disclosing pre-assault alcohol use and the social reactions received specific to such assaults, as survivors of alcohol-related assaults have been shown to differ in support received and post-assault adjustment from survivors of non-alcohol-related assault (Ullman & Filipas, 2001). Understanding such factors may lead to improvements in how informal and formal support sources respond to survivors of alcohol-related sexual assault.

Survivors impaired by alcohol are more likely to disclose to informal, but not formal support sources than are non-impaired victims (Littleton, Grills-Tauchel, & Axsom, 2009). When controlling for adolescent sexual victimization, pre-assault drinking is predictive of college women disclosing their assault (Orchowski & Gidycz, 2012), though we do not know if the decision to disclose alcohol use varies based on specific assault characteristics (e.g. resistance, relationship to perpetrator, etc.). Both formal (e.g. police) and informal (e.g. family) sources may react negatively to victims who were drinking. While most victims report a mixture of both positive and negative social reactions, survivors of alcohol-related assaults report receiving more negative responses (Ullman & Filipas, 2001). In particular, women who experience alcohol-related assaults report more blaming, controlling, stigmatizing, and distracting responses than survivors of non-alcohol related assaults (Ullman & Filipas, 2001). Thus, survivors of alcohol-involved assault may lack positive social support, and face a more complicated recovery. While evidence suggests that survivors of alcohol-related assaults are likely to receive more negative social reactions, past studies have not assessed alcohol-specific social reactions, only social reactions in general for survivors disclosing alcohol-related assaults (see Macy, Nurius, & Norris, 2006; Ullman & Filipas, 2001; Ullman & Najdowski, 2011). Thus, the factors associated with receiving positive and negative alcohol-specific social reactions remain unknown. Further, prior studies have explored factors associated with disclosure in general (e.g. timing, detail) but have neglected to assess these factors in terms of disclosing pre-assault alcohol use. This is

needed, as there are notable differences in the experiences, disclosures, and social reactions of alcohol and non-alcohol involved assaults (Ullman & Najdowski, 2010), including the presence of social reactions specific to pre-assault alcohol use (Relyea & Ullman, 2015). Extant research highlights the necessity of studying alcohol-specific social reactions, as survivors of alcohol-involved assault may not be receiving the positive social support needed to facilitate positive post-assault adjustment.

Research shows that negative social reactions related to drinking are likely driven by negative perceptions and stereotypes of drinking women, who are often viewed as sexually available, vulnerable, promiscuous, and even deserving of assault (see Abbey, 2002; Abbey et al., 2004; Abbey et al., 2014 for reviews). This may also be driven by societal rape myths, which are false cultural beliefs about rape that mainly serve the purpose of shifting the blame from perpetrators to victims (Suarez & Gadalla, 2010). Rape myths specific to alcohol use blame victims for engaging in pre-assault drinking, by suggesting that women who drink are acting in a promiscuous manner and effectively behaving in ways that lead to sexual victimization (Edwards, Turchik, Dardis, Reynolds, & Gidycz, 2011). Overall, research related to perceptions of survivors who were drinking at the time of the assault suggests that women likely receive alcohol-specific social reactions.

Results of extant studies of social reactions to survivors of alcohol-related assaults are mixed and have not examined social reactions specific to survivors' pre-assault drinking. Research is also lacking on effects of alcohol-specific social reactions on psychological recovery. In a prior study, we used a new measure on alcohol-specific social reactions the Social Reactions Questionnaire – Alcohol (SRQ-A; Relyea & Ullman, 2015) and found that: (a) victims received alcohol-specific social reactions, (b) women report receiving more positive (81%) than negative (72%) alcohol-specific social reactions; and (c) most survivors disclosing alcohol-related sexual assaults felt that disclosing their drinking made things worse (43%), or made no difference (46%), though only 11% felt alcohol use disclosure made things better. Given the importance of social reactions on recovery and post-assault adjustment, there is evidence that suggests alcohol-specific social reactions should be studied separately from social reactions in general. Here, we use the same dataset to explore predictors of alcohol-specific social reactions such as assault characteristics and who survivors told. As many survivors do not disclose their alcohol use, we also examine predictors of disclosing. We hope understanding the factors that influence the social reactions survivors receive will let us begin to design systems that let survivors of alcohol-related assault feel comfortable disclosing without fear of blame.

Past research shows relationships between offender violence, victim resistance, and injury outcomes in alcohol-related assaults (see Ullman, 2003, for review). In general, alcohol-involved assaults have been found to involve greater perpetrator aggression, less physical and verbal resistance by survivors, and greater injury (Abbey et al., 2004; Littleton et al., 2009; Ullman & Najdowski, 2010). Greater injury is related to disclosure (Ullman & Filipas, 2001), though injury and other assault characteristics have not been studied in relation to disclosure of pre-assault alcohol use. Survivors of more violent alcohol-involved sexual assaults receive more negative reactions than survivors of less violent assaults (Ullman, 2000). Research shows that societal expectations for women to resist assault may lead

people to blame survivors that did not resist (Estrich, 1987). Yet, little research has examined how people view resistance in survivors who drank, an important area given that survivors who drank are less likely to resist. Pre-assault drinking is common in stranger assaults (Ullman & Brecklin, 2000) and assaults by non-intimate persons (Testa et al., 2007). Many alcohol-involved assaults occur within the context of a “hook up,” in which the victim and perpetrator do not know each other well but engage in some degree of consensual activity (Flack et al., 2007). Yet, prior consensual sex is also predictor of subsequent alcohol-involved assault (Testa, VanZile-Tamsen, & Livingston, 2007). Relationship to the perpetrator has been linked to receipt of general social reactions, with stranger assault victims receiving more negative social reactions (Ullman, Filipas, Townsend, & Starzynski, 2006). Thus, for victims who disclose, these findings suggest a link between social reactions and the victim-offender relationship in alcohol-involved assaults. Unfortunately, research is limited in this area, particularly for alcohol-related assaults.

Social reactions may vary based on education level, as college survivors who were drinking at the time of the assault are less likely to receive negative social reactions than community women (Littleton et al., 2009). This may be due to college student’s greater awareness of sexual assault, particularly alcohol-involved assault among acquaintances or “hook ups,” and the college culture where excessive drinking is accepted or even encouraged (Abbey, 2002; Flack et al., 2007), and their lower acceptance of rape myths (Suarez & Gadalla, 2010). Thus, being in college or having a college education may affect the social reactions received by victims and how these social reactions are interpreted. How alcohol-specific social reactions and the decision to disclose pre-assault alcohol use vary based on support provider told has yet to be explored. Research suggests that survivors are more likely to disclose to and receive positive reactions from informal support providers (Ullman & Filipas, 2001). Specifically, survivors are most likely to tell a female friend (Fisher et al., 2003), intimate partner, or other intimate persons (Feldman-Summers & Ashworth, 1981). Conversely, reporting to police is much less common, but for those who do report, social reactions by police are often regarded as negative (Campbell, 2005), particularly when alcohol is involved or when reporting is delayed (Jordan, 2004). Given the high prevalence of alcohol-involved assault, the possibility of receiving negative social reactions warrants further exploration, as social reactions can greatly affect post-assault adjustment.

Negative social reactions are associated with post-traumatic stress symptoms and are more common among survivors who had been drinking (Orchowski et al., 2013; Ullman & Najdowski, 2011). Survivors of alcohol-related assaults who receive negative social reactions also report more self-blame, depression, and decreased sexual assertiveness (Macy, Nurius, & Norris, 2006; Ullman & Najdowski, 2011). This suggests alcohol-related assault survivors may face a more complicated recovery. On the other hand, positive social reactions (e.g. emotional support) are associated with increased coping via social support and adaptive coping as well as less self-blame and fewer drinking problems (Orchowski et al., 2013; Ullman, 2003; Ullman & Najdowski, 2011). Extant research reveals the impact of social reactions on recovery and suggests that the effect of social reactions may be magnified for alcohol-related assault survivors.

The link between alcohol-involved assault and social reactions highlights the importance of exploring the correlates of reactions related to pre-assault alcohol use. By understanding the disclosure and social support received following alcohol-involved assault, researchers can begin to develop and evaluate interventions aimed at improving social responses to survivors of alcohol-involved assault that may enhance the recovery process. Specifically, knowledge of precursors of social reactions related to pre-assault drinking may be used to develop interventions to train support providers in how to respond to survivors disclosing drinking.

Present Study

Extant research highlights the influence of social reactions on recovery (see Orchowski et al., 2013; Ullman, 2010; Ullman & Najdowski, 2011) and shows worse post-assault adjustment for survivors of alcohol-related assault receiving negative social reactions. Given the prevalence of alcohol-involved assaults, it is important to establish what factors lead to receipt of certain alcohol-specific social reactions. The present exploratory study examines correlates of alcohol-specific social reactions including: demographics, alcohol and assault-related factors, and characteristics of disclosures in which the survivor disclosed they were drinking at the time of the assault among a community sample of women. We also assess relationships between demographics, alcohol and assault-related factors, and the decision to disclose alcohol use at the time of the assault or not. This study uses the newly developed SRQ-A (Relyea & Ullman, 2015) and the same dataset used to create this measure, to study a new issue of the correlates of positive and negative alcohol-specific social reactions to women disclosing drinking prior to assault. First, we expected that greater perceived alcohol impairment during assault will be related to negative alcohol-specific social reactions. Survivors who were more intoxicated at the time of the assault may be perceived as being at fault for their behavior, by putting themselves at risk for assault, and therefore receive negative reactions related to their greater intoxication. Second, non-stranger victim-offender relationships will be associated with negative alcohol-specific social reactions, since such relationships contradict stereotypical rapes. Third, survivors who resisted and experienced more violent assaults will be less likely to disclose pre-assault alcohol use and receive fewer positive and more negative alcohol-specific social reactions, because alcohol might diminish their perceived legitimacy, the efficacy of their resistance, and divert people's attention from the violence. Finally, police reporting will result in more negative alcohol-specific social reactions, as police typically respond poorly to sexual assault victims (Maier, 2014), including victims of alcohol-related assault (Campbell, 1998).

Methods

Sample and Procedure

The sample consisted of 1863 women, ages 18 to 71 ($M = 36.51$, $SD = 12.54$) from the Chicago metropolitan area who responded to a self-report mail survey regarding unwanted sexual experiences previously disclosed to others. Women were asked to consider their *most serious* unwanted sexual experience when completing the survey, and the disclosure of this experience. Thus, all women in the study had an unwanted sexual experience and disclosed to someone. Fliers, advertisements and notices were distributed over the span of one year on

college campuses, the community, mental health agencies, and rape crisis centers in order to obtain a broad and diverse sample. Women were paid \$25 for their participation. The return rate for surveys was 85%. Slightly over half (57%; $n=1035$) of women were unemployed and most (68%; $n=1266$) reported household incomes below \$30,000. Approximately 32% ($n=586$) had a college degree or higher, 42% ($n=778$) some college, and 26% ($n=468$) a high school diploma or less. Race was 45% ($n=899$) African American, 35% ($n=751$) White, 2% ($n=56$) Asian, 7% ($n=130$) multiracial; and ethnicity was 13% ($n=246$) Latina/Hispanic. To predict disclosure of pre-assault drinking, we utilized the full sample consisting of women who were drinking at the time of the assault ($N=570$). The subsample used in analysis of alcohol-specific social reactions included women who disclosed an alcohol-related assault and elected to complete the SRQ-A questionnaire ($N=387$), regarding their disclosure of pre-assault drinking to others. Thus, the subsample of the present study consists of women who a) had an unwanted sexual experience that they disclosed to someone; b) were drinking at the time of the assault; c) disclosed pre-assault drinking to someone; and d) elected to complete the SRQ-A questionnaire. The subsample was primarily White (62%; $n=230$), followed by African American (24%; $n=90$), and younger, more educated, and higher income (\$30,000+) than the rest of the sample. The subsample average age was 33 ($SD=11.1$). Forty-one percent ($n=156$) had at least a college degree, 44% ($n=167$) some college, 9% ($n=36$) high school degree or GED, 6% ($n=22$) less than high school. About half of the subsample was currently employed ($n=196$). Slightly less than the sample, 62% of the subsample ($n=229$) reported household incomes below \$30,000.

Measures

Demographics—Demographics assessed included age (years), education (four ordinal categories ranging from *less than 12th grade* to *college degree or beyond*), and time since assault (years). Each race/ethnicity is dummy coded as White, African American, or “other” (all other racial/ethnic categories), with White as the reference category. Level of education is used as an ordinal variable in all analyses.

Alcohol and assault-related factors—Assault and alcohol-related factors are assessed, including: relationship to perpetrator, perceived life threat, level of resistance, perpetrator violence, and highest level of impairment at the time of assault. Victim-perpetrator relationship is coded as (1) *known assailant* or (2) *known or both stranger and known*. Many women selected more than one category of perpetrator relationship (e.g. both husband AND stranger), though not necessarily referring to an assault by multiple perpetrators, but possibly separate events, and therefore responses were not necessarily independent of one another. Additionally, some perpetrator relationships were rare, leading us to code the victim-perpetrator relationship in this way. Perceived life threat is measured with the (*no/yes*) question *did you think your life was in danger?* We assess victim resistance ($M=4.44$, $SD=2.11$) with an ordinal measure ranging from (1) low physical/verbal resistance to (7) high physical resistance (e.g. *stay still or freeze, scream for help, run away, physically fight*). Perpetrator violence is an ordinal measure ranging from (1) verbal tactics to (6) physical tactics ($M=2.98$, $SD=1.57$; e.g. *insistence, hitting, choking, weapon*). Resistance and violence were coded as ordinal variables to capture the variance in possible violence and resistance tactics. Survivors’ perceived highest level of impairment at assault ($M=1.06$, SD

= .85) is measured with Littleton et al.'s (2009) ordinal question. Due to lack of variation in the original 5 levels, we recoded this variable to include three levels: *not incapacitated*, *impaired*, or *incapacitated*. Incapacitated was selected as the highest level of intoxication because it is defined in the literature as the victim is passed out or awake but too drunk to know what she is doing or control her behavior (Kilpatrick et al., 2007), thus referring to a higher level of intoxication than impairment.

Disclosure—The survivor's decision to disclose their alcohol use at the time of the assault is coded dichotomously (no/yes). Timing of initial adult sexual assault disclosure ($M = 2.90$, $SD = 1.95$) is an ordinal question, ranging from 1 (*immediately after*) to 6 (*more than one year after*). Extent of detail in the assault disclosure ($M = 2.62$, $SD = 1.15$) is an ordinal measure ranging from 1 (*I said what happened briefly but didn't discuss it further*) to 4 (*I said what happened and talked about it in detail*). Alcohol-related assault disclosure ($M = 5.34$, $SD = 1.41$) is also coded on 7-point, less-to-more detail scale, where the first two points of the scale include not drinking or not disclosing drinking, thus these two response categories are excluded from the present analysis. The SRQ-A asks participants to rate the frequency of receiving these alcohol-specific social reactions, but does not link them to the specific support sources told. Women were asked separately if they ever told informal (e.g., romantic partner, family, friend) and formal support sources (e.g., clergy, police, medical, mental health, rape crisis), each of which were dummy-coded.

Alcohol-specific social reactions—We assess alcohol-specific social reactions with the SRQ-A (see Relyea & Ullman, 2015 for review of psychometric characteristics of the scale and full listing of items). Both the negative and positive scales measure alcohol-specific social reactions broadly, although encompass specific instances of such reactions (e.g. alcohol-related blame as an instance of a negative social reaction). The self-report scale was 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 indicating perceived social reactions based on victims' disclosures of alcohol-related sexual assault to potential support providers. Women were asked how often they received each type of reaction with Likert-scale responses of 0 (*never*) to 4 (*always*). The scale is divided into positive ($M = 1.84$, $SD = 1.29$, $\alpha = .60$) and negative reactions ($M = .83$, $SD = .90$, $\alpha = .92$). The positive scale has two items (*Said that you should have been able to go out and have a drink without worrying about something like this happening* and *Said it was not your fault or you were taken advantage of because you were too drunk to give consent*). The negative scale has 10 items that include reactions of unsupportive acknowledgement and turning against reactions specific to alcohol use (Relyea & Ullman, 2013; e.g., *told you the experience was your fault because you were drinking when it happened*, *said that your experience could not have really been unwanted because it happened while you were drinking*, and *said you shouldn't blame the perpetrator just because you made bad choices while drinking*).

Results

Sample Characteristics

Out of the full sample, 31% ($n=560$) reported pre-assault alcohol use with 63% ($n=387$) actively disclosing this alcohol use. In the subsample of women disclosing pre-assault alcohol use, all women had an adult sexual assault (86% completed rape; $n=335$) occurring an average of 11 years ago (range = 0 – 50 years) and had consumed alcohol: 33% ($n=121$) drank alcohol but were not incapacitated, 24% ($n=86$) were impaired, and 43% ($n=157$) were incapacitated. Approximately 36% ($n=135$) of victims felt their life was in danger and most women were assaulted by one perpetrator (90%): 21% ($n=78$) stranger only, 79% ($n=307$) known or both stranger and known. Levels of resistance reported include “stay still” for freeze (14%; $n=46$), reason/plead (11%; $n=38$), cry/sob (16%; $n=54$), scream for help (1%; $n=2$), run away (3%; $n=10$), physically struggle (44%; $n=147$), and physically fight (11%; $n=37$). Reported violence experienced includes verbal abuse such as insistence (27%; $n=85$) or threats (4%; $n=11$) and physical violence such as twisting arm/holding down (44%; $n=137$), hitting/slapping (6%; $n=19$), choking/beating (10%; $n=32$), and weapon confrontation (10%; $n=32$).

Of the subsample disclosing pre-assault drinking, most told someone about the assault immediately after (35%; $n=135$), days after (22%; $n=85$) or more than a year after (23%; $n=86$). On average, women in the subsample told 6 persons, with most telling informal sources, typically friends (88%; $n=327$). Mental health professionals were the most frequently told formal support source (42%; $n=86$). Most women disclosed the assault with great detail (32%; $n=123$) or briefly and talked about the incident a little (24%; $n=91$). Women disclosing pre-assault alcohol use discussed their drinking in great detail (31%; $n=120$), provided a little detail (19%; $n=75$), or talked about their alcohol use in a general way (18%; $n=68$). Most survivors felt somewhat satisfied with support received from everyone (45%; $n=190$) while 13% ($n=44$) felt very unsatisfied. For descriptive statistics, see Table 1.

Correlations

Correlations were calculated between survivor demographics, alcohol and assault related factors, and disclosure characteristics, including decision to disclose pre-assault drinking, with positive and negative alcohol-specific social reactions. The same variables were included for each dependent variable (see Table 2). Disclosing more detail about the assault was positively associated with the decision to disclose alcohol use. Having more education, being more incapacitated, resisting more, and disclosing to a romantic partner/spouse or friend were associated with a positive decision to disclose pre-assault alcohol use. Experiencing life threat and delayed disclosure was associated with a greater likelihood of *not* disclosing pre-assault alcohol use. Having less education was related to receiving more positive and negative alcohol-specific social reactions. Age, years since assault, and race were not related to alcohol-specific social reactions. Greater impairment during assault was related to receiving more negative and positive alcohol-specific social reactions. Perceived life threat and higher violence during assault were each related to more negative alcohol-specific social reactions. Relationship to perpetrator and highest level of resistance were not

related to alcohol-specific social reactions. Telling formal sources (mental health, medical, police, rape crisis) was related to more negative alcohol-specific social reactions. Only telling the informal support source of parent/step parent was related to negative alcohol-specific social reactions. Disclosing more detail about one's pre-assault drinking was related to receiving more positive alcohol-specific social reactions.

Regressions

Preliminary regressions examined correlates of the decision to disclose pre-assault alcohol use, as well as positive and negative alcohol-specific social reactions. Variables that were significant at $p < .10$ in correlations entered into models to identify significant predictors. Then, the backward method was used to remove nonsignificant predictors and arrive at reduced models (see Table 3). Significant predictors are shown for reduced models only, as all others were nonsignificant in full and reduced models.

Decision to disclose pre-assault alcohol use—The full regression model (not shown) predicting survivors' decision to disclose pre-assault alcohol use was significant, $F(8, 286) = 4.68, p < .01$ and explained approximately 9% of the variance. Survivors who disclosed more detail about the assault were more likely to disclose pre-assault alcohol use as well. More education, greater impairment and more resistance were each associated with the survivor's decision to disclose pre-assault alcohol use. The reduced model using the backward method retained predictors if $p < .10$, was also significant, $F(5, 289) = 7.41, p < .01$, and explained approximately 9% of the variance. Variables significant in the full model remained significant in the reduced model. The survivor's decision to disclose to a romantic partner/spouse/lover was significant at the $p < .10$ level. No other variables were significant.

Negative alcohol specific social reactions—The full regression model (not shown) predicting negative alcohol-specific social reactions was significant, $F(10, 246) = 7.07, p < .01$, and explained 20% of the variance. Less education and greater impairment at assault (as predicted) were related to receiving more negative alcohol-specific social reactions. Disclosing to a parent/step parent was related to more negative reactions. Disclosing to police was significantly related to negative alcohol-specific social reactions ($p < .10$), as expected. The reduced model using the backward method retained predictors if $p < .10$, was also significant, $F(6, 250) = 11.52, p < .01$, explaining 20% of the variance. All variables significant in the full model were significant in the reduced model, and as predicted, telling police, medical professionals, and greater violence during assault were all significant predictors of negative alcohol reactions.

Positive Alcohol specific social reactions—The full regression model (not shown) predicting positive alcohol-specific social reactions was significant, $F(10, 245) = 3.45, p < .01$, explaining 9% of the variance. Unexpectedly, having less education was related to more positive alcohol-specific social reactions. Higher levels of impairment were related to more positive alcohol-specific social reactions. Extent of alcohol use detail at disclosure was significant ($p < .10$). The reduced model was also significant, $F(4, 252) = 9.73, p < .01$, explaining 9% of the variance (see Table 3), and both education and level of alcohol impairment remained significant, as well as alcohol use detail at disclosure.

Discussion

Alcohol-related sexual assaults are common, but there is a lack of research on disclosure of these assaults and social reactions received by survivors specifically related to drinking prior to assault. This was the first exploratory study of correlates of alcohol-specific social reactions received by victims disclosing their pre-assault alcohol use. This study builds on our prior work (Relyea & Ullman, 2015) by examining factors predictive of receiving alcohol-specific social reactions and provides additional support for examining alcohol-specific social reactions separately from social reactions in general. Victims with less education received more positive and negative reactions. Research linking education, drinking, and social reactions is somewhat limited, so we were not expecting this result. Perhaps survivors with less education experienced more stereotypical assaults and disclosed to more support sources, resulting in more of all types of reactions (Ullman, 2010). Interestingly, survivors with more education were more likely to disclose pre-assault alcohol use. College students are likely to receive fewer negative social reactions for alcohol-involved assaults than community women (Littleton et al., 2009), perhaps because they disclose to more educated support providers. College-educated support providers may have a greater awareness of alcohol-involved sexual assault and therefore react more positively, though we were unable to examine education level of support providers.

As expected in our first hypothesis, survivors who were impaired or incapacitated at the time of the assault (i.e. difficulty walking, unconscious) were more likely to disclose their assault and receive both positive and negative alcohol-specific social reactions. Alcohol-specific social reactions may become more relevant as level of impairment increases because support providers may be more likely to comment on victims' heavy drinking. The receipt of both positive and negative alcohol-specific social reactions is somewhat surprising on its face, as experimental research suggests that survivors who were drinking are evaluated negatively (Maurer & Robinson, 2008). However, alcohol-involved assault survivors may have told more support sources and therefore received more positive and negative alcohol-specific social reactions. Additionally, survivors' interpretations of social reactions may vary. Those highly intoxicated during assault may engage in self-blame (Ullman, 2010) and interpret reactions related to drinking negatively. Reactions could also vary based on the degree to which she disclosed her level of impairment. For example, a potential support provider may react differently to the survivor disclosing that she was unconscious as opposed to impaired (e.g., difficulty walking) or simply having a drink. Reactions may also vary based on if the disclosure recipient perceives the survivor as having an alcohol abuse issue or not, as survivors with alcohol problems and survivors with comorbid alcohol problems and PTSD receive more negative social reactions (Ullman et al., 2006). Women who drink also face negative stigma (Ullman et al., 2006) and women who receive alcohol-specific social reactions report feeling further blamed and stigmatized (Relyea & Ullman, 2015). Future research should examine alcohol-specific social reactions in conjunction with level of alcohol impairment, the role of self-blame, and support provider type.

Contrary to our hypothesis that *non-stranger* perpetrator relationships would be predictive of negative alcohol-specific social reactions, this association was nonsignificant. It was somewhat surprising that there were no significant victim-offender relationship differences,

as past research shows stranger assaults are predictive of disclosure to informal and formal support persons (Starzynski et al., 2005) and social reactions received. This is also unexpected given common adherence to rape myths that suggests most rapes are perpetrated by strangers, often resulting in disbelief or blame for survivors of non-stranger assaults. Earlier research by Scronce and Corcoran (1995) found, contrary to their predictions, ratings of greater blame for victims of *stranger* rape rather than acquaintance rape. They attributed this finding to contextual differences in the scenarios employed by their methodology, as well as the influence of perceptions of date rape. The participants in their study may have expected survivors to be more “on guard” when strangers are present. This may shed light on our findings as well, suggesting that disclosure recipients may rely on context or different aspects of the assault other than the relationship when providing their social reactions. Additionally, disclosure recipients may be more focused on the survivor’s pre-assault alcohol use rather than the relationship to perpetrator. Thus, this relationship may differ due to our focus on alcohol-related sexual assault disclosure specifically.

As expected, more violent assaults were related to receipt of more alcohol-specific negative reactions, but not the decision to disclose pre-assault alcohol use. This is consistent with earlier research that shows more general negative reactions for survivors of more violent alcohol-involved assaults than less violent alcohol-involved assaults (Ullman, 2000). Perhaps the increased seriousness of assaults characterized by life threat or weapons led disclosure recipients to respond negatively and blame the victim defensively to protect themselves from the fact that this could happen to them (Hayes, Lorenz, & Bell, 2013). Thus, pre-assault drinking may also provide a justification to blame victims and respond negatively to pre-assault alcohol use. Research suggests negative reactions to more severe assaults may be influenced by the survivor’s post-assault adjustment. Receipt of negative reactions in high threat assaults where the survivor feels her life may be in danger is particularly salient when PTSD symptoms are present (Starzynski et al., 2005). Our finding of negative alcohol-specific social reactions in assaults involving greater violence partially supports this finding and suggests that PTSD symptoms may possibly moderate this association of perceived life threat and alcohol-specific social reactions. Future research should test a moderating relationship between PTSD symptoms and alcohol-specific social reactions in high threat assaults. However, given that alcohol-related assaults are more commonly perpetrated by known perpetrators and associated with less physical force and life threat, this may be difficult to test empirically without a large sample with varying levels of alcohol and violence tactics by perpetrators (Peter-Hagene & Ullman, 2015). Perceived life threat (typical in more violent assaults) was not related to receiving alcohol-specific social reactions, contrary to general sexual assault social reactions literature, which suggests that weapon confrontation and perceived life threat are related to receipt of more positive social reactions (Starzynski et al., 2005). Contrary to expectations, survivor resistance was not related to alcohol-specific social reactions, but resistance is less common in such assaults, as alcohol inhibits resistance and makes assault completion easier (Norris et al., 1996). However, survivor resistance was related to the decision to disclose pre-assault alcohol use. This is contrary to our expectations, given the low prevalence of resistance in alcohol-involved assaults. Survivors who were able to resist may have felt that it negated their pre-assault drinking, and therefore decided to disclose their alcohol use.

Finally, as expected, disclosure to police and medical professionals were both related to receiving negative alcohol-specific social reactions. This is particularly interesting because it is unlikely that a survivor would disclose to *only* a police officer and no other formal or informal support source. Skepticism by police of rape claims (Maier, 2014; Ullman, 2010), particularly in cases with pre-assault drinking, may influence how victims are treated and responded to by police and/or medical professionals. Negative reactions and treatment by police when reporting a sexual assault can influence how police are viewed in terms of legitimacy and trustworthiness (Tyler & Huo, 2002) and in turn, how likely victims are to participate in the legal process and report future crimes. Research should explore how negative alcohol-specific social reactions affect victims' perceptions of police and future reporting practices. Disclosure to a parent/step parent was the only informal support source related to more negative alcohol-specific social reactions. However, because the survey did not ask participants to link specific social reactions to specific providers, these results may reflect that survivors disclosing to a specific support source may have disclosed to more people generally, and thus received more negative reactions. We found no significant associations between support sources and positive alcohol-specific social reactions.

Implications for research and clinical practice

There are several important implications of this study's findings for research, clinical practice, and intervention. First, demographics warrant further investigation and greater education in particular appears to be related to fewer negative reactions, even in alcohol related assaults, suggesting that this is a protective factor that may be due to less endorsement of rape myths in the social networks of more educated survivors (Suarez & Gadalla, 2010) and/or greater access to more and better sources of support. Given that women who were more incapacitated during the assault received more negative alcohol-specific social reactions suggests that such victims may face higher risk of problem drinking, and need information about alcohol abuse and treatment information when seeking support from practitioners such as therapists, alcohol treatment providers, and/or sexual assault educators or advocates. Additionally, both informal and formal support providers should be educated to provide explicit non-blaming reactions to reinforce that drinking does not make survivors to blame for their assault. Such responses may facilitate better recovery and coping mechanisms, such as less self-blame and less alcohol misuse.

Disclosing to parents, stepparents, medical professionals, and police were related to negative reactions, suggesting that they believe more rape stereotypes and are important targets for education and training around the realities of alcohol-related sexual assault and the harm associated with blaming victims. Unfortunately, we cannot know whether the medical professionals or police gave these reactions and it is possible there is a third variable that caused them both to tell these formal sources and to get these kind of reactions. So, the relationship between these variables is more hypothesis generating and should be explored in future studies, and clinicians cannot give advice regarding specific support providers. More extensive assault disclosure was related to more alcohol positive reactions supporting past research (Ullman, 2010), so should be encouraged in safe spaces with supportive persons such as individual and group therapy for sexual assault survivors, 12-step women's groups where sensitive issues like trauma and sexual assault can be discussed, and online

chat/support forums where many survivors seek help. Clinicians and advocates can also help to educate those around survivors about the stigma and stereotypes surrounding women's drinking and sexual assault and help them to provide positive alcohol-specific social reactions, and avoid negative ones.

Results of this exploratory study suggest future research is needed on alcohol-specific social reactions. Our findings may differ from past research exploring alcohol-related assaults (but not alcohol-specific social reactions) that examined general social reactions only (see Littleton et al., 2009). Some results may be influenced by other variables in need of further study like PTSD symptoms, the disclosure recipient, or education level, all of which may moderate how a survivor interprets the social reactions she received. Also, perceptions of social reactions may vary depending on degree of impairment due to alcohol. Replication of these findings is needed in clinical, college, and representative community samples. Researchers should examine mediators and moderators of demographic and assault-related correlates of alcohol-specific social reactions, such as survivor symptoms and responses (e.g., self-blame, rape myth acceptance) and support seeking related variables. Findings from the current study and future research can be used to educate and train formal and informal support sources about how to respond to survivors of alcohol-related sexual assaults in ways that counteract their self-blame and encourage them to engage in adaptive coping including help seeking.

Limitations and conclusion

This exploratory study is the first to examine factors related to the decision to disclose pre-assault alcohol use in conjunction with alcohol-specific social reactions and the relationships between demographic variables, alcohol and assault-related factors, and disclosure characteristics with the new SRQ-A measure (Relyea & Ullman, 2015) in a large sample of community residing survivors. Limitations include the self-report survey and retrospective design. Memory bias may have influenced participants' reports of their assaults and reactions from others. Time elapsed since the assault and participating in this research may influence how women interpret these reactions. However, the present analysis did not yield any significance based on time elapsed since the assault took place. Nonetheless, it is still worth considering that survivors' interpretations of reactions may have changed over time. Additionally, how survivors were responded to may differ based on when the survivor disclosed assault and who she disclosed to, due to changing social attitudes over time. Despite this limitation, the present study still highlights the need to explore alcohol-specific social reactions, given the prevalence of alcohol-related assault and receipt of social reactions specific to pre-assault drinking. A second limitation concerns the SRQ-A scale. The SRQ-A scale used only two items for positive reactions which psychometric analysis revealed yielded a lower alpha due to few items, although the correlation of items was moderate, supporting the use of this scale (Relyea & Ullman, 2015). Finally, the sample was non-representative, so more research is needed to replicate these results in representatively sampled victims of alcohol-related assaults. More research is also needed to explore whether alcohol-specific social reactions differ between clinical, community, and college populations, as research suggests that college students are not blamed more when alcohol is involved (Littleton et al., 2009). Despite these limitations, this exploratory study was the first

of its kind to examine demographic, assault, and disclosure factors as predictors of survivors' decision to disclose their pre-assault alcohol use and receipt of alcohol-specific social reactions, and shows that there are factors predictive of receiving alcohol-specific social reactions warranting further study. Understanding such predictors improves our knowledge and can be useful for interventions regarding informal and formal support providers' responses to survivors disclosing pre-assault drinking. Findings can be used by clinicians working with survivors and their families to help them secure positive support and cope with and hopefully avoid receiving negative reactions specific to their drinking prior to assault.

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References

- Abbey A, Wegner R, Woerner S, Pegman J, Pierce J. Review of survey and experimental research that examine the relationship between alcohol consumption and men's sexual aggression perpetration. *Trauma, Violence, and Abuse*. 2014; 15:265–282.
- Abbey A. Alcohol-related sexual assault: A common problem among college students. *Journal of Studies on Alcohol, Supplement*. 2002; 14:118–128. DOI: 10.15288/jsas.2002.s14.118
- Abbey A, Zawacki T, Buck PO, Clinton AM, McAuslan P. Sexual assault and alcohol consumption: What do we know about their relationship and what types of research are still needed? *Aggression and Violent Behavior*. 2004; 9:271–303. DOI: 10.1016/S1359-1789(03)00011-9 [PubMed: 26500424]
- Campbell RM. The community response to rape: Victims' experiences with legal, medical, and mental health systems. *American Journal of Community Psychology*. 1998; 26:355–379. [PubMed: 9726113]
- Campbell R. What really happened? A validation study of rape survivors' help-seeking experiences with the legal and medical systems. *Violence and Victims*. 2005; 20:55–68. DOI: 10.1891/0886-6708.2005.20.1.55 [PubMed: 16047935]
- Edwards KM, Turchik JA, Dardis CM, Reynolds N, Gidycz CA. Rape Myths: History, individual and institutional-level presence, and implications for change. *Sex Roles*. 2011; 65:761–733. DOI: 10.1007/s11199-011-9943-2
- Estrich, S. *Real Rape*. Cambridge, MA: Harvard University Press; 1987.
- Fisher B, Daigle LE, Cullen FT, Turner MG. Reporting sexual assault to the police and others: Results from a national-level study of college women. *Criminal Justice and Behavior*. 2003; 30:6–38. DOI: 10.1177/0093854802239161
- Feldman-Summers S, Ashworth CD. Factors Related to Intentions to Report a Rape. *Journal of Social Issues*. 1981; 37doi: 10.1111/j.1540-4560.1981.tb01070.x
- Flack WF, Daubman KA, Caron ML, Asadorian JA, D'Aureli NR, Gigliotti SN, Hall AT, Kiser S, Stine ER. Risk factors and consequences of unwanted sex among university students: Hooking up, alcohol, and stress response. *Journal of Interpersonal Violence*. 2007; 22:139–157. DOI: 10.1177/0886260506295354 [PubMed: 17202573]
- Hayes RM, Lorenz K, Bell KA. Victim blaming others: Rape myth acceptance and the just world belief. *Feminist Criminology*. 2013; 8:202–220. DOI: 10.1177/1557085113484788
- Jordan J. Beyond belief? Police, rape and women's credibility. *Criminal Justice*. 2004; 4(1):29–59. DOI: 10.1177/1466802050404222

- Kilpatrick, DG., Resnick, HS., Ruggiero, KJ., Conoscenti, LM., McCauley, J. Drug-facilitated, incapacitated and forcible rape: A national study. Charleston, SC: Medical University of South Carolina, National Crime Victims Research & Treatment Center; 2007.
- Koss MP, Dinero TE, Seibel CA, Cox SL. Stranger and acquaintance rape: Are there differences in the victim's experience? *Psychology of Women Quarterly*. 1988; 12:1–24. DOI: 10.1111/j.1471-6402.1988.tb00924.x
- Littleton H, Grills-Tauchel AE, Axsom D. Impaired and incapacitated rape victims: Assault characteristics and post-assault experiences. *Violence and Victims*. 2009; 24:439–457. DOI: 10.1891/0886-6708.24.4.439 [PubMed: 19694350]
- Macy RJ, Nurius PS, Norris J. Responding in their best interests: Contextualizing women coping with acquaintance sexual assault. *Violence Against Women*. 2006; 12:478–500. DOI: 10.1177/1077801206288104 [PubMed: 16617172]
- Maier, S. Rape, victims, and investigations: Experiences and perceptions of law enforcement officers responding to reported rapes. New York: Routledge; 2014.
- Maurer TW, Robinson DW. Effects of attire, alcohol, and gender on perceptions of date rape. *Sex Roles*. 2008; 58:423–434.
- Norris J, Nurius PS, Dimeff LA. Through her eyes: Factors affecting women's perception of and resistance to acquaintance sexual aggression threat. *Psychology of Women Quarterly*. 1996; 20:123–145. DOI: 10.1111/j.1471-6402.1996.tb00668.x [PubMed: 25705073]
- Orchowski LM, Gidycz CA. To whom do college women confide following sexual assault? A prospective study of predictors of sexual assault disclosure and social reactions. *Violence Against Women*. 2012; 18:264–288. DOI: 10.1177/1077801212442917 [PubMed: 22531082]
- Orchowski L, Untied A, Gidycz CA. Social reactions to disclosure of sexual victimization and adjustment among survivors of sexual assault. *Journal of Interpersonal Violence*. 2013; 28:2005–2023. DOI: 10.1177/0886260512471085 [PubMed: 23300195]
- Peter-Hagene L, Ullman SE. Sexual assault characteristics effects on PTSD and psychosocial mediators: A cluster analysis approach to sexual assault types. *Psychological Trauma*. 2015; 7:162–170. DOI: 10.1037/a0037304 [PubMed: 25793692]
- Relyea M, Ullman SE. Unsupported or Turned Against: Understanding how two types of negative social reactions to sexual assault relate to postassault outcomes. *Psychology of Women Quarterly*. 2013; doi: 10.1177/0361684313512610
- Relyea M, Ullman SE. Measuring social reactions to female victims of alcohol- involved sexual assault: The Social Reactions Questionnaire-Alcohol (SRQ-A). *Journal of Interpersonal Violence*. 2015; 30:1864–1887. DOI: 10.1177/0886260514549054 [PubMed: 25253018]
- Scronce CA, Corcoran KJ. The influence of the victim's consumption of alcohol on perceptions of stranger and acquaintance rape. *Violence Against Women*. 1995; 1:241–253. DOI: 10.1177/1077801295001003004 [PubMed: 12322334]
- Starzynski LL, Ullman SE, Filipas HH, Townsend SM. Correlates of women's sexual assault disclosure to informal and formal support sources. *Violence and Victims*. 2005; 20:417–432. DOI: 10.1891/0886-6708.20.4.417 [PubMed: 16250409]
- Suarez E, Gadalla T. Stop blaming the victim: A meta-analysis on rape myths. *Journal of Interpersonal Violence*. 2010; 25:2010–2035. DOI: 10.1177/0886260509354503 [PubMed: 20065313]
- Testa M, VanZile-Tamsen C, Livingston JA. Prospective prediction of women's sexual victimization by intimate and nonintimate male perpetrators. *Journal of Consulting and Clinical Psychology*. 2007; 75:52–60. DOI: 10.1037/0022-006X.75.1.52 [PubMed: 17295563]
- Tyler, TR., Huo, YJ. Trust in the law: Encouraging public cooperation with the police and courts. New York, NY: Russell Sage Foundation; 2002.
- Ullman SE. Psychometric characteristics of the Social Reactions Questionnaire: A measure of reactions to sexual assault victims. *Psychology of Women Quarterly*. 2000; 24:257–271. DOI: 10.1111/j.1471-6402.2000.tb00208.x
- Ullman SE. A critical review of field studies on the link of alcohol and adult sexual assault in women. *Aggression and Violent Behavior*. 2003; 8:471–486. DOI: 10.1016/S1359-1789(03)00032-6
- Ullman, SE. Talking about sexual assault: Society's response to survivors. Washington DC: American Psychological Association Press; 2010.

- Ullman SE, Brecklin LR. Alcohol and adult sexual assault in a national sample of women. *Journal of Substance Abuse*. 2000; 11:405–420. [http://dx.doi.org/10.1016/S0899-3289\(00\)00036-5](http://dx.doi.org/10.1016/S0899-3289(00)00036-5). [PubMed: 11147236]
- Ullman SE, Filipas HH. Correlates of formal and informal support seeking in sexual assault victims. *Journal of Interpersonal Violence*. 2001; 16:1028–1047. DOI: 10.1177/088626001016010004
- Ullman SE, Najdowski CJ. Understanding alcohol-related sexual assaults: Characteristics and consequences. *Violence and Victims*. 2010; 35:29–44. DOI: 10.1891/0886-6708.25.1.29
- Ullman SE, Najdowski CJ. Prospective changes in attributions of self-blame and social reactions to women's disclosures of adult sexual assault. *Journal of Interpersonal Violence*. 2011; 26:1934–1962. DOI: 10.1177/0886260510372940 [PubMed: 20724295]
- Ullman SE, Filipas HH, Townsend SM, Starzynski LL. Correlates of comorbid PTSD and drinking problems among sexual assault survivors. *Addictive Behaviors*. 2006; 31:128–132. DOI: 10.1016/j.addbeh.2005.04.002 [PubMed: 15899554]

Table 1**Descriptive Statistics for Survivors of Alcohol-Involved Sexual Assault**

	N (percentage)	Range	Mean (SD)
Current age		18–69	32.60 (11.12)
Years since assault		0–50	10.96 (10.39)
Education		0–5	3.19 (.83)
Did not graduate college	225 (59.1)		
College graduate or beyond	156 (40.9)		
Race/Ethnicity – African American	90 (24.1)		
Race/Ethnicity - White	230 (61.7)		
Race/Ethnicity - Other	53 (14.2)		
Perceived life threat	135 (36.7)		
Highest level of impairment		0–3	1.06 (.85)
Not incapacitated	121 (33.3)		
Impaired	86 (23.6)		
Incapacitated	157 (43.1)		
Highest level of resistance		0–7	4.44 (2.11)
Stay still or freeze	46 (13.8)		
Nonforceful verbal	92 (27.5)		
Forceful verbal	2 (0.6)		
Nonforceful physical	157 (47.0)		
Physically fight	37 (11.1)		
Highest level of violence experienced		0–6	2.98 (1.57)
Verbal	96 (30.6)		
Physical	186 (59.2)		
Weapon	32 (10.2)		
Relationship to perpetrator (stranger)	78 (20.3)		
Disclose - Parent/step parent	133 (35.3)		
Disclose - Romantic partner/spouse	256 (68.6)		
Disclose - Family member/relative	153 (41.2)		
Disclose - Friend	327 (87.9)		
Disclose - Minister/priest/rabbi	15 (4.0)		
Disclose - Police	67 (17.8)		
Disclose - Rape crisis center staff	50 (13.4)		
Disclose - Psychiatrist/MH/counselor	154 (41.5)		
Disclose – Medical doctor/ER staff	86 (22.9)		
Timing of first disclosure since assault		1–6	2.90 (1.95)
Immediately to months after	289 (74.7)		
A year or more after	98 (25.3)		
Extent of assault detail at disclosure		1–4	2.62 (1.15)
Talked generally or with less detail	263 (68.1)		
Talked in great detail	123 (31.9)		

	N (percentage)	Range	Mean (SD)
Extent of drinking detail at disclosure		3–7	5.34 (1.41)
Talked generally or with less detail	268 (69.1)		
Talked about it in detail	120 (30.9)		

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Table 2

Correlates of Decision to Disclose and Alcohol-Related Social Reactions to Survivors Disclosing Alcohol-Related Assaults

Predictor	Decision to disclose	SRQ-Alc negative	SRQ-Alc positive
Current age	-.07	-.01	-.05
Years since assault	-.04	-.01	-.08
Education	.08 *	-.25 ***	-.13 ***
Race/Ethnicity-African American	-.02	.01	.03
Race/Ethnicity-Other	-.06	.05	.02
Perceived life threat	-.08 *	.19 ***	.00
Highest level of impairment	.20 ***	.14 ***	.18 ***
Highest level of resistance	.05 **	.05	.08
Highest level of violence experienced	.03	.20 ***	-.03
Relationship to perpetrator	-.02	-.07	.09
Disclose - Romantic Partner/Spouse/Lover	.09 *	.07	.05
Disclose- Parent/Step parent	.04	.17 ***	-.02
Disclose - Family member/relative	.03	.07	.08
Disclose - Friend	.08 *	.02	.00
Disclose - Minister/Priest/Rabbi	-.03	.04	-.02
Disclose - Psychiatrist/MH/counselor	.01	.13 ***	.02
Disclose - Medical Dr/medical person/ER staff	.04	.19 ***	.02
Disclose - Police	.02	.24 ***	.03
Disclose - Rape crisis center staff	.05	.15 ***	.00
Timing of first disclosure since assault	-.09 ***	-.07	.07
Extent of assault detail at disclosure	.75 ***	-.04	.00
Extent of drinking detail at disclosure	.16 ***	-.01	.09 *

Note.

*
 $p < .10$.

**
 $p < .05$.

 $p < .01$.

Table 3
 Hierarchical Backwards Regression Predicting Decision to Disclose, Positive and Negative Alcohol-Specific Social Reactions for Victims Disclosing Pre-Assault Drinking

	Decision to disclose			Negative reactions			Positive reactions		
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Education	.06	.02	.15***	-.19	.06	-.17***	-.22	.09	-.14***
Highest level intoxication	.07	.02	.16***	.26	.06	.23***	.38	.09	.24***
Highest level violence experienced				.08	.04	.13**			
Highest level of resistance	.02	.00	.15***						
Disclose to parent, step parent				.27	.11	.13**			
Disclose- romantic partner/spouse/lover	.07	.04	.10*						
Disclose to police				.33	.17	.12**			
Disclose to medical				.24	.14	.10*			
Extent detail at disclosure	.05	.01	.18***						
Extent alcohol use detail at disclosure							.09	.05	.10***

Note. Coefficients for backwards reduced models shown. Extent of alcohol use detail at disclosure was not included in regression models predicting alcohol use disclosure due to multicollinearity.

Dependent variable = decision to disclose alcohol use: $F(5, 289) = 7.41, p = .000, \text{adj. } R^2 = .09$. Dependent variable = negative alcohol-specific social reactions: $F(6, 250) = 11.52, p = .000, \text{adj. } R^2 = .19$.

Dependent variable: positive alcohol-specific social reactions: $F(4, 252) = 9.73, p = .000, \text{adj. } R^2 = .09$.

* $p < .10$.

** $p < .05$.

*** $p < .01$.