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Coercive sexual experiences, protective behavioral strategies, alcohol expectancies and consumption among male and female college students

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Abstract

Alcohol use and sexual assault on college campuses are highly prevalent and the focus of numerous prevention and intervention efforts. Our goals were to gain a greater understanding of the relationship between coercive sexual experiences, utilization of protective behavioral strategies, alcohol expectancies and consumption among male and female college students. We surveyed 370 college students regarding their past year experiences and found that 34% of women and 31% of men reported unwanted sexual contact, 6% of women and 13% of men reported engaging in sexually coercive behavior, and 4% of women and 9% of men reported experiencing both unwanted contact and engaging in sexually coercive behavior. Findings indicated students who experienced unwanted sexual contact reported significant differences in alcohol expectancies. More specifically those who engaged in sexually coercive behaviors had significantly higher sex related alcohol expectancies. Additionally, recipients of unwanted contact reported higher alcohol consumption, utilized fewer protective strategies when drinking, and experienced more negative consequences due to their alcohol use. Results suggest that campus alcohol and sexual assault prevention efforts should include information on alcohol expectancies and use of protective strategies.

Keywords

sexual assault; sexual aggression; protective behavioral strategies; alcohol expectancies; alcohol-related negative consequences; college men and women

INTRODUCTION

Approximately 90% of college students consume alcohol and 40% engage in episodic heavy drinking (Johnston, O'Malley, Bachman, & Schulenberg, 2007; Wechsler, Lee, Seibring,

Nelson, & Lee, 2002) which has been associated with a range of negative consequences from missing class to physical injury or death (Perkins, 2002). One of the particularly salient negative consequences of alcohol use on campus is the occurrence of unwanted sexual experiences or assault (Abbey, 2002). The prevalence of experiencing coercive sexual experiences among college women is striking with reports as high as 31% occurring within the first year (Humphrey and White, 2000). In the majority of occurrences, both the recipients of the unwanted contact and the perpetrators have been drinking (Abbey 2002; Abbey, Ross, McDuffie & McAuslan, 1996a, 1996b, Abbey, McAuslan, & Ross, 1998; Koss, 1988).

Alcohol expectancies among both parties to unwanted sexual experiences appear to have a considerable impact (Abbey, Ross, McDuffie & McAuslan, 1996b; Benson, Gohm & Gross, 2007; Corbin, Bernat, Calhoun, McNair, & Seals, 2001; Wilson, Calhoun, & McNair, 2002). Alcohol expectancies have been described as outcome expectancies held by an individual that impact alcohol consumption resulting in the behaviors or emotions expected (Jones, Corbin, & Fromme, 2001). Heavier drinkers have stronger positive alcohol expectancies (Goldman, Boca, & Darkes, 1999), and perpetrators and victims of sexually coercive behavior are heavier drinkers (Corbin, Bernat, Calhoun, McNair, & Seals, 2001; Kaysen, Neighbors, Martell, Fossos, & Larimer, 2006; Marx, Nichols-Anderson, Messman-Moore, Miranda, & Porter, 2000). Alcohol expectancy theory suggests the positive alcohol expectancies held by victims and perpetrators would work synergistically with their heavy alcohol consumption. Heavy drinking victims with positive alcohol expectancies may not perceive themselves at risk and therefore would be less likely to use protective strategies to mitigate the effects of intoxication. In turn, perpetrators who drink heavily and hold positive alcohol expectancies are less likely to engage in protective strategies as they would be expecting and seeking the positive effects of alcohol that include expectancies about alcohol and sexual situations. To the extent that alcohol consumption may increase alcohol expectancies for subscales such as liquid courage, risk and aggression or sex, this combination may be associated with heightening the risk for perpetration. This study examined alcohol expectancies, alcohol consumption, utilization of protective behavioral strategies and recent consequences of alcohol use among students who reported being victims and students who reported being perpetrators of unwanted sexual contact.

College Men: Sexual Aggression, Alcohol Expectancies, and Victimization

Among college students, alcohol has been consistently associated with risk of unwanted sexual contact or sexual assault (Abbey et al., 1996a; Muehlenhard & Linton, 1987) and occurrences involving alcohol are associated with completed rape as well as a higher degree of aggression (Abbey et al., 1996a; Testa & Parks, 1996; Ullman, Karabatos & Koss, 1999). A review by Abbey, Zawacki, Buck, Clinton and McAuslan (2004) indicated that 57% of college men reported engaging in sexually aggressive behavior. Abbey et al., (1996b) reported that almost half (47%) of college men who had reported sexually aggressive behaviors or assault had been consuming alcohol at the time of the assault. College men typically consume more alcohol per occasion than women and more alcohol in sexual situations (Abbey et al., 2001). College men who reported using sexual coercion tend to hold higher alcohol expectancies and drink more than men who do not report sexual aggression (Wilson, Calhoun, & McNair, 2002). Abbey et al. (2004) suggested that perpetrators have multiple alcohol-related outcome expectancies involving the effects of alcohol on sexuality, aggression and disinhibition.

A majority of the research conducted on those engaging in sexually aggressive behaviors ranging from unwanted touching to completed rape have focused on men as the perpetrators. Reports of unwanted sexual contact from college men has ranged from 24% in the past year (O'Sullivan, Byers, & Finkelmann, 1998), 43% since the age of 16 (Struckman-Johnson &

Struckman-Johnson, 1998) and up to 70% in the past 5 years (Fiebert & Tucci, 1998). College men were more likely to be a recipient if single, at a party, and a frequent drinker (Banyard, Ward, Cohn, Plante, Moorhead, & Walsh, 2007). Men who reported unwanted contact consume more alcohol and report more alcohol-related negative consequences (Larimer, Lydum, Anderson, & Turner, 1999). Additionally, men are less likely than women to disclose their unwanted experience with anyone or to seek support services (Banyard et al., 2007).

College Women: Unwanted Sexual Contact, Alcohol Expectancies, and Sexual Aggression

Numerous factors converge to place college women at risk for unwanted sexual contact (e.g., age, dating or party situations, alcohol use, sexual history and activity). Koss (1992) found that female victims knew the male perpetrator and the occurrence took place within the context of a date in 85% of college rape cases. Approximately 50% of female victims of unwanted sexual experiences indicated that they had been consuming alcohol at the time (Abbey et al., 1996b; Harrington and Leitenberg, 1994), and risk of sexual victimization increases with heavier alcohol consumption (Buddie & Miller, 2001; Combs-Lane & Smith, 2002; Greene & Navarro, 1998; Parks & Fals-Stewart, 2004). Female college students who have experienced unwanted sexual contact consume more alcohol and report more negative consequences due to their use (Corbin, Bernat, Calhoun, McNair, & Seals, 2001; Kaysen, Neighbors, Martell, Fossos, & Larimer, 2006; Marx, Nichols-Anderson, Messman-Moore, Miranda, & Porter, 2000).

When compared to those who have not been victimized, college women who have been victims of unwanted sexual contact also report increased alcohol-related outcome expectancies for sexual enhancement (Marx, Nicols,-Anderson, Messman-Moore, Miranda, & Porter 2000; Testa & Dermen, 1999). For example, Corbin, Bernat, Calhoun, McNair, and Seals (2001) found that women with the most severe histories of victimization expressed increased alcohol outcome expectancies involving sexual enhancement, tension reduction and global positive change that were associated with higher drinking rates, more sexual partners, and more sexual activity, all of which could place them at high risk for re-victimization. Marx, Nichols-Anderson, Messman-More, Miranda, and Porter (2000) found that women who had been victimized while under the influence of alcohol or drugs had higher alcohol outcome expectancies involving power and aggression, careless unconcern, cognitive and physical impairment, relaxation and tension reduction, sexual enhancement, social expressiveness, social and physical pleasure and global positive expectancy) and these expectancies were associated with higher quantity and frequency of alcohol use.

Research has rarely examined college women who engage in sexually coercive behavior or the impact of alcohol expectancies on their behavior. Anderson and Savage (2005) found that women indicated engaging in a similar range of sexually aggressive behavior from verbal coercion, incapacitation with alcohol or drugs, and physical force as men. Approximately 14% (Poppen & Segal 1988) to 35% (Anderson & Savage, 2005) of women report engaging in sexually coercive behavior.

Protective Strategies

One way college students may counter-act the powerful effects of alcohol expectancies is to use protective behavioral strategies. Protective strategies may include specific behaviors engaged in prior to and throughout a drinking episode such as: eating before going out, spacing out drinks over time, avoiding drinking games, and watching out for male and female friends. Research suggests that students who reported utilizing these strategies to limit intoxication also reported fewer alcohol-related negative consequences (Benton et al., 2004, Delva et al., 2004, Haines, Barker, & Rice, 2006; Walters, Roudsari, Vader, & Harris,

2007). Although women consume fewer drinks on average than men, they also utilize more protective behavioral strategies suggesting that this skill area might be expanded to include avoidance or management of high-risk sexual situations (Delva et al., 2004; Haines, Barker, & Rice, 2006; Walters, Roudsari, Vader, & Harris, 2007). The use of protective behavioral strategies may be particularly important given the relationship between alcohol expectancies, alcohol consumption, and sexual assault.

We evaluated the association between coercive sexual experiences during the past year and (a) current patterns of alcohol expectancies (b) recent use of protective strategies, recent alcohol consumption and recent consequences of drinking among male and female college students. To our knowledge, this is one of a few studies to examine alcohol expectancies among women who have engaged in sexually coercive behavior and the first study to examine the utilization of protective behavioral strategies among male and female victims and perpetrators of unwanted sexual contact. Building upon the results of previous research, we expected that after controlling for the relationship between gender and the different dimensions of drinking, victims would have higher alcohol expectancies, engage in fewer protective behavioral strategies to manage their level of intoxication, consume more drinks per week, and report more negative consequences of drinking. Similarly, we expected that after controlling for the relationship between gender and the different dimensions of drinking perpetrators would report a pattern of increased alcohol expectancies, utilize fewer protective behavioral strategies, consume more drinks per week, and experience more negative consequences.

METHOD

Participants

The sample consisted of 370 undergraduate students attending a private university located in southern Connecticut. The majority of participants were of European (77%) or African American (13%) heritage and the average age of participants was 19.6 (SD=1.5) years. Men (48%) and women (52%) were equally represented within the sample. Most students were living within a university residence hall (88%) and each undergraduate class was adequately represented (i.e. 36% freshman, 22% sophomore, 22% junior, 20% senior).

Measures

Students completed a battery of self-report measures to assess sexual experiences, expectancies, alcohol use, use of protective strategies while drinking, and negative consequences.

Unwanted sexual contact and sexually coercive behaviors were assessed with an adapted version of the Sexual Experiences Survey (SES; Koss & Oros, 1982) which asked students to report on “sexual experiences/activity” in the past year which could involve some degree of coercion or force (see Table 2 for full description of items). Sexual activity was defined as “physical behaviors ranging from touching to intercourse” to obtain a broad range of behaviors. Students were classified as: 1) having been the victim of coercive sexual behavior or not and, 2) having been the perpetrator of coercive sexual behavior.

Alcohol Expectancies were measured by the Comprehensive Effects of Alcohol scale (CEOA; Fromme, Stroot, & Kaplan, 1993). The CEOA is a 38-item measure of expectancies due to alcohol use which assesses perceived likelihood of different thoughts, feelings, and situations as well as the value (positive or negative) of the potential effects. The CEOA has good internal reliability, (alpha's range from .59-.89) and test-retest reliability in college student samples (Fromme, Stroot, & Kaplan, 1993). The seven subscales (i.e., sociability, tension reduction, liquid courage, sexuality, cognitive and behavioral impairment, risk and

aggression, and self-perception) were used to assess the different dimensions of alcohol expectancies.

Alcohol use was assessed using a modified version of the Daily Drinking Questionnaire (DDQ; Collins, Parks & Marlatt, 1985). This measure asks participants to report the number of times they drank on each day of the week in a “typical month,” then asks for the average drinking quantity for each day. A standard drink was defined as 1.5 oz. of hard liquor or liqueur, 5 oz. of wine or 12 oz. of beer. The total number of drinks per week was calculated by summing the number of drinks reported for each day.

Protective Behavioral Strategies were assessed with the Protective Strategies Questionnaire (PSQ, Palmer, 2004) which measures the degree to which participants use specific safety strategies prior to and during drinking. Sixteen items were rated on a Likert scale (0 = never, 6 = always), and example items include: “avoid drinking games,” “have a reliable designated driver,” use protection with a sexual partner,” “drink slowly in a safe environment,” and “have a plan with a friend to watch out for each other.” The scale has good internal reliability ($\alpha = .91$). A total protective strategies score was created by summing all items.

Alcohol-Related Negative Consequences were assessed using the Rutgers Alcohol Problem Index (RAPI; White & Labouvie, 1989), which asked participants to rate the frequency of occurrence of 23 items reflecting alcohol’s impact on social and health functioning over the past three months. A total score was based on the prevalence of each of 23 items.

Procedure

Students were recruited utilizing flyers distributed throughout campus and the residence halls by residence hall staff. The flyers stated: “Complete a survey: We want to understand the pattern of alcohol, tobacco, and other risky behaviors among college students.” Participation in the study involved completion of the survey packet which took approximately 20 to 45 minutes. A total of 399 students completed a packet of measures in one of two large group testing sessions held in the student union building. Among the surveys, 25 were judged to be invalid based on obvious response sets or extreme inconsistency. An additional four were excluded due to missing data for gender. Data was collected voluntarily and anonymously and the packets were distributed with a waiver of consent form on the cover of each packet that participants could remove and take with them. Students were compensated \$15 for their participation. All study procedures were approved by the institutional review boards for human subjects.

Data Analysis

Initially we examined the frequencies of unwanted sexual contact, sexually coercive behaviors, alcohol expectancies, consumption, use of protective strategies and negative consequences. In a series of preliminary analyses to test for gender differences in drinking behaviour, ANOVA was used to examine differences between men and women for alcohol expectancies, alcohol consumption, protective strategies and negative consequences. ANCOVAs were conducted comparing (a) recipients of unwanted contact with those who had no unwanted contact and (b) perpetrators of sexually coercive behavior with those who had no sexually coercive behavior. Gender was included as a covariate in all ANCOVAs.¹ We chose to make a family-wise adjustment to the alpha holding the Type 1 error rate at .05

¹A small percentage of students (i.e., 8 women and 16 men) endorsed both engaging in sexually coercive behavior and receiving unwanted sexual contact. Given that we conducted separate analyses for coercive behavior and unwanted contact we kept them in each category.

for each of the four major constructs (expectancies, use of alcohol, protective strategies, and negative consequences) and then corrected alpha for the expectancy scales (.05/7= .007).

RESULTS

As noted in Table 1, 34% of women and 31% of men reported being a victim of unwanted sexual experiences. Men more often reported engaging in sexually coercive behavior (13%) than women (6%). The most frequently occurring items for both unwanted and sexually coercive experiences involved the participant or the partner being: “so aroused that you/partner could not stop yourself/them even though you/your partner wanted to stop.” Other items endorsed among both men and women included engaging in sexual activity when they did not want to despite continual arguments and that someone had attempted sexual activity by giving them alcohol or other drugs. A chi-square conducted on gender and the experience of unwanted sexual contact was unexpectedly not significant $\chi^2(1, N = 378) = .80, p > .05$, highlighting that there were no significant differences between men and women in their report of experiencing unwanted sexual contact. However the chi-square on gender and engaging in sexually coercive behavior was significant $\chi^2(1, N = 378) = 5.53, p < .05$, highlighting that men more often reported engaging in sexually coercive behavior than women.

The ANOVAs revealed expected gender differences on drinking behaviors such that men reported more total drinks per week, $M = 23.6, SD = 19.0$, than women, $M = 16.5, SD = 17.1, F(1, 368) = 14.5, p < .001$, and more negative consequences, $M = 8.9, SD = 6.7$, than women, $M = 7.0, SD = 6.1, F(1, 368) = 8.9, p < .01$. Women reported more frequently using more protective strategies, $M = 33.4, SD = 13.3$, than men, $M = 29.7, SD = 13.3, F(1, 368) = 6.8, p < .01$. There were no gender differences for the alcohol expectancy subscales.

Table 2 presents the results of ANCOVAs done to test for differences in alcohol expectancies, consumption, protective strategies and consequences for students who had and had not been the recipient or perpetrator of unwanted sexual contact. Victims of unwanted contact reported higher expectancies for liquid courage and sex. In regard to drinking behaviors, victims reported greater alcohol consumption and negative consequences as well as utilizing fewer protective strategies. Students indicating sexually coercive behaviors expressed significantly higher expectancies for the effect of alcohol on sex and did not differ on other expectancy subscales. They reported more negative consequences than non-coercive students, but did not differ on alcohol consumption or use of protective strategies.

DISCUSSION

Students who have been the victim of unwanted sexual experiences in the past year reported a constellation of beliefs, behaviors, and negative consequences. We found no differences between men and women in regard to alcohol expectancy subscales, whereas men reported consuming more alcohol and negative consequences than women and women utilized more strategies to control their alcohol use. Consistent with research by Larimer and colleagues (1999), we did not find differences between men and women in their report of unwanted sexual contact. We found a surprisingly high prevalence of men (31%) had experienced some degree of unwanted contact in the past year and lower rates of men and women who reported engaging in sexually coercive behavior. The discordance between the rates of victimization and perpetration within our sample could be due to participants' natural reluctance to endorse engaging in some degree of sexual assault.

When we placed participants into groups based on their status as victims and perpetrators, we found that participants who reported unwanted contact expressed greater alcohol

expectancies on a few subscales, consumed more alcohol, experienced more negative consequences, and used fewer protective strategies than those who had not experienced unwanted contact. Participants who reported unwanted contact had higher expectancies on the liquid courage and sex subscales. Among victimized men and women, our findings for alcohol expectancies were consistent with prior research for increased alcohol consumption and more negative consequences (Corbin, Bernat, Calhoun, McNair, & Seals, 2001; Wilson, Calhoun, & McNair, 2002). Our study adds to the literature with regard to female victims' under-utilization of protective strategies and provides new information about male victims. Interestingly, there are a number of differences between victims and non-victims with regard to expectancies, alcohol use, negative consequences and protective strategies, whereas there were only two significant differences found between perpetrators and non-perpetrators (i.e., alcohol expectancies for the sex subscale and alcohol-related negative consequences). Based on alcohol expectancy theory we would have expected differences between perpetrators and non-perpetrators for alcohol use, expectancy subscales other than sex, and use of protective strategies.

The current report should be interpreted with caution as this was a cross-sectional assessment within one sample of undergraduate students recruited for a study on substance use and therefore there is the potential for selection bias. In addition, the sample was not large enough to adequately test gender differences between those who engaged in sexually coercive behaviors and those who have not. In addition, we only assessed unwanted sexual experiences and engaging in sexually coercive behaviors which occurred in the past year and drinking behaviors from the past three months thus our measures varied in the time periods covered and do not fully capture alcohol use during the period the participant may have experienced or perpetrated the sexually coercive behavior. However, one of the strengths of this study included the assessment of both men and women on a range of alcohol expectancies, typical alcohol consumption, use of protective strategies while drinking, negative consequences due to alcohol use as well as victimization and perpetration of unwanted sexual contact. In addition, this is the first study to examine alcohol expectancies among male victims of unwanted sexual contact and female perpetrators and their use of protective behavioral strategies.

Our findings can not address the question of whether unwanted sexual experiences may change an individual's alcohol use. However, past year victimization was related to higher rates of alcohol consumption, more negative consequences and fewer protective strategies. These factors may place vulnerable students at significantly greater risk for re-victimization. Thus, campuses prevention programs should consider emphasizing the use of protective behavioral strategies before and throughout drinking situations which may reduce the likelihood a student will experience unwanted sexual contact. In addition, an enhanced focus on sex-related alcohol expectancies and protective behavioral strategies, might help dispel myths about the effects of alcohol and sex as well as teach specific behavioral skills (i.e., protective strategies to implement before or during a drinking episode) such as drinking slowly in a safe environment, eating before you go out, alternating alcohol and non-alcohol drinks and having a plan with friends to watch out for each other. More specifically, colleges may want to consider policies mandating interventions and programs on alcohol and unwanted sexual contact be provided yearly in the residence halls and for incoming freshmen. Better knowledge of the behaviors associated with increased risk for experiencing unwanted sexual contact or assault may help students to protect themselves without feeling responsible for incurring the unwanted behavior (Abbey, Zawacki, Buck, Clinton & McAuslan, 2004).

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Table 1**Unwanted Sexual Contact and Sexually Coercive Behavior in the Past Year by Gender**

Items	Men Frequency (%)	Women Frequency (%)
<u>Unwanted Sexual Contact</u>		
1. Partner so aroused you felt it was useless to stop them even though you did not want to engage in sexual activity	29 (17)	34 (17)
2. Engaged in sexual activity with someone when you didn't want to because you felt pressured by arguments	22 (13)	30 (15)
3. Been in a situation where someone used some degree of physical force to get you to engage in sexual activity when you didn't want to whether or not intercourse occurred	2 (1)	11 (6)
4. Someone attempted sexual activity with you by giving you alcohol or other drugs but intercourse did not occur	16 (9)	26 (13)
5. Engaged in sexual activity when you didn't want to because someone gave you alcohol or other drugs	9 (5)	12 (6)
Any Unwanted Sexual Contact	55 (31)	67 (34)
<u>Sexually Coercive Behavior</u>		
6. Were so aroused that you could not stop yourself even though your partner wanted to stop	15(9)	9 (5)
7. Engaged in sexual activity with someone when they didn't want to because they felt pressured by your arguments	4 (2)	2 (1)
8. Used some degree of physical force to try to get someone to engage in sexual activity with you when they didn't want to whether or not intercourse occurred	3 (2)	0 (0)
9. Attempted sexual activity by giving someone alcohol or other drugs but intercourse did not occur	4 (2)	1 (>1)
10. Engaged in sexual activity with someone when they didn't want to by giving them alcohol or other drugs	1 (>1)	1 (>1)
Any Sexually Coercive Behavior	23 (13)	11 (6)

Note. N = 370 students for the whole sample, n = 175 male students and n = 195 female students. Values represent frequency (%) of students who indicated yes for each item.

Table 2

Results of ANCOVAs for Unwanted Sexual Contact and Sexually Coercive Behavior on Alcohol Expectancies, Alcohol Consumption, Negative Consequences and Protective Strategies with Gender as a Covariate.

	<u>No Unwanted Contact</u>		<u>Unwanted Contact</u>		<u>Not Coercive</u>		<u>Coercive</u>	
	<u>M</u>	<u>(SE)</u>	<u>M</u>	<u>(SE)</u>	<u>F</u>	<u>M</u>	<u>(SE)</u>	<u>F</u>
<u>Expectancy subscales</u>								
Social	3.28 (.04)		3.41 (.06)		3.94	3.32 (.03)	3.39 (.11)	.49
Tension Reduction	2.84 (.04)		2.67 (.06)		4.67	2.78 (.04)	2.77 (.12)	.01
Liquid Courage	2.57 (.05)		2.85 (.07)		11.26***	2.64 (.04)	2.90 (.14)	3.43
Sex	2.37 (.05)		2.68 (.08)		11.33***	2.44 (.05)	2.85 (.15)	7.13**
Impairment	2.61 (.04)		2.61 (.05)		.01	2.61 (.03)	2.66 (.10)	.35
Risk/Aggression	2.42 (.05)		2.62 (.07)		6.01	2.47 (.04)	2.59 (.13)	.78
Self Perception	2.15 (.05)		2.13 (.07)		.03	2.14 (.04)	2.16 (.14)	.02
Total drinks per week	18.25 (1.14)		23.33 (1.63)		6.46*	19.89 (.99)	20.28 (3.21)	.01
Negative consequences	6.97 (.40)		9.53 (.57)		13.71***	7.59 (.34)	10.11 (1.11)	4.64*
Protective strategies	32.90 (.84)		28.74 (1.19)		8.13**	31.74 (.72)	29.34 (2.34)	.95

Note. Values represent mean and standard error adjusted for gender as a covariate.

* p < .05.

** p < .01.

*** p < .001.