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Men's Alcohol Intoxication and Condom Use during Sexual Assault Perpetration

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Abstract

We assessed the association between alcohol consumption and condom use during penetrative sexual assault acts perpetrated by young adult men. Men aged 21–35 who reported inconsistent condom use and heavy episodic drinking ($N = 225$) completed a questionnaire assessing their perpetration of sexual assault since the age of 15, their consumption of alcohol prior to these acts, and their use of condoms during acts involving penetration. Descriptive statistics and, Pearson's chi-square tests were used to examine the simultaneous use of alcohol and condom non-use during penetrative sexual assault acts. Over one-third of the respondents reported at least one penetrative sexual assault perpetration 35.6% ($n = 79$). Condoms were not used in 70.0% of penetrative sexual assaults. When they had consumed alcohol, perpetrators were significantly less likely to use condoms. The sexual assaults reported by this sample typically consisted of perpetrator alcohol consumption and the non-use of condoms. Programs targeting sexual health and assault risk reduction would be enhanced by addressing this interplay of alcohol, violence, and risk.

Keywords

Sexual assault; condoms; alcohol; risky sexual behavior

Despite prevention efforts, sexual assault remains a widespread public health concern in the United States, with approximately 300,000 women being raped each year (Tjaden & Thoennes, 2006). In addition to its negative mental health consequences, sexual assault is associated with adverse effects on women's sexual and reproductive health. Studies of global-level associations indicate that women with a history of sexual assault victimization report increased somatic complaints, including dysmenorrhea, menorrhagia, and sexual dysfunction (Golding, Wilsnack, & Learman, 1998) and also have elevated rates of sexually transmitted infections (STIs; Reynolds, Peipert, & Collins, 2000). Although it is difficult to determine the risk of acquiring an STI specifically from a sexual assault, studies estimate that sexual assault involving penile penetration results in 3–20% of victims acquiring an STI (Jenny et al., 1990; Tjaden & Thoennes; McFarlane et al., 2005). Additionally, approximately 5% of victims that are of reproductive age become pregnant from their assault; however, this rate rises to up to 20% when sexual assault within intimate relationships is included (Holmes, Resnick, Kilpatrick, & Best, 1996; McFarlane et al.).

Although the use of a male latex condom during penetrative sexual assault may decrease the risk of both STI transmission and unwanted pregnancies, studies indicate that penetrative sexually aggressive acts often do not involve condom use (Davis, Schraufnagel, George, &

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Norris, 2008; Peterson, Janssen, & Heiman, 2010; Raj et al., 2006). Moreover, men who self-report perpetration of sexual violence present an elevated STI transmission risk to their victims due to their greater number of sexual partners and less frequent condom use during consensual vaginal and anal sexual intercourse (Peterson et al., 2010; Raj et al., 2006). As these research findings make clear, elevated sexual risk on the part of the perpetrator coupled with unprotected sexual assault further increase the sexual and reproductive health risks to sexual assault victims. Of course, simply encouraging perpetrators to use condoms during the commission of sexual assault is not sufficient for addressing these risks; sexual assault prevention programs must continue their efforts to reduce the overall incidence of sexual assault. It is hoped, however, that research investigating the overlapping risks involved in unprotected sexual assault may provide key information regarding potential risk factors that may ultimately serve as fruitful targets for intervention.

One such risk factor is alcohol consumption, which is often present in incidents of unprotected sex (George & Stoner, 2000; Cooper, 2006), as well as the majority of sexual assaults (Testa, 2002). Although these associations are well-established, there has been little study of the relationship between alcohol consumption and the use or non-use of condoms during sexual assault. In a previous study, we examined the use of alcohol and condoms during sexual assault with a community sample of young heterosexual male social drinkers (Davis et al., 2008). Findings indicated that the majority of sexual assault perpetrators reported consuming alcohol and not using condoms (or using them inconsistently) during their assault perpetration. Additionally, perpetrator alcohol consumption and condom non-use were significantly globally correlated for forcible rape: the more frequently men drank prior to or during forcible rape acts, the greater their frequency of not using a condom during these acts. These analyses were conducted at the perpetrator-level; act-level relationships regarding alcohol consumption and condom non-use within the same assaultive act were not addressed in that study.

The goal of the present research was to contribute to the current literature by not only attempting to replicate theDavis et al. (2008) findings with a larger community sample of men at elevated sexual risk, but also to expand our understanding of alcohol-related unprotected sexual assault by examining these relationships at the act level. We hypothesized that the majority of reported sexual assaultive acts would involve alcohol consumption by the perpetrator and that the majority of penetrative sexual assault acts would not involve condom use. We also hypothesized an act-level relationship between perpetrator alcohol consumption and condom non-use such that acts involving alcohol would be less likely to include the use of a condom.

Methods

Study Design

The present study reports data gathered from questionnaires which were administered as part of a larger experimental study. Measures that assessed demographics, sexual assault perpetration, and alcohol and condom use during sexual assaults were administered to every participant, without regard to their experimental cell assignment. All procedures and protocols were approved by the University of Washington Institutional Review Board.

Participants

Single men ($N = 225$) were recruited through advertisements in a local weekly free newspaper, a campus newspaper, public fliers, and online bulletin boards (e.g. Craigslist). Advertisements stated that the study was recruiting single male “social drinkers” and that it would investigate “decision-making.” Inclusion requirements consisted of (a) being a man

between the ages of 21 and 35; (b) being interested in a sexual relationship with a woman; (c) being a social drinker; (d) having had at least one heavy drinking episode (defined as having consumed 5 or more drinks on one occasion) in the past six months; and (e) having had sexual intercourse without a condom at least once in the past twelve months. Exclusion criteria consisted of (a) being in a steady, committed relationship with a woman; (b) current or historical problem drinking as defined by a score of five or higher on the Brief Michigan Alcoholism Screening Test (Pokorny, Miller, & Kaplan, 1972); or (c) having an alcohol contraindication such as a health condition or medication regimen.

Measures

Demographic and Drinking Sample Characteristics—Using a questionnaire created for this project, data were gathered regarding participants' age, ethnicity, race, student status, and income. Typical alcohol consumption levels were assessed using a drinking calendar and history questionnaire (Collins, Parks, & Marlatt, 1985). Quantity and frequency of their typical weekly alcohol consumption over the prior month were assessed. Table 1 presents the demographic characteristics and the typical weekly alcohol consumption patterns of the sample.

Modified Sexual Experiences Survey (MSES)—This 61-item questionnaire is a modified version of Koss and Oros's (1982) original Sexual Experiences Survey (SES). Among men, the MSES is used to assess sexual aggression perpetration since the respondent turned 15 years old. Items assessed participants' self-reported engagement in the following sexually aggressive acts: *forced sexual contact* (unwanted kissing, fondling, or genital touching), *verbal sexual coercion* (unwanted sexual intercourse obtained through verbal means), *incapacitated rape* (victim was incapacitated by drugs or alcohol), *attempted rape* (unsuccessful attempts to force sexual intercourse), and *forcible rape* (forced unwanted sexual intercourse). Our modifications allowed for the assessment of alcohol consumption during any sexually aggressive act and for condom use during sexually aggressive acts that involved penetration. For each type of assault a participant endorsed engaging in, he was given follow-up questions regarding whether or not he had consumed alcohol prior to or during these acts and, if alcohol was consumed, the number of drinks that were usually consumed during that type of assault. Further, for each act that was endorsed, we also assessed the number of times the participant did not use a condom (only for acts involving penetration). Of note, some of these sexually assaultive acts (i.e. specific sexually aggressive behaviors) may have occurred during the same assault incident (i.e. a distinct sexual assault event that could include multiple sexually aggressive acts). For example, a respondent who reported perpetrating an act of forced sexual contact and an act of forcible rape may have committed both of these assaultive acts against the same victim during a single assault incident. Please seeDavis et al. (2008) for a more complete description of the MSES.

Procedure

Participants for this study were recruited using the convenience sampling procedures listed above. Interested potential participants called the laboratory, were given additional information about the nature of the study, and were screened for eligibility. Upon their arrival at our laboratory, the participant was greeted by a male experimenter who escorted him to a private office and guided him through the process of informed consent. The participant was oriented to the computer, asked to notify the experimenter when he had finished, and left to complete all questionnaires privately. Upon completion of the study, the participant was debriefed and compensated for his time.

Data Analysis

Descriptive analyses were conducted to examine self-reported perpetration rates, as well as condom use and alcohol consumption during sexual assault perpetration. The relationship between 1) condom involvement and assault type and 2) alcohol involvement and assault type was assessed using Pearson's chi-square tests. The relationship between assault type and average number of drinks consumed during that assault type was tested through paired sample *t*-tests. Descriptive statistics and Pearson's chi-square tests were conducted to examine the simultaneous use of alcohol and condom non-use during penetrative sexual assault acts. Finally, repeated measures *t*-tests were conducted to examine the use of alcohol and condoms among repeat perpetrators, using perpetrators, rather than sexual assault acts, as the unit of analysis. Repeat perpetrators were defined as respondents who had perpetrated the same type of assaultive act more than once, thus assuring that they had perpetrated sexual aggression during at least two separate assault incidents.

Results

Sexual Assault Perpetration

Over half of the respondents reported some form of sexual assault perpetration (52.7%; $n = 117$). Forced sexual contact was reported by 33.8% ($n = 75$) of respondents, sexual coercion was reported by 18.1% ($n = 40$), attempted rape was reported by 10.4% ($n = 23$), incapacitated rape was reported by 20.0% ($n = 44$), and forcible rape was reported by 10.8% ($n = 24$) of respondents. Respondents were permitted to endorse more than one form of sexual assault.

When categorized for the most severe type of assault perpetrated (i.e. rape, attempted rape, sexual coercion, forced sexual contact, in descending order of severity; Koss, Gidycz, & Wisniewski, 1987), 26.6% ($n = 59$) of respondents reported perpetration of rape (either incapacitated or forcible); 2.3% ($n = 5$) reported attempted rape but not forcible rape; 8.2% ($n = 18$) of respondents reported perpetration of sexual coercion, but not rape or attempted rape; 15.9% ($n = 35$) of participants reported perpetration of forced sexual contact, but not rape, attempted rape, or coercion.

Repeat perpetration of any sexual aggression was reported by 69.2% ($n = 81$) of perpetrators. We summed the number of sexual assault acts reported across the entire sample. Perpetrators ($n = 117$) reported committing a total of 686 sexually aggressive acts, ranging from 1 act ($n = 25$) to 35 acts ($n = 1$).

Condom Use during Sexual Assault

At least one act of sexual aggression involving penetration (e.g. sexual coercion, incapacitated rape, forcible rape) was reported by 35.6% ($n = 79$) of participants. Table 2 shows condom use by sexual assault type, summing across all respondents. Type of assault was not related to the use of a condom ($\chi^2(2) = 5.18$, $p = .075$).

Alcohol Consumption during Sexual Assault

Table 3 shows alcohol consumption by sexual assault type, summing across all respondents. Type of assault was related to the presence or absence of alcohol ($\chi^2(4) = 49.23$, $p < .001$), in that incapacitated rapes were positively associated with alcohol consumption by the perpetrator ($z = 3.88$). No other assault types were significantly associated with the presence or absence of perpetrator alcohol consumption. Average numbers of drinks consumed by perpetrators during their assaultive acts are also presented in Table 3. A repeated measures ANOVA indicated that the average number of drinks consumed across the five assault types were not significantly different, $F(4, 85) = 2.40$, p = .057.

Table 4 shows the correlations between typical alcohol consumption during each assault type and current weekly drinking averages. These correlations are statistically significant for overall assaults, forced contact, and verbal coercion (all p's < .001), but are not significant for attempted, incapacitated, or forcible rape (all p's > .08).

Simultaneous Condom Non-Use and Alcohol Consumption during Perpetration

Act-Level Analysis—Out of 307 sexual aggression acts involving penetration, 51.5% (n = 158) simultaneously involved alcohol and condom non-use. Among sexual coercion acts, 50.5% (n = 55) involved alcohol and condom non-use. Among incapacitated rapes, 56.7% (n = 72) involved alcohol and condom non-use. Among forcible rapes, 43.7% (n = 31) involved alcohol and condom non-use.

Table 5 shows chi-square tests of association between alcohol and condom non-use, overall and separated by assault type. Across all acts and for sexually coercive acts, condom non-use was significantly associated with alcohol consumption. However, there was no association between alcohol and condom non-use for incapacitated rape, perhaps owing to the fact that 88% of these acts involved the perpetrator consuming alcohol. There was also no association for forcible rape, again, possibly owing to the high rates of condom non-use in this type of act (76%).

When examining the percentages, Table 5 appears to show a relatively uneven split between condom use and non-use among respondents who drank alcohol, but a relatively even split among those who were sober. Within each alcohol group for each assault type, we conducted post hoc chi-square tests to ascertain whether the split between condom use and non-use was significantly different from 0.5 (i.e. one-half of the acts involve condom use and one-half do not). As expected, when alcohol was involved, respondents were less likely to use a condom across all types of assaults (all p's < 0.005). In contrast, only forcible rape had a detectably higher condom non-use rate than expected when alcohol was not involved, $\chi^2(1) = 5.12$, $p = .02$.

Perpetrator-Level Analysis—The previous analyses treat all acts as independent from one another, an assumption which is violated for repeat perpetrators. To address this problem, we conducted similar co-occurrence analyses using repeat perpetrators as the unit of analysis. For each repeat perpetrator (n=79), we computed four proportions: 1) the number of times he consumed alcohol and did not use a condom/total penetrative assaults; 2) the number of times he consumed alcohol and did use a condom/total penetrative assaults; 3) the number of times he did not consume alcohol and did not use a condom/total penetrative assaults; 4) the number of times he did not consume alcohol and did use a condom/total penetrative assaults. We then computed repeated measures t-tests comparing the average proportion of assaults involving alcohol consumption but no condom use to each of the other three proportions.

Repeat perpetrators reported that a higher proportion of their penetrative assaults involved alcohol and condom non-use (M = .404, SD = .444) as compared to their sober, condom non-use assaults (M = .205, SD = .364, $t(78) = 2.685$, $p = .009$) and as compared to their sober, condom-using assaults (M = .141, SD = .327, $t(78) = 3.673$, $p < .001$). However, repeat perpetrators were only marginally more likely to consume alcohol and not use a condom than to consume alcohol and use a condom (M = .250, SD = .390, $t(78) = 1.956$, p = .054).

Discussion

Our hypotheses regarding alcohol consumption, condom non-use, and the co-occurrence of the two during acts of sexual assault perpetration were supported. As hypothesized, we found that over half (61.2%) of all reported sexual assaults involved alcohol consumption by the perpetrator. Moreover, results indicated that the majority (70.0%) of penetrative sexual assaults did not involve condom use. Finally, both act-level and perpetrator-level analyses supported the hypothesis that penetrative sexual assaults were significantly less likely to involve condom use when the perpetrator had consumed alcohol.

The association between alcohol and condom non-use during sexual assault was largely consistent in this study. However, the mechanisms that underlie this association require further research. Prior research has suggested two primary pathways that may undergird the association between alcohol and condom non-use during sexual assaults. The first of these pathways involves the deleterious effects of alcohol consumption on cognitive decision-making processes (referred to as Alcohol Myopia Theory; Steele & Josephs, 1990). According to Alcohol Myopia Theory, the pharmacological effects of alcohol result in cognitive deficits that impair one's ability to make safer sexual decisions. Because these alcohol-induced cognitive impairments have been related to both sexual assault perpetration (Testa, 2002) and to unprotected sexual behavior (Davis, Hendershot, George, Norris, & Heiman, 2007), interventions that reduce men's alcohol consumption may ultimately also decrease their perpetration of unprotected sexual assaults.

The second of these alcohol-related pathways involves the beliefs that individuals maintain about alcohol's effects (referred to as Alcohol Expectancy Theory; MacAndrew & Edgerton, 1969). According to Alcohol Expectancy Theory, individuals' expectations about the effect of alcohol on their behavior then guides said behavior during states of intoxication. Thus, individuals who expect alcohol to increase their aggressivity or sexual riskiness are more likely to engage in these types of behaviors when intoxicated; a supposition borne out by prior studies (Abbey, McAuslan, Ross, & Zawacki, 1999; Dermen & Cooper, 1994). Men with stronger alcohol expectancies regarding both sexual risk and aggression may therefore be at the greatest risk of perpetrating alcohol-involved sexual assault without a condom and thus may be a particularly important group towards whom to target intervention efforts.

It is important to note however, that for forcible rape, condom non-use was more likely than expected even in situations that did *not* involve alcohol. Thus, research investigating potential risk factors other than alcohol consumption in the perpetration of unprotected sexual assaults is also clearly warranted. For example, one study found that slightly over one-third of young men in a nationwide sample reported having used coercive or forceful tactics to avoid using a condom during sexual intercourse (Davis & Logan-Greene, in press). There was a direct association between men's misogynistic attitudes and use of coercion to obtain unprotected sex, indicating that men's attitudes about women and gender roles may be a key component in understanding not only sexual assault generally (Malamuth, Sockloskie, Koss, & Tanaka, 1991), but also sexual assault that does not involve condom use specifically. Moreover, attitudes about condom use, as well as personality factors such as sexual sensation seeking, have both been related to general condom non-use (Kalichman & Cain, 2004; Sheeran, Abraham, & Orbell, 1999) and coerced condom non-use (Davis & Logan-Greene). Thus, both attitudinal and personality factors may be useful for identifying men most in need of intervention efforts.

Because the present research only examined sexual assault situations, we do not know to what extent the current findings regarding the relationship between alcohol consumption and condom non-use would generalize to our participants' consensual sexual behaviors. Future

research exploring the ways in which these associations may differ between consensual and non-consensual relationships is needed. Moreover, it is quite likely that the conjunction of alcohol, sexual risk, and sexual aggression varies based on situational factors, as well as individual men's particular combination of risk factors (Logan-Greene & Davis, 2011). In particular, future research would do well to examine the utility of dispositional latent constructs that may underlie alcohol-involved unprotected sexual assaults given that several dispositional factors (e.g. impulsivity, sensation seeking) have been related to all of the behaviors under consideration in this study, namely condom non-use, sexual aggression, and heavy alcohol consumption (e.g. Davis & Logan-Greene, in press; Hendershot, Stoner, George, & Norris, 2007; Zawacki, Abbey, Buck, McAuslan, & Clinton-Sherrod, 2003). Such research could inform our knowledge about risk profiles specific to the perpetration of alcohol-involved unprotected sexual assault, thereby fostering the development of sexual assault prevention efforts that are appropriately targeted and effectively tailored for particular groups of men.

Limitations

It is important to note that the high rates of sexual assault perpetration reported in this study are not necessarily reflective of those in the more general male population given that our alcohol and sexual risk-related eligibility criteria selected for men at risk of committing alcohol-involved sexual assault. Additionally, the data provided here are not only subject to recall biases due to their retrospective nature regarding assaults that may have occurred several years prior, but are also survey-based and can thus only provide evidence for variable associations rather than causal linkages. Finally, data from the current study do not capture the victim's alcohol intoxication level and therefore cannot speak to its relevance to condom use during penetrative sexual assault.

Implications & Conclusions

Despite advances in sexual assault prevention efforts, young male social drinkers' reported rates of sexual assault perpetration remain high, necessitating continued diligence in our research and prevention efforts. Although the present study cannot ascertain the rates at which the reported assaults may have resulted in unwanted pregnancies or STI transmissions, the possible sexual health risks for the victims involved were likely exacerbated by the low rates of condom use during these assaults. These findings further substantiate current clinical recommendations to provide emergency contraception and STI prophylaxis as a standard of care for rape victims (Luce, Schrager, & Gilchrist, 2010). Moreover, they underscore the need for continued research on the associations among alcohol, sexual risk-taking, and sexual aggression. Greater knowledge regarding the ways in which these associations may vary for men with certain risk profiles or across different situational contexts would facilitate a more nuanced, targeted, and – hopefully - effective approach to sexual assault prevention.

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Table 1

Participant characteristics (N=225).

	M	SD	Median
Age (years)	25.5	3.5	24.98
Number of drinks per week	18.5	11.6	16
	Number	**% of sample**	
Race			
African American	20	9.1	
European American	154	70.3	
Asian American	14	6.4	
Native American/Alaska Native	4	1.8	
Native Hawaiian/Pacific Islander	1	0.5	
Multiracial/Other	26	11.9	
Ethnicity			
Latino	20	9	
Not Latino	205	91	
Student status			
Yes	79	35.4	
No	144	64.6	
Annual income (household)			
≤ $10,999	45	20.5	
$11,000–$20,999	57	25.9	
$21,000–$30,999	39	17.7	
$31,000–$40,999	19	8.6	
$41,000–$50,999	12	5.5	
$51,000–$60,999	10	4.5	
≥$61,000	38	17.3	

Table 2

Condom Use by Sexual Assault Type

Type of Sexual Assault	Sum of Acts n	Condom Non-Use n (%)
All	307	215 (70.0%)
Coercion	109	81 (74.3%)
Incapacitated rape	127	80 (63.0%)
Forcible rape	71	54 (76.1%)

Table 3

Alcohol Consumption by Sexual Assault Type

Type of Sexual Assault	Sums of Acts n	Alcohol Involved n (%)	Number of Drinks Consumed M (SD)
All	686	420 (61.2%)	3.83 (4.34)
Forced sexual contact	319	180 (56.4%)	3.29 (3.38)
Coercion	109	61 (56.0%)	2.90 (4.23)
Attempted rape	58	28 (48.3%)	2.98 (3.17)
Incapacitated rape	127	112 (88.2%)	5.86 (5.29)
Forcible rape	73	29 (53.4%)	2.71 (2.94)

Table 4

Correlation between Mean Number of Drinks in Past Assaults and Current Drinks per Week

Type of Sexual Assault	r with Number of Drinks for a typical week	Sig. (2-tailed)	n
All	0.310	0.001	116
Forced sexual contact	0.319	0.006	74
Coercion	0.471	0.002	40
Attempted rape	0.184	0.400	23
Incapacitated rape	0.267	0.080	44
Forcible rape	0.217	0.308	24

Table 5

Measures of Association between Alcohol and Condom Non-use

Overall:		
	Condom	**No Condom**
Alcohol	53 (17.3%)	158 (51.5%)
No Alcohol	39 (12.7%)	57 (18.6%)
$\chi^2(1) = 7.56$, $p < .001$ ($N = 307$)		
Verbal coercion:		
	Condom	**No Condom**
Alcohol	6 (5.5%)	55 (50.5%)
No Alcohol	22 (20.2%)	26 (23.9%)
$\chi^2(1) = 18.23$, $p < .001$ ($N = 109$)		
Incapacitated rape:		
	Condom	**No Condom**
Alcohol	40 (31.5%)	72 (56.7%)
No Alcohol	7 (5.5%)	8 (6.3%)
$\chi^2(1) = 0.680$, $p = .409$ ($N = 127$)		
Forcible rape:		
	Condom	**No Condom**
Alcohol	7 (9.9%)	31 (43.7%)
No Alcohol	10 (14.1%)	23 (32.4%)
$\chi^2(1) = 1.370$, $p = .242$ ($N = 71$)		

Note: Observed frequencies (Cell-wise percentages in parentheses), and Pearson chi-square tests.