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Alcohol Use, Condom Use and Partner Type among Heterosexual Adolescents and Young Adults*

M. LYNNE COOPER, PH.D., AND HOLLY K. ORCUTT, PH.D.*

Department of Psychology, University of Missouri-Columbia, Columbia, Missouri 65211

ABSTRACT. Objective: The present study examined the links between alcohol use and condom use, and the nature of the sexual relationship in which these behaviors occurred, and tested the notion that partner type suppresses the negative, direct effects of alcohol use on condom use. Method: Data were collected as part of face-to-face interviews conducted with 1,417 (54% female) randomly selected young adults (aged 18-25 years) who had had sex in the past 6 months. Results: Using within-subjects analytic procedures, results showed that both drinking and condom use were more common with casual than with serious sexual partners, as expected. Moreover, consistent with the suppression hypothesis, the relationship between alcohol use and condom use became significant and negative only after controlling for partner type. Conclusions: These findings suggest that the interrelationships among partner type, alcohol use and condom use are complex and that the processes linking each pair of variables are best understood as part of a larger system of interconnected variables. (J. Stud. Alcohol 61: 413-419, 2000)


Drinking in sexual situations has been identified as one potentially important influence. According to alcohol myopia theory (Steele and Josephs, 1990), alcohol reduces the capacity to fully process relevant cues related to decision making. Consequently, the intoxicated individual who is about to have sex may focus on a smaller number of highly salient cues, such as sexual arousal, and fail to process more distal, less easily accessed cues, such as the possibility of contracting an infection. As a consequence, riskier decisions, such as having sex without a condom, are thought to be more likely. Despite the logic of this model, support for alcohol effects on condom use is mixed at best (Cooper, 1992; Leigh and Stall, 1993). The present study explores one plausible explanation for the weakness of this link—namely, that the type of relationship in which these behaviors are most likely to co-occur suppresses (Bollen, 1989) the influence of alcohol use on condom use.

Research consistently indicates that condom use is less common with a regular or primary sexual partner than with a casual partner, presumably because casual partners are seen as more risky. This finding holds for adolescents and adults, for heterosexuals and homosexuals, across ethnic/racial lines and in general population and more specialized convenience samples (see Misovich et al., 1997, for a review). Although less well researched, a robust positive association has also been found between having a casual partner and drinking proximal to intercourse (Baker et al., 1995; Sheldt and Windle, 1996). Of course, it is unclear whether drinking and casual sex go together (1) because an intoxicated individual is more likely to have sex with a casual partner; (2) because people who want to have sex with a casual partner drink to increase the likelihood of intercourse or to provide an excuse for having intercourse; or (3) because people are likely to drink and meet casual sex partners in the same settings (Cooper, 1992). The nature of the underlying causal relationship is secondary to our immediate purposes, however, because all three explanations have the same statistical implications for the link between alcohol use and condom use. As illustrated in Figure 1, each model suggests that the alcohol-condom use relationship is composed of a negative direct effect and a positive indirect (Model A) or spurious (Models B and C) effect. Specifically, Model A indicates that drinking alcohol increases the probability of having sex (e.g., by disinhibiting behavior) with a casual partner, which in turn increases the likelihood of using a condom. Thus, according to Model A, the total relationship between alcohol use and condom use includes a positive indirect effect of alcohol via partner status. In contrast, Model B indicates that having a casual

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*Holly K. Orcutt is with the Women’s Health Science Division, National Center for Posttraumatic Stress Disorder, Boston Veterans Affairs Medical Center, Boston, MA.
partner increases the likelihood that alcohol will be consumed (possibly as a result of pre-existing expectancies), and that a condom will be used. In this case, part of the relationship between alcohol use and condom use is due to the prior common (i.e., spurious) influence of having a casual partner on both alcohol and condom use. Finally, Model C indicates that part of the relationship between alcohol use and condom use is due to the fact that both drinking and opportunities to meet casual partners co-occur in certain types of settings (e.g., in bars or at parties). Thus, according to Model C, part of the alcohol-condom use link is spurious owing to the co-occurrence of drinking and casual partners in a common setting.

To the extent that any of these situations hold, the positive indirect or spurious effect if not controlled could obscure the deleterious direct effects of drinking on condom use. (See Bollen, 1989, and Tzelgov and Henik, 1991, for contemporary interpretations of suppressor models similar to those offered here.) Thus, the primary purpose of the present study was to examine links between partner type, alcohol use and condom use, and to estimate the relationship between alcohol use and condom use while controlling for partner type. To the extent that partner type suppresses the relationship between alcohol use and condom use, controlling for partner type should increase the magnitude of the correlation between these two behaviors.

A second purpose of the present study was to conduct a stronger test of the relationships between partner type and condom use, and between partner type and alcohol use. The majority of studies examining these links have used between-subjects designs in which rates of alcohol use and condom use were compared among individuals having more intimate versus less intimate sexual partners. Because such individuals are likely to differ in a variety of ways (Dolcini et al., 1993), differences in alcohol use and condom use cannot be unambiguously attributed to underlying differences in the relational context in which these behaviors occurred.

Only five studies that examined partner type and condom use using a within-subjects design have been identified (Baker et al., 1995; Hunt et al., 1993; Scheidt and Windle, 1996; Soskolne et al., 1991; Van Oss Marin et al., 1993);
and only two of these (Baker et al., 1995; Scheidt and Windle, 1996) also assessed alcohol use. Although these studies permit stronger causal inference than between-subjects studies, they are few in number, more equivocal in their findings and, as a group, have relied on the use of high-risk samples (e.g., STD clinic patients, alcoholics), thus raising questions about the generalizability of their results. The present study, therefore, examined the links between partner type and alcohol use and condom use using within-subjects data from a representative community sample of sexually active young adults.

Method

Sample and procedures

Data for the present study were obtained from the second wave of a longitudinal study of young adults interviewed in 1989-90 and again in 1994-95. (At Time 1 sexual behavior was not assessed separately for casual and serious partners.) As described in earlier publications (Cooper and Orcutt, 1997; Cooper et al., 1994), random-digit-dial techniques were used to identify a sample of 2,544 young adults, aged 13 to 19, within the city limits of Buffalo, NY. Interviews were completed with 2,052 eligible teens (81% completion rate) at Time 1 (T1), and 1,814 of these individuals (88% of the T1 sample) were reinterviewed 4.5 years later. Face-to-face computer-assisted interviews were conducted using a structured interview schedule. More sensitive questions, including those used in the present study, were self-administered. Average interview length was 2.5 hours, and respondents were paid $25 for their participation. Data for the present study were obtained from a subset of respondents who had had sex in the past 6 months, and had complete data on all variables (n = 1,414). Included respondents were 21.5 years old on average, 54% were female and 46% were black.

Measures

As shown in Figure 2, a detailed description of each person’s sexual experiences in the past 6 months was obtained for their partner(s) or partner types. Respondents with one (n = 916) or two partners (n = 235) were asked a set of seven questions about the nature of the relationship with each partner and about his or her experiences with that partner. Because of pragmatic considerations (e.g., fatigue effects), respondents with three or more partners (n = 263) did not provide detailed information on all sexual partners, but instead provided information on up to two partners or partner types. Following these procedures, we obtained

![Flow chart describing data structure for condom use and alcohol use assessments](image-url)
1,874 discrete reports of sexual experiences with individual partners, or categories of partners who were considered similar in terms of their intimacy levels.

**Partner type.** A grouping variable was created among the subset of respondents having two partners or two different partner types (n = 460) to indicate whether (1) both were casual (n = 148), (2) both were serious (n = 32), or (3) one was casual and one was serious (n = 280). Each of the 460 individuals in this subset contributed two discrete reports of sexual experiences with individual partners or partner types, thus yielding a total of 920 reports for use in the within-subject analyses. Of these 920 reports, 695 were reports for an individual partner and 225 were reports aggregated across two or more partners whom the respondent considered similar in terms of intimacy level.

Partners were designated as casual or serious in one of two ways. First, those describing a single partner described their relationship with that partner the last time they had sex, using a 1 to 7 scale, where 1 = someone you had just met that day or evening and 7 = your husband or wife. For analytic purposes, casual partners were partners the respondent had just met, or casual acquaintances, friends, or dates; serious partners were close friends, serious dating partners, boy/girlfriends, fiancé(e)s or spouses. Remaining respondents (all of whom had ≥ 3 partners) were presented with operational definitions of casual and serious partners, and asked to assign each partner to one of the two categories. For this purpose, casual partners were defined as short-term partners in whom the respondent had a primarily sexual interest; serious partners were described as individuals to whom the respondent felt some degree of emotional commitment, or in whom he or she had a potentially long-term romantic interest.

**Frequency of condom use.** Respondents rated the frequency of condom use with each individual partner or category of partners, on a scale ranging from 1 to 6, where 1 = none of the time and 6 = every time the respondent had sex with that partner or category of partners.

**Frequency of drinking proximal to intercourse.** Respondents were asked to indicate the frequency of drinking alcohol prior to sex with each individual partner or category of partners, on a scale ranging from 1 to 7, where 1 = none of the time and 7 = every time the respondent had sex with that partner or category of partners.

### Results

**Partner type, alcohol use and condom use**

To examine whether partner type was associated with frequency of using condoms and drinking, two repeated measures ANCOVAs were conducted using the condom use and alcohol use frequency variables as the within-subjects factors and the three-level grouping variable (i.e., two casual, two serious, or one casual/one serious partners) as the between-subjects factor. Demographic (gender, age, race) and experiential (lifetime alcohol use, drug use, number of sex partners) variables were controlled. Support for our hypothesis would be indicated by a significant Group × Change interaction. If, as expected, condom use and alcohol use covary as a function of partner type, levels of use should differ across individuals having one casual and one serious partner, but not across those having either two casual or two serious partners.

Consistent with expectation, we obtained a significant Group × Change interaction (F = 8.0, 2/457 df, p < .001) for condom use. As shown in Figure 3 (top panel), respondents who had both serious and casual partners used condoms significantly more often when they had sex with a casual partner than when they had sex with a serious partner (F = 122.6, 1/457 df, p < .001), whereas those with two serious partners did not differ in their use (F < 1, 2/454 df, ns). Contrary to expectation, however, condom use did differ across casual partners (F = 17.8, 1/457 df, p < .001). Although this finding was unexpected, post hoc analysis of the intimacy ratings of casual partners provided by the subset who rated both partners as casual (i.e., those who had exactly two partners; n = 87 of 148), showed that the second partner was significantly more casual than the first partner (mean = 2.79 vs 2.41, respectively, t = 3.64, 86 df, p < .01). This finding suggests that a more or less linear relationship exists between relationship intimacy and condom use, even among those who broadly characterized their partners as casual.

Results of the within-subjects analysis predicting alcohol use also yielded a significant Group × Change interaction (F = 4.9, 2/457 df, p < .01). As shown in Figure 3 (bottom panel), respondents who had both serious and casual partners drank significantly more often with their casual sex partner(s) than with their serious partner(s) (F = 44.9, 1/457 df, p < .001). In contrast, and as expected, alcohol use did not differ across partners among those who had only serious (F = 1.1, 1/457 df, ns) or only casual (F = 1.2, 1/457 df, ns) partners.

**Does partner type suppress the relationship between alcohol use and condom use?**

To test the suppressor hypothesis, a regression analysis was conducted among the subset of 1,306 respondents who provided individual intimacy ratings for their first partner. In this analysis, covariates were entered on the first step, followed by frequency of drinking proximal to intercourse (Step 2) and the partner intimacy rating (Step 3). As previously indicated, to the extent that relationship intimacy suppresses the alcohol use-condom use relationship, controlling for partner type should increase the magnitude of the alcohol effect. As expected, the b coefficient for frequency of drinking proximal to intercourse was -.04 and nonsignif-
the $b$ coefficient when computed across all individuals ($n = 1,402$) regardless of partner type was .00 and not significant. In sum, the observed pattern of effects is consistent with the idea that partner type suppresses the negative direct effects of alcohol use on condom use. Moreover, the fact that the $b$ coefficients for alcohol use were significant and negative among those with casual partners ($b = -.13$) and those with serious partners ($b = -.18$) argues against partner type as a moderator of the alcohol use-condom use link.

**Discussion**

The present study examined the relationship between alcohol use, condom use, and the nature of the relationship in which these behaviors co-occur. Consistent with expectation, both drinking and condom use on sexual occasions were more common with a casual than with a serious partner. Also as expected, partner intimacy suppressed the relationship between alcohol use and condom use, such that controlling for partner type increased the magnitude of the negative relationship between alcohol use and condom use. Considered as a whole, these findings suggest that the interrelationships among partner type, alcohol use and condom use are complex, and that the processes linking each pair of variables are best understood, not in isolation, but in the context of a larger system of interconnected variables.

Adopting this perspective has several important advantages. First, it encourages us to think about these variables and their interrelationships in more complex and realistic ways. In addition, considering each bivariate relationship in the context of a larger system of variables may foster new insights into the nature of the bivariate relationships. Indeed, it was this sort of thinking that led us to the somewhat counterintuitive notion that relationship type acts as a suppressor on the alcohol use-condom use link. Thinking in terms of a system of variables does not, however, automatically clarify the nature of the underlying causal processes among these variables. As portrayed in Figure 1, the relationships documented here among these variables are equally consistent with several alternative causal models. Because differentiating among these models has important implications for prevention and intervention efforts, continued efforts should be made to distinguish among them.

At the same time, it is important to recognize that no single model may ultimately emerge as the "winner," either because different causal mechanisms operate among different individuals, or because multiple mechanisms operate within an individual across different situations or even within a given situation (see Cooper, 1992). Consider, for example, a scenario in which a man has a few drinks in a bar while chatting with an attractive young woman. The alcohol emboldens him to make an advance that he otherwise would not have made. The young woman responds positively; they return to her apartment and have sex. The fact that the man had been drinking played an important facilitating role; yet,
had he not been in a bar, the opportunity would not have presented itself. Thus, part of the covariation between drinking and casual sex in this scenario is spurious owing to the co-occurrence of alcohol and a potential partner in the bar setting, whereas another equally important part reflects causal influence of alcohol on behavior. As this example illustrates, no single causal model may be adequate to the task of explaining covariation between drinking and risky sex.

Several limitations of the present study must be acknowledged. First, as discussed earlier, correlational data such as these are consistent with multiple causal models. Thus, as always, the limitations of correlational data with respect to drawing causal inferences must be underscored. Second, the present study used retrospective, self-report data of unknown validity and reliability. Although prior research suggests that self-report measures can be reasonably valid (Catania et al., 1990), our data had an unusually complex structure which may have introduced additional error. Whereas most respondents provided data on individual partners, many respondents with three or more partners aggregated their behavior across partners. Thus, to the extent that this strategy is more error prone, the amount of error in our data was likely confounded with number of partners. Different definitions of casual and serious partners were used for respondents who described their relationships with an individual partner versus a category of partners, thus raising questions about the functional equivalence of the relationship intimacy designations. Nevertheless, supplementary analyses revealed virtually identical relationships between partner type, alcohol use, and condom use among the subset who individually rated their partners, and those who treated partners as a category. Thus, although use of different measurement strategies may have increased random error, it appears unlikely that it spuriously produced our findings.

A final potential concern is the relatively small magnitude of effects reported in the present study. Although some researchers are prone to dismiss such effects, we believe that doing so would be inappropriate for the following reasons. First, a relatively low ceiling exists on the maximum effect size that can be obtained between any single determinant and a given outcome when that outcome is fully determined by even a few factors (Ahadi and Diener, 1989). Thus, given that condom use is a complex, multidetermined behavior, the expectation of a large effect may be unreasonable. Second, even small effects can exert a large impact when they cumulate over time, as is the case for repetitive behaviors such as drinking proximal to intercourse (Abelson, 1985). Third, although moderation was not the focus of the present study, we have shown in prior work (Dermer et al., 1998) that alcohol effects on risky sex are stronger among some individuals than others. Thus, our sole focus on mediation likely underestimated the strength of the alcohol-condom use relationship among at least some individuals. Fourth, because the consequences of not using a condom can be literally deadly, we believe that we cannot afford to overlook potential causal influences—even if small—as long as they are amenable to change.

In sum, results of the present study suggest that the adverse effects of alcohol use on condom use are offset by the fact that people are more likely to both drink and use condoms with a casual than with a serious partner. Accordingly, failure to control for partner type when examining alcohol effects on condom use may systematically underestimate the strength of the relationship between drinking and condom use. In general terms, these findings underscore the need to adopt more complex, multivariate approaches in our efforts to understand the links between alcohol use and human sexual behavior.

References

Cooper, M.L. Alcohol and increased behavioral risk for AIDS. Alcohol Hlth Res. World 16: 64-72, 1992.
Misovich, S.J., Fisher, J.D. and Fisher, W.A. Close relationships and ele-


