Adolescent health brief

Dyadic alcohol use and relationship quality as predictors of condom non-use among adolescent females

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Abstract

We examined alcohol use concordance (respondent and partner alcohol use) and relationship quality as predictors of condom non-use among adolescent women. Both variables were significant independent predictors of condom non-use. These results suggest that both the individual's and her partner's behaviors should be taken into consideration in research and clinical practice. © 2006 Society for Adolescent Medicine. All rights reserved.

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Research on the association of alcohol use with non-use of condoms suggests that situational and relationship factors may play a role [1–3]. Other studies have shown that condoms are used more frequently in relationships characterized by lower relationship quality than in long-term relationships with higher relationship quality [4–6]. Given that condom use involves an interaction between two individuals, it is important to consider dyad contributions to this behavior. We examined the contributions of dyad alcohol use and relationship quality to condom non-use. This research represents a step in the process of gaining an understanding of the complex set of behaviors related to condom-use in adolescent sexual relationships.

Methods

Participants, all young women, were recruited from urban adolescent health clinics located in a large Midwestern city, and administered structured in-person interviews (i.e., specific response choices were given for each question) that covered the

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previous two months. Interviewers were experienced, highly-trained research assistants. The university institutional review board approved this study. Participants provided written informed consent and parents provided signed permission. Adolescents were compensated $20 for participation.

An alcohol use concordance variable was created from two items. One item addressed the adolescent's own alcohol use and the other assessed her partner's use. Responses could be "Never Drink," "Sometimes Drink," or "Drink A Lot of the Time" prior to sex. The response distributions were highly skewed toward never using alcohol. Therefore, each item was dichotomized into either "No Alcohol Use" or "Use" prior to sex, resulting in these four categories: concordant non-use, respondent only use (discordant respondent use), partner only use (discordant partner-use), and concordant use. An established five-item scale with a five-point response format was used to measure the perceived relationship quality of the respondents' primary sexual relationship ($\alpha = .89$) [6]. Relationship quality scores were calculated by summing across items, with higher scores reflecting better relationship quality. Non-use of condoms was measured by subtracting the number of times a condom was used during vaginal intercourse from the number of times the adolescent reported having vaginal sex in the past two months. This measure also was highly skewed and was dichotomized into either "No Unprotected Events" or "One or More Unprotected Events."

Spearman rho correlation, χ^2, and a *t* test were used to evaluate the associations among alcohol use concordance, relationship quality, and condom non-use. Multiple logistic regression was used to examine the independent associations of dyad alcohol use and relationship quality to condom non-use. The logistic regression model was evaluated with the Hosmer and Lemeshow goodness-of-fit test [7].

Results

Of 181 adolescents enrolled in the study, 117 met the inclusion criterion of reporting sexual activity in the past two months. Only one adolescent reported drinking alcohol prior to sex when her partner did not. Consequently, the analyses were conducted on data from 116 adolescents and included only concordant non-use, discordant partner-use, and concordant use.

Adolescents ranged from 14 to 17 years of age (mean: 16.2, SD: 1.0), 82% were African-American, 10% were white, and the remainder were from other race/ethnic groups. Concordant non-use of alcohol prior to coitus was reported by 63%, 21% reported discordant partner-use, and 15% reported concordant use. Scores on the relationship quality scale ranged from 5 to 20 (mean: 16.3, SD: 3.4). Fifty-one percent of adolescents reported always using condoms, whereas 49% had not used condoms on one or more occasions.

Dyad alcohol use and relationship quality were not significantly correlated (Spearman rho = −.15, *p* = .10). A marginal, but nonsignificant association was found between dyad alcohol use and condom non-use (χ^2 = 5.3, p < .08). Although not statistically significant, the results were in the predicted direction of dyad alcohol use being associated with non-use of condoms. A *t* test revealed that adolescents reporting unprotected coitus had higher relationship quality (mean: 17.3, SD: 2.7) than those reporting protected coitus (mean: 15.3, SD: 3.7): *t* = −3.3, *p* < .01. Age was not significantly associated with non-use of condoms (*p* = .17), dyad alcohol use (*p* = .50), or relationship quality (*p* = .08).

The criterion of a bivariate significance level of *p* < .1 was used to determine which variables would be entered into the logistic regression. Therefore, both alcohol concordance and relationship quality were included in the analysis. For the categorical alcohol-use variable, two dummy variables were created, with concordant non-use as the reference group. Both relationship quality and alcohol concordance were significant, independent predictors of condom non-use (Table 1). Each one point increase on the relationship quality scale was associated with a 1.3 times greater odds of being in the condom non-use group. Respondents indicating discordant partner alcohol use were three times more likely to be non-users of condoms than those reporting concordant non-use of alcohol. Concordant alcohol users were five times more likely to be non-users of condoms than concordant non-users. The goodness-of-fit test indicated that the model fit the data (χ^2 = 4.8; df = 7; *p* = .69).

Table 1
Adjusted multiple logistic regression for prediction of condom non-use

Variable	Odds ratio	95% Confidence interval
Alcohol concordance		
Concordant non-use	1.0	
Discordant partner-use*	3.0	1.1–8.5
Concordant use**	5.0	1.4–17.1
Relationship quality**	1.3	1.1–1.4

* *p* < .05; ** *p* < .025.

Discussion

Our findings are consistent with previous research on relationship quality and condom use [6]. This study was unique in considering alcohol use as a relationship behavior. Even when only one adolescent in the dyad (almost always the male partner) was using alcohol prior to sexual intercourse, condom use was less likely. Research that only assesses alcohol use of one dyad member may fail to accurately evaluate a meaningful predictor of condom use and non-use (i.e., the partner's alcohol use).

There are several limitations to this study. First, we relied on reports of adolescent respondents about both themselves and their partners. Data regarding behaviors of an individual may not be as accurate when obtained via a secondary informant. Second, the sample is urban, female, primarily African-American, and recruited from clinics in a single city, limiting the generalizability of the findings. Despite this limitation, this is a relevant sample of high-risk youth.

Our findings provide further evidence of the complexity of adolescent sexual relationships and behaviors. When two individuals come together in a relationship, each brings a set of health behaviors into the dyad, a process that must be taken into consideration when evaluating adolescent sexual behavior in research or clinical practice.

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