



# Retrospective assessment of the association of drinking to condom use

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## Introduction

Research on factors associated with high-risk sexual behavior for disease transmission has suggested that drinking alcohol at the time of sexual activity is related to the occurrence of unprotected sex. Investigating links between drinking and high-risk sexual activities requires accurate measures not only of alcohol use and of sexual behavior, but of the co-occurrence of the two. In the absence of noninvasive and ecologically valid biological or observational techniques, measurement of both alcohol use and sexual behavior must rely on self-reports, which are generally retrospective.

Retrospective reports of associations of drinking to other behaviors can be biased by implicit theories about covariation of drinking, its precursors, and its consequences. Answers to questions such as “do you use condoms more or less when drinking” may represent an “effort after meaning,” or the tendency to reconstruct events in a manner consistent with current attitudes and knowledge. Given the strong cultural beliefs about the effects of drinking on sexual activity, such retrospective reports might represent after-the-fact justifications rather than actual behavior. Collecting reports of behavior on the day that it occurred may reduce memory biases and enable a more accurate measure of the co-occurrence of drinking and condom use.

In this study we compared reported condom use when drinking and not drinking collected from participants over 8 weeks of daily diaries with the same participants’ reports of these behaviors reported in a questionnaire administered after the diary collection was complete.

## Participants

Participants were recruited from several samples:

- college students (n=145; age 18-23)
- men who have sex with men (MSMs; n=147; age 18-35)
- adults recruited from an STD clinic (n=167; age 19-35)
- adolescents who had been treated for STD (n=111; age 13-19)

Participants were eligible if they

- were unmarried, and not in a steady monogamous relationship of longer than six months duration
- had had sex on at least four occasions in the last two months
- had drunk alcohol on at least four occasions in the past two months
- had sex after drinking alcohol at least once in the last two months
- had used a condom at least once in the last year (but not always)

## Procedure

A daily survey was completed for 8 weeks; questions included

- alcohol consumption
  - up to 3 drinking occasions per day
  - time drinking began and ended, number of drinks consumed, drinking companions
- sexual encounters
  - up to 3 encounters per day
  - time began and ended, characteristics of partner, condom use, other contraceptive use

Following the eight-week daily reporting period, participants completed a questionnaire that asked about their behavior over the diary period. Participants were asked how often they used condoms with sex when they were drinking, and how often they used condoms with sex when they were not drinking (response alternatives were never, rarely, less than half the time, about half the time, more than half the time, almost always, and every time).

## Analysis

Using the daily reports, drinking episodes were matched with sexual encounters if drinking occurred within 4 hours before sexual activity started. We calculated the proportion of condom use in sexual encounters with and without drinking, and subtracted the without-drinking proportion from the with-drinking proportion to generate a measure of the association of drinking to condom use.

Using the retrospective questions about condom use, we subtracted the frequency of condom use without drinking from the frequency of condom use with drinking, yielding an ordinal measure (values from -6 to +6) that represents the increase or decrease in condom use while drinking compared to not drinking.

277 of the participants answered the retrospective questions indicating how often they used condoms when they were drinking and when they were not drinking. Of these, 185 had diary reports of sexual encounters both with and without drinking.

## Results

Data from the daily diaries indicated no association of drinking to condom use (44% condom use in both drinking and sober events), and a large majority of participants (134 of 185) reported retrospectively that they used condoms with the same frequency when drinking and not drinking.

Although the proportion of condom use while drinking and not drinking were highly correlated on the diary ( $r=.82$ ) and on the retrospective questionnaire ( $\rho=.88$ ), the drinking-no drinking discrepancy in condom use in diary and retrospective measures were virtually uncorrelated (see Figure). That is, participants’ retrospective judgments about whether they used condoms more or less when drinking were not significantly related to their behavior as reported on the diary.

## Results (continued)

As seen in the Figure, a large number of participants (117 out of the 185) reported that they used condoms equally often when drinking and not drinking and were consistent in their reporting on both retrospective and diary measures. However, 85% of those participants whose retrospective reports were consistent with diary reports were people who either never used condoms or used condoms every time.

Among the participants whose retrospective reports were inconsistent with the diary reports, twice as many retrospectively reported greater condom use when sober than reported greater condom use when drinking ( $z=-2.35$ ,  $p<.02$ ).

Drinking-no drinking differences in condom use on diary and retrospective measures

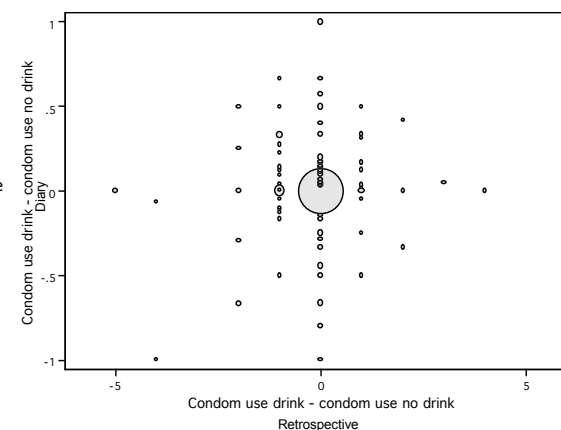


Figure note: size of points reflects number of people represented at those coordinates.

## Conclusions

These findings suggest that retrospective questions about the association of drinking to condom use are consistent with actual behavior only among people who demonstrate a constant habit of either never or always using condoms. For these habit-driven people, answering retrospective questions requires little actual retrospection; instead, their responses are a description of what they “always” or “never” do. For people whose condom use varies, questions about associations between drinking and sex may be difficult to answer due to their conditional nature, and can be biased by cultural beliefs.

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