

## Risky Sexual Behavior Among Married Alcoholic Men

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The current study explored whether the wives of men entering alcoholism treatment are at risk for sexually transmitted infections (STIs) exposure as a result of their husbands' sexual risk behaviors. The extramarital relationships of married alcoholic men entering outpatient treatment ( $n = 125$ ) were compared with those of a demographically matched community sample of nonalcoholic married men ( $n = 125$ ). The proportion of alcoholic men who reported 1 or more extramarital affairs in the previous year (14%) was significantly higher than that of the community sample (4%). Additionally, only 2 alcoholic husbands and 1 nonalcoholic husband reported that his wife was aware of the extramarital relationship. For both groups, none of the men who engaged in extramarital relationships reported consistent use of condoms when having sexual intercourse with their wives or with their extramarital partners. These results suggest that wives of alcoholic men are unknowingly placed at risk for indirect exposure to STIs as a result of their husbands' sexual risk behaviors. Thus, infidelity in treatment-seeking alcohol-abusing men represents a significant public health issue.

*Keywords:* alcoholism, risk behaviors, marriage, sexually transmitted infections (STIs)

Infidelity occurs in approximately 20% to 25% of all marriages (Greeley, 1994; Laumann, Gagnon, Michael, & Michaels, 1994; Wiederman, 1997) and can have a number of deleterious effects on a relationship and the individuals involved in the relationship; it is the leading cause of divorce (Amato & Previti, 2003; Beitzig, 1989) and often results in anger, disappointment, self-doubt (Buunk, 1995), and depression (Cano & O'Leary, 2000) among partners of unfaithful individuals (see Allen et al., 2005, for a recent review of the literature). Moreover, with the rapid spread of sexually transmitted infections (STIs), infidelity has become a significant public health issue. Not only are individuals who engage in unprotected sex outside of a committed relationship at direct risk of exposure to STIs, there is also emerging evidence that the primary partners of these individuals are at indirect risk of exposure to diseases such as HIV (Fals-Stewart et al., 2003). In fact, the majority of women who acquire HIV are infected by their primary male partners (Carpenter et al., 1991; O'Leary, 2000).

Fifteen million people in the United States become infected with one or more STIs each year, the most serious of which is HIV (Cates, 1999). HIV has become increasingly

common among women and is now the fifth leading cause of death among women ages 25–44 years (Hader, Smith, Moore, & Holmberg, 2001). The risk of HIV infection is two to five times higher among individuals who have other STIs, suggesting that STIs are cofactors for HIV transmission (Centers for Disease Control, 1998). STI risk among women may be especially high in clinical samples due not only to direct risk but also due to indirect risk. Fals-Stewart et al. (2003) found that 71% of wives of drug-abusing men were unknowingly placed at risk for indirect exposure to STIs such as HIV as a result of their husbands' risk behaviors. In community samples, 23% of women were at indirect risk for STIs (Finer, Darroch, & Singh, 1999). Though there is little evidence of how this risk may vary among different clinical populations, wives of alcoholic men may also be particularly vulnerable to indirect STI exposure, as a result of the documented association between alcohol use and risk behaviors.

Alcohol use has been linked to risky sexual behaviors at both the situational and global levels (Leigh & Stall, 1993). At the situational level, it is believed that alcohol intoxication may lead an individual to take sexual risks that would not be taken when sober. Cooper (2002) reviewed evidence of situational studies of drinking and risky sex and found that drinking was indeed associated with an increased probability of intercourse and risky partner choice. However, she did not find that drinking consistently decreased protective behaviors such as condom usage. At the global level, heavy episodic drinkers are more likely to have multiple sexual partners (Graves, 1995; Wechsler, Dowdall, Davenport, & Castillo, 1995) and report lower rates of condom use

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(Graves, 1995; however, for exceptions, see Wechsler, Davenport, Dowdall, Moeykens, & Castillo, 1994, and Lowry et al., 1994). Similarly, among alcoholic inpatients, sexual risk behaviors include low rates of condom use, multiple sex partners, and trading sex for drugs or money (Scheidt & Windle, 1995).

Evidence of a situational and global association between alcohol use and sexual risk behaviors puts individuals at direct risk of STI exposure. But how might this association relate to indirect risk, in which women are placed at risk as a result of their partners' behavior? To address this question, one must explore the link between alcohol and sexual risk behaviors within the context of committed romantic relationships. Much research on alcohol use and risky behaviors has relied on college samples in which students may or may not have been in committed relationships. This raises the question of whether drinking is equally problematic for married or cohabiting couples, who presumably would be less likely to engage in sexual risk behaviors.

Given alcohol's disinhibitory effects, however, drinking may be related to unprotected sexual infidelity even among married individuals. There is evidence that alcohol impairs information processing such that instigatory cues (e.g., availability of a potential extradyadic sexual partner) are given more weight than inhibitory (e.g., one's marriage, risk of HIV) cues (e.g., MacDonald, MacDonald, Zanna, & Fong, 2000). Similarly, among individuals who believe alcohol is associated with sexual risk behaviors, expectancy effects may lead to infidelity. Consistent with these lines of reasoning, there is evidence to support an association between alcohol and infidelity, as Scheidt and Windle (1996) found that alcoholics who engaged in extradyadic sex reported more frequent alcohol use in those situations than in sexual situations with their primary partners. Although condom use was higher with extradyadic partners than with primary partners, data from national surveys suggest that only 12%–19% of individuals consistently use condoms with their extramarital partners (Choi, Catania, & Dolcini, 1994). Of those who engage in infidelity, only 8%–17% consistently use condoms with their primary sex partners. Thus, even among community samples, a large number of people are at indirect risk of exposure to STIs because of their partners' infidelity. These rates are expected to be significantly higher among couples in which one partner is an alcoholic, due to the association between alcohol and sexual risk behaviors.

One of the most disturbing facts regarding such indirect exposure is that a substantial proportion of women are not aware of their risk because they believe they are in monogamous relationships (Finer et al., 1999). Indeed, the majority of married individuals who engage in extramarital relationships do not disclose the information to their spouses (Ellen, Vittinghoff, Bolan, Boyer, & Padian, 1998). Fals-Stewart et al. (2003) found that among couples in which husbands were engaging in unprotected extramarital sexual intercourse, only 16% of wives were aware of this behavior: These women may not have put themselves at risk by engaging in unprotected sex with their spouses had they been aware of such infidelity. Indeed, women are more

likely to insist on condom use when engaging in sex with a partner whom they perceive as a significant risk (Green, Fulop, & Kocsis, 2000). Thus, partner awareness of unprotected extradyadic behavior is an important consideration in STI exposure.

The purpose of the present study was to explore the STI risk and preventive infidelity behaviors reported by alcoholic men entering outpatient treatment. STI risk and preventive infidelity behaviors among a matched community sample were also evaluated to compare the direct and indirect risks across these two groups.

## Method

### *Participants*

Two hundred fifty married men participated in this investigation from two groups. The first group consisted of married men who were entering outpatient treatment for alcoholism ( $n = 125$ ) and who met *Diagnostic and Statistical Manual* (4th ed.; *DSM-IV*; American Psychiatric Association, 1994) criteria for a current alcohol abuse or dependence. The second group was a demographically matched community sample of married men who did not meet *DSM-IV* criteria for a current substance abuse disorder. We matched the treatment-seeking and community samples on variables that have been shown in prior research to be related to the likelihood of marital infidelity (Amato & Rogers, 1997; Atkins, Baucom, & Jacobson, 2001; Choi et al., 1994; Traeen & Stigum, 1998; Treas & Giesen, 2000; Wiederman, 1997). A husband from the community sample was considered matched to a target husband from alcoholism treatment-seeking sample if (a) their age was within  $\pm 3$  years; (b) their education was within  $\pm 2$  years; (c) race matched; (d) income was within  $\pm \$5,000$ ; (e) employment status (i.e., full-time, part-time, unemployed) matched; and (f) length of marriage was within  $\pm 5$  years. The husbands from the community were recruited with computer-assisted telephone interviewing from the same community in which the substance abuse treatment program was located.

To recruit matched nonalcoholic husbands from the community, we used the following strategy. For each alcoholic husband, we located the block on which he resided (i.e., the *index block*) on the map. We then (a) randomly selected a cardinal compass point; (b) selected as the comparison block the street block that was adjacent to the index block in the indicated cardinal direction; (c) identified the residences on the comparison block through a reverse telephone directory; (d) randomly selected six residences on the block; (e) contacted the residents at each address, one at a time, to determine if they met inclusion and exclusion criteria noted above for the community sample; determined if they matched the alcoholic husband on the demographic matching criteria; and, if a match was found, solicited the family's involvement; and (f) if no match was found, selected another adjacent block and began the process anew.

## Procedure

Prior to completing study interviews and measures, all participants reviewed and signed a statement of informed consent that included a description of study procedures and study approval by the RTI International Institutional Review Board. As part of their intake to the outpatient alcoholism treatment program, husbands participated in several structured and semi-structured interviews and completed self-report measures to provide information about their substance use, psychosocial histories, and their marital relationships. Husbands from the community, who were interviewed in an office adjacent to the alcoholism treatment program, provided psychosocial, relationship, and diagnostic information. Husbands in both groups were paid \$100 for participating in the study and completing all interviews.

## Measures

**Extramarital relationships.** As part of a self-report questionnaire about their sexual behavior, husbands were asked if they had penetrative sexual intercourse (i.e., vaginal or anal sexual intercourse without use of a condom) with a person other than their spouse in the previous year. If they endorsed that they had engaged in sexual intercourse with a partner other than their spouse, husbands were asked if their primary partners were aware of it. They were also asked if they consistently used condoms in their extramarital sexual relationships.

**Substance use.** The Timeline Followback Interview (TLFB; Sobell & Sobell, 1996) was used to assess frequency of drug and alcohol use. Percent days abstinent (PDA) was operationally defined as the percentage of days in the 12-month measurement period the interviewee reported no substance use and was not in jail or a hospital for reasons related to drug or alcohol use. Husbands were also interviewed with the substance use modules of the Structured Clinical Interview for *DSM-IV* (First, Spitzer, Gibbon, & Williams, 1995), administered by one of two master's degree-level interviewers (both of whom were trained by William Fals-Stewart, who has extensive experience administering the Structured Clinical Interview for *DSM-IV*).

**Psychosocial interview.** The Texas Christian University Comprehensive Intake (Simpson, 1995) was used to collect sociodemographic and background information.

**Marital satisfaction.** The Dyadic Adjustment Scale (Spanier, 1976) is a widely used 32-item self-report measure of general relationship satisfaction with acceptable reliability and validity (Hunt, 1978). Scores can range from 0 to 151, with higher scores indicating higher levels of adjustment; a total score of 97 has been the traditional cutoff point for relationship distress (Jacobson, Schmalzing, & Holtzworth-Munroe, 1987). Coefficient alpha for this measure in the present study was .89.

## Results

### *Sociodemographic Characteristics of the Samples*

The background characteristics of the husbands from the alcoholism treatment program and the husbands drawn from the community are located in Table 1. The matching procedures used were effective; no significant differences between husbands on any of the demographic characteristics were found. There were, by design, expected differences between the husbands from the treatment program and from the community in terms of substance use frequency and diagnoses. However, given the constraints of the matching process, we were unable to match the two samples on marital quality. As would be expected, significant differences emerged between alcohol ( $M = 89.2$ ,  $SD = 18.3$ ) and community ( $M = 107.2$ ,  $SD = 12.6$ ) samples,  $t(248) = 9.06$ ,  $p < .01$ .

### *Extramarital Relationships*

The proportion of alcoholic men who reported one or more extramarital affairs in the previous year ( $n = 18$ ; 14%) was significantly higher than that in the matched community sample ( $n = 5$ ; 4%),  $\chi^2(1, N = 250) = 8.09$ ,  $p < .01$  (odds ratio [OR] = 4.04; 95% confidence interval [CI] for OR = 1.45, 11.25). Additionally, according to husband reports only two wives of husbands from the alcoholic sample and one wife from the community sample were aware of the extramarital relationship. For both groups, none of the men who engaged in extramarital relationships reported consistent use of condoms when having sexual intercourse with their wives or with their extramarital partners.

Although all men in the treatment sample were seeking intervention for an alcohol problem, 37 of these men also met *DSM-IV* criteria for a substance use disorder other than

Table 1  
*Demographic Information for the Alcoholic and Community Sample*

Variable	Alcohol sample ( $n = 125$ )		Community sample ( $n = 125$ )	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Age	34.2	6.4	35.2	7.1
Education	14.3	1.6	14.9	1.8
Years married	6.8	2.0	7.1	2.3
Family income	29.6	14.2	31.4	15.4
Race				
White	74		74	
African American	42		42	
Latino	5		5	
Other	4		4	
Employment				
Full-time	60		60	
Part-time	32		32	
Unemployed	33		33	
Years problematic alcohol use	9.2	4.3		
Percent days abstinent in prior 3 months	35.2	17.3	87.3	10.2

alcohol. As a result, we repeated the analysis excluding these men and their matched counterparts in the community sample. Again, the proportion of alcoholic men who reported one or more extramarital affairs in the previous year ( $n = 14$ ; 15.9%) was significantly higher than that of the matched community sample ( $n = 5$ ; 5.7%),  $\chi^2(1, N = 176) = 4.78, p < .03$  (OR = 3.14; 95% CI for OR = 1.08, 9.14).

To account for nonindependence of data from the matched samples, a conditional logistic regression analysis (Hosmer & Lemeshow, 1989) was performed to predict the occurrence of infidelity from group status (i.e., alcoholic vs. community) and marital satisfaction. This model was significant, with both group,  $\beta = 1.10, z = 2.07, p < .05$  (OR = 3.00; 95% CI for OR = 1.06, 8.49); and marital satisfaction,  $\beta = -0.04, z = 2.01, p = .05$  (OR = 0.96; 95% CI for OR = 0.92, 0.97), contributing significantly to prediction of infidelity.<sup>1</sup>

### Discussion

The findings from the present study indicate that men entering treatment for alcohol problems are significantly more likely to have had an extramarital affair within the past year than are nonalcoholic men. Given that the prevalence of infidelity within the community sample in the current study was consistent with the rates found in large-scale national surveys (e.g., 1.5%–4% within the last 12 months; Billy, Tanfer, Grady, & Mepinger, 1993; Choi et al., 1994; Laumann et al., 1994), it is unlikely that this difference stemmed from underreporting of extramarital affairs within the current community sample. In addition, by demographically matching the alcoholic and community samples, we were able to control for other variables that have been shown to be associated with infidelity, such as age and socioeconomic status (e.g., Atkins et al., 2001). Although we were unable to match on the basis of marital satisfaction or substance use disorders other than alcohol, two variables that have also been shown to be predictive of infidelity, alcoholism was a significant predictor of infidelity even after statistically controlling for these factors. Thus, it appears that the consumption of alcohol at levels that result in a clinical diagnosis may increase the likelihood of sexual risk behaviors, as alcoholic men were more likely to engage in infidelity. This is consistent with the results of Atkins, Yi, Baucom, and Christensen (2005), who found that excessive alcohol consumption was associated with infidelity within a treatment-seeking sample. Moreover, in the current study neither group of men reported consistent condom usage when having sexual intercourse with their wives or with their extramarital partners. These findings show that wives of alcoholic men are at higher risk for indirect exposure to STIs such as HIV than are wives of nonalcoholic men, due to the higher frequency of unprotected extradyadic sex among alcoholic men. However, given the low rates of regular condom usage among both groups, wives of nonalcoholic men may also be at risk for contracting STIs.

Although these findings are troubling, more concerning is the fact that the vast majority of wives whose husbands are

engaging in extramarital affairs are unaware of this behavior and thus are also unaware that they may be at indirect risk of exposure to STIs when they engage in unprotected intercourse with their husbands. An overwhelming 89% of wives whose alcoholic husbands reported engaging in infidelity were unknowingly at risk for indirectly contracting an STI because of their husbands' unprotected extramarital sexual intercourse. This was also true of 80% of women in the community sample whose husbands reported engaging in infidelity. However, indirect exposure to STIs is less likely among wives in the community sample due to the lower base rate of extramarital affairs. Overall, these findings suggest that a significant number of wives who engage in unprotected intercourse with alcoholic husbands may be unaware of the risks associated with this behavior.

Although women who are in stable, long-term relationships are unlikely to use condoms as their primary method of protection (Kwiatkowski, Stober, Booth, & Zhang, 1999; McCoy & Inciardi, 1993), perhaps condom usage would become more salient when at-risk women are aware of a real threat of indirect STI exposure. Fals-Stewart et al. (2003) found that wives who were aware of their husbands' high risk behaviors were more likely to use condoms when having sexual intercourse with their spouses. Yet given the difficulty that women have in initiating and maintaining condom use with their primary partners (O'Leary & Wingood, 1999), Fals-Stewart et al. (2003) offered two strategies for promoting consistent use of condoms in high-risk primary relationships. First, conjoint psychoeducational sessions for treatment-seeking husbands and their wives may serve as an impetus to discussions of high-risk behaviors. In addition, "negotiated safety contracts" which are used in behavioral couples therapy for drug abusers (e.g., O'Farrell & Fals-Stewart, 2000) could be extended to treatment for alcoholic men and their spouses. Such contracts would entail both partners undergoing STI testing and then sharing the results, as well as agreeing to use condoms in any extramarital sexual relations. Although these are both viable strategies for increasing awareness of and reducing secondary risk of STI exposure, more research is needed to assess the efficacy of such approaches.

These issues also raise ethical questions about disclosure and confidentiality within clinical settings. It is not uncommon for undisclosed infidelity to be revealed to a clinician during the course of couple therapy, leaving the therapist to grapple with the issue of whether the affair should be disclosed to the nonparticipating partner (see Snyder & Doss, 2005, for an exploration of these issues). Although the future of therapy may depend in part on the limits of

<sup>1</sup> These models were also estimated with PDA included, along with group status and marital satisfaction. PDA was not significant in these models, but group status remained significant. However, if PDA was entered into the model and group was excluded, PDA was significant. The results suggest that PDA serves as a proxy variable for group status (and is significant in models when group status is not included) but does not significantly improve predictive ability when group status is known. Detailed results of these analyses are available from the authors on request.

confidentiality established early in treatment, continued treatment is often conditional on the unfaithful individual's disclosure of the infidelity to his or her partner. However, the stakes become even higher in situations where the therapist becomes aware of one individual's unprotected extradyadic sexual behaviors, which may be placing the unknowing partner at risk for STI exposure. While professional and legal obligations regarding the "duty to warn" provide some guidance, it is often difficult to discern the nonparticipating partner's risk of STI exposure when the unfaithful individual's STI status is unknown to the clinician. Thus, from an ethical standpoint, the disclosure of unprotected infidelity in clinical and research settings merits further consideration.

There were several limitations of the current study. Chief among these was the small sample size that resulted when the overall sample was reduced to men who had engaged in infidelity within the past 12 months. This diminished statistical power, thus limiting our ability to identify variables that may be associated with wives being at high secondary risk for STI exposure. In addition, the current study focused specifically on alcoholic men and their nonalcoholic wives. It is unclear whether these findings would generalize to couples in which only the wife or in which both partners abused alcohol. Third, the actual STI status of extramarital partners was unknown and hence indirect exposure to STI could not be measured directly but had to be inferred from the occurrence of infidelity. Finally, in measuring wives' awareness of their husbands' extramarital affairs, we relied on husbands' reports. It is not known how closely these reports would correlate with wives' self-reported awareness.

Despite these limitations, the present exploratory study brings to light a public health issue that may affect thousands of women. Our findings are consistent with the view that a considerable number of wives of alcoholic men are unknowingly placed at high risk for indirect exposure to STIs as a result of their husbands' sexual risk behaviors. If correct, one solution to this problem would be to promote preventive strategies that will decrease rates of infidelity among these couples. Perhaps a more realistic first step is to devote future research to increasing STI awareness and reducing STI risk behaviors in these couples.

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Received December 12, 2006

Revision received April 30, 2007

Accepted July 9, 2007 ■