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Alcohol Expectancies and Risky Drinking among Men and Women at High-Risk for HIV Infection in Cape Town South Africa

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Abstract

This study examined the differential patterns of alcohol outcome expectancies in relation to drinking before sex and having sex partners who drink before sex among men ($N = 614$) and women ($N = 158$) sexually transmitted infections clinic patients in Cape Town South Africa. Hierarchical regressions, controlling for age, education, and alcohol use showed that men's sexual enhancement alcohol expectancies were associated with drinking before sex and having sex partners who drank before sex. Behavioral disinhibition expectancies were inversely related to drinking before sex. For women, there were no associations between alcohol expectancies and drinking before sex, although sexual enhancement expectancies were related to having sex partners who drank before sex. We conclude that alcohol outcome expectancies, particularly expectancies that alcohol will enhance sexual experiences, are related to HIV transmission risks. Sexual risk reduction interventions for those at greatest risk for HIV/AIDS should directly address alcohol expectancies.

Among the more than 40 million people in the world who are infected with HIV, two out of three live in sub-Saharan Africa; nearly one in five South African adults are living with HIV/AIDS (UNAIDS, 2006). Coinciding with one of the world's worst HIV/AIDS epidemics, South Africa consumes among the most alcohol per capita in the world (Parry, 2005). Like elsewhere in the world, alcohol use among South Africans is associated with risks for sexually transmitted infections (STI) including HIV/AIDS (Cook & Clark, 2005). Cognitive factors, such as the expected outcomes from drinking, have demonstrated

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important effects on sexual risk behaviors in South Africa. For example, expectations that alcohol will increase sexual desires and sexual pleasure are related to HIV risk behaviors among STI clinic patients in Cape Town (Kalichman et al., 2006). In addition, sexual enhancement expectations have been related to greater numbers of sex partners and regret having had sex (Morojele et al., 2006). There is also evidence for gender differences in how alcohol expectancies are related to sexual risk behavior. In qualitative research, men are more likely to expect that alcohol will increase their sexual desires, whereas women expect the opposite effects of alcohol on sexual desires (Simbayi et al., 2006). Alcohol expectancies may also differ for men and women in relation to whether the individual and his or her partner were drinking before sex. However, to our knowledge, there are no studies that have quantitatively examined the association of alcohol outcome expectancies and alcohol use by sex partners within sexual contexts in South Africa.

Previous research in South Africa is limited by uni-dimensional representations of alcohol expectancies (Kalichman et al., 2006; Simbayi et al., 2004). Theories propose that alcohol outcome expectancies are multidimensional (e.g., Goldman & Darkes, 2004). In addition to sexual enhancement expectancies, drinkers may expect alcohol to have a more generalized behavioral disinhibiting effect; acting out and doing things one would not ordinarily do. Also, alcohol may be expected to facilitate non-sexual social interactions; easing conversation and increasing friendliness. Another aspect of alcohol use that may vary is the sexual context of drinking, whether individuals drink before sex and whether his/her partner drinks before sex.

In the current study, we tested the associations between drinking in sexual contexts and three alcohol outcome expectancies: sexual enhancing, behavioral disinhibiting, and social facilitating expectancies. Based on previous qualitative research in South Africa (Morojele et al., 2006; Simbayi et al., 2006), we hypothesized that sexual enhancement and behavioral disinhibition outcome expectancies would be related to drinking before sex and that sexual enhancement and social facilitation outcome expectancies would be related to having partners who drink before sex. We also hypothesized that men and women would differ in their associations between alcohol expectancies and drinking; men were predicted to have stronger associations between sexual enhancement expectancies and their own drinking before sex, whereas among women the associations between behavioral disinhibition and social facilitation alcohol outcome expectancies were predicted to be stronger for partners drinking.

Methods

Participants and setting

Participants were 614 men and 158 women receiving STI diagnostic and treatment services from a public STI clinic in Cape Town, South Africa. Nearly all participants (98%) were indigenous Africans; 42% were 25 years or younger, 9% were married, 72% had high school educations or less, and 42% were unemployed.

Measures

All measures were translated and back-translated in English, Xhosa, and Afrikaans.

Demographic characteristics—Participants reported their age, gender, race, years of education, employment, marital status, and HIV testing history.

Sexual risk behaviors—Sexual practices and HIV risk history factors were assessed by participants reporting their number of male and female sex partners and frequency of sexual events, including vaginal and anal intercourse with and without condoms in the previous 3 months.

Alcohol and other drug use—Participants reported if they had ever used alcohol, dagga (marijuana), cocaine, Mandrax (methaqualone), and other drugs. Global use of alcohol was assessed by the Alcohol Use Disorder Identification Test (AUDIT), a 10-item instrument that includes quantity and frequency of alcohol use, with scores that range from 0 to 40; scores of 8 or above indicate risk for problem drinking (Simbayi et al., 2004).

Drinking in sexual contexts—Participants indicated whether they or their sex partners drank before sex in the past 3 months, representing situational use of alcohol. Responses were made on 8-point scales indicating number of times (range 0 to 41 or more times).

Alcohol outcome expectancies—Three dimensions of alcohol outcome expectancies (Goldman & Darkes, 2004) were assessed: Sexual Enhancement Expectancies, 10-items, e.g. “I feel sexual after I have been drinking”, $\alpha = .95$; Behavioral Disinhibition Expectancies, 6 items, e.g. “When I’m drinking, I do things I wouldn’t usually do”, $\alpha = .92$; and Social Facilitation Expectancies, 7 items, e.g. “Drinking makes it easier to talk to people”, $\alpha = .91$. Items were responded to on 4-point scales, 1 = Strongly disagree, to 4 = Strongly agree.

Procedures

Participants were recruited to complete anonymous surveys of sexual behavior and health. Potential participants were referred to the study recruiter by the clinic nurse following their routine clinical services; 90% of patients referred to the study agreed to complete surveys. Sampling occurred during all hours of clinic operation over a five month period. Participants received ZAR15 South African Rand (US\$3) for their time.

Results

Table 1 presents the characteristics of men and women STI clinic patients. Results showed that 273 (45%) men and 32 (20%) women reported drinking before sex in the previous three months. In addition, 186 (30%) men and 92 (59%) women indicated that a sex partner had drank before sex during that time period. For men, drinking before sex and having a partner who drank before sex were associated with having had two or more sex partners in the past three months. Among women, drinking before sex was associated with multiple sex partners but was not related to engaging in unprotected intercourse. However, women who reported

that a sex partner drank before sex indicated multiple partners and engaging in unprotected intercourse (see Table 2).

Multivariate regression for alcohol expectancies as predictors of alcohol use before sex

Table 3 shows the Pearson correlations (men shown above and women below the diagonal) among alcohol use and alcohol expectancy variables. Hierarchical regressions for men demonstrated that age and AUDIT scores were significantly related to drinking before sex (see Table 4). In addition, we found that sexual enhancement and behavioral disinhibition outcome expectancies predicted drinking before sex, contributing an additional 3.6% of the variance ($p < .01$). For frequencies of partners drinking before sex, AUDIT scores were significant in the first block and sexual enhancement expectancies contributed 3.8% ($p < .01$) of the explained variance over and above the other variables.

For women, analyses showed that AUDIT scores were significantly related to drinking before sex; women who reported more problem drinking were more likely to drink before sex. However, none of the alcohol expectancy measures were related to drinking before sex. For partners drinking before sex, the AUDIT was again significant and in the second block sexual enhancement expectancies accounted for an additional 5% ($p < .01$) of the explained variance.

Discussion

Alcohol use before sex is consistently related to sexual risk practices and could itself should be considered a marker for STI/HIV risks. We found that alcohol outcome expectancies were associated with drinking before sex as well as having sex partners who drank before sex. For men, beliefs that alcohol enhances sexual experiences were the only expectancies that were positively related to greater frequencies of drinking before sex and greater frequencies of partners drinking before sex. However, beliefs that alcohol disinhibits behavior were inversely associated with the frequency that men drank before sex. This finding may mean that men who believe that alcohol leads to less control use alcohol less in sexual situations simply because they value remaining in sexual control. Importantly, the relationship between behavioral disinhibition expectancies and drinking before sex was not related to men's partners drinking. Among women, none of the alcohol expectancy scales were associated with drinking before sex. However, sexual enhancement expectancies were significantly related to women's partners drinking before sex. These findings confirm qualitative research that suggests women do not expect alcohol to enhance sexual behavior and experiences (Morojele et al., 2006), and are consistent with the conclusion that women's risks for STI/HIV are to a great extent determined by their partner's behaviors.

Alcohol outcome expectancies represent cognitions that are amenable to intervention. Previous intervention research in the US has shown promising effects of interventions that target alcohol expectancies. Challenging positive alcohol expectancies does not always lead to changes in drinking, but there is evidence that enhancing negative outcome expectancies can reduce alcohol use in specific situations. Behavioral intervention research is therefore needed to identify the optimal strategies for altering alcohol outcome expectancies to reduce sexual risk-related alcohol use and ultimately reduce sexual risk behaviors. Motivational

counseling approaches include cognitive restructuring strategies that can address expectancies that alcohol enhances sexual outcomes. Effective counseling for risk-related alcohol use can be integrated into existing counseling services offered by STI clinics including voluntary counseling and testing for HIV. Implementing effective interventions that break the association between alcohol use and sexual risks in places with extremely high prevalence rates of HIV infection should be a global public health priority.

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Table 1

Characteristics of men and women receiving STI clinic services.

Characteristic	Men (N = 614)		Women (N = 158)		X ²
	N	%	N	%	
Less than age 25	266	44	80	51	9.7
Married	57	9	14	9	2.9
Employed	472	78	76	48	54.2**
Indigenous-African race	602	98	154	98	5.2
Drank at least monthly	291	47	35	22	47.9**
Typically more than 2 drinks	142	23	16	10	28.9**
AUDIT score 9	311	71	122	29	39.4**
Used other drugs	179	29	23	15	13.7**
Previous STI	302	49	79	50	0.1
Exchanged sex	49	8	12	8	0.1
Tested for HIV	264	43	87	55	7.5**
Were HIV positive	26	4	10	6	1.1
Years of education (M, SD)	9.6	3.5	10.6	3.2	3.24**

Note:

^a t-test for differences between genders.

* p < .05.

** p < .01

Table 2

Alcohol use before sex by self and partners among men and women in relation to multiple sex partners and engaging in unprotected intercourse in the previous three months.

	Participant Alcohol Use					Partner Alcohol Use				
	Participant did not drink before sex	Participant did drink before sex	N	%	X ²	Partner did not drink before sex	Partner did drink before sex	N	%	X ²
<u>Men</u>										
2+ sex partners	207	61	221	81	28.4**	276	65	151	81	16.1**
Engaged in unprotected intercourse	273	81	248	91	12.2**	347	82	173	93	12.8**
<u>Women</u>										
2+ sex partners	38	30	25	78	24.1**	20	31	43	47	4.0*
Engaged in unprotected intercourse	97	78	29	91	2.5	44	69	82	89	10.1**

Note:

*
p < .05,

**
p < .01

Table 3

Correlation matrix among alcohol use and alcohol outcome expectancy variables for men (correlations above the diagonal) and women (correlations below the diagonal).

	AUDIT	Sexual enhancement	Behavioral disinhibition	Social facilitation	Drank before sex	Partner drank before sex
AUDIT	--	.03	-.10*	.02	.63**	.52**
Sexual enhancement	.05	--	.65**	.79**	.17**	.20**
Behavioral disinhibition	-.06	.74**	--	.71**	-.03	.04
Social facilitation	.03	.73**	.71**	--	.10**	.13**
Drank before sex	.79**	.17**	-.03	.10*	--	.74**
Partner drank before sex	.34**	.22**	.04	.10*	.55**	--
Men's Mean	10.4	3.1	3.1	3.2	2.3	1.9
SD	10.6	1.0	0.9	0.9	1.8	1.6
Women's Mean	4.9	2.7	3.1	2.9	1.6	2.7
SD	8.8	1.1	1.0	1.0	1.3	1.8
t(770) ^a	5.9**	4.3**	0.4	3.3**	4.5**	5.6**

Note:

^a t-test for difference between men and women,

* p < .05,

** p < .01

Table 4
Hierarchical regressions predicting alcohol use by self and partner in sexual contexts for men and women.

	Men						Women					
	Drank before sex			Partner drank before sex			Drank before sex			Partner drank before sex		
	β	t		β	t		β	t		β	t	
<u>Block 1: Participant characteristics</u>												
Age	.07	2.1*		.05	1.5		.01	0.1		.07	0.9	
Education	.04	1.1		.01	0.2		.01	0.1		.09	1.3	
AUDIT	.61	19.2**		.51	14.7**		.79	15.7**		.32	4.3**	
<u>Block 2: Alcohol expectancies (AE)</u>												
Sexual enhancement	.27	5.2**		.26	4.5**		.15	1.8		.36	2.9**	
Behavioral disinhibition	-.11	-2.4*		-.02	-0.3		-.01	.06		-.19	1.6	
Social facilitation	-.03	-0.5		-.06	0.9		-.11	1.4		-.05	0.4	
F df	6, 607			6, 607			6, 151			6, 151		
F	76.9**			77.6**			29.6**			6.1**		
R ²	.426			.306			.637			.195		
R ² for AE block	.036**			.038**			.009			.05*		

** p < .01,

* p < .05