

Being drunk and high during sex is not associated with condom use behaviours: a study of high-risk young Black males

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Abstract. *Objective:* To assess the relationship between the frequency of being drunk and high during sex, and condom use errors and problems (CUEP) among a sample of high-risk young Black males recruited from the United States. *Methods:* Data were collected in clinics treating sexually transmissible infections in three cities in the southern United States. Males 15–23 years of age ($n = 697$) who identified as African-American and reported recent (past 2 months) condom use were eligible. Measures of alcohol and drug use, as well as condom use behaviours were assessed by audio-computer assisted self-interview. Eighteen CUEP were included in this assessment. *Results:* Sixteen bivariate correlations were obtained. The magnitude of the coefficients was small, ranging from 0.01 to 0.13. Only three were significant. These were positive associations between the frequency of being drunk and the frequency of unprotected vaginal sex, as well as the frequency of the 18-item measure of CUEP. A significant correlation was also found between the frequency of being high during sex and the frequency of unprotected vaginal sex. Adjustments for age did not change the findings. *Conclusions:* Interventions designed to promote safer sex behaviours among young Black males attending sexually transmissible infection clinics are no more likely to benefit patients through the inclusion of messages and training attempting to dissuade the use of alcohol and drugs before or during sex.

Additional keywords: alcohol use, drug use, sexual behaviour, sexually transmitted infections, young men.

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Introduction

AIDS in the United States (US) has become a national crisis for young Black males (YBM).^{1–7} Condom use continues to be a critical prevention strategy for this population.^{8–11} Therefore, research isolating factors impacting condom use is critical.^{12–14} Whether alcohol and drug use influences condom use remains an equivocal research question.^{15–21} Moreover, only two studies to date investigated whether alcohol and drug use influences condom use errors and problems (CUEP). These studies occurred in Croatia and Armenia.^{22,23} Accordingly, this current study determined the relationship between the frequency of being drunk and high during sex, and CUEP among a sample of high-risk YBM recruited from the Southern US.

Methods

Study sample

A sample of 697 YBM was recruited for participation in a National Institute of Health-funded randomised controlled trial of a safer sex intervention program. The baseline data from that

trial were used for this study. Recruitment occurred in sexually transmissible infection clinics located in three USA states. Inclusion criteria were: self-identification as African-American, ages 15 to 23 years, engaging in penile–vaginal sex at least once in the past 2 months and not knowingly HIV-positive. The study participation rate was 60.4%.

Study procedures

Following consent and enrolment, a computer-assisted survey was administered. This assessed the frequency of alcohol or drug use (or both) during sex and the frequency of unprotected vaginal sex (UVS), and contained an expanded version of the Condom Use Errors/Problems Survey (CUES).²⁴ The study protocol was approved by the institutional review boards at all participating sites.

Measures

All measures were assessed using a 2-month recall period. One question asked, ‘In the past 2 months, how many times were you

Table 1. Frequency of drunkenness during sex or being high during sex and condom use behaviours

	Unadjusted correlations				Adjusted correlations			
	Drunk		High		Drunk		High	
	<i>r</i>	<i>P</i>	<i>r</i>	<i>P</i>	β	<i>P</i>	β	<i>P</i>
Unprotected vaginal Sex	0.13	0.001	0.09	0.02	0.11	0.005	0.08	0.05
18 errors and problems	0.11	0.006	0.06	0.15	0.10	0.01	0.06	0.18
Late application	0.08	0.09	0.03	0.57	0.08	0.14	0.03	0.58
Early removal	-0.04	0.44	0.02	0.64	-0.05	0.31	0.02	0.67
Breakage	-0.04	0.43	0.07	0.17	0.03	0.57	0.07	0.15
Slippage	-0.01	0.69	0.04	0.44	-0.03	0.59	0.04	0.46
Slippage during withdrawal	-0.04	0.44	-0.05	0.34	-0.04	0.42	-0.05	0.34
Critical errors and problems index	0.02	0.64	0.03	0.51	0.02	0.59	0.03	0.52

drunk while having sex?’ The subsequent question replaced the word ‘drunk’ with ‘high.’ Response options were provided on a six-point scale: never, once, twice, three times, four times or more than four times.

Regarding the CUES, YBM provided yes/no responses for whether each of 18 errors/problems (2 month recall). These 18 items were summed to create one overall errors and problems index. Five of these 18 errors and problems (breakage, slippage during sex, slippage during withdrawal, late application and early removal) were summed to create a ‘critical errors and problems index.’

Data analysis

All measures were preserved in their continuous form. Pearson product moment correlations were used to determine bivariate associations. Multiple linear regression models calculated age-adjusted β values. Significance was defined by an α of 0.05.

Results

Characteristics of the sample

Mean age was 19.75 years (s.d. = 1.9 years). Most (64.3%) had graduated from high school. Most (95.3%) were receiving public assistance of some kind. The mean score on the six-item measure of being drunk during sex was 1.90 (s.d. = 1.48) and the mean was 2.57 (s.d. = 2.07) for being high. The mean frequency of UVS was 5.6 times (s.d. = 13.6). The mean CUES score was 3.27 times (s.d. = 2.27). The mean score on the five-item critical errors and problems index was 4.11 times (s.d. = 22.9).

Unadjusted correlations

Table 1 displays the correlation coefficients. As shown, the magnitude of the coefficients was small, ranging from 0.01 to 0.13. Further, only three of the coefficients were large enough to be considered unlikely to be a product of chance. These were positive associations between the frequency of being drunk and the frequency of UVS, as well as the frequency of CUEP. A significant correlation was also found between frequency of being high during sex and UVS.

Age-adjusted correlations

Age-adjusted correlations (Table 1) yielded very weak β weights, ranging from 0.02 to 0.11. Again, only three of the obtained β weights were significant; these corresponded to the same three unadjusted correlations obtaining significance.

Discussion

Among YBM attending US sexually transmissible infection clinics, the frequency of UVS was substantial. Being drunk or being high during sex did not significantly influence condom use behaviours. In the few exceptions where significant relationships were obtained, the magnitude of the correlations was weak. Our findings are at odds with the two previous studies that reported associations between CUEP and alcohol or drug use.^{22,23}

The negligible relationship between being drunk and high and UVS suggests that YBM are potentially influenced by a host of relational and context-based influences that are tied more closely to the act of using condoms. The lack of correlation suggests that nonuse or imperfect use of condoms is a consequence of factors that are not as simple as states of intoxication. Another possibility is that contextual factors such as partner type (e.g. casual v. steady) moderate relationships between alcohol or drug use and condom use.²⁵

The findings have direct implications for behavioural interventions that seek to promote the consistent and correct use of condoms among high-risk YBM. Intervention efforts dedicated to the potential mediator of avoiding alcohol and drug use during sex is not a wise use of time or resources if the goal is to promote consistent and correct condom use.

Conflicts of interest

None declared.

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References

- Centers for Disease Control and Prevention. HIV/AIDS surveillance, 2011 (year end edition). Atlanta: US Department of Health and Human Services; 2011.
- Centers for Disease Control and Prevention. African Americans and AIDS. Atlanta: Department of Health and Human Services; 2006.
- Centers for Disease Control and Prevention. HIV/AIDS among African Americans. Fact sheet. Atlanta: Department of Health and Human Services; 2013. Available online at: <http://www.cdc.gov/hiv/risk/raciaethnic/aa/facts/> [verified 17 January 2014].
- Centers for Disease Control and Prevention. A heightened national response to the HIV/AIDS crisis among African Americans. Atlanta: Department of Health and Human Services; 2007.

- 5 Centers for Disease Control and Prevention. African Americans and sexually transmitted diseases. Atlanta: Department of Health and Human Services; 2011.
- 6 Centers for Disease Control and Prevention. HIV and AIDS among African American youth. Atlanta: Department of Health and Human Services; 2012.
- 7 Southern States AIDS/STD Directors Work Group (SSADWG). Southern States manifesto. 2003. Available at: <http://www.vdh.virginia.gov/epidemiology/DiseasePrevention/documents/pdf/FinalSouthernManifesto.pdf> [verified 17 January 2014]
- 8 Crosby RA, Charnigo R, Weathers C, Caliendo AM, Shrier LA. Condom effectiveness against non-viral sexually transmitted infections: a prospective study using electronic daily diaries. *Sex Transm Infect* 2012; 88: 484–9. doi:10.1136/sextrans-2012-050618
- 9 Crosby RA, Bounse S. Condom effectiveness: where are we now? *Sex Health* 2012; 9: 10–7. doi:10.1071/SH11036
- 10 Holmes KK, Levine R, Weaver M. Effectiveness of condoms in preventing sexually transmitted infections. *Bull World Health Organ* 2004; 82: 454–61.
- 11 Crosby RA. Sate of condom use in HIV prevention science and practice. *Curr HIV/AIDS Rep* 2013; 10: 59–64. doi:10.1007/s11904-012-0143-7
- 12 DiClemente RJ, Crittenden CP, Rose E, Sales JM, Wingood GM, Crosby RA, *et al.* Psychosocial predictors of HIV-associated sexual behaviors and the efficacy of prevention interventions in adolescents at-risk for HIV infection: what works and what doesn't work. *Psychosom Med* 2008; 70: 598–605. doi:10.1097/PSY.0b013e3181775edb
- 13 Salazar LF, Crosby RA, Santelli J, DiClemente RJ. Sexually transmitted diseases and pregnancy among adolescents. In DiClemente, RJ, Santelli, JS, Crosby, RA, editors. Adolescent health: understanding and preventing risk. San Francisco: Jossey-Bass Wiley; 2009. pp. 259–275.
- 14 DiClemente RJ, Crosby RA. Sexually transmitted diseases among adolescents: risk factors, antecedents, and prevention strategies. In Adams, GR, Berzonsky M, editors. Blackwell handbook of adolescence. Oxford, UK: Blackwell Publishers Ltd; 2003. pp. 573–605.
- 15 Cooper ML. Alcohol use and risky sexual behavior among college students and youth: evaluating the evidence. *J of Studies on Alcohol* 2002; 101–7.
- 16 Von Haeften I, Fishbein M, Kasprzyk D, Montano D. Acting on one's intentions: variations in condom use intentions and behaviours as a function of type of partner, gender, ethnicity and risk. *Psychol Health Med* 2000; 5: 163–71. doi:10.1080/713690182
- 17 Calsyn DA, Crits-Christoph P, Hatch-Maillette MA, Doyle SR, Song YS, Coyer S, *et al.* Reducing sex under the influence of drugs or alcohol for patients in substance abuse treatment. *Addiction* 2010; 105: 100–8. doi:10.1111/j.1360-0443.2009.02812.x
- 18 Leigh BC, Vanslyke JG, Hoppe MJ, Rainey DT, Morrison DM. Drinking and condom use: results from an event-based daily diary. *AIDS Behav* 2008; 12: 104–12. doi:10.1007/s10461-007-9216-9
- 19 Leigh BC, Ames SL, Stacy AW. Alcohol, drugs, and condom use among drug offenders: an event-based analysis. *Drug Alcohol Depend* 2008; 93: 38–42. doi:10.1016/j.drugalcdep.2007.08.012
- 20 Gilmore MR, Morrison DM, Leigh BC, Hoppe MJ, Gaylord J, Rainey DT. Does "high=high risk?" An event-based analysis of the relationship between substance use and unprotected anal sex among gay and bisexual men. *AIDS Behav* 2002; 6: 361–70. doi:10.1023/A:1021104930612
- 21 Gilmore AK, Granato HF, Lewis MA. The use of drinking and condom-related protective strategies in association with condom use and sex-related alcohol use. *J Sex Res* 2013; 50: 470–9. doi:10.1080/00224499.2011.653607
- 22 Baćak V, Stulhofer A. Condom use errors and problems in a national sample of young Croatian adults. *Arch Sex Behav* 2012; 41: 995–1003. doi:10.1007/s10508-011-9838-x
- 23 Lang DL, Salazar LF, Diclemente RJ, Markosyan K, Darbinyan N. Predictors of condom errors among sex workers in Armenia. *Int J STD AIDS* 2011; 22: 126–30. doi:10.1258/ijsa.2009.009418
- 24 Crosby RA, Graham CA, Milhausen RR, Sanders SA, Yarber WL. Condom use errors/problems survey. In Fisher, T, Davis, C, Yarber, W, Davis, S, editors. Handbook of sexuality-related measures. 3rd edn. New York: Routledge; 2011. pp. 153–159.
- 25 LaBrie J, Earleywine M, Schiffman J, Pedersen E, Marriot C. Effects of alcohol, expectancies, and partner type on condom use in college males: event-level analyses. *J Sex Res* 2005; 42: 259–66. doi:10.1080/00224490509552280