

HIV RISK PROFILES OF CRYSTAL METHAMPHETAMINE USERS IN A COHORT OF YOUNG MEN WHO HAVE SEX WITH MEN

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Background

Substance use has been associated with HIV risk behaviour including multiple sex partners and unprotected sex among men who have sex with men (MSM). Recent work conducted in the United States found the use of amphetamines to be positively associated with unprotected anal intercourse among MSM. Kalichman et al. reported that the relationship between recreation drug use and sexual risk behaviours was mediated by sensation-seeking personalities.

Objective

To identify demographic and behavioural risk factors associated with the use of crystal methamphetamine (crystal) among young MSM.

Methods

- The present analysis is limited to those individuals who had completed a baseline questionnaire, at least one follow-up questionnaire and HIV test between May 1995 and November 2001.
- Variables of interest in these comparative analyses included: socio-demographic characteristics such as age, ethnicity, income, housing status and education; sexual behaviour variables including the frequency of receptive and insertive anal intercourse with regular and casual partners; and the frequency of condom use during receptive and insertive anal intercourse. The use of alcohol and other drugs was also assessed.
- For the purpose of this analysis unstable housing was defined *a priori* as living in a hotel, boarding house, group home, in the street or having no fixed address.
- Categorical variables were compared between groups using Pearson's chi-squared test. Contingency tables that contained one or more expected counts of less than five were analysed by the Fisher's exact test. Comparisons of continuous variables were carried out using Wilcoxon's rank-sum test. All reported p-values are two-sided.

Results

- One hundred twenty-five (25%) participants reported crystal use in the previous year. Men who reported living in stable housing, having at least a high school education and being employed (all OR:0.4) were less likely to report crystal use (Table 1). Caucasian men were 1.8 times more likely to report crystal use and younger men were more likely to report crystal use (Median:26 vs. 29 years).
- Participants who reported having sold sex in the previous year were 3.2 times more likely to report crystal use (Table 2). Crystal users were also more likely to have engaged in unprotected anal sex with known HIV-positive partners (OR:4.3), to have had casual partners (OR:2.3) and greater numbers of casual partners (median:5 vs. 3).
- The use of other substances in the past were positively associated with crystal use year, including marijuana (OR:5.1), cocaine (OR:11.7), nitrite inhalants (OR:3.6), crack (OR:10.1), speed (OR:11.7), heroin (OR:9.8) and ecstasy (OR:15.5) (Table 3). Participants who reported injection drug use in the previous year were 4.9 times more likely to report crystal use.
- Contemplation of suicide (OR:2.2) and attempted suicide (OR:2.2) were positively associated with crystal use.

Table 1: Sociodemographic characteristics of MSM who reported crystal use (n=125) and MSM who did not report crystal use (n=370).

	Crystal Use n (%)	No Crystal Use n (%)	Unadjusted Odds Ratio	95% CI
Median Age*	26 years	29 years		
Aboriginal ethnicity	12 (10)	26 (7)	1.4	0.7-2.9
Stable housing	98 (80)	338 (92)	0.4	0.2-0.6
At least high school education	91 (75)	318 (87)	0.4	0.3-0.7
Employed	76 (61)	287 (78)	0.4	0.3-0.7
Income < \$10,000/year	5 (7)	20 (7)	1.0	0.4-2.7

* p<0.001

Table 2: Sexual behaviour of MSM who reported crystal use (n=125) and MSM who did not report crystal use (n=370).

	Crystal Use n (%)	No Crystal Use n (%)	Unadjusted Odds Ratio	95% CI
Sex trade work	40 (32)	48 (13)	3.2	1.9-5.1
Non consensual sex	34 (27)	105 (29)	0.9	0.6-1.5
Unprotected anal sex with HIV-positive partner	30 (25)	59 (16)	1.7	1.1-2.8
Unprotected receptive anal sex with REGULAR partner	53 (44)	143 (40)	1.2	0.8-1.8
Unprotected insertive anal sex with REGULAR partner	51 (42)	142 (40)	1.1	0.7-1.7
Unprotected receptive anal sex with CASUAL partner	32 (26)	48 (13)	2.3	1.4-3.8
Unprotected insertive anal sex with CASUAL partner	38 (31)	74 (21)	1.7	1.1-2.8

NB: All variables assessed in the previous year with the exception of non-consensual sex, which is a lifetime measure.

Table 3: Substance use of MSM who reported crystal use (n=125) and MSM who did not report crystal use (n=370).

	Crystal Use n (%)	No Crystal Use n (%)	Unadjusted Odds Ratio	95% CI
*Use of:				
Marijuana	110 (88)	219 (59)	5.1	2.8-9.0
Cocaine	92 (74)	73 (20)	11.7	7.2-18.8
Nitrite inhalants	69 (57)	98 (27)	3.6	2.3-5.5
Crack	47 (38)	21 (6)	10.1	5.7-17.8
Speed	32 (26)	11 (3)	11.7	5.7-24.1
Heroin	34 (28)	14 (4)	10.0	5.0-19.0
Ecstasy	97 (78)	69 (19)	15.5	9.4-25.6
Injection drug use	31 (25)	23 (6)	4.9	2.7-8.9
Share needles	10 (8)	5 (1)	6.3	2.1-18.8

* previous year

Summary & Implications

- The use of crystal was positively associated with a number of HIV-risk behaviours including poly-substance use, injection drug use and risky sexual behaviour.
- HIV prevention efforts designed for young MSM should incorporate substance use counselling and education specific to crystal use in order to reduce the risk of HIV transmission.

Literature Cited

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