

Patterns of Substance Use among Young Gay and Bisexual Men in Vancouver

Keith Chan, KJP Craib, T Lampinen, AE Weber, ML Miller, MT Schechter, A Schilder, B Devlin, I Goldstone, C Lips, RS Hogg
The Vanguard Project; BC Centre for Excellence in HIV/AIDS, Vancouver, British Columbia

Background

In practice, substances used are typically studied individually. In actuality a person will often use multiple substances, either one at a time or in combination.

Objective

• To identify analytically useful patterns of substance use in a cohort of young gay and bisexual men in Vancouver.

Methods

The Vanguard Project:

The Vanguard Project is a prospective study of HIV incidence and risk behaviors that began in May, 1995. Eligible participants are males between the ages of 16 and 30, living in the Greater Vancouver area, which have not previously tested HIV-positive. The study is open to all men who have sex with men, regardless of whether they self-identify as gay, bisexual or straight.

Recruitment of participants involved outreach at gay community events, use of print materials (e.g. posters, brochures, condom packages), and recruitment by health care professionals at HIV testing clinics and local physicians' practices. Since May of 1995, over 1000 participants have completed confidential, self-administered questionnaires and undergone HIV testing on an annual basis. Recruitment of street-involved sex-trade workers occurred primarily at an outreach clinic specifically aimed at street youth.

Study Design:

Eligible participants for this particular analysis were those who completed the questionnaire in the seventh wave of the study (2001-2002). Participants who tested HIV-positive prior to the questionnaire period were excluded from analysis. Questionnaire items included demographics, sexual behavior, and substance use.

For the purpose of this analysis, self-reported number of uses of various substances within the past year were examined.

Statistical Analysis:

Factor Analysis was used to determine patterns of substance use. This method groups variables together such that all variables within a particular group are highly correlated among themselves but have relatively small correlation with variables in a different group. It is assumed that each group of variables represents a single underlying factor that is responsible for the observed correlations.

Results

Table 1: Socio-demographic characteristics.

Variable	Wave 7 (n=371) n(%)
Year of Enrollment	
1995	74 (20)
1996	86 (23)
1997	37 (10)
1998	25 (7)
1999	32 (9)
2000	27 (7)
2001	40 (11)
2002	50 (13)
Median Age (IQR)	29 (25-33)
Ethnicity	
White	261 (72)
Native	36 (10)
Other	65 (18)
Unstable Housing	38 (10)
College or University Graduate	176 (49)
Employed Fulltime	200 (54)

Table 2: Risk Characteristics

Variable	Wave 7 (n=371) n(%)
Injected Drugs	31 (8)
Sexually Transmitted Disease	17 (5)
Regular Partner	233 (68)
Median Number of Partners (IQR)	1 (1-3)
Unprotected Anal Insertive	136 (61)
Unprotected Anal Receptive	129 (58)
Casual Partner	245 (72)
Median Number of Partners (IQR)	5 (2-15)
Unprotected Anal Insertive	68 (30)
Unprotected Anal Receptive	53 (23)
HIV Positive or Unknown Partner	200 (58)
Unprotected Anal Insertive	57 (28)
Unprotected Anal Receptive	42 (21)

Table 3: Substance Use Frequency during the past year.

Variable	Wave 7 (n=371) Median (IQR)*
Alcohol (n=310)	153 (52-312)
Marijuana (n=214)	24 (4-208)
Poppers (n=95)	24 (5-104)
Ecstasy (n=94)	5 (2-12)
Cocaine (n=91)	12 (3-104)
Crystal Meth (n=78)	24 (2-360)
GHB (n=45)	3 (1-12)
Special K (n=45)	3 (2-10)
Viagra (n=41)	3 (2-10)
Amphetamine (n=30)	100 (2-365)
Heroin (n=27)	520 (156-1095)
Crack (n=21)	36 (6-357)

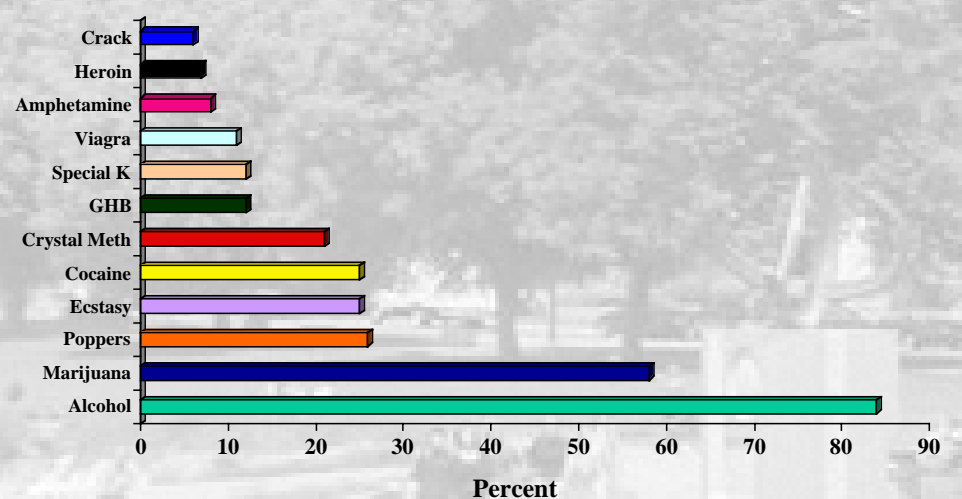
* uses per year among users of substance

Table 4 : Factor Analysis Results

Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Ecstasy	Heroin	Cocaine	Poppers	Alcohol	Viagra
GHB	Crystal Meth	Crack	Marijuana		
Special K	Amphetamine				
19% *	37%	55%	65%	74%	82%

* Cumulative proportion of substance use explained

Figure 1: Percent substance use of Vanguard Participants



Discussion

The Factor Analysis results in six factors accounting for 82% of the information contained in the twelve substances. The meaning of the factors is open to interpretation. They can be based on many things such as venue (bars, clubs, discos, streets), sex, substance replacement or substance "pick-me-up".

Conclusions

These data suggest that the use of substances by participants in the Vanguard Project group together into several underlying factors. This is a first step in understanding the dynamics of substance use in this cohort. Prevention efforts should incorporate harm reduction related to substances that are known to be risk factors for HIV transmission as well as those that are associated.