



Different patterns of substance use signals different HIV risk behaviours among men having sex with men (MSM) in Montreal

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& M-Track Study Researchers**

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Argus 2005

- 1st of biennial surveys of Montreal MSM
- First site to participate in “M-Track”
 - Second-generation surveillance system among MSM
 - Monitor HIV, HCV & STI & risk behaviours

Objectives

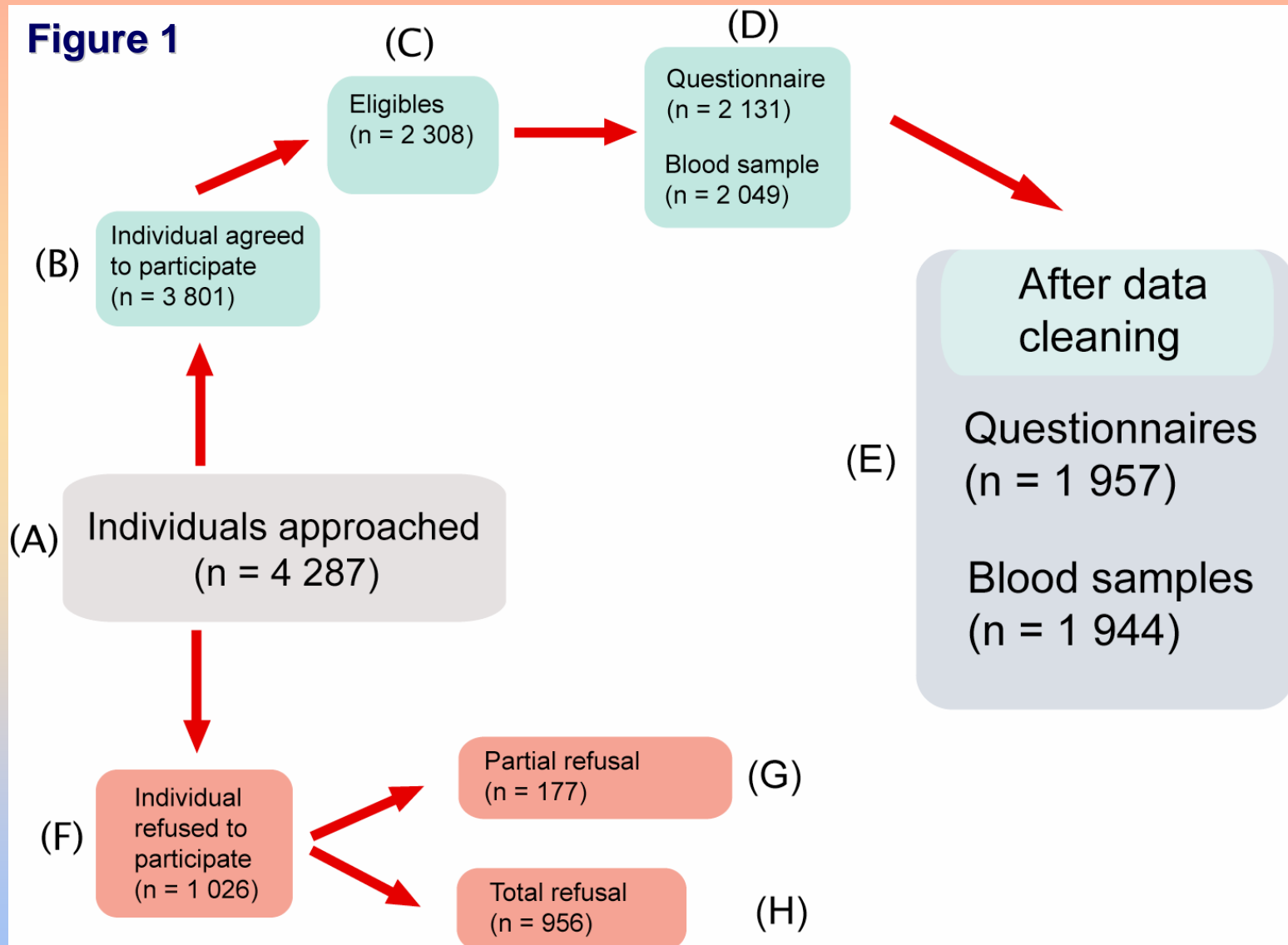
- 1. To derive profiles of MSM substance users during sex**
- 2. To describe and compare the drug use patterns during sex within this population**

Method



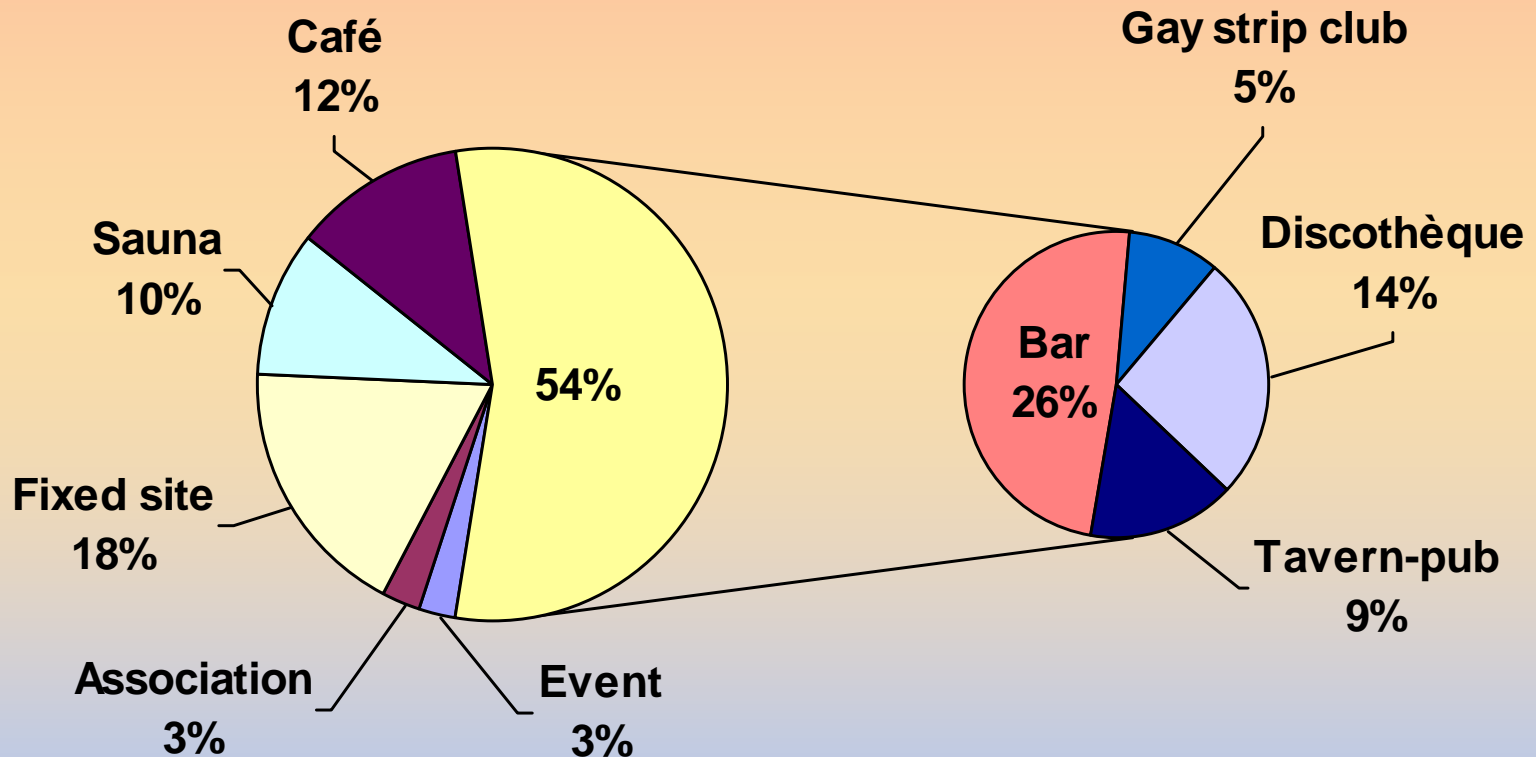
- **Cross-sectional**
- **Population**
 - Men who have sex with men
 - ≥ 18 years
 - resident of Montreal
- **Recruitment**
 - Convenience sample, diversity focus
 - Gay social spaces (bars, saunas, cafés etc.)
- **Data collection**
 - Anonymous self-administered questionnaire
 - Dried blood spot ; HIV antibodies

Participation – January to July 2005



Participation by recruitment sites

Figure 2



n = 1 957

Table 1. Substances used at least once during the past 6 months, within 2 hours before having sex (oral or anal) or while having sex (n = 1646)

	No (%)		Yes (%)	
		< 50% of the time		≥ 50% of the time
Alcohol	26.7	45.7	27.6	
Marijuana	61.6	23.8	14.6	
Poppers	70.4	20.1	9.5	
Cocaine	79.2	14.2	6.6	
Ecstasy	84.2	13.5	2.5	
Viagra	84.3	10.9	4.8	
Speed	84.8	11.8	3.4	
GHB	89.2	8.9	1.9	
Ketamine	90.9	7.8	1.3	
Mushrooms	95.9	3.5	0.6	
Crystal	96.4	3.0	0.6	
Tranquilizers	97.2	2.0	0.8	
Heroin	97.6	1.5	0.9	
LSD	98.2	1.3	0.5	
Opiates	98.3	1.4	0.3	

Variables

- Socio demographic background** (age, highest level of education completed, last year's income, sexual orientation, proportion of gay friends, sex life/social life satisfaction)
- Public settings where participants looked for sex at least once during the past 6 months** (bars, bathhouses after-hours clubs/parties sex parties, Internet, rave/circuit parties, public places, cafés, community events)
- Sexual and risk behaviours in the past 6 months** (group sex, barebacking, number of male partners, sex work)
- Health status, health care and STIs** (have seen a doctor for a regular or STI check up during the past 12 months, infected with Hepatitis C, infected with HIV, STI ever)
- Self-efficacy and attitudes towards condom use** (I am confident that I will succeed in using a condom every time I have anal sex with casual partners, I am fed up with being told to use condoms)

Analyses



- **Latent class analysis (LCA) was used to determine the profiles of substance users during sex**
- **Bivariate comparisons between profiles: Pearson χ^2 tests**
- **Multivariate analysis: polytomous logistic regression**

Results

Table 2. LCA 3-class solution (n=1646)

Substances ¹	Light users (55%) n=913	Common users (30%) n=486	Party drug users (15%) n=247
Alcohol	0.57	0.89	0.91
Poppers	0.15	0.40	0.50
Viagra	0.06	0.15	0.42
Marijuana	0.04	0.74	0.71
Cocaine	0.02	0.33	0.48
Amphetamines	0.01	0.05	0.78
Ecstasy	0.01	0.04	0.87
Crystal meth	0.00	0.01	0.21
Ketamine	0.00	0.03	0.49
GHB	0.00	0.05	0.56
Mushrooms	0.00	0.04	0.14
Tranquilizers	0.01	0.04	0.05
Heroin	0.00	0.03	0.07
Opiates	0.00	0.02	0.04
LSD	0.00	0.01	0.06

Results

Table 3.0 Multivariate polytomous regression analysis

	Classes compared with the class of Light users (n=913)	
	Party drug users (n=247) AOR ¹ (95%CI)	Common users (n=486) AOR ¹ (95%CI)
Socio demographic		
Age (18-29)	3.11 (1.97-4.91)	ns
Proportion of gay friends (most / all)	ns	0.73 (0.56-0.96)
Sex life satis. (quite or very satisfied)	2.12 (1.41-3.20)	ns
Have looked for sex in the past 6 months (at least once)		
After-hours bars (yes)	2.39 (1.54-3.70)	1.64 (1.20-2.24)
Rave / circuit parties (yes)	17.96 (9.54-33.83)	ns
Cafés (yes)	0.42 (0.24-0.74)	ns

1. Adjusted for education and income

Results

Table 3.1 Multivariate polytomous regression analysis

	Classes compared with the class of Light users (n=913)	
	Party drug users (n=247) AOR ¹ (95%CI)	Common users (n=486) AOR ¹ (95%CI)
Sexual and risk behaviours		
Group sex (at least once) ²	2.71 (1.79-4.10)	ns
Received money (or other goods) in exchange for sex (yes) ²	4.50 (2.36-8.59)	3.55 (2.12-5.95)
Health status / care and STIs		
Infected with HIV (yes)	ns	1.87 (1.22-2.86)
Infected with HCV (yes)	4.35 (1.35-14.03)	3.45 (1.36-8.70)
STI ever (yes)	2.22 (1.46-3.38)	1.83 (1.37-2.43)

1. Adjusted for education and income

2. During the past 6 months

Results

Table 3.2 Multivariate polytomous regression analysis

	Classes compared with the class of Light users (n=913)	
	Party drug users (n=247) AOR ¹ (95%CI)	Common users (n=486) AOR ¹ (95%CI)
Self-efficacy and attitudes towards condom use		
I am confident that I will succeed in using a condom every time I have anal sex with casual partners (agree moderately or very much)	0.53 (0.33-0.83)	0.61 (0.44-0.84)

1. Adjusted for education and income

Results – Summary (1)

- ❑ Party drug users were 3 times more likely to be under the age of 30 than the light users. They also distinguished themselves with greater probability of being satisfied with their sex life. They were more likely to have looked for sex in after-hours bars and rave parties, but less likely to have looked for sex in cafés
- ❑ Common users showed greater odds of having looked for sex in after-hours bars than light users. Also they were less likely to report a high proportion of gay friends

Results – Summary (2)

- ❑ Compared to the light users, the party drug users were more likely to report group sex in the past 6 months, to have received money, drugs or other goods in exchange for sex, to be infected with HCV and to ever had a STI
- ❑ Common users distinguished themselves from the light users by having greater probability of having received money in exchange for sex, to be infected with HCV and to ever had a STI, plus they also were more likely to be infected with HIV than the light users

Results – Summary (3)

- ❑ Finally, both party drug users and common users were less likely than light users to be confident on succeeding in using a condom every time they have anal sex with casual partners

Discussion (2)

- Each class (or profile) shows some specificity regarding socio demographic background or other characteristics that should be taken into account in intervening with this (these) population (s)
 - Party drug users were more likely to report group sex and a higher sexual satisfaction. Party drug users may use substances during sex to increase their sensations which would explain the higher sexual satisfaction. It could also be a personality feature like sensation seeking.
 - Common users on their part reported lower proportion of gay friends : greater isolation or an ambiguous relation with the gay community ? This isolation could become a concern since they showed higher Odds of being infected with HIV and HCV.

Discussion (3)

- ❑ Targeting public settings according to substance users' profiles could represent a relevant avenue in rethinking HIV prevention strategies and/or prevention of (specific) substance use
- ❑ It would be of interest to compare these profiles with other profiles emerged from different MSM samples (since public settings are quite different from one country to another or even from one town to another. Same thing with the availability of substances that vary from place to place)

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Thank you!