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Predictors of drug type and sexualized use in men who have sex with men (MSM) and transgender people in France

Alain Léobon, PhD, & Eugénie Samson-Daoust, MSc

Background

Chemsex: Use of psychoactive drugs in a sexual context.

- Recent mediatic attention

- Healthcare professionals are helpless: “There is an explosion of chemsex in France” (Charente Libre)

- Drugs involved: wide range of substances ≠ poppers or cannabis (Léobon, Dussault, & Otis, 2018; Maxwell, Shahmanesh, & Gafos, 2019; Scholz-Hehn et al., 2022)
- Quantitative data is lacking in France

Objective

Investigate predictors of sexualized use of uncommon drugs by comparing 3 groups, in a sample of MSM and trans people.

Methods

Net Gay Barometer, 2018: 10,853 online French participants → 3,563 drug users (32.8%)

Common drugs: cannabis, poppers, Viagra

- Group 1:** Exclusive users of common drugs → n=1,796 (50.4%) [reference group]

Uncommon drugs: cocaine, amphetamines, MDMA, methamphetamines, cathinones, GHB/GBL, opioids, etc.

- Group 2:** At least one uncommon drug in the past year, no sexual context → n=887 (24.3%)
- Group 3:** At least one uncommon drug in the past year, in a sexual context at least once → n=880 (24.1%)

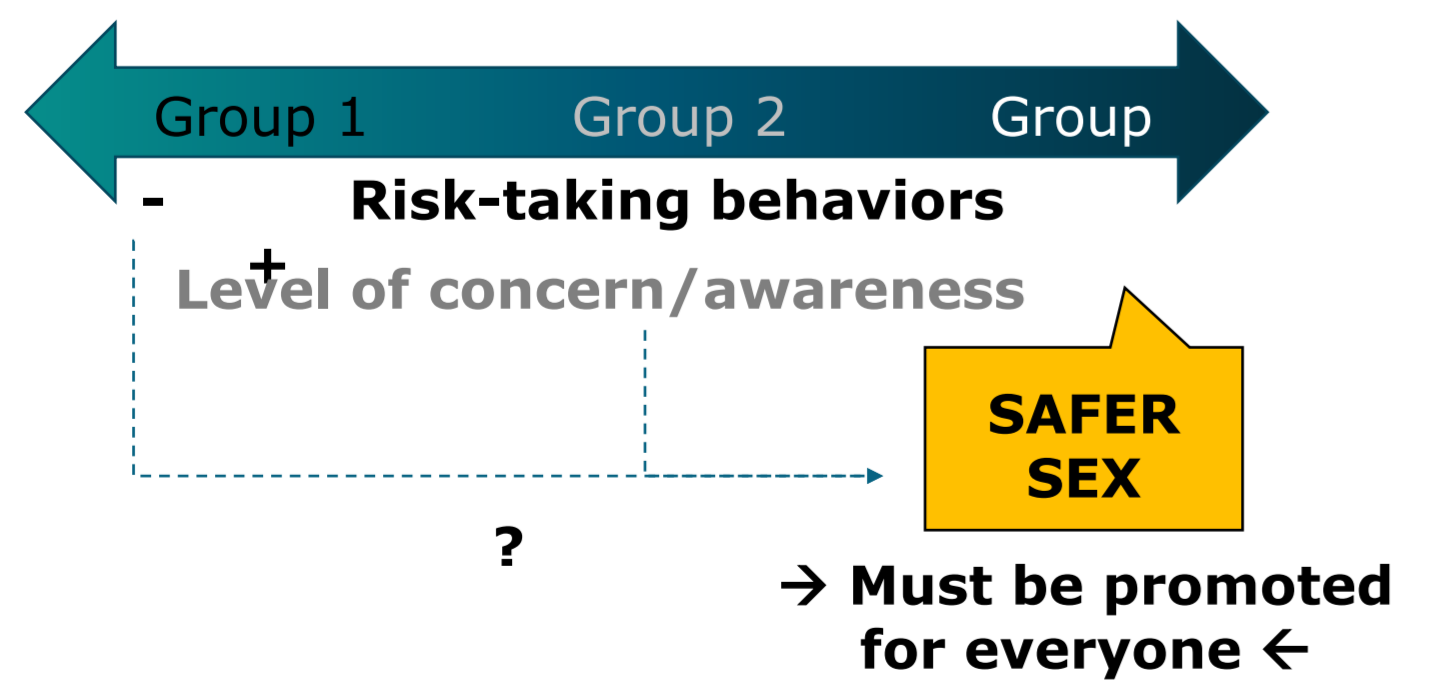
Results

Multivariate regression model (Table 1) explained 50,9% (Cox and Snell’s R²) of variance between groups.

Controlling for sociodemographic variables:

- Professional status:**
 - Group 2 → + self-employed (aOR=1.69);
 - Group 3 → - retired (aOR=0.18) or - full-time student (aOR=0.59)
- Residence in Paris region:**
 - Group 2 & 3 → + Paris region (aOR=1.59-2.02)
- Residence area:**
 - Group 3 → - suburban (aOR=0.68) or – rural (aOR=0.46)
- Birth country:**
 - Group 3 → + born outside of France (aOR=1.84)
- Website of origin:**
 - Group 2 → - general MSM dating websites (aOR=0.71)
- Gender identity:**
 - Group 2 → + non-binary people (aOR=2.21);
 - Group 3 → + trans women (aOR=4.54)
- Sexual orientation:**
 - Group 2 → + other than gay or bisexual orientation (aOR=1.62)
 - Group 3 → - bisexual orientation (aOR=0.48)

Conclusions



References

Léobon, A., Dussault, É., & Otis, J. (2018). « Chemsex » chez des hommes français ayant des relations sexuelles avec des hommes. *Drogues, Santé et Société*, 17(2), 53–75. <https://doi.org/10.7202/1062116ar>

Maxwell, S., Shahmanesh, M., & Gafos, M. (2019). Chemsex behaviours among men who have sex with men: A systematic review of the literature. *International Journal of Drug Policy*, 63, 74–89. <https://doi.org/10.1016/j.drugpo.2018.11.014>

Scholz-Hehn, A. D., Milln, S., Schulte, B., Reimer, J., Buth, S., & Schäfer, I. (2022). Substance Use and Chemsex in MSM - A Latent Class Analysis. *Journal of Drug Issues*, 52(1), 83–96. <https://doi.org/10.1177/00220426211040564>

Table 1. Multinomial logistic regression model of sexualized and non-sexualized context of uncommon drug use compared with exclusive use of common drugs (Net Gay Barometer 2018)

	Total (N=3563)	χ ²	Group 1: Users of common drugs exclusively (N=1796)		Group 2: Users of uncommon drugs outside of a sexual context (N=887)		Group 3: Users of uncommon drugs in a sexual context (N=880)	
	Freq. or <i>M</i> (<i>SD</i>)	<i>p</i>	Freq. or <i>M</i> (<i>SD</i>)	aOR	Freq. or <i>M</i> (<i>SD</i>)	aOR (95%CI)	Freq. or <i>M</i> (<i>SD</i>)	aOR (95%CI)
Poly-drug use (2+ on the same occasion)	N=3563	<0.001	N=1796	1.000	N=887		N=880	
Yes	37.0%		18.5%		45.7%	2.544 (2.016-3.211)***	66.0%	4.144 (3.158-5.437)***
No	63.0%		81.5%		54.3%	1.000	34.0%	1.000
Addiction concerns: Drug use	N=3552	<0.001	N=1794	1.000	N=886		N=872	
Very concerned	3.1%		1.1%		4.0%	4.857 (2.177-10.836)***	6.5%	6.778 (2.855-16.095)***
Quite concerned	8.4%		4.0%		12.1%	3.753 (2.418-5.826)***	13.5%	2.693 (1.607-4.511)***
Not very concerned	13.5%		8.6%		18.7%	2.498 (1.796-3.475)***	18.3%	2.557 (1.704-3.838)***
Not concerned at all	23.3%		19.9%		24.5%	1.550 (1.197-2.007)**	28.9%	2.169 (1.580-2.977)***
Did not experience this issue	51.7%		66.4%		40.7%	1.000	32.7%	1.000
5+ alcoholic drinks on the same occasion	N=3561	<0.001	N=1794	1.000	N=887		N=880	
Everyday or almost everyday	2.1%		1.3%		2.6%	3.372 (1.440-7.897)**	3.1%	2.113 (0.778-5.745)
Several times a week	15.5%		11.5%		23.0%	3.336 (2.129-5.227)***	16.1%	2.257 (1.347-3.781)**
Once a week	24.2%		21.0%		32.0%	2.533 (1.657-3.872)***	23.1%	2.288 (1.425-3.672)**
Once a month	23.6%		26.0%		20.9%	1.531 (0.998-2.346)	21.4%	1.914 (1.204-3.043)**
Less than once a month	21.8%		25.5%		14.3%	1.240 (0.808-1.903)	21.8%	1.343 (0.855-2.108)
Never	12.7%		14.6%		7.2%	1.000	14.5%	1.000
Mean frequency of mixed marginal sex practices (breeding, group sex, gangbang as a bottom) with casual male partners	N=3265	<0.001	N=1581		N=815		N=869	
Barebacking in a drug use context at least 1x	N=3563	<0.001	N=1796	1.000	N=887		N=880	
Yes	22.9%		11.4%		13.1%	0.997 (0.683-1.453)	56.4%	3.642 (2.406-5.513)***
No	77.1%		88.6%		86.9%	1.000	43.6%	1.000
Injected drugs	N=3563	<0.001	N=1796	1.000	N=887		N=880	
Yes	4.7%		0.6%		1.8%	2.483 (0.993-6.212)	16.1%	10.214 (4.265-24.459)***
No	95.3%		99.4%		98.2%	1.000	83.9%	1.000
Sexual health concerns: Risky sexual behaviors	N=3550	<0.001	N=1793	1.000	N=885		N=872	
Very concerned	5.8%		4.6%		6.8%	1.583 (1.006-2.489)*	7.3%	0.888 (0.500-1.575)
Quite concerned	18.2%		17.2%		18.3%	1.203 (0.893-1.621)	20.0%	1.017 (0.694-1.492)
Not very concerned	13.2%		10.1%		17.6%	2.411 (1.741-3.338)***	14.9%	1.550 (1.015-2.366)*
Not concerned at all	21.4%		17.2%		16.2%	1.243 (0.914-1.692)	35.6%	1.372 (0.960-1.959)
Did not experience this issue	41.4%		50.9%		41.1%	1.000	22.2%	1.000
Mean frequency of hard marginal sex practices (fisting, BDSM, urophilia, scatophilia) with casual male partners	N=3265	<0.001	N=1581	1.000	N=815		N=869	
	2.05 (2.61)		1.54 (2.25)		1.28 (1.96)	0.940 (0.883-1.001)	3.70 (3.00)	1.132 (1.068-1.199)***
Sex in exchange for money, drugs, goods or services	N=3561	<0.001	N=1795	1.000	N=886		N=880	
Often	2.6%		1.6%		1.1%	1.130 (0.435-2.937)	6.1%	4.021 (1.653-9.780)**
Sometimes	5.3%		3.8%		3.7%	1.853 (0.992-3.461)	9.9%	4.706 (2.445-9.059)***
Rarely	6.7%		5.3%		6.3%	1.693 (1.056-2.716)*	10.0%	1.994 (1.167-3.409)*
No	85.4%		89.3%		88.8%	1.000	74.0%	1.000
Frequency of exchanges on mobile dating applications	N=3563	<0.001	N=1796	1.000	N=887		N=880	
Many times a day	26.6%		23.1%		25.3%	1.210 (0.874-1.674)	35.1%	1.507 (1.002-2.266)*
Many times a week	27.8%		25.7%		27.6%	1.268 (0.933-1.723)	32.2%	2.220 (1.500-3.285)***
Many times a month	9.9%		10.5%		9.0%	0.836 (0.557-1.256)	9.5%	1.491 (0.882-2.521)
Less than 1x/month or irregularly	10.4%		9.6%		15.1%	1.505 (1.029-2.200)*	7.5%	2.159 (1.268-3.677)**
Does not use apps	25.3%		31.1%		23.0%	1.000	15.7%	1.000
Psychosocial concerns: Accepting sexual orientation	N=3552	<0.001	N=1794	1.000	N=886		N=872	
Very concerned	3.2%		4.2%		2.9%	0.570 (0.317-1.025)	1.4%	0.369 (0.140-0.975)*
Quite concerned	7.2%		8.7%		6.2%	0.533 (0.352-0.806)**	5.3%	0.543 (0.315-0.936)*
Not very concerned	6.8%		7.6%		7.4%	0.695 (0.461-1.049)	4.4%	0.551 (0.309-0.982)*
Not concerned at all	10.2%		11.5%		9.7%	0.592 (0.416-0.843)**	7.9%	0.656 (0.417-1.031)
Did not experience this issue	72.7%		68.1%		73.7%	1.000	81.1%	1.000
Condomless anal penetration with casual male partners	N=3563		N=1796	1.000	N=887		N=880	
Always	9.1%		7.0%		4.6%	0.607 (0.350-1.053)	18.1%	0.495 (0.262-0.938)*
Often	15.3%		10.2%		9.2%	0.814 (0.518-1.280)	31.8%	1.080 (0.630-1.852)
Sometimes	15.2%		13.5%		14.0%	0.765 (0.520-1.126)	19.8%	1.011 (0.617-1.655)
Rarely	14.7%		14.8%		16.6%	0.784 (0.554-1.108)	12.5%	1.472 (0.932-2.323)
Never or not applicable	45.7%		54.5%		55.6%	1.000	17.8%	1.000
Total number of STDs (excluding HIV et HCV)	N=3557	<0.001	N=1794	1.000	N=886		N=877	
	0.79 (1.95)		0.43 (1.28)		0.70 (2.05)	1.146 (1.054-1.245)**	1.62 (2.63)	1.156 (1.063-1.256)**
Developing feelings, friendships or emotional relationships with 1+ partners in the context of paid sex	N=3563	<0.001	N=1796	1.000	N=887		N=880	
Very often or often	0.9%		0.7%		0.3%	0.476 (0.105-2.171)	1.8%	1.533 (0.461-5.098)
Sometimes	1.9%		1.2%		1.1%	0.680 (0.249-1.855)	3.9%	1.568 (0.641-3.834)
Rarely	2.7%		2.2%		1.5%	0.524 (0.234-1.175)	5.1%	0.342 (0.156-0.750)**
Never or not applicable	94.5%		95.9%		97.1%	1.000	89.2%	1.000
Negative impact of drug use	N=3563	<0.001	N=1796	1.000	N=887		N=880	
Yes	31.9%		20.8%		33.3%	0.981 (0.759-1.267)	53.2%	1.661 (1.247-2.212)**
No	68.1%		79.2%		66.7%	1.000	46.8%	1.000
Barebacking practice	N=3563	<0.001	N=1796	1.000	N=887		N=880	
Exclusively as a couple	21.4%		22.6%		24.0%	1.261 (0.925-1.719)	16.3%	0.973 (0.630-1.503)
Non-exclusively	18.1%		14.0%		12.6%	1.105 (0.724-1.687)	32.0%	0.522 (0.302-0.902)*
Only with casual male partners	21.1%		17.3%		17.6%	1.364 (0.914-2.036)	32.6%	0.576 (0.337-0.985)*
No barebacking	39.3%		46.1%		45.8%	1.000	19.1%	1.000
Mean number of known HIV risk reduction strategies	N=3550	<0.001	N=1789	1.000	N=887		N=874	
	7.02 (2.67)		6.56 (2.64)		6.76 (2.67)	0.986 (0.943-1.031)	8.23 (2.33)	1.095 (1.033-1.162)**
Hepatitis C	N=3563	<0.001	N=1796	1.000	N=887		N=880	
Yes	2.8%		0.9%		1.5%	3.402 (1.357-8.528)**	8.2%	3.209 (1.403-7.339)**
No	97.2%		99.1%		98.5%	1.000	91.8%	1.000
Number of casual male partners	N=3563	<0.001	N=1796	1.000	N=887		N=880	
	21.37 (41.77)		13.22 (28.14)		15.34 (32.03)	1.003 (0.998-1.007)	44.11 (61.10)	1.005 (1.002-1.009)**
Regularly attending sexually charged meeting spaces (outdoor places, saunas, sex clubs, peep shows, swingers clubs)	N=3563	<0.001	N=1796	1.000	N=887		N=880	
Yes	22.4%		19.9%		12.9%	0.760 (0.563-1.025)	37.3%	1.276 (0.941-1.730)
No	77.6%		80.1%		87.1%	1.000	62.7%	1.000
Global satisfaction with physical appearance	N=3554	<0.001	N=1794	1.000	N=886		N=874	
Yes	68.7%		63.6%		73.7%	1.427 (1.121-1.816)**	73.9%	1.256 (0.928-1.698)
No	31.3%		36.4%		26.3%	1.000	26.1%	1.000
Positive impact of drug use	N=3563	<0.001	N=1796	1.000	N=887		N=880	
Yes	57.4%		49.0%		60.3%	1.179 (0.954-1.457)	71.6%	1.478 (1.126-1.940)**
No	42.6%		51.0%		39.7%	1.000	28.4%	1.000
PrEP use at least 1x in lifetime	N=3563	<0.001	N=1796	1.000	N=887		N=880	
Yes	9.7%		4.7%		8.0%	1.404 (0.921-2.141)	21.4%	1.710 (1.132-2.583)*
No	90.3%		95.3%		92.0%	1.000	78.6%	1.000
Index of the number of different locations (school, work, neighborhood, gay community, Internet and public space) where discrimination against being overweight was felt	N=3550	<0.001	N=1793	1.000	N=886		N=871	
	0.28 (0.77)		0.33 (0.83)		0.20 (0.68)	0.855 (0.731-1.000)*	0.26 (0.70)	0.824 (0.687-0.988)*
Condomless penetration in the context of paid sex	N=3563	<0.001	N=1796	1.000	N=887		N=880	
Always	2.2%		1.7%		0.5%	0.276 (0.077-0.990)*	5.1%	0.287 (0.116-0.711)**
Often	1.6%		0.9%		0.5%	0.528 (0.121-2.296)	4.1%	0.647 (0.235-1.781)
Sometimes	1.6%		1.6%		0.8%	0.552 (0.197-1.542)	2.6%	0.310 (0.122-0.788)*
Rarely	1.5%		0.9%		0.9%	0.800 (0.289-2.213)	3.1%	0.708 (0.266-1.885)
Never or not applicable	93.1%		94.9%		97.4%	1.000	85.1%	1.000

Note. R²=0.51 (Cox-Snell), 0.58 (Nagelkerke) ; Model χ² (178)=2091.338, *p*<0.001. **p*<0.05; ***p*<0.01; ****p*<0.001.

Unless otherwise mentioned, all variables listed above were for the past 12 months for participants. Bold numbers indicate significance at *p* < 0.05.

Sociodemographic variables not shown but included in multivariate model with forced entry for control purposes: age, gender identity, birth country, residence in Paris region, residence area, website of origin, university education, profession, relationship status, and sexual orientation.

Freq.: Frequency in percentage (%) of column (group); SD: standard deviation; aOR: adjusted odds ratio; 95%CI: 95% confidence intervals.