

Patterns of poly-substance use and mental health among Mexican gay, bisexual, and other men who have sex with men who use crystal methamphetamine

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Introduction

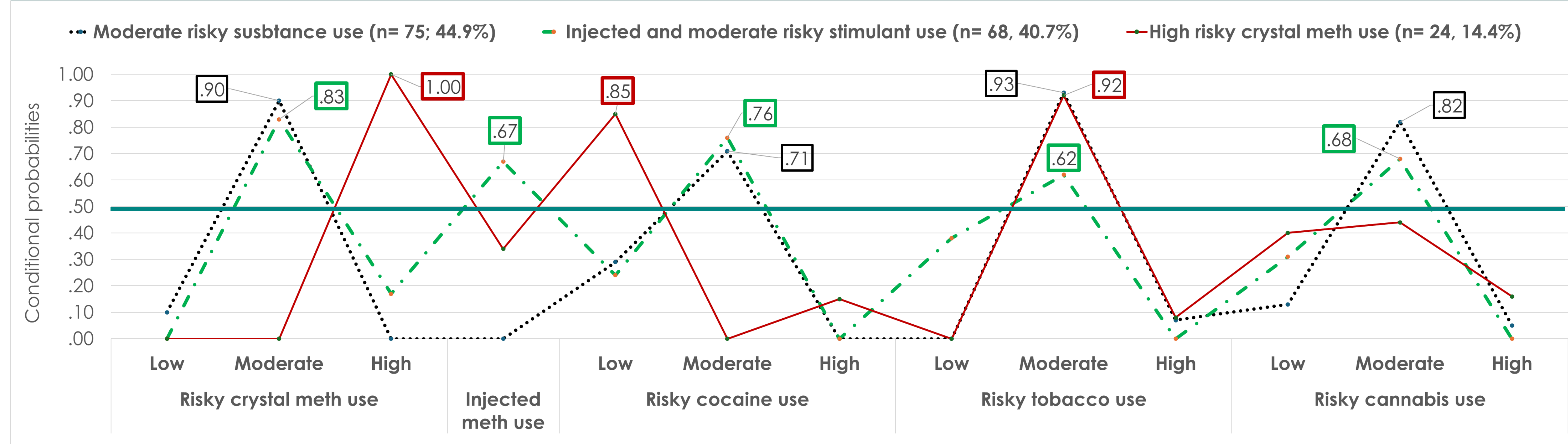
Previous research suggests high-risky patterns of poly-substance use among gay, bisexual, and other men who have sex with men (gbMSM) who use crystal methamphetamine (meth). This includes crystal meth use combined with different stimulants and depressants (Meyers-Pantele et al., 2022). Studies on these substance use patterns among persons who use crystal meth in Mexico are scarce and this information is essential to create effective harm reduction strategies and policies.

Methods

Participants (N= 167)	Procedure and instruments	Analysis	Ethical considerations
Snowball online sampling: <ul style="list-style-type: none">Mexican gbMSM≥ 18 years old.Crystal meth use in ≤ 3 months.Not in psychological/psychiatric treatment.	Participants answered an online survey (<i>Survio</i>) composed by: <ul style="list-style-type: none">Questions on current pattern of crystal meth use.ASSIST test (current risky substance use).Beck's Depression Inventory.Beck's Anxiety Inventory.WHO CIDI (lifetime traumatic experiences).	RStudio. <ul style="list-style-type: none">Latent class analysis (<i>poLCA</i>).Bivariate and multiple multinomial logistic regressions (<i>nnet</i>).	<ul style="list-style-type: none">Approval of the Ethics Committee of the Faculty of Psychology, UNAM (FPCE_16012021_H_AC).

Results

Figure 1. Conditional probabilities for a 3-class model of patterns of poly-substance use among Mexican gbMSM who use crystal meth in the last 3 months (N= 167)



Notes: Only probabilities (*P*) > .50 are shown. The model also included risky alcohol use, but all participants had high probabilities (*P* > .50) of having low-risky alcohol use, regardless of the class.

Table 1. Variables associated with three patterns of polysubstance use among Mexican gbMSM who use crystal meth in the last 3 months (N= 167)

	Distributions			Multiple model			
	Moderate risky substance use (n= 75)	Injected and moderate risky stimulant use (n= 68)	High risky crystal meth use (n= 24)	Injected and moderate risky stimulant use		High risky crystal meth use	
	%	%	%	aOR	CI 95%	aOR	CI 95%
Depressive symptoms							
Minimal/ mild	68.0	54.41	29.17	(Ref.)		(Ref.)	
Moderate/ severe	32.0	45.59	70.83	1.38	.66-2.88	3.35	1.13-9.95
Sexualized crystal meth use							
< Half of the times	64.00	38.24	16.67	(Ref.)		(Ref.)	
Most of the times/ always	36.00	61.76	83.33	3.19	1.54-6.60	12.22	3.16-47.25
Lifetime sexual violence							
No	70.83	47.06	43.48	(Ref)		(Ref)	
Yes	29.17	52.94	56.52	2.91	1.39-6.08	3.42	1.17-9.99

Notes: aOR: adjusted odds ratio; CI: confidence intervals; Ref: reference group. The moderate risky substance use class was the reference group in the multiple model. aOR and CI with *p* < .05 in bold.

References

- Gallardo Esclapez, I. (2023). Re-pensar el chemsex: un enfoque posestructuralista. *Revista Del Laboratorio Iberoamericano Para El Estudio Sociohistórico de Las Sexualidades*.
- Jaspal, R. (2018). Enhancing sexual health, self-identity and wellbeing among MSM: a guide for practitioners.
- Meyers-Pantele, et al. (2021). <https://doi.org/10.1016/j.drugalcdep.2021.108928>
- Rafful, C. et al., (2025). <https://doi.org/10.1177/29767342241311665>

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Discussion

- High risky crystal meth use is not necessarily injected (e.g., smoked, anal, nasal).
- Differentiate mental health issues between patterns of the same substance (Rafful et al., 2025).
- Association between social stressors (e.g., traumatic experiences), mental health outcomes, and sexualized substance use is mediated by the pattern of substance use, social support, and personality traits (Jaspal, 2018; Gallardo Esclapez, 2023).
- It is essential that harm reduction not only focuses on instrumental (i.e., paraphernalia provision) and self-care in the physical area but also integrates strategies to preserve mental health.

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