

Impact of substance use on pre-exposure prophylaxis adherence among men who have sex with men and trans women in Latin America: a sub-analysis of the ImPrEP Study



E.H. Vega-Ramirez¹, C. Coutinho², T.S. Torres², I. Leite², R. Moreira², K.A. Konda^{3,4}, B. Hoagland², R. Robles-Garcia¹, J.V. Guanira³, S. Bautista-Arredondo⁵, H. Vermandere⁵, M. Benedetti², C. Pimenta², B. Grinsztejn², C.F. Cáceres³, V.G. Veloso², ImPrEP Study Group^{1,2,3,5}

¹National Institute of Psychiatry Ramon de la Fuente Muñiz, Mexico City, Mexico; ²National Institute of Infectiology Evandro Chagas, Fundação Oswaldo Cruz, Rio de Janeiro, Brazil; ³Universidad Peruana Cayetano Heredia, Center for Interdisciplinary Studies in Sexuality, AIDS and Society, Lima, Peru; ⁴USC Keck School of Medicine, Division Disease Prevention, Policy and Global Health, Department of Population and Public Health Sciences, Los Angeles, United States of America; ⁵National Institute of Public Health, Cuernavaca, Mexico



BACKGROUND

Gay, bisexual, and other men who have sex with men (GBMSM) and trans women (TW) have higher rates of substance use compared to the general population. This increased substance use could raise the risk of acquiring HIV or disrupt adherence to pre-exposure prophylaxis (PrEP). In line with this, our study aimed to compare self-reported PrEP adherence among ImPrEP participants based on their reported substance use during the follow-up period.

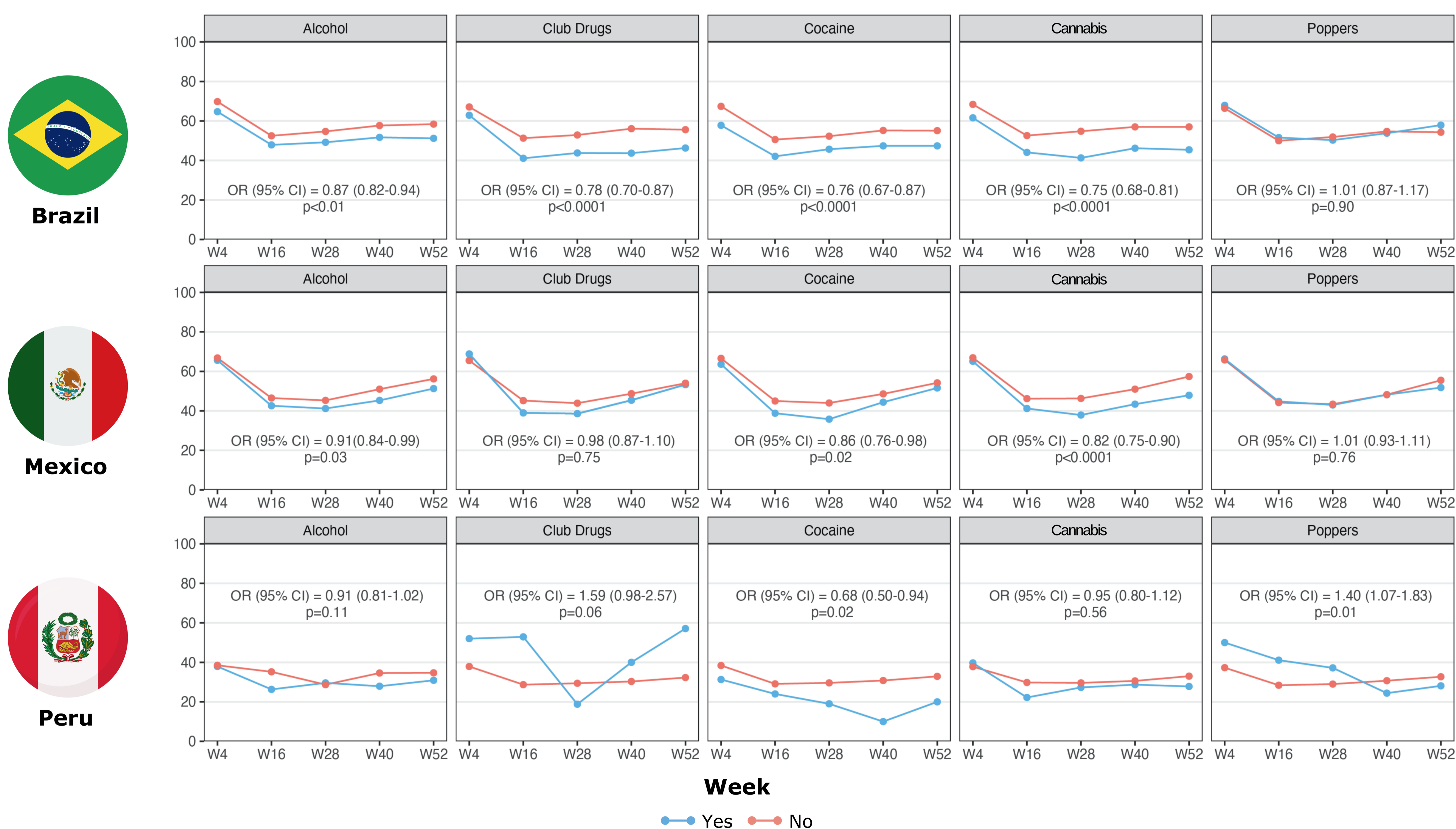
METHODS

This is a secondary analysis of the ImPrEP Project, a prospective, single-arm, open-label, multicenter PrEP implementation study that enrolled 9,509 MSM/TW from Brazil, Mexico, and Peru (2018-2021). We included participants who had complete information on at least one follow-up visit (4, 16, 28, 40, and 52 weeks) after enrollment and had complete information on substance use. We defined PrEP adherence with self-report and if the participant has not missed any pills in the past 30 days. We assessed the use of alcohol, cannabis, cocaine, poppers, and club drugs (including ecstasy, lysergic acid diethylamide, and gamma-hydroxybutyrate) (yes vs. no) in the previous three months at each visit. We used generalized estimating equation logistic regression models for each substance to associate PrEP adherence proportions over follow-up.

RESULTS

At the 4-week visit, our sample included 8,714 participants (43.2% Brazil, 34.8% Mexico, 22% Peru), with 55.3% attending the 52-week visit. The majority were GBMSM (94.8%), Black/Pardo/Mestizo (72.1%), and had >secondary education (82.7%). Our analysis revealed that participants who consistently used cocaine showed lower odds of PrEP adherence across all countries. Similarly, cannabis and alcohol users had lower PrEP adherence, but this was only observed in Brazil and Mexico. Furthermore, the use of club drugs in Brazil and poppers in Peru were also associated with decreased odds of PrEP adherence (Figure 1).

Figure 1. Proportion of PrEP adherence by substance use among GBMSM & TW from Brazil, Mexico, and Peru: The ImPrEP Study



CONCLUSIONS

The prevalence of substance use among the Latin GBMSM and TW individuals in this study is high. However, the patterns of consumption and types of substances used vary across the three countries, possibly due to differences in availability and context. Our analysis indicates lower PrEP adherence among groups most vulnerable to HIV when combined with the use of certain substances. HIV prevention programs should include regular assessments of substance use and early detection of its impact on PrEP adherence.

REFERENCES

- Veloso VG, et al. Same-day initiation of oral pre-exposure prophylaxis among gay, bisexual, and other cisgender men who have sex with men and transgender women in Brazil, Mexico, and Peru (ImPrEP): a prospective, single-arm, open-label, multicentre implementation study. *Lancet HIV*. 2023 Feb;10(2):e84-e96.
- Guo Y, et al. PrEP Uptake and Methamphetamine Use Patterns in a 4-Year U.S. National Prospective Cohort Study of Sexual and Gender Minority People, 2017-2022. *AIDS Behav*. 2024 Jun;28(6):2087-2088.
- Lesko CR, et al. Depression and HIV viral nonsuppression among people engaged in HIV care in an urban clinic, 2014-2019. *AIDS*. 2021 Oct 1;35(12):2017-2024.