

Mayara ST Silva^{1*}, Thiago Torres¹, Carolina Coutinho¹, Iuri Leite², Ronaldo Moreira¹, Brenda Hoagland¹, Cristina Pimenta³, Kelika A. Konda⁴, Hamid Vega⁵, Sergio Bautista⁶, Carlos Caceres⁴, Peter L. Anderson⁷, Valdilea Veloso¹, Beatriz Grinsztejn¹, for ImPrEP Study Group.

¹Instituto Nacional de Infectologia Evandro Chagas (INI, Fiocruz), Rio de Janeiro, Brazil, ²Escola Nacional de Saúde Pública Sérgio Arouca (ENSP, Fiocruz), Rio de Janeiro, Brazil, ³Ministério da Saúde, Distrito Federal, Brasil, ⁴Universidad Peruana Cayetano Heredia, Lima, Peru, ⁵Instituto Nacional de Psiquiatría Ramón De la Fuente Muñiz, Mexico City, Mexico, ⁶Instituto Nacional de Salud Pública, Cuernavaca, Mexico, ⁷University of Colorado, Denver, CO, USA

* Author contact information: mayara.secco@fiocruz.br

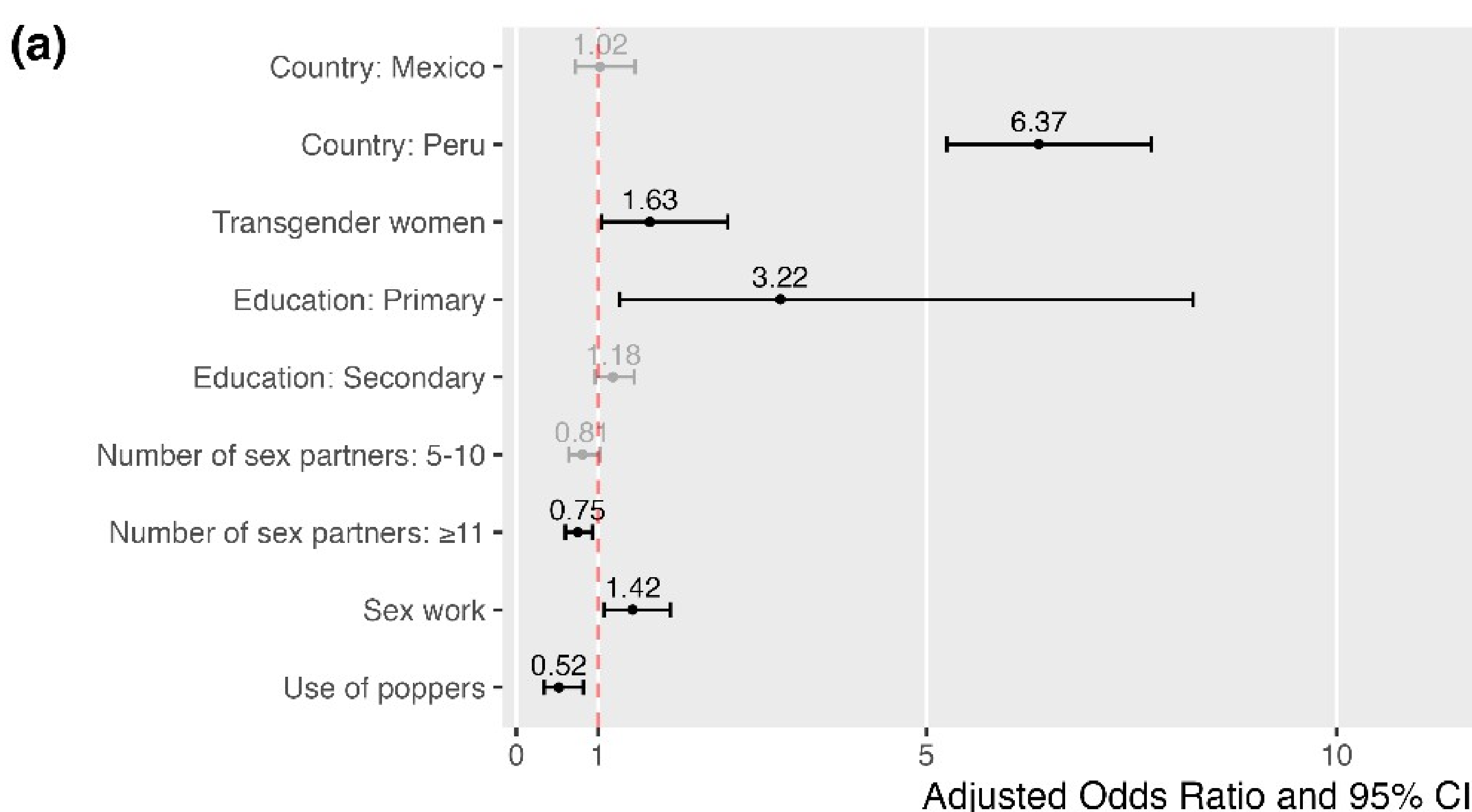
BACKGROUND

- The HIV epidemic disproportionately affects transgender women (TGW) and young men who have sex with men (YMSM) in Latin America, driven by LGBTQIAPN+phobia, stigma and social determinants of health.¹
- Ensuring adherence in PrEP programs is essential for customizing prevention strategies and enhancing engagement in healthcare.
- The objective was to identify factors associated with non-protective TDF-FTC levels in dried blood spots (DBS) in TGW and YMSM enrolled in ImPrEP study.

METHODS

- ImPrEP was an implementation study offering same-day oral PrEP (TDF/FTC) for 9,509 MSM/TGW in Brazil, Mexico, and Peru (2018-2021).^{2,3}
- Follow-up visits were scheduled 4 weeks post-enrolment and then quarterly.
- For this analysis, YMSM (18-24 years) and TGW (all ages) who had at least one DBS obtained during study follow-up were included.
- Generalized estimating equations were used to identify factors associated with inadequate PrEP adherence (tenofovir diphosphate [TFV-DP]<550 fmol/punch [week 4] or 800 fmol/punch [weeks 28-124] in DBS, equivalent to less than 4 weekly doses) among MSM/TGW (18-24 years) and TGW (all ages), separately.⁴

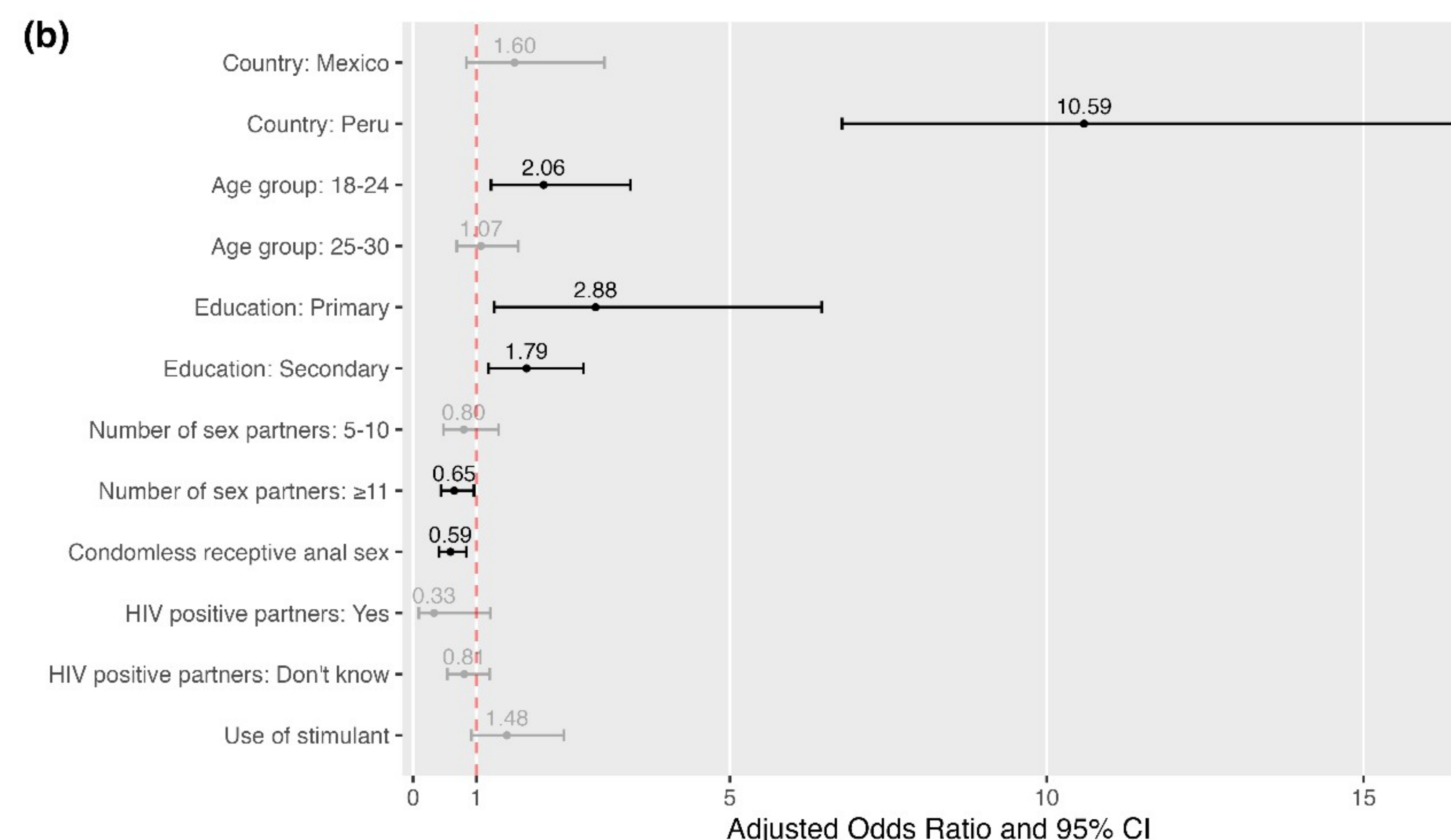
Figures. Factors associated with inadequate PrEP adherence, TFV-DP levels in DBS suggestive of <4 doses of TDF/FTC per week, according to characteristics of **young (a)** and **TGW (b)** participants, ImPrEP study



Addressing the social determinants of health In Latin America could improve outcomes within the HIV prevention continuum of care, especially among the most vulnerable groups. These populations encounter additional adherence-related challenges who could especially benefit from long-acting PrEP.

RESULTS

- The analysis included 3,573 DBS samples of 1,802 young MSM/TGW [week 4: 1645 (46%); weeks 28-124: 1928 (54%)], and 928 DBS samples of 404 TGW [week 4: 358 (39%); weeks 28-124: 570 (61%)].
- Of young participants, 94% were MSM, 14% aged 18-19 years, 75% non-white and 70% had post-secondary education. Among TGW, 27% were 18-24 years, 77% non-white and 57% had secondary education.



RESULTS

- For both populations, being from Peru and having a limited educational background (primary or secondary education) increased the odds of inadequate PrEP adherence, while having more than 10 partners decreased the odds of inadequate adherence.
- Engaging in sex work and being TGW were associated with inadequate adherence among young participants. Within the TGW subgroup, being 18-24 years showed the same association.
- Use of poppers (for young participants) and reporting condomless anal sex (for TGW) decreased the odds of inadequate adherence (Figures).

CONCLUSIONS

- Social determinants of health such as education played a major role in PrEP adherence among TGW and young MSM/TGW in Latin America.
- HIV risk perception might have been influenced by sexual behavior, increasing adherence to PrEP.
- Within Latin America, PrEP programs for young MSM/TGW must incorporate tailored interventions aimed at addressing stigma within health services, and enhancing adherence, particularly among the most vulnerable, such as those with lower education and engaging in sex work.
- Employing long-acting PrEP can be a strategic approach to improve PrEP adherence in these populations.

REFERENCES

- Torres TS, Teixeira SLM, Hoagland B, et al. Recent HIV infection and annualized HIV incidence rates among sexual and gender minorities in Brazil and Peru (ImPrEP seroincidence study): a cross-sectional, multicenter study. *Lancet Reg Health Am.* 2023 Dec 2;28:100642.
- Veloso VG, Cáceres CF, Hoagland B, 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; 10:e84-96.
- Konda KA, Torres TS, Mariño G, et al. Factors associated with long-term HIV pre-exposure prophylaxis engagement and adherence among transgender women in Brazil, Mexico and Peru (ImPrEP): results from the ImPrEP study. *J Int AIDS Soc.* 2022 Oct;25 Suppl 5(Suppl 5):e25974.
- Anderson PL, Glidden DV, Liu A, et al. Emtricitabine-tenofovir concentrations and pre-exposure prophylaxis efficacy in men who have sex with men. *Sci Transl Med* 2012; 4: 151ra125.