

Background. Between 2010-2023, Latin America (LA) had a 9% rise in new persons acquiring HIV and a moderate reduction in HIV-related deaths (-38%), especially among sexual and gender minorities (SGM). Social vulnerability and psychosocial challenges often hinder antiretroviral adherence (ARV-Ad). We aimed to identify social and psychosocial factors associated with low ARV-Ad among SGM living with HIV in LA.

Methods. We conducted a web-based survey in Brazil, Mexico, and Peru from August to November 2024. Participants were ≥18 years old and self-reported living with HIV. We collected data on socio-demographics, time living with HIV, sexual behavior, and substance use, along with scales for depression (*Patient Health Questionnaire* [PHQ-9]), mental health well-being (*Short Form-36 Health Survey* [SF-36]), homonegativity (*Reactions to Homosexuality Scale*), and HIV knowledge (*HIV/AIDS Knowledge Assessment Tool*). We included participants who reported taking ARVs and defined optimal adherence as self-reporting ≥95% ARV-Ad in the last 30 days using a visual analog scale. We conducted a multivariate logistic regression analysis using the forward conditional method, including variables with a $p \leq 0.10$ in the comparative analysis.

Results. We had 2553 participants, and most of them were from Brazil (Figure 1). 95.1% were cisgender men, with a mean age of 42.3 (S.D. 10.1), and 80.5% had more than secondary education. Most (78.3%) reported optimal ARV-Ad. The proportion of participants aged 18-24 with a monthly income of ≤2 minimum wages was higher in the group with no ARV-Ad (both, $p \leq 0.041$). Chemsex and stimulant drug use were also higher (both, $p < 0.001$), and the undetectable equals untransmittable (U=U) slogan awareness was lower in this group ($p = 0.003$). There were no differences in the time living with HIV and all the variables about sexual behavior (i.e. condomless receptive anal intercourse) (Table 1). The HIV knowledge and the mental health well-being were lower, and the depression score was higher in the no ARV-Ad group (all, $p < 0.001$) (Figure 2). There were no differences in HIV and homonegativity score between the ARV-Ad groups. Being from Mexico, having no or low income, having recent transactional sex, stimulant and opioid drug use, and having a higher score of depressive symptoms increased the odds of non-adherence. Conversely, a higher HIV knowledge score decreased the odds of no ARV-Ad (Table 2).

Figure 1. Sexual and Gender Minorities Living with HIV in Brazil, Mexico, and Peru

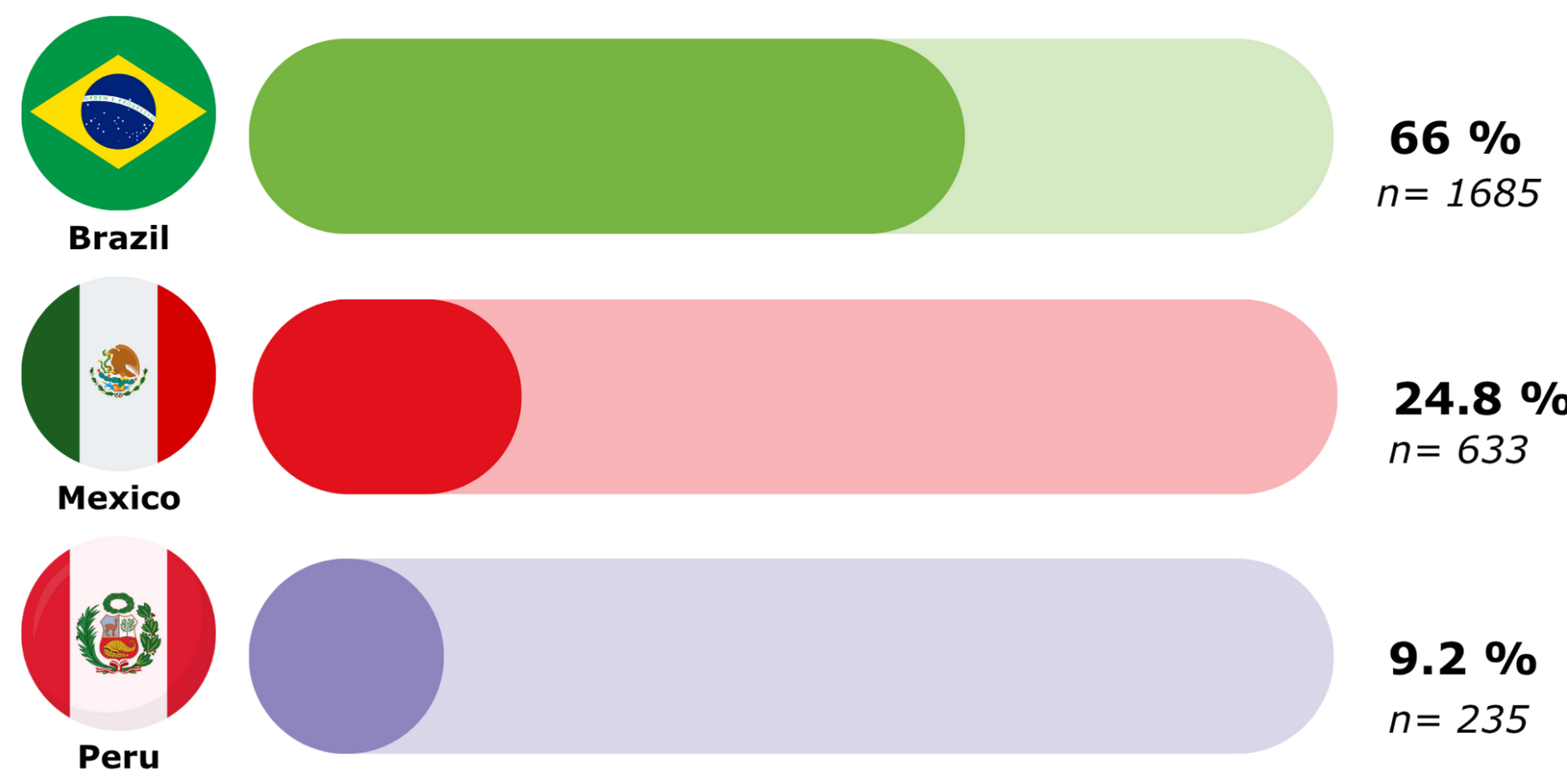


Figure 2. Mental Health, HIV knowledge, HIV Stigma, and Homonegativity among sexual and gender minorities living with HIV in Brazil, Mexico, and Peru

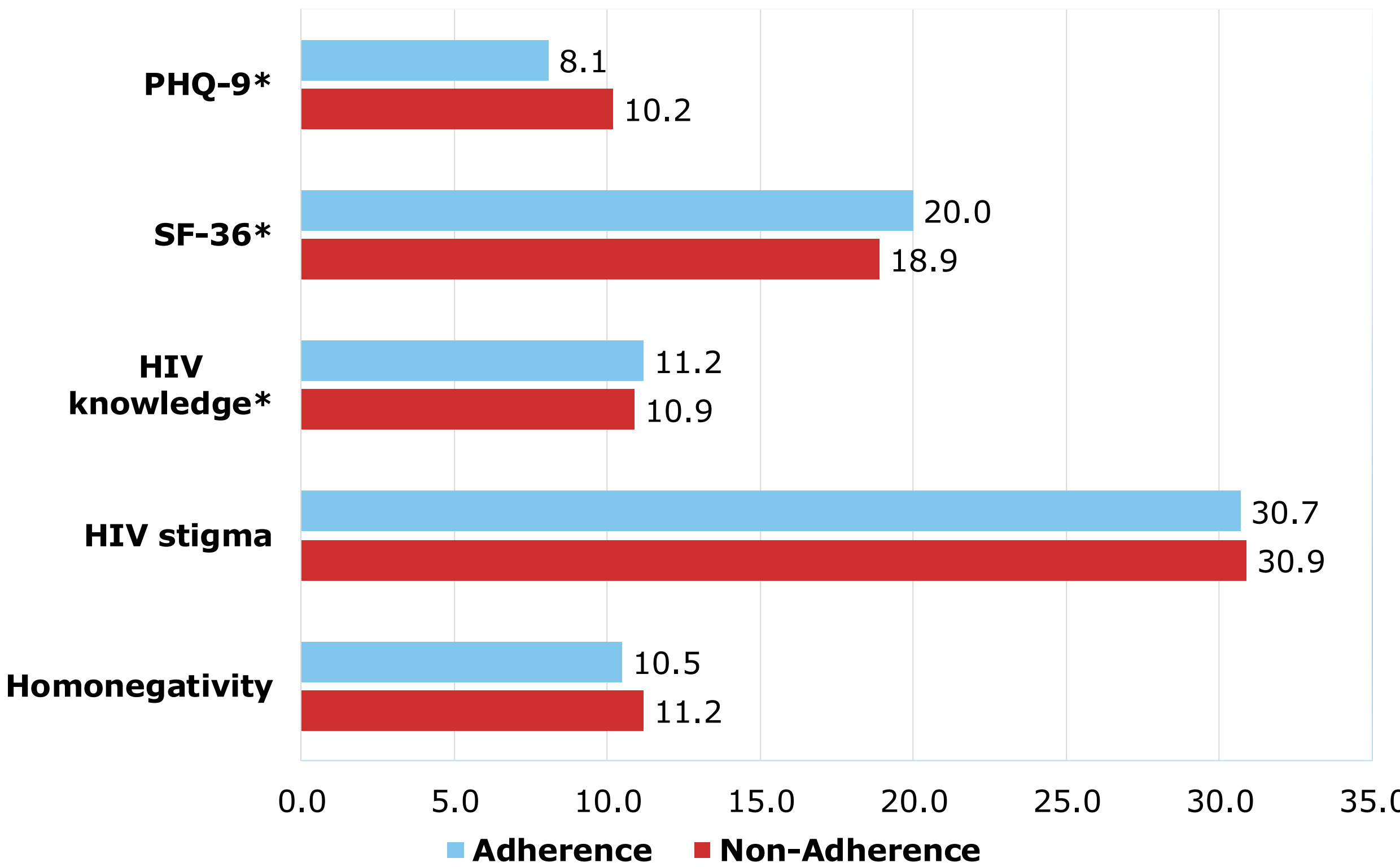


Table 1. Sociodemographic, Sexual Behavior, and Substance Use among Sexual and Gender Minorities Living with HIV in Brazil, Mexico, and Peru

	Total (n= 2553)	Adherence (n= 2000, 78.3%)	Non-Adherence (n= 553, 21.7%)	p
Age				0.041
18-24	51 (2.0%)	34 (1.7%)	17 (3.1%)	
>24	2,502 (98.0%)	1,966 (98.3%)	536 (96.9%)	
Education				0.916
≤Secondary	498 (19.5%)	391 (19.6%)	107 (19.3%)	
>Secondary	2,055 (80.5%)	1,609 (80.5%)	446 (80.7%)	
Monthly income ⁺				<0.001
Minimum or less	447 (17.5%)	289 (14.4%)	158 (28.6%)	
>1 to 2 MW	473 (18.5%)	356 (17.8%)	117 (21.2%)	
>2 to 6 MW	1,130 (44.3%)	919 (46.0%)	211 (38.2%)	
>6 MW	503 (19.7%)	436 (21.8%)	67 (12.1%)	
Ethnicity				<0.001
White	1,073 (42.0%)	896 (44.8%)	177 (32.0%)	
Mixed	1,127 (44.1%)	841 (42.0%)	286 (51.7%)	
Afro-descendant	228 (8.9%)	179 (8.9%)	49 (8.9%)	
Other	125 (4.9%)	84 (4.2%)	41 (7.4%)	
Time living with HIV				0.441
<1 year	189 (7.4%)	144 (7.2%)	45 (8.1%)	
1-5 years	749 (29.3%)	590 (29.5%)	159 (28.8%)	
6-10 years	649 (25.4%)	497 (24.9%)	152 (27.5%)	
>10 years	966 (37.8%)	769 (38.5%)	197 (35.6%)	
Undetectable (yes) [§]	2,112 (84.3%)	1,717 (86.1%)	395 (77.3%)	<0.001
CRAI (yes) [§]	1,831 (71.7%)	1,443 (72.2%)	388 (70.2%)	0.358
Transactional sex (yes) [§]	275 (10.8%)	184 (9.2%)	91 (16.5%)	<0.001
Chemsex (yes) [§]	934 (60.3%)	670 (57.8%)	264 (67.9%)	<0.001
Stimulant drug use (yes) [§]	304 (11.9%)	208 (10.4%)	96 (17.4%)	<0.001
Opioids drug use (yes) [§]	22 (0.9%)	14 (0.7%)	8 (1.4%)	0.093
U=U awareness (yes) [§]	2,511 (98.4%)	1,975 (98.8%)	536 (96.9%)	0.003

MW: Minimum wage; U=U: undetectable equals untransmittable
⁺In Brazil: USD 270; Mexico: USD 408; Peru: USD 277; [§]In the last 6 months.

Table 2. Factors Associated with No Antiretroviral Adherence among Sexual and Gender Minorities Living with HIV in Brazil, Mexico, and Peru

	aOR	95%C.I.	p
Country (ref. Brazil)			
Mexico	4.70	3.66 , 6.04	<0.001
Peru	1.00	0.66 , 1.51	0.997
Age (ref. >24)			
18-24	1.22	0.62 , 2.42	0.559
Education (ref. >secondary)			
≤Secondary	1.23	0.92 , 1.66	0.162
Monthly income (ref. >6 MW) ⁺			
1 MW or less	1.96	1.35 , 2.84	<0.001
>1 to 2 MW	1.32	0.91 , 1.91	0.140
>2 to 6 MW	1.15	0.84 , 1.58	0.372
Time living with HIV (ref. ≤1 year)			
1-5 years	1.10	0.72 , 1.67	0.665
6-10 year	1.52	0.99 , 2.33	0.056
>10 years	1.54	1.01 , 2.35	0.043
Transactional sex (yes vs. no) [§]	1.41	1.04 , 1.91	0.029
Stimulant drug use (yes vs. no) [§]	1.90	1.42 , 2.54	<0.001
Opioids drug use (yes vs. no) [§]	2.85	1.05 , 7.79	0.041
PHQ-9 (score)	1.02	1.00 , 1.04	0.034
HIV knowledge (score)	0.84	0.77 , 0.92	<0.001

MW: Minimum wage; PHQ-9: Patient Health Questionnaire
⁺In Brazil: USD 270; Mexico: USD 408; Peru: USD 277; [§]In the last 6 months.

Conclusions. Social vulnerability and psychosocial adversities continue to impact ARV adherence among SGM living with HIV in LA. The HIV response in the region still requires a more comprehensive approach to enhance ARV adherence for those particularly vulnerable.