

# Depression among trans women and men who have sex with men from Brazil, Mexico, and Peru: Who has the highest odds?



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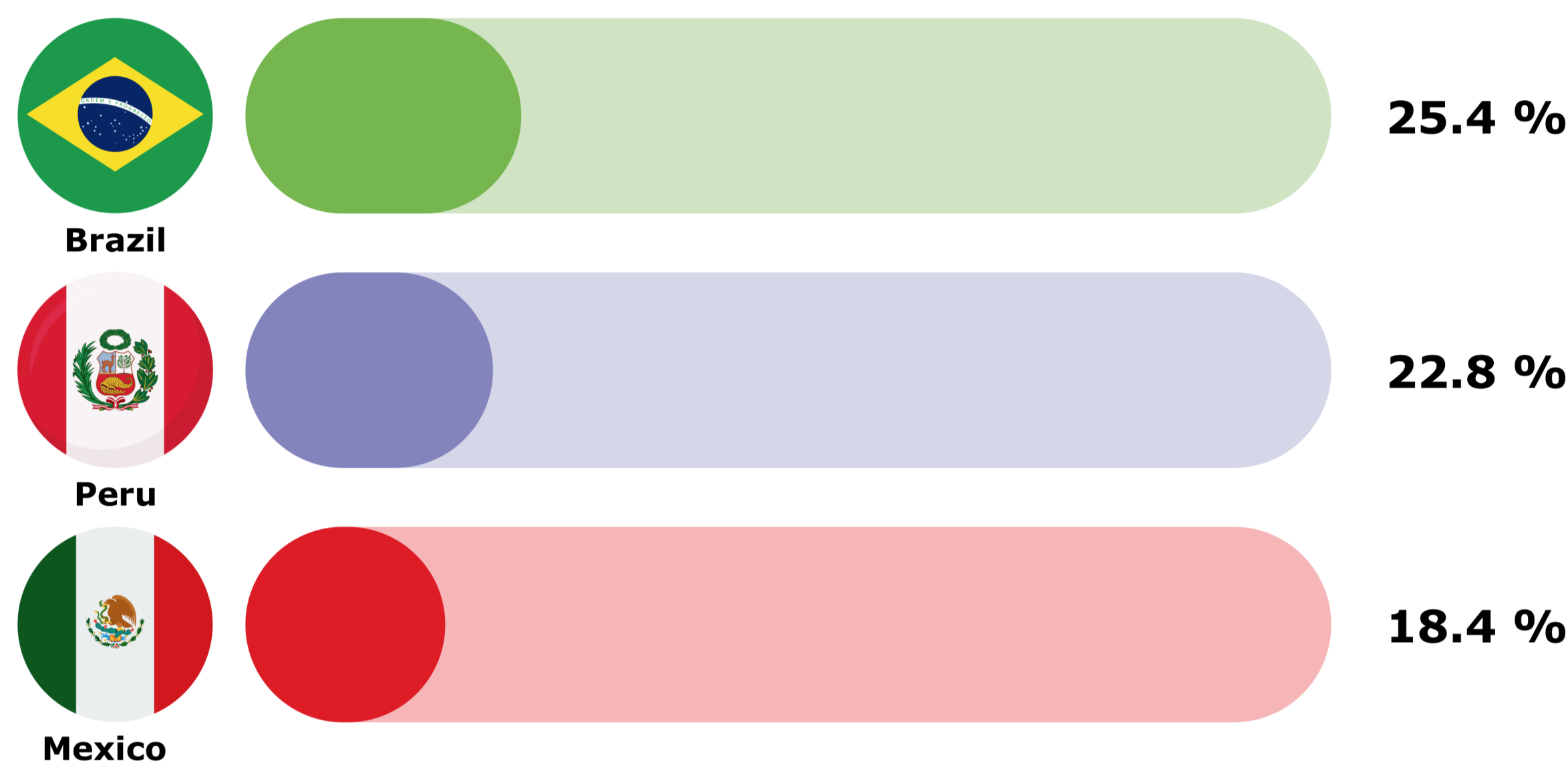
## BACKGROUND

Depression is more prevalent among transgender women (TW) and gay, bisexual, and other men who have sex with men (GBMSM) compared to cisgender and heterosexual populations. This could be connected to their HIV status, the use of specific pre-exposure prophylaxis (PrEP), sexual behavior, and indicators of social inequality. We aimed to identify the factors associated with depression among TW/GBMSM in Latin America.

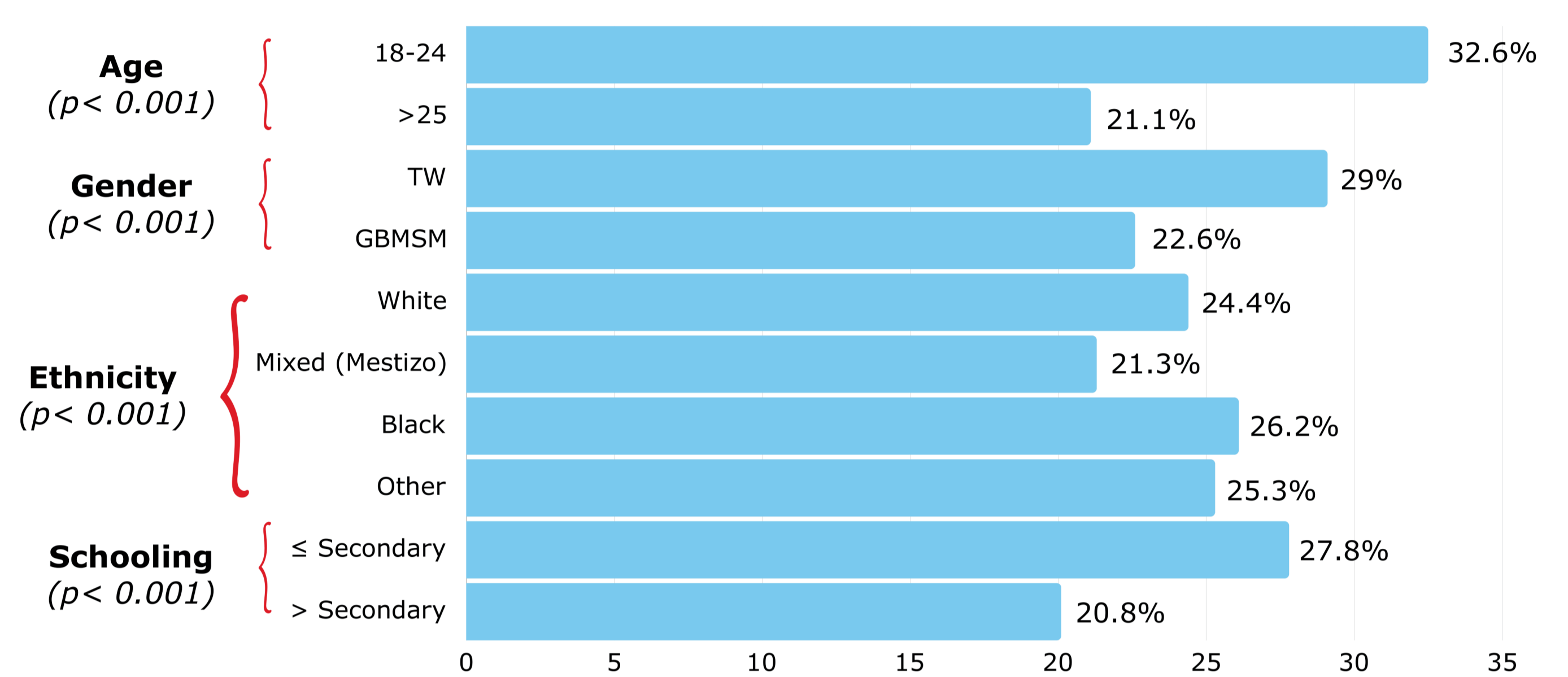
## METHODS

We conducted a cross-sectional web-based survey among adult (age  $\geq 18$  years) TW/GBMSM living in Brazil, Mexico, and Peru in 2021. We collected data on sociodemographics (country, age, ethnicity, gender, sexual attraction, schooling, and individual monthly income), self-reported HIV status, PrEP past or current use, sexual behavior, binge drinking, chemsex, and mental health well-being (assessed with the mental health module of the Short Form Health Survey). We defined depression according to the Patient Health Questionnaire-2 (score  $\geq 3$ ) and used this as the outcome for logistic regression analyses. In the final multivariable model, we kept all significant variables ( $p \leq 0.05$ ).

**Figure 1.** Prevalence of depression among GBMSM & TW from Brazil, Mexico, and Peru (2021)



**Figure 2.** Prevalence of depression among GBMSM & TW from Brazil, Mexico, and Peru by socioeconomic characteristics (2021)



**Table 1.** Factors associated with depression among GBMSM & TW from Brazil, Mexico, and Peru (2021)

	MSM & TW w/ depression (n= 18,397) OR (C.I. 95%)	MSM & TW w/ depression (n= 15,060) aOR (C.I. 95%)
<b>Country</b> (ref. Mexico)		
Peru	1.31 (1.15-1.48)***	0.74 (0.59-0.92)**
Brazil	1.50 (1.39-1.63)***	1.38 (1.21-1.57)***
<b>Age</b> (18-24 vs. >24)	1.80 (1.66-1.96)***	1.25 (1.01-1.24)**
<b>Ethnicity</b> (ref. White)		
Mixed/Mestizo	0.84 (0.78-0.90)***	0.95 (0.85-1.07)
Black	1.09 (0.96-1.25)	1.07 (0.90-1.28)
Other	1.05 (0.88-1.25)	1.29 (1.00-1.67)
<b>Gender</b> (TW vs. GBMSM)	1.40 (1.19-1.66)***	1.14 (0.90-1.46)
<b>Schooling</b> ( $\leq$ secondary vs. >secondary)	1.47 (1.37-1.57)***	0.93 (0.83-1.04)
<b>Sexual attraction</b> (Men vs. Women/Both)	1.13 (1.02-1.24)*	1.11 (0.96-1.29)
<b>Individual income</b> (ref. high)		
Medium	1.36 (1.14-1.62)***	1.32 (1.02-1.70)*
Low	2.12 (1.79-2.51)***	1.78 (1.36-2.34)***
None	3.81 (3.17-4.59)***	2.55 (1.89-3.44)***
<b>Mental health well-being</b> (score)	0.72 (0.71-0.73)***	0.72 (0.71-0.73)***
<b>Current/past PrEP user</b> (yes vs no)	1.05 (0.94-1.17)	---
<b>Living with HIV</b> (yes vs. no)	1.12 (1.02-1.24)***	1.22 (1.06-1.39)**
<b>Previous STI diagnosis</b> <sup>o</sup> (yes vs. no)	1.12 (1.02-1.23)*	---
<b>Stable partner</b> (no vs. yes)	1.37 (1.27-1.48)***	1.18 (0.89-1.16)**
<b>Transactional sex</b> <sup>o</sup> (yes vs. no)	1.33 (1.19-1.49)***	0.91 (0.78-1.07)
<b>Binge drinking</b> (yes vs. no)	1.04 (0.96-1.11)	---
<b>Chemsex drugs use</b> <sup>+</sup> (yes vs no)	0.96 (0.89-1.05)	---

## RESULTS

We had 18,397 participants (60.7% Brazil, 28.9% Mexico, and 10.4% Peru) with a mean age of 33.5 (SD= 9.4) years, 96% were GBMSM, 4% TW, 4.3% were Mestizo/Mixed, 32.6% had  $\leq$ secondary education and 15.3% reported living with HIV. Over half of the participants (60.8%) reported none/low individual income (Figure 1). Participants with depression were 23.1% (25.4% Brazil, 22.8% Peru, and 18.4% Mexico;  $p < 0.001$ ) (Figure 2), and the mean score of mental health well-being was 20.3 (SD=8.2) (range: 5-30), corresponding to 20.8 (SD=5.0) for Mexico, 20.1 (SD=5.2) for Brazil, and 19.9 (SD=4.9) for Peru ( $p < 0.001$ ). Brazilians, young individuals, people living with HIV, those having none/low individual income, and those not having a partner were all associated with higher odds of depression (Table 1). Those with higher mental health well-being scores had lower odds of depression.

## CONCLUSIONS

The frequency of depression among TW and GBMSM surpasses that of the general population in each country, and is associated with indicators of higher social vulnerability. The integration of mental health services should be considered to strengthen the HIV prevention and care cascade for sexual and gender minorities.

## REFERENCES

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<sup>+</sup>Includes mephedrone, cocaine, poppers, ecstasy, ketamine, erectile dysfunction drugs, methamphetamine, GHB; <sup>o</sup>In the last 6 months STI: Sexually transmitted infections; \* $p \leq 0.05$ ; \*\* $p \leq 0.01$ ; \*\*\* $p \leq 0.001$