Recent HIV Acquisition Among Transgender Women From Midwest Brazil

1108

Sylvia L M Teixeira[1], Thiago S Torres[2], Bruno V Silva[3], José H Pilotto, Ingebourg Georg[2], Carlos S Jesus[1], Paulie M Santos[3], Karlla A Caetano[3], Regina M Martins[3], Megmar A Carneiro[3], Monick L Guimarães[1], Sheila Teles[3]

[1]Instituto Oswaldo Cruz, Rio de Janeiro, Brazil, [2]Instituto Nacional de Infectologia Evandro Chagas, Rio de Janeiro, Brazil, [3]Universidade Federal de Goiás, Goiás, Brazil

BACKGROUND

- In Brazil, transgender women (TGW) face a disproportionately high burden of HIV
  - HIV prevalence: ~35%[1-3]
  - HIV incidence: 5.8% [95% CI (2.9-8.7)] to 9.2% [95% CI (4.1-17.3)] [4,5]
- Research on the patterns of the HIV epidemic in TGW is still lacking in Midwest Brazil
- We aimed to evaluate the HIV prevalence and proportion of recent HIV acquisition and to explore factors associated with recent HIV acquisition among TGW from Goiás, Brazil

METHODS

- Data are from TGW aged 16-59 from three cities in Goiás, Brazil: Goiânia, Itumbiara, and Jataí (Figure 1).
- Participants were recruited between Apr-2018 to Nov-2019 using respondent driven sampling (RDS).
- HIV testing followed the Brazilian algorithm and the Maxim HIV-1 LAg-Avidity EIA assay (LAg) was used to identify recent HIV acquisition in plasma samples.
- We compared study participants' characteristics using Pearson's chi-square and Fisher's test for categorical variables and the Wilcoxon test for continuous variables: (1) recent *vs.* longstanding HIV acquisition and (2) recent *vs.* HIV-negative.
- We used logistic regression models to assess factors associated with recent HIV acquisition among participants at risk of HIV acquisition (excluding those with longstanding HIV acquisition).

The HIV prevalence was 33.2% (143/431).

A total of 50.6% of participants evaluated by avidity assay recently acquired HIV.

Figure 1. Location of the study.

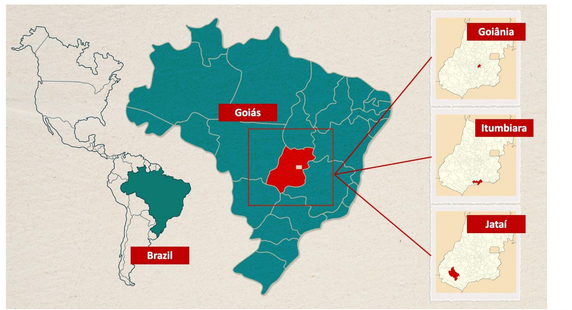


Figure 2. Study flowchart.

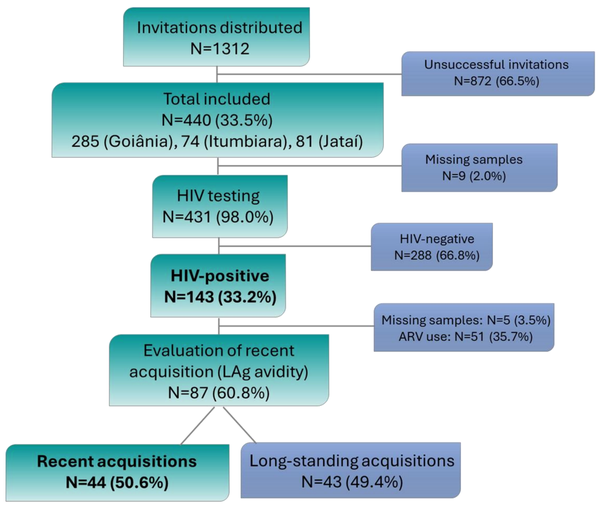


Table 1. Demographic and behavioral characteristics of TGW, Goiás, Brazil, 2018-2019.

	HIV-negative N=287	Recent HIV N=44	Longstanding HIV N=43	P-value
Age (mean,SD)	26.06 (7.44)	**28.30 (9.81)**	**24.79 (5.19)**	**0.041**
Color				
Black/pardo	224 (78.3)	34 (77.3)	34 (79.1)	p>0.05
Other	62 (21.7)	10 (22.7)	9 (20.9)	
Schooling				
Until elementary (≤9 years)	214 (74.6)	27 (61.4)	30 (69.8)	p>0.05
More than elementary (>9 years)	73 (25.4)	17 (38.6)	13 (30.2)	
Income				
>2 MW	148 (51.6)	23 (52.3)	29 (67.4)	p>0.05
≤2 MW	139 (48.4)	21 (47.7)	14 (32.6)	
Marital status				
Married	44 (15.3)	6 (13.6)	7 (16.3)	p>0.05
Other	243 (84.7)	38 (86.4)	36 (83.7)	
Sexwork[a]				
No	118 (41.1)	19 (43.2)	12 (27.9)	p>0.05
Yes	169 (58.9)	25 (56.8)	31 (72.1)	
Forced sex				
No	151 (52.8)	24 (54.5)	26 (60.5)	p>0.05
Yes	135 (47.2)	20 (45.5)	17 (39.5)	
Number of sexual partners[b] (mean, SD)	27.32 (62.57)	18.14 (22.90)	33.19 (77.22)	p>0.05
Inconsistent condom use				
No	180 (64.1)	26 (58.1)	30 (69.8)	p>0.05
Yes	101 (35.9)	18 (41.9)	13 (30.2)	
STI				
No	165 (57.5)	30 (68.2)	18 (41.9)	**0.024**
Yes	122 (42.5)	14 (31.8)	25 (58.1)	
Chemsex				
No	76 (26.7)	9 (20.5)	8 (19.0)	p>0.05
Yes	209 (73.3)	35 (79.5)	34 (81.0)	

SD, standard deviation; [a]at the time of recruitment; [b]in the last 7 days; MW, minimum wage; p-value refers to Recent HIV *vs.* Longstanding HIV comparison.

Table 2. Logistic regression analysis for recent HIV (*vs.* HIV negative)

	OR (95%CI)	p-value
Age (per 1-year increase)	1.03 (0.99-1.07)	0.08

OR, odds ratio; CI, confidence interval.

Schooling, race, income, sexual behavior-related characteristics: p>0.05, not included in the model

RESULTS

- We enrolled 440 TGW: 285 in Goiânia, 74 in Itumbiara, and 81 in Jataí; the median age was 25 years (IQR: 21-30), 312 (71.2%) self-identified as Black, 269 (61.1%) completed secondary school; none of the TGW were on PrEP.
- HIV prevalence: 33.2% (143/431), 50.6% (N=44/87) recently acquired HIV (Figure 2).
- TGW with recent HIV acquisitions were older than those with longstanding HIV (p=0.041), while those with longstanding HIV were more affected by sexually transmitted infections (p=0.024) (Table 1).
- In logistic regression analysis, odds of recent HIV acquisition increased with age, although the association was borderline (OR: 1.03 [95%CI:0.99-1.07], per 1-year increase, p=0.08). (Table 2).

CONCLUSIONS

- The very high levels of HIV prevalence and recent HIV acquisition among TGW in Midwest Brazil highlight the significant burden of the HIV epidemic and STI in this population, despite the availability of public health prevention strategies.
- TGWs may have a lower perception of risk, leading to behaviors that increase the odds of acquiring HIV.
- It is crucial to address these gaps to improve targeted interventions and care for TGW, including increasing PrEP access, especially in regions where their vulnerability to HIV is high.

ADDITIONAL KEY INFORMATION

- Contact: sylvia@ioc.fiocruz.br
- FAPEG sponsors this study
- TST, MLG, and ST are supported by CNPq and FAPERJ
- SLMT is a CROI scholarship recipient

ACKNOWLEDGEMENTS

Study participants
My collaborators
Our funders
The organizers for the scholarship award

REFERENCES

(1) Grinsztejn et al., Lancet HIV. 2017; 4(4):e169–e176;
(2) Bastos et al. Medicine 2018; 97:51(e9447);
(3) Dourado et al., Rev Bras Epidemiol. 2024; 27(Suppl 1): e240004.supl.1;
(4) Jalil et al., J Acquir Immune Defic Syndr 2025; Volume 98, Number 1;
(5) Teixeira SLM et al. Journal of the International AIDS Society 2021; 24:e25743.