

Partner-Level Factors Associated with Insertive and Receptive Condomless Anal Intercourse among Transgender Women in Lima, Peru

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BACKGROUND

Concentrated HIV epidemic in Peru

- 29.6% among transgender women (TW) ¹
 - 48.5% among Peruvian TW undergoing first-time HIV testing ²
- 12-22% among men who have sex with men ³⁻⁵
- 0.4% among general population ⁴

In Peru, the sexual practices of TW are likely shaped by their legal, social, and economic vulnerabilities ^{1, 6}

Given that sex occurs within partnership contexts, there is a growing need to position our evaluation of risk behaviors, such as condom use, at the partner-level

Previous research in Peru has found a greater risk of condomless anal intercourse (CAI) by TW in primary partnerships ^{1, 6, 7}

- Examining CAI in aggregate may not account for the ways in which the sociocultural landscape of machismo, homophobia, and transphobia in Peru may shape the sexual roles and expectations of TW and their male partners

Purpose

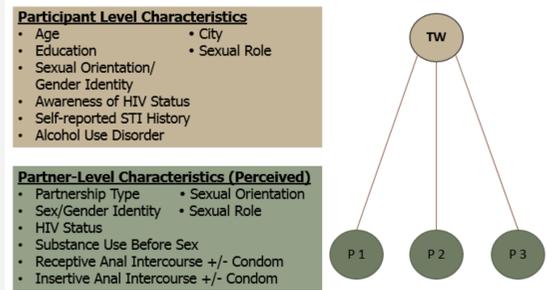
- To assess the association between partner type and condom use during insertive versus receptive anal intercourse with the last three non-female partners of TW in Lima, Peru.

METHODS

We analyzed cross-sectional, egocentric data from TW screened for a 2012-2014 Partner Management study in Lima, Peru.

Study Population

Self-identified TW reporting anal intercourse (AI) with at least 1 of their last 3 non-female partners.



Statistical Analysis

- Models were created using GEE with Poisson distribution (Stata 10.0) to assess prevalence ratios and 95% confidence intervals for:
 - (1) condomless receptive anal intercourse (RAI) by partner type
 - (2) condomless insertive anal intercourse (IAI) by partner type
 - (3) any condomless anal intercourse by partner type
- Adjusted for participant education, HIV status, STI history, pre-sex alcohol use, sexual role, and partner sexual role

RESULTS

Table 1: Characteristics of TW Participants; N=138*

Characteristics	n (%)	Characteristics	n (%)	Characteristics	n (%)
Age in years median (IQR)	27 (22-33)	Sexual/Gender Identity		Male/Transgender Sex Partners in Last Month median (IQR)	10 (2-28)
Education		Heterosexual	3 (2.2)	Type of Anal Intercourse Practiced	
Less than Secondary	46 (33.6)	Bisexual	3 (2.2)	Exclusively Insertive	5 (3.6)
Secondary Complete	53 (38.7)	Homosexual	61 (44.2)	Exclusively Receptive	90 (65.2)
University/Technical School	38 (27.4)	Transgender	63 (44.6)	Both Insertive and Receptive	43 (31.2)
HIV Status ^A		Other	2 (1.4)		
Infected	65 (47.1)	Don't Know	6 (4.4)		
Uninfected	63 (45.7)	Type of Partnerships Engaged ^B			
Unknown	10 (7.2)	Primary	70 (50.7)	Sexual Role Strain ^C	
Recent and Persistent STIs ^A		Casual	69 (50.0)	Yes	30 (21.7)
Yes	62 (48.4)	Anonymous	14 (10.1)	No	74 (53.6)
No	61 (47.7)	Transactional Sex Client	45 (32.6)	Moderna	34 (24.6)
Unsure	5 (3.9)	Transactional Sex Provider	5 (3.6)		
Alcohol Use Disorders (AUD)		Sexual Role		Condomless Anal Intercourse	
No AUD or Social Drinker	47 (34.3)	Activa (Insertive)	6 (4.4)	Condomless Insertive AI ^D	24 (50.0)
Hazardous Use	51 (37.2)	Pasiva (Receptive)	98 (71.0)	Condomless Receptive AI ^E	72 (54.1)
Harmful Use	20 (14.6)	Moderna (Versatile)	34 (24.6)	Condomlessness for Any AI ^F	80 (58.0)
Dependence Use	19 (13.9)				

Table 2: Characteristics of Last 3 Non-Female Sexual Partners of TW; N=376*

Partner-Level Characteristics ^G	Total Partners	Primary	Casual ^H	Transactional Sex ^I
	N=376 n (%)	N=137 (36.4%) n (%)	N=141 (37.5%) n (%)	N=98 (26.1%) n (%)
Gender				
Men	341 (90.7)	125 (91.2)	136 (96.4)	80 (81.6)
Transgender	25 (9.3)	12 (9.8)	5 (3.6)	28 (18.4)
Sexual/Gender Identity				
Heterosexual	126 (33.5)	40 (29.2)	55 (39.0)	31 (31.6)
Bisexual	165 (43.9)	69 (50.4)	58 (41.1)	38 (38.8)
Homosexual	44 (11.7)	18 (13.1)	15 (10.6)	11 (11.2)
Transgender	9 (2.4)	1 (0.7)	2 (1.4)	6 (6.1)
Other ^H	15 (4.0)	2 (1.5)	5 (3.5)	8 (8.2)
Don't Know	17 (4.5)	7 (5.1)	6 (4.3)	4 (4.1)
Sexual Role				
Activo	274 (72.9)	115 (83.9)	107 (75.9)	52 (53.1)
Pasivo	26 (6.9)	11 (8.0)	4 (2.8)	11 (11.2)
Moderno	65 (17.3)	10 (7.3)	23 (16.3)	32 (32.6)
Other ^I	2 (0.5)	0 (0.0)	1 (0.7)	1 (1.0)
Don't Know	9 (2.4)	1 (0.7)	6 (4.3)	2 (2.0)
HIV Status				
Infected	23 (6.1)	17 (12.4)	4 (2.8)	2 (2.0)
Uninfected	58 (15.4)	31 (22.6)	22 (15.6)	5 (5.1)
Unknown	295 (78.5)	89 (65.0)	115 (81.6)	91 (92.9)

Table 3: Sexual Practices of TW with their Last 3 Non-Female Sexual Partners; N=376*

TW Sexual Practices with Partners	Total Partners	Primary	Casual ^H	Transactional Sex ^I
	N=376 n (%)	N=137 (36.4%) n (%)	N=141 (37.5%) n (%)	N=98 (26.1%) n (%)
Alcohol Use Before Sex with Partner				
Yes	104 (27.7)	33 (24.1)	45 (31.9)	26 (26.5)
No	263 (69.9)	102 (74.4)	93 (66.0)	68 (69.4)
Unsure	9 (2.4)	2 (1.5)	3 (2.1)	4 (4.1)
Drug Use Before Sex with Partner				
Yes	45 (12.0)	11 (8.0)	25 (17.7)	9 (9.2)
No	325 (86.4)	124 (90.5)	112 (79.4)	89 (90.8)
Unsure	6 (1.6)	2 (1.5)	4 (2.8)	0 (0.0)
Sexual Role Strain ^C				
Yes	58 (15.4)	21 (15.3)	22 (15.6)	15 (15.3)
No	228 (60.6)	88 (64.2)	89 (63.1)	51 (52.0)
Moderna	90 (23.9)	28 (20.4)	30 (21.1)	32 (32.6)
Type of Anal Intercourse				
Exclusively Insertive	21 (5.6)	5 (3.6)	7 (5.0)	9 (9.2)
Exclusively Receptive	281 (74.7)	106 (77.4)	108 (76.6)	67 (68.4)
Both Insertive and Receptive	74 (19.7)	26 (19.0)	26 (18.4)	22 (22.4)
Condomless Anal Intercourse				
Overall Condomless Insertive AI ^J	40 (41.1)	9 (29.0)	14 (42.4)	17 (54.8)
Overall Condomless Receptive AI ^K	137 (38.6)	59 (44.7)	49 (36.6)	29 (32.6)
Condomlessness for Any AI ^L	155 (41.2)	61 (44.5)	55 (39.0)	39 (39.8)

Table 4: Prevalence Ratios of Condomless Anal Intercourse (AI) with the Last Three Non-Female Sexual Partners of TW; N=376*

Characteristics/Sexual Practices	Condomless Insertive AI (n=95)		Condomless Receptive AI (n=355)		Any Condomless AI (n=355)	
	Crude PR (95%CI)	Adjusted PR (95%CI)	Crude PR (95%CI)	Adjusted PR (95%CI)	Crude PR (95%CI)	Adjusted PR (95%CI)
Participant Education						
Less than Secondary School	--	--	0.85 (0.56-1.29)	0.71 (0.43-1.16)	0.97 (0.67-1.40)	0.80 (0.52-1.22)
Secondary School and More	--	--	(reference)	(reference)	(reference)	(reference)
Participant HIV Status ^A						
Positive	0.52 (0.29-0.94) [†]	0.55 (0.31-0.96) [†]	1.01 (0.69-1.49)	1.01 (0.68-1.52)	0.96 (0.67-1.37)	0.87 (0.57-1.31)
Negative	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
Unknown	0.43 (0.12-1.59)	0.37 (0.11-1.30)	1.48 (0.84-2.61)	2.30 (1.24-4.29) [†]	1.44 (0.87-2.37)	1.92 (1.24-2.96)
Participant History of STIs ^A						
Yes	--	--	1.01 (0.70-1.47)	1.13 (0.78-1.64)	1.04 (0.74-1.48)	1.16 (0.79-1.68)
No	--	--	(reference)	(reference)	(reference)	(reference)
Participant Pre-Sex Alcohol Use						
Yes	1.20 (0.69-2.10)	1.29 (0.79-2.08)	1.18 (0.81-1.72)	1.25 (0.85-1.85)	1.18 (0.85-1.65)	1.26 (0.87-1.82)
No	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
Participant Sexual Role						
Strictly Pasiva	0.79 (0.43-1.45)	0.78 (0.45-1.36)	1.32 (0.84-2.07)	1.50 (0.89-2.51)	1.10 (0.74-1.63)	1.24 (0.81-1.88)
Activa/Moderna	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
Partner Sexual Role ^G						
Activo	--	--	(reference)	(reference)	(reference)	(reference)
Pasivo	--	--	0.84 (0.51-1.39)	0.79 (0.46-1.36)	0.81 (0.45-1.46)	0.81 (0.45-1.46)
Moderno	--	--	0.72 (0.38-1.38)	0.72 (0.38-1.38)	1.02 (0.71-1.47)	1.00 (0.66-1.53)
Partner Type						
Primary	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
Casual ^H	1.38 (0.74-2.57)	1.48 (0.77-2.84)	0.73 (0.51-1.05)	0.67 (0.45-1.00)	0.77 (0.55-1.08)	0.70 (0.47-1.04)
Transactional Sex ^I	1.72 (0.90-3.28)	1.61 (0.83-3.10)	0.59 (0.37-0.93) [*]	0.70 (0.43-1.12)	0.73 (0.49-1.09)	0.85 (0.56-1.29)

*Discrepancies in totals due to missing data
^A Self-reported
^B Does not sum to N=138 because participants can report more than one partner type among their last 3 partners.
^C Strain= AI practiced does not match the preferred insertive or receptive role. No strain = practicing the type of AI that matches one's stated preferred sexual role
^D % based on N=48 TW engaging in IAI
^E % based on N=133 TW engaging in RAI
^F % based on total TW sample (N=138)
^G As reported by TW
^H Includes anonymous partners
^I Includes sex clients and providers
^J Other included: "activo, hombre, macho, moderno, mostasero, mostasero activo, veron"
^K Other included: "macho, bisexual"
^L % based on N=95 IAI acts
^M % based on N=355 RAI acts
^N % based on total AI acts (N=371)
[†] p<0.05

SUMMARY & CONCLUSIONS

Receptive Anal Intercourse

Condomless RAI was more common with primary partners and by TW with unknown HIV status (vs. uninfected)

Implications:

- Receptive role as gender-affirming
- Condomless sex as expression of intimacy with primary partners
- Perceived lower risk in stable partnerships
- Lack of direct control of condom

Insertive Anal Intercourse

Condomless IAI was more common with transactional and casual sex partners, by TW with a history of harmful or hazardous alcohol use, pre-sex substance use, and/or HIV-uninfected status (vs. infected)

Implications:

- Insertive role as a predominantly transactional sex practice
- Advantage of direct control of condom outweighed by lack of economic agency

Our study highlights the need to:

- Further examine the relationship between the cultural constraints on gender/sexual roles and the sexual risks enacted within distinct partnership contexts
- Create multicomponent rights-based interventions to decrease marginalization
- Increase availability of HIV/STI prevention technologies that can be independently accessed and controlled without legal, economic, or interpersonal consequences

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