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Comparing the Characteristics of Brazilian MSM Using APP for Sexual Encounters

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BACKGROUND

Geosocial networking (GSN) smartphone applications (apps) are becoming the main venue for sexual encounters among Brazilian men who have sex with men (MSM).

As HIV infection risk has been increasing among MSM, the Brazilian government recently adopted pre-exposure prophylaxis (PrEP) which is now provided by the Brazilian National Health System (1).

Accordingly, an understanding of the profile of MSM who use apps for sexual encounters is needed to design combined prevention interventions tailored for this group.

METHODS

Two cross-sectional online surveys using the same questionnaire among MSM population from ten Brazilian capitals were conducted in July 2016 (2) and July 2017.

The questionnaire was created on SurveyGizmo® website and advertised in an app for MSM population (Hornet).

Inclusion criteria were ≥ 18 years of age, cisgender men, HIV uninfected.

Chi-square tests were used to compare characteristics of MSM recruited in the two studies.

RESULTS

- A total of 2800 and 2497 MSM completed the survey in 2016 and 2017, respectively.
- Median age was 30 years (IQR25-36) in both years.
- Compared to 2016, participants with the following characteristics were more represented in the 2017 survey: non-white, bisexual, less years of schooling and low income (Table 1).
- Scores on "The HIV Incidence Risk for MSM" scale and STI diagnosis were similar. Perceived likelihood of getting HIV was higher in 2017, although more MSM reported never testing for HIV and receiving money for sex (Table 2).
- Awareness of PrEP and nPEP was lower in 2017, while for HIVST was higher (Figure 1).
- Willingness to use oral daily PrEP and nPEP was higher in 2017, while PrEP injection and HIVST was lower (Figure 2).

Figure 1. Awareness of HIV Prevention Strategies, Brazil, 2016-2017.

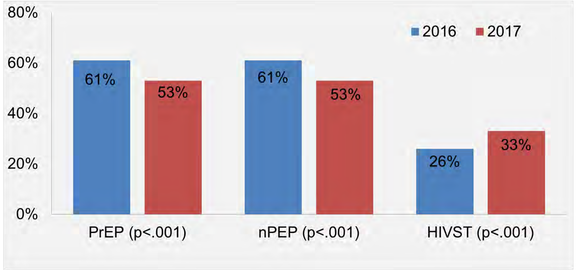


Table 1. Characteristics of the study population, Brazil, 2016-2017.

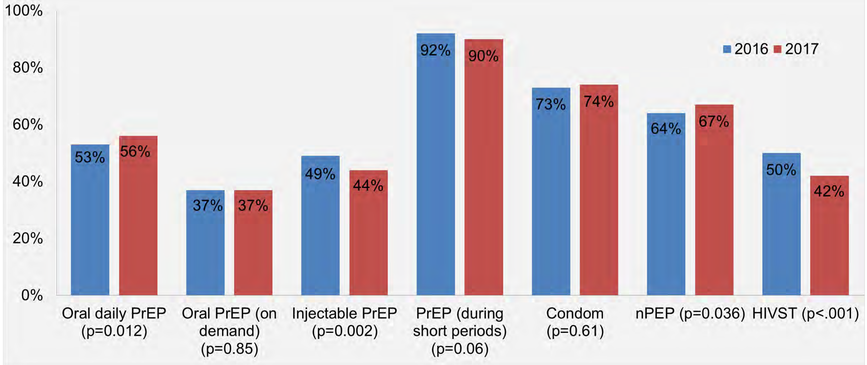
	2016 N=2800	2017 n=2497	Total N=5297	p-value
Region				<.001
North (Manaus and Belém)	36(1.3)	**60(2.4)**	96(1.8)	
Northeast (Salvador and Recife)	115(4.1)	**123(4.9)**	238(4.5)	
Central-West (Brasília and Goiânia)	167(6.0)	**238(9.5)**	405(7.6)	
South (Florianópolis and Porto Alegre)	**202(7.2)**	153(6.1)	355(6.7)	
Rio de Janeiro	719(25.7)	640(25.6)	1359(25.7)	
São Paulo	**1561(54.9)**	1283(51.4)	2844(53.7)	
Age (years)				0.036
18-24	730(26.1)	**724(29.0)**	1454(27.4)	
25-35	1392(49.7)	1165(46.7)	2557(48.3)	
≥ 36	678(24.2)	608(24.3)	1286(24.3)	
Color (Non-white)	1023(36.5)	**1062(42.5)**	2085(39.4)	<.001
Family income[c]				<.001
≤ 3 (low income)	955(34.1)	**1135(45.4)**	2090(39.4)	
4-10 (middle income)	**1229(56.1)**	963(38.6)	2192(41.4)	
>10 (high income)	**616(22.0)**	399(16.0)	1015(19.2)	
Schooling (≥ 12 years)	**1641(58.6)**	1261(50.5)	2902(54.8)	<.001
Sexual orientation				<.001
Homosexual/gay	**2509(89.6)**	2148(86.0)	4657(87.9)	
Bisexual	258(9.2)	**323(12.9)**	581(12.9)	
Heterosexual/other	33(1.2)	26(1.0)	59(1.0)	
Friends with same sexual orientation (majority)	**1890(67.5)**	1557(62.3)	3447(65.1)	<.001
Steady partner (male)	501(18.0)	483(19.3)	984(18.6)	0.221
Steady partner (female)	87(3.1)	**119(4.8)**	206(3.9)	0.002
Know someone living with HIV (yes)	1950(69.6)	1683(67.4)	3633(68.6)	0.079
Use of apps for sexual encounters				0.693
Never	269(9.6)	246(9.8)	515(9.7)	
Sometimes	1392(49.9)	1249(50.0)	2641(49.9)	
Daily	1003(35.9)	873(35.0)	1876(35.5)	
Only when travelling or vacations	127(4.5)	129(5.2)	256(4.8)	
Binge drinking (6 months)	2001(71.7)	1837(73.6)	3838(72.6)	0.127
Tobacco	950(33.9)	**1023(41.0)**	1973(37.2)	<.001
Substance use (6 months)				
Stimulants	631(22.5)	514(20.6)	1145(21.6)	0.085
GHB	**114(4.1)**	60(2.4)	174(3.3)	0.001
Marijuana or hash	**963(34.4)**	740(29.6)	1703(32.1)	0.001
Hallucinogens	**300(10.7)**	144(5.8)	444(8.4)	<.001

Table 2. Risk behaviors among the study population, Brazil, 2016-2017.

	2016 N=2800	2017 n=2497	Total N=5297	p-value
Number of male sexual partners[1]				0.027
0-5	1460(52.1)	**1377(55.2)**	2837(53.6)	
6-10	541(19.3)	487(19.5)	1028(19.4)	
>10	**799(28.5)**	633(25.3)	1432(27.0)	
Condomless receptive anal sex[1]	1165(41.6)	**1204(48.2)**	2369(44.7)	<.001
Sex with HIV+ partner[1]				0.711
No	2450(87.5)	2176(87.1)	4626(87.3)	
1	290(10.4)	259(10.4)	549(10.4)	
>1	60(2.1)	62(2.5)	122(2.3)	
Insertive anal intercourse with HIV+ partner[1] (<5)	2557(91.3)	2303(92.2)	4860(91.7)	0.230
The HIV Incidence Risk for MSM scale (3) (≥10 points; high risk)	1861(66.5)	1702(68.2)	3563(67.3)	0.189
Money for sex[1]	91(3.3)	**137(5.5)**	228(4.3)	<.001
Perceived likelihood of getting HIV[2]				0.001
Low	**1959(70.0)**	1645(65.9)	3604(68.0)	
High	590(21.1)	633(25.3)	1223(23.1)	
Don't know	251(9.0)	219(8.8)	470(8.9)	
STI diagnosis[1,3]	344(12.4)	349(14.0)	693(13.1)	0.084
HIV test (never)	401(14.3)	**507(20.3)**	908(17.1)	<.001

1- past 6 months; 2- past 12 months; 3- syphilis, gonorrhea or rectal chlamydia.

Figure 2. Willingness to use HIV Prevention Strategies, Brazil, 2016-2017.



CONCLUSIONS

Our results suggest that the use of GNS apps seems to have spread across younger and less educated MSM in 2017, which may explain the lower PrEP awareness in this year. As this population stratum is at highest risk of HIV acquisition in Brazil, mobile health tools are a promising means to reach these individuals in order to increase awareness and demand of new prevention strategies.

REFERENCES

1. http://www.aids.gov.br/pt-br/pub/2017/protocolo-clinico-e-diretrizes-terapeuticas-para-profilaxia-pre-exposicao-prep-de-risco
2. Torres TS et al. Awareness of Prevention Strategies and Willingness to Use Preexposure Prophylaxis in Brazilian Men Who Have Sex With Men Using Apps for Sexual Encounters: Online Cross-Sectional Study. JMIR Public Health Surveill. 2018 Jan 22;4(1):e11.
3. Smith DK, et al. Development of a clinical screening index predictive of incident HIV infection among men who have sex with men in the United States. J Acquir Immune Defic Syndr 2012;60(4):421-7.

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