

## Background

- Adherence is a critical factor for efficacy of emtricitabine/tenofovir (FTC/TDF) for PrEP.
- Strategies for improving, supporting, motivating and sustaining adherence to PrEP are of great importance in maximizing the impact of PrEP in high-risk populations.
- This study aims to evaluate self-reported adherence to PrEP and its perceived barriers and facilitators among MSM and TGW retained through 48 weeks in the PrEP Brasil study.

## Methods

- PrEP Brasil was a prospective, open-label demonstration project with HIV-uninfected MSM and TGW from 3 referral centers in Rio de Janeiro (RJ) and São Paulo (SP).
- Participants were followed-up for 48 weeks and daily FTC/TDF was provided. PrEP adherence (30-days recall), facilitators and barriers were assessed by the pharmacist using a questionnaire upon study completion (week 48).
- Logistic regression was used to evaluate predictors for optimal (=100%) adherence in the past 30-days.

## Results

- From April/2014 to July/2016, 450 participants initiated PrEP. A total of 375(83.3%) participants were followed through 48 weeks. Of these, 354(94.4%) were dispensed FTC/TDF in the previous 3 months and 338(90.1%) answered the questionnaire at week 48. Median age was 30 years (IQR: 25-35). Baseline characteristics of study participants are depicted in Table 1.
- A total of 60.6% (205/338) reported not missing any dose of FTC/TDF in the past 30-days (optimal adherence); 27(8.0%), 51(15.1%) and 53(15.7%) missed doses in the past week, 1-2 weeks and 3-4 weeks, respectively. Median adherence in the past 30-days was 100% (IQR:92-100).
- The majority (82.2%; 278/338) of participants reported not having difficulty with taking FTC/TDF and 81.3% (274/338) reported excellent or very good capacity to take FTC/TDF in the past 30-days.
- Perceived barriers and facilitators were observed for 38.2% (129/338) and 98.5% (333/338), respectively; main reasons are depicted in Figure 1 and Figure 2.

## Results

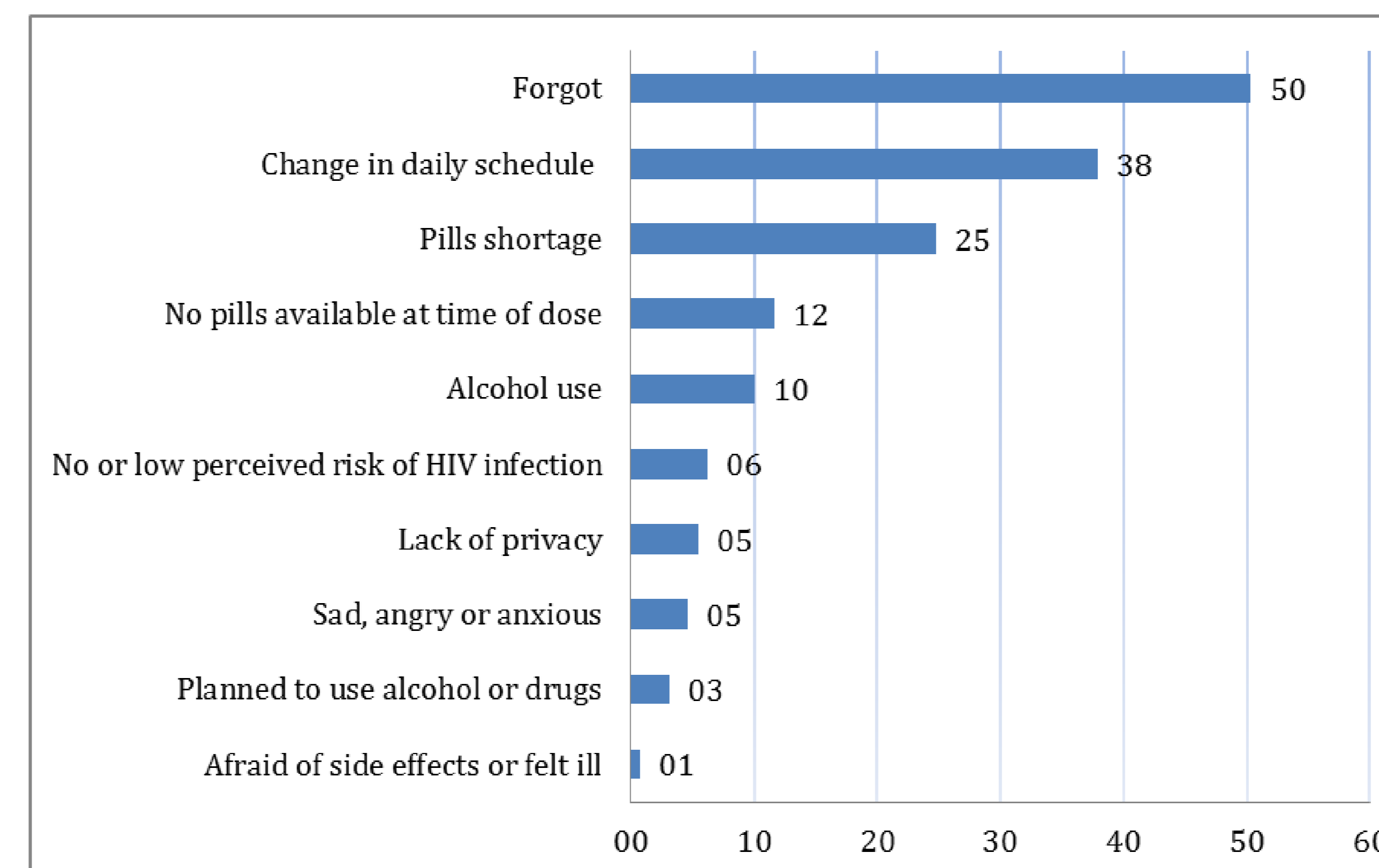
- In multivariate analysis, being from RJ and stimulant use were associated with decreased odds of optimal adherence (Table 2).

**Table 1: Baseline characteristics of participants who answered the questionnaire at week 48 vs. not answered.**

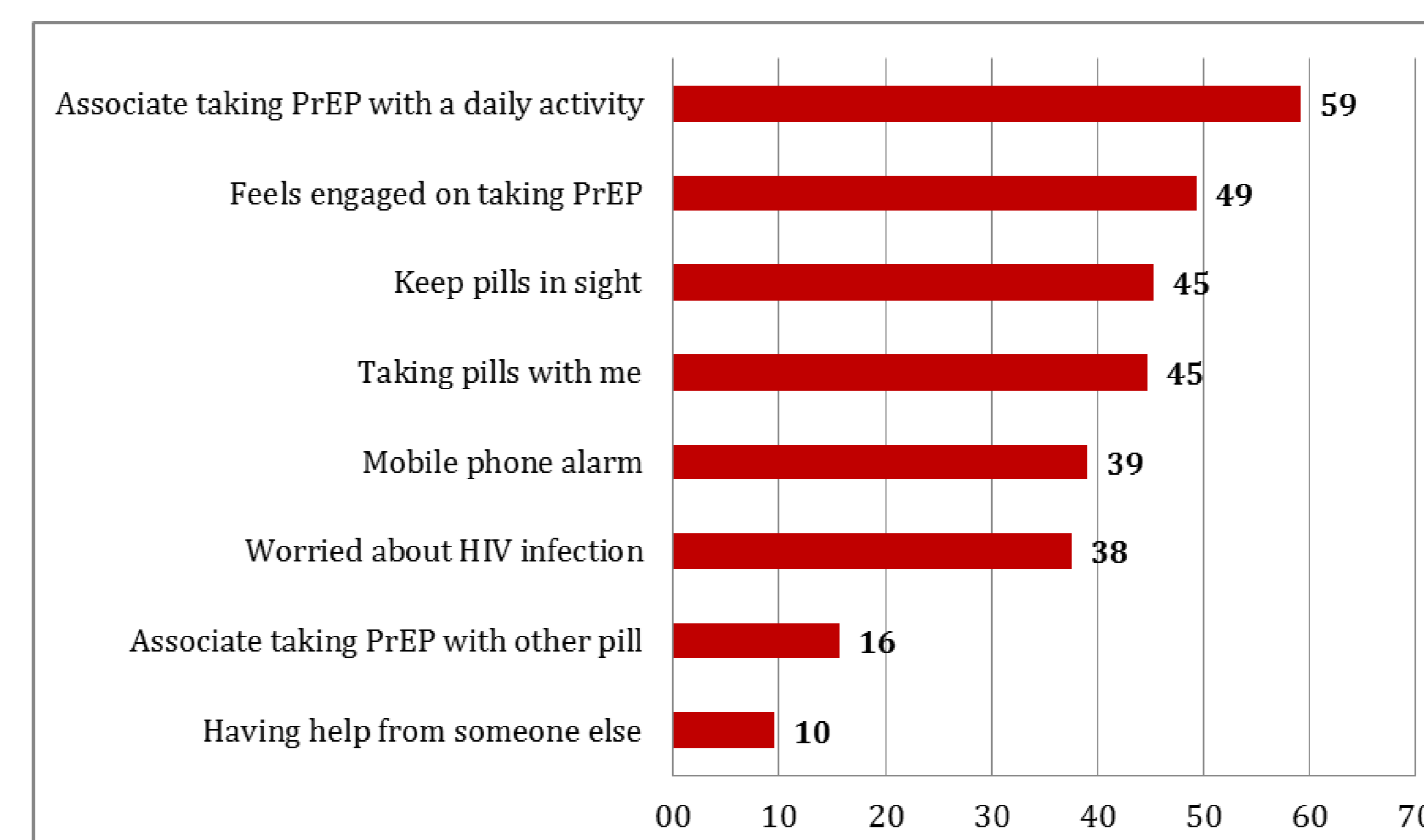
	Answered questionnaire week 48	Not answered questionnaire week 48	Total	p-value <sup>a</sup>
<b>Overall</b>	338 (75.1%)	112 (24.9%)	450	0.23
<b>Site Location</b>				
RJ (vs. SP)	118 (65.6%)	62 (34.4%)	180	<0.01
<b>Age</b>				
18-24 years	75 (66.4%)	38 (33.6%)	113	0.04
25-34 years	169 (79.0%)	45 (21.0%)	214	
≥35 years	94 (76.4%)	29 (23.6%)	123	
<b>Schooling</b>				
≥ 12 (vs. < 12 years)	265 (79.1%)	70 (20.9%)	335	<0.01
<b>Color/Race</b>				
White (vs. Non-white)	192 (79.0%)	51 (21.0%)	243	0.56
<b>Gender</b>				
Transwomen (vs. Male)	18 (72.0%)	7 (28.0%)	25	0.71
<b>Housing situation</b>				
Rento/own (vs. other)	222(76.8%)	67 (23.2%)	289	0.34
<b>Steady partner</b>				
Yes (vs. No)	195 (76.8%)	59 (23.2%)	254	0.35
<b>Had sex with client<sup>b</sup></b>				
Yes (vs. No)	17 (63.0%)	10 (37.0%)	27	0.13
<b>Condomless receptive anal intercourse<sup>b</sup></b>				
Yes (vs. No)	159 (79.0%)	42 (20.9%)	201	0.08
<b>Sex with HIV positive partners<sup>b</sup></b>				
Yes (vs. No)	173 (77.6%)	50 (22.4%)	223	0.28
<b>Binge drinking<sup>b</sup></b>				
Yes (vs. No)	200 (75.2%)	66 (24.8%)	266	0.96
<b>Stimulants<sup>b</sup></b>				
Yes (vs. No)	63 (73.3%)	23 (26.7%)	86	0.66
<b>Depression PHQ score</b>				
PHQ-2 score ≥ 3 (vs. PHQ-2 score < 3)	20 (74.1%)	7 (25.9%)	27	0.88
<b>STD diagnosis<sup>b</sup></b>				
Yes (vs. No)	67 (75.3%)	22 (24.7%)	89	0.90
<b>GI symptoms<sup>c</sup></b>				
Yes (vs. No)	140 (78.6%)	38 (21.4%)	178	0.88
<b>Received text message</b>				
Yes (vs. No)	161(77.8%)	46(22.2%)	207	0.24

a) Chi-square or Fisher's exact test; b) previous 3 months; c) Any among the following: abdominal pain, diarrhea, flatulence, nausea and vomiting

**Figure 1. Perceived barriers to Adherence (n=129, %)**



**Figure 2. Perceived facilitators to Adherence (n=333; %)**



## Conclusions:

- High levels of self-reported adherence were reported among those retained through 48 weeks in the PrEP Brasil study.
- Our findings provide information for elaboration, reinforcement and/or update of strategies to improve adherence, especially among stimulant users, and for developing the best practices to promote PrEP adherence in our context.
- Interventions to reduce patient forgetfulness may be beneficial.

## Contact:

Thiago Silva Torres  
thiago.torres@ini.fiocruz.br

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**Table 2. Unadjusted and adjusted odds ratios and 95% confidence interval for factors associated with optimal self-reported adherence (100%) at week 48.**

	Optimal adherence (100%) N=205 (60.6%)	OR (95%CI) <sup>a</sup>	AOR (95%CI)
<b>Site Location</b>			
RJ (vs. SP)	55 (46.6)	0.41 (0.26-0.64)	<b>0.33 (0.20-0.56)</b>
<b>Gender</b>			
Transwomen (vs. male)	6 (33.3)	0.41 (0.14-1.14)	0.43 (0.15-1.28)
<b>Sex with HIV positive partners</b>			
Yes (vs. no)	93 (66.4)	1.46 (0.92-2.32)	1.49 (0.99-2.44)
<b>Stimulants in last 3 months</b>			
Yes (vs. no)	40 (54.8)	0.58 (0.33-1.00)	<b>0.54 (0.30-0.94)</b>
<b>Depression PHQ score</b>			
PHQ-2 score ≥ 3 (vs. PHQ-2 score < 3)	8 (40.0)	0.39 (0.15-1.01)	0.38 (0.14-1.01)
<b>GI symptoms<sup>b</sup></b>			
Yes (vs. no)	83 (59.3)	0.64 (0.39-1.05)	0.62 (0.38-1.03)

a) Odds ratio adjusted for site only; only variable with p>0.1 were displayed  
b) Any among the following: abdominal pain, diarrhea, flatulence, nausea and vomiting