

# Post-exposure prophylaxis and pre-exposure prophylaxis in gay, bisexual, and other men who have sex with men who practice sexualised drug use

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## ABSTRACT

Advances in STI prevention and control measures and the availability of treatments offer harm reduction strategies to gay, bisexual, and other men who have sex with men (GBMSM) who participate in sexualized drug use (SDU). These measures include primary prevention strategies such as consistent condom use and biomedical interventions such as Pre-exposure Prophylaxis (PrEP) (Evers et al., 2020; O'Halloran et al., 2021). Some studies have proposed incorporating PrEP into prevention strategies targeting the GBMSM population at risk for HIV infection, such as men who practice SDU (MacGregor et al., 2021). PrEP has shown high efficacy in HIV prevention when adherence is good (Sun et al., 2021). In addition, there are other secondary prevention strategies such as Post-Exposure Prophylaxis (PEP) that are effective against accidental exposure to HIV. Hegazi et al. (2017) noted that SDU participants were more likely to have accessed PEP for HIV. PrEP and PEP are important strategies to prevent HIV infection. Still, there are few studies on the prevalence of these measures in groups with unique characteristics, such as SDU participants, could condition their efficiency and security. Therefore, the objective of this study was to analyze the relationship between SDU and strategies for primary and secondary prevention of HIV in GBMSM. The sample of this study consisted of 493 GBMSM aged 18 to 78 years (mean age = 32.58, SD = 11.05). Mean age differed significantly between participants who practiced SDU (mean age = 38.21, SD = 11.57) and those who did not (mean age = 29.13, SD = 9.44). HIV-positive and -negative GBMSM aged 18 years and older were invited to participate through social networks (Instagram and Twitter), gay dating apps, and information distributed through various LGBTIQ + associations and NGOs. SDU was associated with greater consumption of Post-Exposure Prophylaxis (PEP) and Pre-Exposure Prophylaxis (PrEP) compared to participants who did not practice SDU. It is necessary to well as to expand and facilitate access to HIV prevention strategies, such as PrEP, among those most at risk of HIV seroconversion. These strategies may represent an opportunity to acquire or reinforce the responsibility for sexual health.

## METHODS

### Participants

The sample of this study consisted of 493 GBMSM aged 18 to 78 years (mean age = 32.58, SD = 11.05). The majority (n = 415, 84.2%) self-identified as gay and, to a lesser extent, as bisexual (n = 61, 12.4%), pansexual (romantic or sexual attraction to other people regardless of gender) (n = 13, 2.6%), or other sexual orientation (n = 4, <1%). Of the respondents, 55.8% indicated having completed university studies. Participants who had not completed university studies at the time of the survey indicated that they had completed non-university level technical (17.2%), high school graduate (21.3%), secondary school graduate (5.1%), no studies/primary school graduate (0.4%), and other studies (0.2%). Table 1 shows demographic variables for the entire sample.

### Measures

To learn about the use of HIV preventive strategies, we asked participants to indicate whether they had used PEP in the past 18 months (1 = "yes," 2 = "no," 3 = "I don't know what PEP is," and 4 = "does not apply, I have HIV"). If they had consumed PEP, we asked them if it had been after practicing SDU. In addition, participants were asked to indicate whether they had taken PrEP in the past 18 months (1 = "yes, under medical review," 2 = "yes, without prescription," 3 = "does not apply, I have HIV," and 4 = "no"). The last question was about STI prevention with partners (yes, none, condom, PrEP, and others).

### Procedure

HIV positive and negative GBMSM aged 18 years and older were invited to participate through social networks (Instagram and Twitter), gay dating apps, and information distributed through various LGBTIQ + associations and NGOs in Spain. Inclusion criteria for participation in the present study were: (1) being at least 18 years old; (2) being gay, bisexual, or other men who have sex with men; (3) having lived most of the last 24 months in Spain. Participants were informed that filling out the questionnaire was completely voluntary and that they could quit the study at any time. Data were collected anonymously through a self-administered online cross-sectional survey from February to June, 2021. The survey received a total of 1,945 visits. The response rate was 28.6%. Participants were encouraged to ask questions if they had difficulty answering any items. The survey took approximately 35 to 45 minutes to complete. This study followed the ethical standards and rules of The Declaration of Helsinki. The study was approved by the Research Ethics Committee of the Autonomous University of Madrid (Project ID: CEI-105-2041).

## RESULTS

Men in the SDU group used more PEP (8.6% and 3.9%, respectively;  $\chi^2 = 34.833$ ,  $p < .001$ ) and PrEP (19.3% and 2.6%, respectively;  $\chi^2 = 104.926$ ,  $p < .001$ ) in the previous 18 months. Finally, regarding STI preventions with couple, GBMSM who had practiced SDU were significantly more likely to not use any prevention measure (38.0% vs 25.5%;  $\chi^2 = 9.058$ ,  $p = .003$ ) or to be taking PrEP for HIV prevention with a sexual couple (22.5% vs 3.6%;  $\chi^2 = 45.053$ ,  $p < .001$ ).

**Table 1.** Sexualized drug use and HIV Prevention Strategies

	Total sample	SDU (Yes = 187; 33.6%)		$\chi^2$
	N (%)	Yes (N, %)	No (%)	
PEP in the last 18 months (N = 492)				
Yes	28 (5.7)	<b>16 (8.6)</b>	12 (3.9)	<b>34.833 (p &lt; .001)</b>
No	377 (76.6)	132 (70.6)	<b>245 (80.3)</b>	
I don't know what PEP is	42 (8.5)	7 (3.7)	<b>35 (11.5)</b>	
Does not apply, I have HIV	45 (9.1)	<b>32 (17.1)</b>	13 (4.3)	
PEP after SDU (N = 28) (answer = yes)	5 (17.8)	5 (35.7)	0 (0.00)	---
PrEP in the last 18 months (N = 490)				104.926 (p < .001)
Yes, under medical review	38 (7.8)	<b>30 (16.1)</b>	8 (2.6)	
Yes, without prescription	6 (1.2)	<b>6 (3.2)</b>	0 (0.0)	
Not applicable, I have HIV	75 (15.3)	<b>56 (30.1)</b>	19 (6.3)	
No	371 (75.7)	94 (50.5)	<b>277 (91.1)</b>	

Note. \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

## CONCLUSIONS

- This is one of the few studies to examine the relationship between SDU and a range of health-related factors, including prevention strategies of HIV in Spain.
- Positive associations were found between SDU and PEP and PrEP.
- From a harm reduction perspective, PrEP can be a recommended resource for those who practice USD, since it would allow organizing a care strategy to avoid contracting HIV infection. In addition, it could represent an opportunity for some users to take responsibility for their sexual health and remain linked to health resources that respond to their needs.

This research was funded by Ministerio de Sanidad, Consumo y Bienestar Social (Spanish Government) through the program "National Plan on Drugs" in the call for grants for the development of research on addictions, grant number 2020I060

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