

Sexual Behavior and HIV Testing Practices among Men who have Sex with Men in Portugal

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Abstract

The objective of the study was to explore sexual behavior and HIV-testing practices among men who have sex with men (MSM) in Portugal, in light of current international health guidelines that recommend frequent HIV testing for MSM who engage in high-risk behavior. Participants were 304 mostly young, gay or bisexual self-identified MSM. They provided information regarding their HIV status (67% negative, 7% positive, 26% didn't know), 24% had never been tested for HIV, and 15.5% had been tested only once; main reasons for never having tested previously were: always using condoms, and not feeling at risk. Thus, HIV testing was infrequent and insufficient for early detection of infection, entry into treatment, and protection of sexual partners, since many unprotected sexual practices still occur. Those who tested more were older, self-identified as gay, living in major urban areas and employed. Linear regression predicted that the number of times MSM had penetrative sex without a condom was associated with the number of times they got tested, indicating that they might be using the test itself as a means to gain control of their unprotected sexual practices. Testing campaigns should aim to help MSM become more aware of their risk behavior, decrease fear of testing by explaining available treatment resources and decreasing the stigma associated with HIV, and by publicizing information about free and confidential testing locations.

Keywords: HIV testing; Sexual behavior; MSM; Portugal

Introduction

In Portugal there are an estimated 41,035 HIV-infected individuals [1], and one of the highest prevalence rates in Western Europe [2]. In addition, 81.7% of the people diagnosed with HIV were men, and although the highest rate of HIV infection is through heterosexual unprotected sex, approximately 15% of all infections were transmitted via homosexual and/or bisexual unprotected sex [1]. This is particularly important to mention given that this rate has doubled since 2001 among man who have sex with men (MSM) in Portugal, and these estimates only regard the notified cases, not considering the unreported cases. Therefore, MSM remain one of the most at risk groups for HIV transmission [3]. Despite these worrisome statistics, little systematic research has been conducted in Portugal on the contextual factors associated with unsafe sex among MSM, namely HIV testing practices and its relation to demographic variables and sexual behavior.

HIV testing facilitates early detection of infection among at-risk individuals, and early HIV detection is directly associated with improved quality of life and decreased sexual risk behavior [4-6]. Early and successful treatment of HIV-infected individuals with antiretrovirals (ARVs) significantly decreases the chances of HIV transmission to partners.

The US Centers for Disease Control and Prevention [7] recommend testing every three to six months for sexually active MSM. Given that large percentages of HIV-infected persons may be unaware of their infection [8,9], especially among MSM who remain at disproportionate risk of infection [10], frequent testing is important.

Although the percentage of MSM who have never tested for HIV is decreasing [11], many MSM remain untested or test infrequently [7,12,13]. Likelihood and frequency of testing may be related to demographic characteristics such as sexual orientation, age and ethnicity [14,9,15]; and to fear of positive results, perceived HIV risk, and beliefs about HIV treatment [16,17].

The uncertainty of unknown HIV status is an important motive for testing; however, denial is also a common response to uncertainty. Fear of the consequences of a positive HIV test is widespread and may take several forms. A sense of responsibility towards oneself or one's partner may be a motive for testing. The perception of stigma, from other gay men or from the wider culture, is a barrier to testing [18].

The risk of acquiring HIV infection is related to an interaction of correct knowledge of one's own HIV sero-status and the sero-status of one's sex partner. Most of the research on frequency of HIV testing has occurred in the US, Australia, and China. Nevertheless, very little is known about the frequency of HIV testing among Portuguese MSM and the factors that facilitate or impede testing among this population. The only two studies that tried to describe testing behavior in the context of MSM in Portugal show that some 72% of men got tested but a lot still needs to be done for improving testing, namely adopting more innovative approaches to HIV testing to improve the efficacy of HIV prevention strategies [19,20].

Therefore, the aim of this study is to contribute to the understanding of the relationship between sexual practices and HIV testing among MSM in Portugal by reporting a sample of 304 demographically diverse men.

Methods

Participants

The inclusion criteria for participation in the study were: (1) being MSM, (2) being over 18 years of age, (3) being Portuguese and living in Portugal, and (4) willingness to participate in the study after knowing its objectives. Participants were recruited through snowball sampling, and two methods were used: (1) Informal social networks. The eligible MSM who agreed to participate were asked to refer their friends to participate in the study; and (2) The Internet. The local researcher distributed announcements via local gay websites to reach potential participants, emphasizing that participation was strictly voluntary and confidential.

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Demographic data (Table 1) show that the sample is highly differentiated and educated, the majority of men are single and self-identify as gay. Only 7.2% of participants state being HIV positive, approximately 26% report not knowing.

Measures

Demographic characteristics

The structured questionnaire covered age, education, marital status, and HIV status. Participants indicated whether they considered themselves (1) gay/homosexual, (2) bisexual, (3) other. The study was not designed to include transgender persons. For the purpose of data analysis, education and marital status were grouped into several categories.

	n	%
Self-identification		
Gay	213	70.06
Bisexual	91	29.94
Marital status		
Single	180	59.21
Emotional commitment	58	19.08
Divorced	16	5.26
Married to a man	7	2.3
Married to a woman	12	3.95
Civil Union to a man	23	7.57
Civil union to a woman	8	2.63
Education		
Up to 9 years of school	27	8.88
Up to 12 years of school	73	24.01
University/college attendance	79	25.98
Pre-graduate degree	56	18.43
Post-graduate degree	69	22.7
HIV status		
Negative	203	66.77
Positive	22	7.24
Does not know	79	25.99

Mean age 32.30, SD=11.28, median=31

Table 1: Demographic characteristics (n=304).

Sexual practices within the last two months	With or Without a condom	Mean	Std. Deviation	t	p
How many times were you penetrated	With a condom	2.89	6.78	-.03	.978
	Without a condom	2.90	8.71		
How many men penetrated you	With a condom	1.36	3.70	2.10	.036*
	Without a condom	.72	3.46		
How many times did you penetrate	With a condom	3.69	9.60	.41	.680
	Without a condom	3.36	9.13		
How many men did you penetrate	With a condom	2.12	7.69	2.51	.012*
	Without a condom	0.84	3.57		
How many times did you perform oral sex	With a condom	1.38	6.60	-8.47	.000**
	Without a condom	8.73	12.95		
How many men did you perform oral sex to	With a condom	.65	4.02	-4.86	.000**
	Without a condom	3.23	7.88		
How many times did someone perform oral sex on you	With a condom	.85	4.54	-8.73	.000**
	Without a condom	9.01	14.98		
How many men performed oral sex on you	With a condom	.71	4.29	-4.26	.000**
	Without a condom	3.41	9.73		

*p<0.05; **p<0.001

Table 2: Results for "sexual practices within the last two months", using or not using a condom (n=304).

Sexual practices

Participants were asked to recall their sexual experiences and their sexual behaviors over the last two months. Information was collected regarding: (1) receptive anal sex; (2) insertive anal sex; (3) receptive and insertive oral sex.

HIV testing history

We inquired whether the participants had tested for HIV previously, reasons for never testing, assumptions about status among those not tested, reasons for first testing among those tested, and frequency of testing for those with more than one test.

Analyses

Analysis was carried out using SPSS version 21. Variables were analyzed using simple frequency and percentage. Logistic regression was carried out on condom use to predict condomless intercourse (dependent variable) with sexual pleasure (independent variable), significant at p<0.05. The t-test and ANOVAs were used to compare differences in groups of MSM using a condom and not using a condom, within the previous two months. All tests were two-tailed.

Ethics statement

The Institutional Review Boards of the Research Unit of Health and Psychology from the Institute of Applied Psychology in Lisbon, Portugal, approved this study.

Results

Sexual practices

Table 2 shows the results for the sexual practices within the last two months, using or not using a condom. Significant differences were found between having sex with or without a condom for receptive anal sex (more men penetrated the participants with a condom, p=0.036), for insertive anal sex (more participants penetrated another man with a condom, p=0.012), and for oral sex (all differences indicate that a condom is much less used for this type of sex, p<0.001).

HIV testing history

Table 3 shows the HIV testing history of the sample. About 24% of

participants had never been tested for HIV, and about 16% had been tested only once. Also, nearly 24% of men had tested 6 or more time for HIV. Gay-identified men reported significantly higher proportions ($t(293) = 4.63; <0.001$) when compared to bisexual-identified men.

Table 4 shows the reasons for not testing among those who never

tested. The most frequent reasons for not testing were always using condoms and not feeling at risk. No significant differences between gay or bisexual-identified men were found except for other reasons.

Table 5 shows reasons for testing among those previously tested. Almost half of the men claimed their primary reason wanted to know if

	Total (N=304)	Gay (n=213)	Bisexual (n=91)	t(df)	p
	M (SD)	M (SD)	M (SD)		
Number of times tested for HIV	2.85 (2.33)	3.26 (2.24)	1.95 (2.29)	4.63(293)	<0.001
0	23.9%	10.1%	13.8%		
1	15.5%	11.4%	4.0%		
2	9.4%	6.7%	2.7%		
3	10.1%	6.7%	3.3%		
4	9.4%	8.1%	1.3%		
5	7.7%	7.1%	.7%		
+6	23.9%	18.5%	6.1%		

Table 3: HIV testing history and prevalence by sexual orientation

		Total (N = 73)	Gay (n=31)	Bisexual (n=40)	Chi-Square (df)	p
Hard to get tested	Yes	11.3%	5.0%	6.3%	0.016 (1)	0.900
	No	88.8%	37.5%	51.2%		
Not knowing where to get tested	Yes	27.5%	11.3%	16.3%	0.031 (1)	0.859
	No	72.5%	31.3%	41.3%		
Fear of discrimination	Yes	12.5%	6.3%	6.3%	0.263(1)	0.608
	No	87.5%	36.3%	51.2%		
Shame to be perceived as homosexual	Yes	12.5%	7.5%	5.0%	1.432(1)	0.231
	No	87.5%	35.0%	52.5%		
Fear of finding out results	Yes	23.8%	12.5%	11.3%	1.047(1)	0.306
	No	76.3%	30.0%	46.3%		
Don't feel at risk	Yes	57.5%	21.3%	36.3%	1.361(1)	0.243
	No	42.5%	21.3%	21.3%		
Always using condoms	Yes	75.0%	33.8%	41.3%	0.614(1)	0.433
	No	25.0%	8.8%	16.3%		
Other reasons	Yes	13.8%	10.0%	3.8%	4.768(1)	0.029*
	No	86.3%	32.5%	53.8%		

*p<0.05

Table 4: Reasons for not testing among those never tested.

		Total (N = 231)	Gay (n=181)	Bisexual (n=50)	Chi-Square (df)	p
Wanting to know if was infected	Yes	45.4%	34.4%	11.0%	0.090 (1)	0.764
	No	54.6%	42.3%	12.3%		
Had had unprotected sex	Yes	23.3%	18.5%	4.8%	0.260 (1)	0.610
	No	76.7%	58.1%	18.5%		
Found out that a sex partner was HIV infected	Yes	5.7%	4.4%	1.3%	0.001(1)	0.981
	No	94.3%	72.2%	22.0%		
Accompanied friend for testing and got motivated to get tested	Yes	7.5%	5.3%	2.2%	0.378(1)	0.539
	No	92.5%	71.4%	21.1%		
Started a relationship	Yes	23.8%	18.1%	5.7%	0.021(1)	0.885
	No	76.2%	58.6%	17.6%		
It was part of a physical	Yes	37.0%	27.3%	9.7%	0.602(1)	0.438
	No	63.0%	49.3%	13.7%		
Other reasons	Yes	9.7%	6.2%	3.5%	2.306(1)	0.129
	No	90.3%	70.5%	19.8%		

Table 5: Reasons for testing among those previously tested.

	M (SD)	t(df)/Beta/F(df)	p
Age			
Younger (<31)	3.46 (4.66)	t(287)=-2.286	0.023*
Older (>32)	4.76 (5.03)		
Sexual Orientation			
Gay	4.62 (4.88)	β=-0.233	<0.001**
Bisexual	2.92 (4.66)		
Place of residence		β=-0.127	0.029*
Major Urban area	4.45 (4.99)		
Smaller Urban area	3.28 (4.49)		
Marital Status			
Single	4.25(5.29)	β=0.043	<0.001**
Married or civil union to a man	3.86(3.99)		
Married or civil union to a woman	2.14(2.49)		
Emotional commitment to a man	4.40(4.49)		
Divorced	4.47(5.05)		
Education		β=0.029	0.638
Up to 12 years of school	4.06 (5.49)		
University education	4.11 (4.53)		
Work Status		F (4; 290)= 3.008	0.019*
Unemployed	3.75 (4.71)		
Self employed	3.78 (4.37)		
Employed by employer	4.80 (5.07)		
Student	2.37 (4.30)		
Other	3.13 (3.60)		
Sexual behavior within the last two months without a condom			
How many times were you penetrated	2.90 (8.71)	β=0.011	0.900
How many men penetrated you	0.72 (3.46)	β=-0.101	0.164
How many times did you penetrate	3.36 (9.13)	β=0.000	0.997
How many men did you penetrate	0.84 (3.57)	β=0.199	0.012*

*p<0.05; **p<0.001

Table 6: demographic variables and sexual behavior without a condom differences based on HIV testing (number of times tested).

they were infected. Thirty seven per cent were tested as part of a physical exam and over 23% mentioned that they had started a relationship or had had unprotected sex. Only almost 6% found out that a sex partner was HIV infected. No significant differences between gay or bisexual-identified men were found.

Table 6 presents the associations of demographic variables as well as sexual behavior without a condom variables and HIV testing (number of times tested over a lifetime). HIV testing was associated with age, sexual orientation, place of residence, marital status, work status, and how many times was penetrated without a condom.

Discussion

In this MSM sample, HIV testing was infrequent and insufficient, particularly in the case of bisexual-identified MSM. Several measures could be taken to counteract this situation. Testing campaigns could be aimed to help MSM, particularly those not gay identified, to become more aware of the behaviors that put them at risk. Given the observed variations in likelihood and frequency of HIV testing according to sexual identity, HIV testing campaigns should highlight that regardless of sexual or gender identity, individuals who engage in sexual risk behavior should be tested regularly. Furthermore, the finding that only 23.3% (18.5% for gay men, and 4.8% for bisexual men) reported having been tested because they had unprotected sex is worrisome considering the number of unprotected sexual practices that they engage in, and this is consistent with previous research [21,22]. This finding suggests very low risk perception in this population despite apparently high levels of risk behavior, considering that the majority of the participants say that they are not in a relationship.

Fear of testing and finding out about results was addressed by 24% of participants. This could be decreased by disseminating information on currently available treatments for those found to be infected.

27.5% mentioned that they didn't know where to get tested, therefore, publicizing information about free and confidential testing locations in the country could further increase testing, particularly for those concerned about costs.

Although Portugal offers health coverage to all citizens, there is a network of HIV detection services, and free anonymous testing is available in health centers, discrimination and fear of rejection (not only because of the disease itself, but also because of being perceived as gay or bisexual) still exists, which may dissuade some people from seeking HIV testing at such facilities.

Furthermore, including HIV testing in regular physical exams, both in private and public settings, could increase both the number of individuals and the frequency of testing. Developing campaigns to decrease HIV-associated stigma could facilitate test-seeking behaviors. With the legalization of same-sex marriage, Portugal is now seen as an example in decreasing sexual-orientation-based discrimination. Lessons learned through that process should be applied to further erode stigmatization of HIV.

Finally, the association of the number of prior HIV testing with socio-demographic indicators of social marginalization (age, marital status, bisexual identity or work status) indicates an urgent need to promote and facilitate HIV testing among the most disenfranchised sectors. On the other hand, the persistent occurrence of risky sexual practices forces us to accept that much is still left to be done in the field of reducing HIV related behaviors and to promote HIV testing among MSM.

This was a cross-sectional study, and although data were collected at a single point in time, they are useful as a baseline measure against which other assessments at other times and at other venues can be compared. Nevertheless, limitations to this study include the fact that

self-reported data provide an opportunity for response bias. The men surveyed in this study could have downplayed or overstated their actual behavior. Also, since this was a convenience sample, hence results cannot be generalized.

The results of the few studies conducted with Portuguese MSM [23] indicate that cultural variables may also be important in understanding MSM responses to HIV testing and its influence on the attribution of importance to sexual practices, since cultures transmit values and expectations that influence the sexual behaviors of their members. It is critical that we understand cultural influences on behaviors relevant to HIV risk to reduce the further spreading of HIV among MSM.

According to a report from the Commissioner for Human Rights from the Council of Europe [24], Portuguese people are not comfortable about having a homosexual person as neighbor, and are against same-sex marriage and same-sex parenting. Consequently, the identity development of MSM individuals is restricted by these negative societal attitudes, which generally results in the internalization of the stigma associated with their sexual and/or gender identity [25], which has been shown to be associated with risky sexual behaviors [26].

Negotiations between HIV testing and a dislike of condoms seem to be given as justifications for unprotected sex between MSM. Portuguese (MSM) erotic culture, and stigma/discrimination, pressure to omit or concede their status, along with the added security of an undetectable viral load due to current adherence to medication all may lead to the rationalization of how risk is produced and Portuguese MSM may feel more likely to defend unprotected sex as not only being more pleasurable but also as signifying a return to an intimate relationship and to a sense of 'normality' weakened by the public health messages that view sexual risk through a biomedical lens only and deny the significance and meaning given to sex and condoms within a relationship and the unquestionable force of love, pleasure and intimacy [27].

Perceptions of low sexual control have been frequently used as justification for unprotected anal sex in studies with MSM, but failed to operationalize HIV testing patterns as a motivator for such exposure. Discrimination toward homosexual behavior is a context of risk and oppression, which have been found to be strong predictors of HIV risk among MSM men, but the contribution of this study forces us to admit that testing efforts that could counteract further spread of the epidemic needs to be prioritized in the development of condoms and other sexual safety measures as well as in the promotion of their use. Also, new strategies to implement access to the test in Portugal, such as rapid HIV screening, should be discussed.

References

1. Departamento de Doenças Infecciosas (DDI) (2012) Infecção VIH/SIDA: a situação em Portugal a 31 de dezembro de 2011. Lisboa: INSA
2. UNAIDS (2013) UNAIDS Report on the global AIDS epidemic. WHO Library Cataloguing in Publication Data.
3. Lorimer K, Kidd L, Lawrence M, McPherson K, Cayless S, et al. (2013) Systematic review of reviews of behavioural HIV prevention interventions among men who have sex with men. *AIDS Care* 25: 133-150.
4. Oberzaucher N, Baggaley R (2002) HIV voluntary counselling and testing: A gateway to prevention and care (UNAIDS/02.41E).
5. Weinhardt LS, Carey MP, Johnson BT, Bickham NL (1999) Effects of HIV counseling and testing on sexual risk behavior: a meta-analytic review of published research, 1985-1997. *Am J Public Health* 89: 1397-1405.
6. World Health Organization (2004) Rapid HIV tests: Guidelines for use in HIV testing and counselling services in resource-constrained settings.
7. Centers for Disease Control and Prevention (CDC) (2011) HIV testing among men who have sex with men—21 cities, United States, 2008. *MMWR Morb Mortal Wkly Rep* 60: 694-699.
8. MacKellar DA, Valleroy LA, Anderson JE, Behel S, Secura GM, et al. (2006) Recent HIV testing among young men who have sex with men: correlates, contexts, and HIV seroconversion. *Sex Transm Dis* 33: 183-192.
9. Sifakis F, Hylton JB, Flynn C, Solomon L, MacKellar DA, et al. (2010) Prevalence of HIV infection and prior HIV testing among young men who have sex with men. The Baltimore young men's survey. *AIDS Behav* 14: 904-912.
10. Sumartojo E, Lyles C, Choi K, Clark L, Collins C, et al. (2008) Prevalence and correlates of HIV testing in a multi-site sample of young men who have sex with men. *AIDS Care* 20: 1-14.
11. Helms DJ, Weinstock HS, Mahle KC, Bernstein KT, Furness BW, et al. (2009) HIV testing frequency among men who have sex with men attending sexually transmitted disease clinics: Implications for HIV prevention and surveillance. *J Acquir Immune Defic Syndr* 50: 320-326.
12. Guy R, Goller JL, Spelman T, El-Hayek C, Gold J, et al. (2010) Does the frequency of HIV and STI testing among men who have sex with men in primary care adhere with Australian guidelines? *Sex Transm Infect* 86: 371-376.
13. MacKellar DA, Valleroy LA, Anderson JE, Behel S, Secura GM, et al. (2006) Recent HIV testing among young men who have sex with men: correlates, contexts, and HIV seroconversion. *Sex Transm Dis* 33: 183-192.
14. Nelson KM, Thiede H, Hawes SE, Golden MR, Hutcheson R, et al. (2010) Why the wait? Delayed HIV diagnosis among men who have sex with men. *J Urban Health* 87: 642-655.
15. Wei C, Ruan S, Zhao J, Yang H, Zhu Y, et al. (2011) Which Chinese men who have sex with men miss out on HIV testing? *Sex Transm Infect* 87: 225-228.
16. Mikolajczak J, Hospers HJ, Kok G (2006) Reasons for not taking an HIV-test among untested men who have sex with men: an Internet study. *AIDS Behav* 10: 431-435.
17. Song Y, Li X, Zhang L, Fang X, Lin X, et al. (2011) HIV-testing behavior among young migrant men who have sex with men (MSM) in Beijing, China. *AIDS Care* 23: 179-186.
18. Lorenc T, Marrero-Guillamón I, Llewellyn A, Aggleton P, Cooper C, et al. (2011). HIV testing among men who have sex with men (MSM): systematic review of qualitative evidence. *Health Educ Res* 26: 834-846.
19. Carvalho C, Fuertes R, Lucas R, Martins A, Campos MJ, et al. (2013) HIV testing among Portuguese men who have sex with men—results from the European MSM Internet Survey (EMIS). *HIV Med* 14 Suppl 3: 15-18.
20. Dias S, Gama A, Severo M, Barros H (2011) Factors associated with HIV testing among immigrants in Portugal. *Int J Public Health* 56: 559-566.
21. Carballo-Diéguez A, Avila MM, Balán IC, Marone R, Pando MA, et al. (2011) Presentación del estudio "Links" de hombres que tienen sexo con hombres en Buenos Aires, Argentina. *Actual SIDA* 19: 21-25.
22. Carballo-Diéguez A, Balán IC, Dolezal C, Pando MA, Marone R, et al. (2014) HIV testing practices among men who have sex with men in Buenos Aires, Argentina. *AIDS Care* 26: 33-41.
23. Pereira H (2007) Determinantes do risco e implicações para a saúde nas práticas sexuais de homens que têm sexo com homens. *Análise Psicológica* 3: 517-527.
24. Commissioner for Human Rights (2011) Discrimination on grounds of sexual orientation and gender identity in Europe. Council of Europe, Strasbourg, France.
25. Costa PA, Pereira H, Leal I (2013) Internalized Homonegativity, Disclosure, and Acceptance of Sexual Orientation in a Sample of Portuguese Gay and Bisexual Men, and Lesbian and Bisexual Women. *Journal of Bisexuality* 13: 229-244.
26. Dew BJ, Chaney MP (2005) The relationship among sexual compulsivity, internalized homophobia, and HIV at-risk sexual behavior in gay and bisexual users of Internet chat rooms. *Sexual Addiction & Compulsivity: The Journal of Treatment & Prevention* 12: 259-273.
27. Dowsett GW (2003) Some considerations on sexuality and gender in the context of AIDS. *Reprod Health Matters* 11: 21-29.