



Vulnerability and sexual behavior among men who have sex with men with positive rapid testing for syphilis: a documentary study

Vulnerabilidade e comportamento sexual entre homens que fazem sexo com outros homens com testagem rápida para sífilis: um estudo documental

Vulnerabilidad y comportamiento sexual entre hombres que tienen relaciones sexuales con otros hombres con pruebas rápidas de sífilis: un estudio documental

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ABSTRACT

Introduction: Syphilis has a high prevalence in the population of men who have sex with men and, as a sexually transmitted infection, is extremely associated with acquired immunodeficiency virus infection. **Objective:** To investigate the factors related to vulnerability, behavior, and sexual practice among men who have sex with men with rapid testing for syphilis. **Outline:** This is a documentary study, approved with registration no. 963,805, conducted from January to July 2015. It presents data from medical records of men who have sex with men, diagnosed with syphilis between 2013 and 2014. A standard form was used as a data source. **Results:** Among the 137 medical records, (61.3%) are single, (26.3%) with 12 years of schooling or more. A majority (80%) of the population that acquired infection continued the exposure through sexual intercourse and claimed to know the service through friends/professionals of the service, (88.6%) said that their partners had an infection, and (29.2%) declared using condoms. **Implications:** The data reinforce the need for disease control actions, as well as the dialogue with health policies, as the risks and vulnerable behaviors presented are the same as described in other studies.

DESCRIPTORS

Homosexuality, Male; Sexual Behavior; Health Vulnerability; Syphilis.

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INTRODUCTION

Syphilis has a high prevalence in the population of men who have sex with men (MSM) and, as a Sexually Transmitted Infection (STI), is extremely associated with acquired immunodeficiency virus (HIV) infection.¹⁻² Recent study shows a 30% increase in the prevalence of syphilis in MSM in some Latin American²⁻⁶ and Asian countries.⁷ Data from the World Health Organization (WHO) in 2010 show that the number of the disease in this population in Brazil maintains high rates, corresponding to 13.6% of the sexually active population.⁸

The picture of STI in the MSM population can be classified by the social and individual dimensions,⁹⁻¹¹ which bring sociocultural factors with them, due to political-institutional aspects, individual characteristics, experiences, interactions, subjectivities, and personal trajectories, as well as some peculiarities of social groups in which individuals are inserted.^{1,12}

Vulnerability to STI acquisition is related to early onset of sexual life, multiple sexual partners and/or non-use of condoms due to trust in the partner.¹³ It may also be associated with the immunodeficiency virus (HIV), as a result of either the state of immunosuppression or interaction with the vulnerability factors that coincide with these infections.¹⁴

Due to the increasing cases of sex-related infections in 1980s, the Testing and Counseling Centers (CTA) aim to promote access to rapid tests for syphilis, HIV, and hepatitis B and C, thus enabling the knowledge of the status of infection prevention and monitoring of positive serologies.¹⁵ With its implementation, this service began to work with a multidisciplinary team, providing a care model focused on the principles of confidentiality and active listening to the cultural and psychosocial needs of users.¹⁶⁻¹⁸

From this perspective, this study aimed to describe the factors related to vulnerability, behavior, and sexual practice among men who have sex with men with syphilis diagnosed with rapid testing. This study

presents a justification for the need to promote the findings through public health policies for the population in STI vulnerability.

METHOD

This is a documentary retrospective study with a quantitative approach, conducted at the Carlos Ribeiro Testing and Counseling Center (CTA), located in the city of Fortaleza, a reference in the following diseases: syphilis, HIV, and hepatitis B and C, during January to July 2015. The study was approved by the Ethics Committee of the São José Hospital for Infectious Diseases (HSJ) under registration number 963,805.

The user's access to the CTA happens predominantly directly, requiring no professional scheduling or indication. Initially, the user fills out the entry form with his/her personal data to later participate in a moment called pre-counseling, in which he/she receives information about STIs and the importance of using condoms as a preventive strategy. Counseling is divided into two stages: collective pre-test counseling, which occurs between 20 and 30 minutes in a place reserved for users who wish to perform testing and post-test counseling, which should be individual and confidential because, at this time, there will be the delivery of the results of the tests, taking approximately 25 minutes, and the time may extend when the result is reagent to the disease, due to performing another test, different from the original, in case of HIV.

These guidelines seek the users' reflection on the situations of vulnerabilities that they expose themselves, trying to raise their awareness and to avoid new risk practices. Among the rapid tests used in the CTA of Fortaleza are the rapid check and the bio-manguinhos to identify the infection through the detection of antibodies to *Treponema Pallidum* (tests validated by the Ministry of Health of Brazil). The application of the tests followed the recommendations of the ordinances of the Ministry of Health (MS).

The sample consisted of data from medical records of male users identified as MSM, with positive testing for syphilis, aged between 18 and 59 years. The variables used were compiled from the CTA form, which corresponds to the user's medical records, forming questions that guided, such as: education, marital status, origin of the clientele, history of STIs in the last 12 months, type of exposure and adherence to condom use with a steady and occasional partner, and drug use. The question regarding the number of partners was also included.

The data were analyzed descriptively, and the absolute and relative frequencies were calculated for all categorical variables. The statistical tests used a significance level of 5% as a decision rule of the procedures. The Mann-Whitney test was used to verify a significant difference between numerical variables, with significant *p* value in the relationship of individuals who had STIs and continued the exposure through sexual intercourse. The Chi-Square Test was performed to compare the level of school education with the type of exposure. The data were analyzed using the software SPSS Statistics version 24.

RESULTS

At the end of data collection, a total of *n*= 137 (100%) of MSM medical records with rapid testing for syphilis were verified. Of these, 113 (82.4%) reside in the municipality of Fortaleza, and 24 (17.6%) are from other locations. Regarding occupation, 92 (73.7%) users had some paid activity, 09 (6.6%) were unemployed, 26 (19%) were students, and 10 (7.3%) did not reported.

As to the marital status, 84 (61.3%) reported being single, 37 (27%) with marital status in secrecy, 13 (9.5%) married, 2 (1.5%) widowed and 1 (0.7%) divorced. In the variable related to educational level, a large number for those with 8 to 11 years of schooling was found, 58 (42.3%); more than 12 years of schooling, 36 (26.3%); did not reported, 30 (21.9%); between 0 and 7 years of schooling, 13 (9.5%). Regarding self-reported skin color, brown, 62 (45.3%); did not report, 48 (35%); black, 16 (11.6%); and white, 11 (8%).

In the variable in which the type of exposure was analyzed, 70 (88.6%) correspond to the partner with some type of STI, significant data (*p*= 0.038). About the exposure through sexual intercourse, 9 (11.4%) of the users reported other forms of exposure; 42 (75%) of the users did not have STIs despite exposure through sexual intercourse. See Table 1.

Table 1 – Association between the type of exposure versus the school grade, and have had STI in the last 12 months. Fortaleza, Ceará, 2017.

Variable	Type of exposure <i>n</i> (%)		<i>p</i> value
	Sexual Intercourse	Other	
Schooling			
7 years	9 (69.2)	4 (30.8)	0.145
From 8 to 11 years	47 (81.0)	11 (19.0)	
More than 12 years	31 (86.1)	5 (13.9)	
Had STI			
Yes	70 (88.6)	9 (11.4)	0.038
No	42 (75.0)	14 (25.0)	

Chi-Square Test

Of the investigated population, 40 (29.2%) participants reported have using condoms with steady or occasional partners during all sexual intercourse in the last 12 months. Most of the individuals who had STIs heard about the CTA service through friends,

corresponding to (*n*=53; 67.1%) (*p*= 0.016) participants. When compared to the group of men who did not have STIs, the majority 30 (53.6%) heard about the CTA service through other sources: internet, radio, newspapers, television, health professionals.

Table 2 – Description of the relationship between the origin of the clientele and the variables: had STI in the last 12 months, school level, reason for the demand for CTA. Fortaleza, Ceará, 2017.

Variable	Group origins n (%)		p value
	Friends/Users	Other	
Had STI			
Yes	53 (67.1)	26 (32.9)	0.016
No	26 (46.4)	30 (53.6)	
Schooling			
7 years	11 (84.6)	2 (15.4)	0.088
From 8 to 11 years	30 (51.7)	28 (48.3)	
More than 12 years	22 (61.1)	14 (38.9)	
Motivation for the service			
Exposure to a risk situation	43 (65.2)	23 (34.8)	0.166
Other	38 (53.5)	33 (46.5)	

Chi-square test

Regarding the reason for not using condoms in sexual intercourse with occasional partners, it was observed that of the users who had between 0 and 7 years of schooling, 4 (3%) do not use because they do not like and 9 (6.5%) for other reasons: not knowing how to use, not having a condom at the time of the relationship, not knowing how to negotiate with the partner regarding the use and/or believing that the partner does not have HIV. And among users with more than 8 years of schooling, 7 (5.1%) do not use because they do not like, while 87 (63.5%) do not use due to other reasons cited.

The negative result for the HIV test was observed in 107 (78.1%) cases, positive in 25 (18.2%) and users who did not report this information corresponded to 5 (3.7%).

In the data Table 3 refers to, it is noted that the non-consumption of drugs was lower for both licit and illicit drugs, and that in recent months a larger number of people reported that the partner had a STI, and 22 (16.0%) did not mention any information. For the type of exposure that occurred in the relationship, the sexual type had a higher percentage than other forms.

Table 3 – Characterization of the findings regarding drug use, STIs symptoms and the type of exposure in the last twelve months. Fortaleza, Ceará, 2017.

Variable	n (%)	Mean	Median	Standard Deviation	p value
Use of licit drugs					
Yes	14 (12.0)	4.5	3.0	3.8	0.679
No	103 (88.0)	6.5	3.0	9.5	
Use of illicit drugs					
Yes	37 (34.9)	6.2	3.0	8.2	0.678
No	69 (65.1)	6.6	3.0	10.0	
Had a STI					
Yes	70 (60.9)	6.5	3.0	9.7	0.914
No	45 (39.1)	5.7	3.0	8.1	
Type of exposure					
Sexual	97 (82.9)	6.7	3.0	9.7	0.567
Other	20 (17.1)	3.8	3.0	3.4	

It is possible to verify that no statistical significance occurred. Yet, it is important to highlight those who do not use drugs, since this data is quite frequent in other studies.

Regarding the relationship between age and drug use, a statistically non-significant association ($p=0.467$) was verified. For age from 18 to 29 years, ($n=18$; 31%) use drugs and ($n=40$; 69.0%) do not use, as for the

age group comprised from 30 years, (n=21; 37.5%) while (n=35; 62.5%) do not use drugs.

DISCUSSION

Studies show that people infected with HIV may present simultaneously other sexually transmitted infections,¹⁹ especially syphilis, due to the sharing of the same risk factors, with the predominant risk of sexual practice and the influence of aspects of social life, mental health, affective experiences, and low immunosuppression.

The non-follow-up by the professionals may compromise the quality of the information recorded in the CTA. Providing resources and investing in the professional training of the staff can help in the production of more accurate information about the epidemiological profile of users.²⁰

In Brazil, the prevalence of HIV infection in the population of men who have sex with men (MSM) is 20 times higher than that of the Brazilian adult population and twice than that found among sex workers and injecting drug users,²¹ mainly in south and southeast regions. This fact is mainly related to a behavioral issue due to the adoption of sexual practices without the use of condoms, being aggravated in this group due to the social and institutional contexts him experiences, such as the difficulty of access to condoms services.²¹ Emphasizing that the functioning of services and prejudice against homosexuals are considered issues to be conquered mainly in the bioethical approach, with regard to the accessibility, this represents an ethical problem in the field of public health.²²

The results of this study are not representative of the population of the state of Ceará, since it only covers those users who attended the local CTA and only 82.4% reported the capital as origin. In the marital status, most of our population is single, referring (61.3%). These data corroborate a study in Belo Horizonte, in which the highest percentage is for those who are also single and MSM with a syphilis diagnosis. Marital status often does not correlate with social

status, which does not mean that people who have declared themselves single do not have a steady sexual partner.²³

However, articles describing sexual vulnerability in skin color, related to the theme of STIs, demonstrated to be an important resource to classify and work on issues of social stigma in the distribution of illness and its determinants.²⁴ In this context, it is emphasized that the risk of infection is related to risk behavior and not to race/skin color, thus emphasizing even more the idea of risk and non-group behavior, which will determine that the involvement is not linked to sexual orientation or social and economic conditions, but to practices of risk exposure through the non-use of condoms.

In Brazil, the level of education can be considered an indicator of social status, and an association of this variable with the risk of being infected has been suggested. The predominant level of education in this study was 8 to 11 years of study (42.3%), corroborating the findings of the literature.²³ It can be imagined that knowledge in years of study is not directly related to the fact of knowing about risky sexual practices, as well as the fact that knowing STIs and being in the health area may make the individual think that he/she will not be infected.

In this study, participants were vulnerable to risk factors, since 75% of cases that did not have any type of STIs reported exposure during sexual intercourse and 88.6% had some type of gender-related infection through unprotected sexual intercourse. Some studies²⁵⁻²⁶ prove that the absence of condoms in the practice of sexual intercourse, in particular receptive anal sex, is the factor of higher risk for acquiring HIV infection and other STIs, which may occur due to the type of sexual partner, recognition of the risk and trust attributed to the sexual partnership, affectivity of the relationship, number of partners or as a reflection of the discrimination suffered by these men.

The investigated population claims to have used condoms during all sexual intercourse with a steady

partner in the last 12 months, despite the positive diagnosis of syphilis in these users. This information suggests that syphilis infection occurred through other sexual practices, such as oral sex without a condom. Other possibilities would be infection through unprotected sexual intercourse in an occasional relationship or non-penetrative sexual practices with the disease in the acute phase, thus occurring transmission.

The study presented the social context and individual characteristics of MSM, as well as the prevalence factor in the population studied. Prevention and intervention actions should be broad in order to improve living conditions and bring individuals closer to health services.²⁷

The study allowed us to analyze that most of the MSM population knew the CTA service through friends, noting the need for greater dissemination by other means of communication about the services offered by the CTA. In addition, it is necessary to step up public health policy so that the number of people with STIs can be minimized, especially in the most vulnerable groups such as MSM.

It is relevant to evaluate the impacts of interventions and public investment, including the production and consolidation of municipal indicators to monitor the prevalence of syphilis, as well as rapid testing,²⁸ so that investments in training the health professionals and immediate public policies occur at the municipal and state level, since the epidemic of this infection in Brazil is not uniform, especially in the scope of Primary Care in order to intensify preventive behaviors, especially concerning syphilis, achieving a reduction in vulnerability exposure of key populations, such as MSM.²⁸

Therefore, it is necessary to seek strategies that enable not only the diagnosis of syphilis, but also can offer immediate pharmacological treatment for users and sexual partners, breaking the cycle of reinfection and poor adherence to drug therapy. Thus, to strengthen the CTA policy, within the context of the discussions about vulnerability and sexual practice

concerning the risk of infection, as a strategy to minimize the number of infected, and thus reducing spending on medication and/or hospitalization.²⁹

Regarding the use of drugs, whether they are legal or illegal, the authors³⁰ describe that this subject is still inconsistent with the hypotheses proposed to explain why alcohol use may be associated with the lack of condom use. A study showed that despite knowledge about preventive measures,³¹ condom use is low in more vulnerable groups, such as MSM, especially under the influence of alcohol and/or other psychoactive substances.²⁷ Alcohol is commonly used as a disinhibitor, that is, a facilitator in the approach for sexual intercourse, recreation, socialization, and bars and nightclubs have emerged as attractive places.³²

This study reflects the importance of filing the forms of the intervention that focuses not only on the transcription of records but also that addresses probable changes in attitudes and behaviors with a view to prevention.

As a limiting factor of this study, we attributed the lack of some information in the service form, since it prevented that other aspects from being investigated, such as whether the sexual practice of the user was active or receptive, if there was the use of lubricant in sexual practice, if during the relationships there was bleeding, thus allowing a more complete profile of sexual practice among MSM, which in fact there are some questions regarding the escape of the response. This study presents as a strength the data demonstrated, as they will serve to expand health policies and adjust the notification form for the MSM population.

Finally, it can be observed that there are advancements and achievements, especially regarding the organization of health policy among the groups with greater vulnerability to gender-related infection.³³

Even though its stigma, accessibility to the service and to medication should not be the main barriers of this population. A total of 40 (69%) of this

specific population up to 29 years of age revealed through the CTA file to be no drug-taking. Other studies show the prevalence of drug use among MSM related to not using condoms and so a greater chance of syphilis infection.

CONCLUSION

Thus, it is suggested that the competent authorities review this form to verify that it is necessary to bring specific questions for vulnerable

groups. As for the disease, the prevalence of syphilis in MSM people demonstrates the need for actions aiming to control it and use rapid testing, mainly due to its practicality, sensitivity, and specificity, and it can be considered as an efficient early diagnosis strategy. Public health policies should prioritize actions to control the disease, with strategies of early screening, reducing morbidity, and improving the sexual health of the general population, especially the most vulnerable people.

RESUMO

Introdução: A sífilis tem alta prevalência na população de homens que fazem sexo com homens e, por ser uma infecção sexualmente transmissível, está extremamente associada à infecção pelo vírus da imunodeficiência adquirida. **Objetivo:** Investigar os fatores relacionados à vulnerabilidade, ao comportamento e a prática sexual entre homens que fazem sexo com homens com testagem rápida para sífilis. **Delineamento:** Este é um estudo documental, aprovado com número de registro 963.805, realizado de janeiro a julho de 2015. Apresenta dados dos prontuários de homens que fazem sexo com homens, diagnosticados com sífilis entre 2013 e 2014. Um formulário padrão foi usado como uma fonte de dados. **Resultados:** Dentre os 137 prontuários, (61,3%) são solteiros, (26,3%) com nível de escolaridade igual ou acima de 12 anos de estudo. Uma maioria (80%) da população que adquiriu alguma infecção manteve exposição por meio de relação sexual e afirmou conhecer o serviço através de amigos/profissionais do serviço, (88,6%) disse que seus parceiros tiveram alguma infecção e (29,2%) declarou usar preservativos. **Implicações:** Os dados fortalecem a necessidade de ações de controle da doença, bem como o diálogo com políticas de saúde, pois os riscos e comportamentos vulneráveis apresentados são os mesmos descritos em outros estudos.

DESCRITORES

Homossexualidade Masculina; Comportamento Sexual; Vulnerabilidade em Saúde; Sífilis.

RESUMEN

Introducción: La sífilis tiene una alta prevalencia en la población de hombres que tienen sexo con hombres y, porque es una infección de transmisión sexual, está extremadamente asociada a la infección por el virus de la inmunodeficiencia adquirida. **Objetivo:** Investigar factores relacionados con la vulnerabilidad, el comportamiento y la práctica sexual entre hombres que tienen sexo con hombres con pruebas rápidas de sífilis. **Delineación:** Se trata de un estudio documental, aprobado con número de registro 963.805, realizado de enero a julio de 2015. Presenta datos de las historias clínicas de hombres que tienen sexo con hombres, diagnosticados con sífilis entre 2013 y 2014. Se utilizó un formulario estándar como fuente de datos. **Resultados:** Entre los 137 registros médicos, (61,3%) son solteros, (26,3%) con un nivel educativo igual o superior a 12 años de estudio. La mayoría (80%) de la población que adquirió una infección mantuvo la exposición a través de las relaciones sexuales y afirmó conocer el servicio a través de amigos / profesionales del servicio, (88,6%) dijo que sus parejas tenían una infección y (29,2%) declaró el uso de condones. **Implicaciones:** Los datos refuerzan la necesidad de acciones de control de enfermedades, así como el diálogo con las políticas de salud, ya que los riesgos y comportamientos vulnerables presentados son los mismos que se describen en otros estudios.

DESCRIPTORES

Homosexualidad Masculina; Conducta Sexual; Vulnerabilidad en Salud; Sífilis.

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We provide the data.

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CONFLICTS OF INTEREST

There are no conflicts of interest to declare.