Journal of Nursing
Revista de Enfermagem
UFPE On Line
ISSN: 1981-8963

ORIGINAL ARTICLE

KNOWLEDGE, ATTITUDES AND PRACTICES ON HIV/AIDS OF WOMEN WHO HAVE SEX WITH WOMEN

CONHECIMENTOS, ATITUDES E PRÁTICAS SOBRE HIV/AIDS DE MULHERES QUE FAZEM SEXO COM MULHERES

CONOCIMIENTOS, ACTITUDES Y PRÁCTICAS SOBRE VIH/SIDA DE MUJERES QUE HACEN SEXO CON MUJERES

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ABSTRACT

Objective: to evaluate the knowledge, attitudes and practices related to the prevention and transmission of HIV/AIDS in women who have sex with women. ***Method:*** a descriptive, cross-sectional, quantitative study, developed through an evaluative survey of 91 women using the *snow ball* technique. Statistical analyses were obtained by SPSS 20.0. ***Results:*** young women with full high school, high monthly income and Catholic, prevailed. They used to live with a partner and do not live with them any more and have sexual relations with only women. Participants demonstrated regular knowledge; positive attitude and inadequate practice regarding HIV/AIDS. Statistically, sociodemographic variables were correlated with knowledge, attitudes and practices. ***Conclusion:*** Although most women present regular knowledge and positive attitudes toward HIV/AIDS transmission and prevention, the findings indicate inadequate practices. Thus, although present, knowledge has not provoked a significant practical change, demonstrating cognitive incoherence. ***Descriptors*:** Knowledge; Attitudes to Health; HIV Infections; Homosexuality, Female.

RESUMO

Objetivo: avaliar o conhecimento, atitudes e práticas relacionadas à prevenção e transmissão do HIV/AIDS em mulheres que fazem sexo com mulheres. ***Método***: estudo descritivo, transversal, de abordagem quantitativa, desenvolvido por meio de um inquérito avaliativo, com 91 mulheres, por meio da técnica *snow ball*. As análises estatísticas foram obtidas pelo SPSS 20.0. ***Resultados***: prevaleceu mulheres jovens, com ensino médio completo, renda mensal elevada e católicas. Viveram com companheira e não vivem mais e mantêm relação sexual somente com mulher. As participantes demonstraram conhecimento regular; atitude positiva e prática inadequada no que concerne ao HIV/AIDS. Estatisticamente, variáveis sociodemográficas foram correlacionadas com conhecimento, atitudes e práticas. ***Conclusão***: apesar de a maioria das mulheres apresentar conhecimento regular e atitudes positivas em relação à transmissão e prevenção do HIV/AIDS, os achados indicam práticas inadequadas. Assim, apesar de presente, o conhecimento não tem provocado uma mudança prática significativa, demonstrando incoerência cognitiva. ***Descritores*:** Conhecimento; Atitude Frente à Saúde; Infecções por HIV; Homossexualidade Feminina.

RESUMEN

Objetivo: evaluar los conocimientos, actitudes y prácticas relacionadas a la prevención y transmisión del VIH/SIDA en mujeres que tienen relaciones sexuales con mujeres. ***Método:*** estudio descriptivo, transversal, enfoque cuantitativo, desarrollado a través de un estudio evaluativo, con 91 mujeres, mediante la técnica *snow ball*. Los análisis estadísticos fueron obtenidos por el SPSS 20.0. ***Resultados:*** mujeres jóvenes prevalecieron, con formación secundaria completa, rentas mensuales elevadas y religión católica. Vivieron con compañero y no viven más y mantienen relaciones sexuales sólo con mujeres. Las participantes demostraron conocimiento regular; actitud positiva y prácticas inadecuadas en relación con VIH/SIDA. Estadísticamente, variables sociodemográficas se correlacionaron con conocimientos, actitudes y prácticas. ***Conclusión:*** Aunque la mayoría de las mujeres presenten regulares conocimientos y actitudes positivas acerca de la transmisión y prevención del VIH/SIDA, los hallazgos indican prácticas inadecuadas. Así que, a pesar de presente, el conocimiento no tiene provocado un cambio de práctica significativa, demostrando incoherencia cognitiva. ***Descriptores:*** Conocimiento; Actitud Frente a la Salud; Infecciones por VIH; Homosexualidad Femenina.

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INTRODUCTION

Women who have sex with women are at risk of acquiring HIV, [1-7] however, a proportion of these women consider themselves to be immune and only test for HIV when they develop heterosexual practices or perceive STDs.[2-3] Health services also consider them invisible, which causes a strong programmatic vulnerability.[5-7]

Risk factors such as contact with menstrual blood and vaginal secretions, use of sex toys, among others, have the potential of transmitting HIV, as well as other STDs - syphilis, hepatitis B and C and human papilloma virus - if the sexual relationship is more or less traumatic. However, sexual practices among women are poorly understood and there are not many studies involving this population segment.[8-9]

Women who have sex with women and men are more at risk for contracting STDs and HIV when compared to women who only have sex with men. Fear of the prejudice of health professionals or previous unpleasant experiences may alienate women from services and other forms of prevention/promotion.[6-9]

From the exposed problem, this study had as objectives:

● To evaluate the knowledge, attitudes and practices related to the prevention and transmission of HIV/AIDS in women who have sex with women.

● Identify the association between knowledge about HIV/AIDS prevention among women who have sex with women with sociodemographic variables.

METHOD

A descriptive, cross-sectional study of a quantitative approach, developed through a survey of Knowledge, Attitudes and Practices. It was carried out in a capital of Northeastern Brazil, with 91 women who have sex with other women. The sample was obtained by statistical calculation, based on previous studies.[10]

Participants were recruited through the snowball technique because they considered that the MSM is a population of difficult location due to their low visibility.[11]

Women aged 18 years or older residing in Teresina, Piauí, Brazil were included in the survey. The sociodemographic characteristics of the research sample were studied, as well as those related to the current sexual relationship; knowledge, attitudes and practices on HIV/AIDS transmission and prevention.

The data was collected through a self-applied questionnaire, presented in physical and electronic formats. The first step in the data collection was to find the initial participants, who indicated other subjects for participation in the study. The former were considered as zero wave, and each was asked to indicate the contact of up to ten women who had sex with women. Wave one was formed by zero wave women who were part of the target population, but were not part of the zero wave. The same happened to those of wave two. The process followed until it arrived at sixty-eight women (68), but ten (10) did not agree to participate in the study and did not justify the reason, fifty-eight (n = 58) remained.

Due to the difficulty in accessing other participants, mainly because they did not want to expose their sexual behavior, and to complement the sample, they hosted the questionnaire in Google Docs. A search was made in social networks that grouped women who identified themselves as "lesbians". An invitation to participate in the research was sent to these networks, explaining the objectives of the research and requesting some form of contact. Many women were interested in attending and sent their e-mail addresses, and the e-mail access link was sent to them with guidelines on the research objectives.

Access to the questionnaire required a login using Google's email in order to guarantee the reliability of the accesses, because in this way each participant could only access the search once. The electronic questionnaire was closed when thirty-three (n = 33) questionnaires were answered in their entirety, since fifty-eight (n = 58) forms had already been completed by physical questionnaires, totaling ninety-one (n = 91) participants, previously calculated sample.

Data was collected by the researcher from the study, from July to October 2015, physical questionnaire; and from November to December 2015, by electronic questionnaire.

Initially a revision, codification of the variables and manual elaboration of the questionnaires was done. The answers to the questions were typed in Microsoft Excel and exported to SPSS for windows (*Statistical Package for the Social Sciences*), version 20.0, used for statistical analysis. The associations were tested by *chi-square*. The significance level of the test was 5% ($p < 0.05$).

All ethical precepts have been respected. The development of the study met national

and international standards of research ethics involving human subjects.

RESULTS

In this study, there was a predominance of the age group from 26-33 year olds (26/28.6%), women with complete high school (42/46,1%), monthly income of 1-4 minimum salaries (48/52,7%), Catholic (58/63.7%) and in a monogamous relationship with another woman (74/81.3%). The mean age was 29.5 years, representing a sample characterized by young adult women.

Data on the knowledge, attitudes and practices of the sample studied, with respect to HIV/AIDS prevention and transmission, are presented in Tables 1, 2 and 3.

Table 1. Knowledge of women who have sex with women about HIV / AIDS prevention and transmission. Teresina (PI), Brazil, 2015. (n = 91)

Affirmation	Opinion	n	%
Does the HIV virus cause AIDS?	Agree	91	100.00
	Disagree	-	-
	Do not know/Did not answer	-	-
The HIV virus is identified by laboratory tests.	Agree	83	91.20
	Disagree	4	4.40
	Do not know/Did not answer	4	4.40
HIV can be transmitted between two women.	Agree	57	62.64
	Disagree	18	19.78
	Do not know/Did not answer	16	17.58
There is a possibility of transmission through the sharing of cutlery, glasses or meals	Agree	2	2.21
	Disagree	88	96.69
	Do not know/Did not answer	1	1.10
People who look healthy can be carriers of HIV / AIDS.	Agree	89	97.79
	Disagree	2	2.21
	Do not know/Did not answer	-	-
Condom use prevents HIV transmission	Agree	88	96.70
	Disagree	3	3.30
	Do not know/Did not answer	-	-
Reduced risk if you have a faithful and uninfected partner	Agree	50	54.93
	Disagree	40	43.96
	Do not know/Did not answer	1	1.10
There is no cure for AIDS	Agree	64	70.33
	Disagree	-	-
	Do not know/Did not answer	27	29.67
Use of AIDS medication reduces HIV transmission	Agree	26	28.57
	Disagree	54	59.34
	Do not know/Did not answer	11	12.09
AIDS is chronic and controlled	Agree	70	76.92
	Disagree	10	10.99
	Do not know/Did not answer	11	12.09

With regard to the distribution of women who have sex with women according to the classification of knowledge related to HIV/AIDS prevention and transmission, 68% had knowledge classified as regular and 32% classified as poor.

Table 2.- Attitudes of women who have sex with women on the prevention and transmission of HIV / AIDS. Teresina (PI), Brazil, 2015. (n = 91)

Question	Answer	N	%
Is your knowledge about HIV enough to prevent it?	Yes	41	45.06
	No	45	49.45
	Do not know/Did not answer	5	5.49
Do you adopt prevention methods?	Yes	58	63.75
	No	32	35.16
	Do not know/Did not answer	1	1.09
Two infected people may not use condoms	Yes	12	13.19
	No	65	71.43
	Do not know/Did not answer	14	15.38
Non-penetration ratio reduces risk of transmission	Yes	33	36.26
	No	47	51.65
	Do not know/Did not answer	11	12.09
HIV occurs only in male homosexuals, prostitutes and drug users	Yes	2	2.21
	No	88	96.70
	Do not know/Did not answer	1	1.09

According to the classification of attitudes related to the prevention and transmission of HIV / AIDS, 63% of women who have sex with women had their attitudes classified as positive.

Table 3. Practices referred by women who have sex with women about HIV / AIDS prevention. Teresina (PI), Brazil, 2015. (n = 91)

Question	Answer	n	%
Have you ever used a female condom?	Yes	51	56.04
	No	40	43.96
Have you had casual relationships with women in the past month?	Yes	32	35.17
	No	59	64.83
Did you have unprotected intercourse during menstruation?	Yes	55	60.44
	No	36	39.56
Do you share accessories during the relationship?	Yes	50	54.94
	No	41	45.06
Did you ever test for AIDS?	Yes	53	58.24
	No	38	41.76

According to the classification of practices related to the prevention and transmission of HIV/AIDS, 53% of participants had their practices classified as adequate, while 47% were classified as inadequate.

DISCUSSION

Although there is no systematic data to prove that lesbian women can be infected with HIV in sexual relations with other women, many HIV-positive women report having sex exclusively with their partners. However, women, irrespective of their sexual orientation, are at risk for HIV, since their risk behavior already makes them vulnerable and not only their sexual identity, which justifies the need to insert them as an object of research when it comes to HIV transmission.[2-3]

The majority of the sample surveyed, finished high school and there was no participant without schooling, had a monthly income between one (1) and four (4) minimum salaries and the predominance of women who used to live with a partner and did not live with them anymore. Despite the growing current representativeness in society, there is no variety of studies addressing the conjugality of women who have sex with women.[12] Studies focused on conjugality between MSM could help in understanding vulnerability behaviors.

Also regarding the sexual health of MSM, the risk of dissolution in marriage is reported as being up to five times higher for lesbian couples when compared to gays or heterosexuals. Research has shown a significant difference between heterosexual marriages in relation to gay and lesbian marriages, in relation to the duration of marriage, which is again higher in lesbians compared to gay men. However, it is important to emphasize that the duration of a relationship is not always expressed in equal measure to its quality, whether in the heterosexual or homosexual population.[13] In homosexuality, affectivity can act as a more decisive factor than for heterosexuals, for which these social ties can contribute to the maintenance of the relationship, even if this factor does not guarantee the level of marital quality.

A predominance of women with non-heterosexual preferences was observed. Understanding the dynamics of women moving through different experiences is crucial in studies of homosexuality, making it clear that the category "exclusively homosexual women" hardly exists. A woman may have relationships with other women eventually or regularly, alternating this pattern over time. They may also have sex with partners with exclusively homosexual behavior or partners who have sex with men on a sporadic or regular basis.[14-5]

With regard to knowledge about the forms of transmission of HIV/AIDS, the high level of knowledge of the participants can be attributed to the training and qualification of the sample studied and to the wide dissemination of HIV/AIDS prevention programs at the national and regional levels.

The recognition that it is possible to transmit during sexual intercourse among women is important and corroborated by the literature, however there is a lack of systematic data on the subject in Brazil. The probable risk of HIV/AIDS transmission was estimated to range from 0.8% to 3.2% in receptive anal sex and 0.05% to 0.15% in unprotected heterosexual vaginal sex4. In 2014, the US Centers for Disease Control and Prevention (CDC) confirmed, in laboratory, the first case of HIV transmission during a lesbian relationship. The agency reported that the case is rare, but there is a possibility of HIV transmission among women when one of the partners is infected.[16]

Recognition of condoms as a form of prevention is of paramount importance. Some sexual practices are considered to be of lower or higher risk because they allow a greater or lesser chance of infection, and sex with condoms appears as a lower risk practice for HIV/AIDS prevention, losing only to sex without penetration and sexual abstinence. However, the fact that more than half of the sample surveyed believe in reducing the risk of HIV transmission if a person has sex with only the faithful and uninfected partner is a concern and plays an important role in the epidemiology of new cases.[17] Any relationship without the use of condoms exposes the individual to risk, making him vulnerable to the acquisition not only of HIV, but of other STDs.

Most of the women investigated demonstrated knowledge about the prevention and transmission of HIV/AIDS. However, this knowledge did not guarantee the use of preventive measures at the necessary occasions.

Health services should be structured to go beyond the guarantee of condom distribution, including aspects of sexual life, as well as assistance with preventive aspects, since the fact that the condom is distributed free of charge does not eliminate cultural barriers, social and emotional that implied in unprotected sexual practices.[1-3]

New prevention strategies appear as complementary tools in coping with the HIV epidemic, expanding the options individuals will have to prevent the virus and offering more alternatives such as Post-exposure Prophylaxis (PEP) and Pre-exposure Prophylaxis (PrEP).

Women have demonstrated that they do not perceive undetectable viral load as a biomedical preventive measure, although early use of antiretroviral therapy (ART) has been shown to be an important tool in reducing HIV transmission.[18]

Most women, 49.45%, said their knowledge about HIV/AIDS prevention and transmission is not enough to prevent, which reinforces the need for frequent educational campaigns. Some behaviors may jeopardize HIV/AIDS infection in women who have sex with women, such as sharing sex toys or razors, having intercourse during the menstrual period, brushing or flossing immediately before oral sex, remove cuticles from the nails before penetrative sexual intercourse with the fingers or sexual behaviors that result in rupture of the skin and/or mucous membranes.[8-9]

It is observed that 51 (56.04%) of the interviewed women have already used a female condom. This is considered appropriate because it demonstrates the interest of these women in the search for the adoption of healthy practices. It is recommended, for safe sex among women, the use of latex gloves for digital penetration and also barrier of latex, made from condoms, for the practice of oral sex, since the evidence shows that there is transmission of STD among women, such as trichomoniasis, human papillomavirus, herpes simplex and hepatitis B.[19]

Most women surveyed (60.44%) have had unprotected intercourse during menstruation, a practice considered inadequate, since it is known that HIV is present in body fluids such as sperm, vaginal and anal secretions, and blood. Although most women demonstrated knowledge about HIV/AIDS prevention and transmission, this knowledge did not translate into practice, as 54.9% of the respondents reported that they shared accessories with the partner during intercourse.

For those who use accessories such as vibrators, rubber penis and sex toys, condom use is crucial, especially if objects are shared. Women justify having unprotected sex because they are not aware of the risk, trust their partners, and are unaware of methods of preventing female oral sex. In this case, conventional condoms - vertically cut - can be used, a latex protection sold in houses of dental material or a tongue protector.[8-9]

Within the lesbian community, as in many heterosexual contexts, STDs and HIV/AIDS can be seen as symbols of infidelity, disloyalty and promiscuity, and may stigmatize lesbians as a result of supposed sexual identity immunity; then if someone in the group reveals their positive HIV status they may be testing their bisexuality. Stigma and prejudice always contribute to poor coping, which can result in risky practices and attitudes, and increase vulnerability to sexually transmitted infections, especially HIV / AIDS.

CONCLUSION

Although most of the women surveyed present regular knowledge and attitudes classified as positive in relation to HIV/AIDS transmission and prevention, the results, from a self-protection point of view, indicate the presence of inappropriate practices. Thus, although frequent knowledge has not provoked a significant change of practice, demonstrating cognitive incoherence.

REFERENCES

1. Carvalho PMG, Nóbrega BSM, Rodrigues JL, Almeida RO, Abdalla FTM, Nichiata LYI. Prevention of sexually transmitted diseases by homosexual and bisexual women: a descriptive study. Online Braz J Nurs [Internet]. 2013 [cited 2016 July 10];12(4):931-41. Available from: http://www.objnursing.uff.br/index.php/nursing/article/view/4177/html_36

2. Pinto VM, Tancredi MV, Tancredi Neto A, Buchalla CM. Sexually transmitted disease/HIV risk behavior among women who have sex with women. AIDS. 2005 Oct;19(Suppl 4):S64-9. Available from: PMID: 16249657

3. Marrazzo JM, Gorgos LM. Emerging sexual health issues among women who have sex with women. Curr Infect Dis Rep. 2012 Feb;14(2):204-11. Doi: 10.1007/s11908-012-0244-x

4. Sandfort TGM, Baumann LRM, Matebeni Z, Reddy V, Southey-Swartz I. Forced sexual experiences as risk factor for self-reported HIV infection among southern African lesbian and bisexual women. PLoS One [Internet]. 2013 [cited 2016 July 10];8(1):e53552. Available from: http://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0053552&type=printable

5. Logie CH, Navia D, Rwigema MJ, Tharao W, Este D, Loutfy MR. A group-based HIV and sexually transmitted infections prevention intervention for lesbian, bisexual, queer and other women who have sex with women in Calgary and Toronto, Canada: study protocol for a non-randomised cohort pilot study. BMJ Open [Internet]. 2014 Apr [cited 2016 July 10];4(4):e005190. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4010811/pdf/bmjopen-2014-005190.pdf

6. Logie CH, Lacombe-Duncan A, Weaver J, Navia D, Este D. A Pilot Study of a Group-based HIV and STI Prevention Intervention for Lesbian, Bisexual, Queer, and Other Women Who Have Sex with Women. AIDS Patient Care STDS. 2015 June;29(6):321-8. Doi:10.1089/apc.2014.0355

7. Gorgos LM, Marrazzo JM. Sexually Transmitted Infections Among Women Who Have Sex With Women. Clin Infect Dis [Internet]. 2011 Dec [cited 2016 July 10];53(Suppl 3):S84-91. Available from: http://cid.oxfordjournals.org/content/53/suppl_3/S84.short

8. Logie CH, Gibson MF. A mark that is no mark? Queer women and violence in HIV discourse. Cult Health Sex. 2013;15(1):29-43. Doi: 10.1080/13691058.2012.738430

9. Jenny I, Kate D, Nadine E, Lisa M. HIV and Hepatitis C Virus Infection and Risk Behaviors Among Heterosexual, Bisexual, and Lesbian Women Who Inject Drugs in Australia. LGBT Health. 2015 June;2(2):127-34. Doi: 10.1089/lgbt.2014.0116

10. Lewis JR. Sample Size Estimation and Use of Substitute Audiences. Speech Product Design and Usability [Internet]. 2001 Jan [cited 2016 July 10];1-49. Available from: https://www.researchgate.net/publication/228579923_Sample_size_estimation_and_use_of_substitute_audiences

11. Singh P, Pandey A, Aggarwal A. House-to-house survey vs. snowball technique for capturing maternal deaths in India: A search for a cost-effective method. Ind J Med Res [Internet]. 2007 Apr [cited 2016 July 10];125(4):550-6. Available from: http://search.proquest.com/openview/59d2f15ed9a7ef4eaaf8d590aa3d82ba/1?pq-origsite=gscholar

12. Costa AB, Peroni RO, Bandeira DR, Nardi HC. Homophobia or sexism? A systematic review of prejudice against nonheterosexual orientation in Brazil. Int J Psychol [Internet].

2012 Oct [cited 2016 July 10];48(5):900-9. Doi: 10.1080/00207594.2012.729839

13. Strohm CQ. A Longitudinal Analysis of Same-Sex and Other-Sex Unions Throughout Young Adulthood. In: 103rd Annual Meeting of the American Sociological Association: Proceedings of the 103rd Annual Meeting of the American Sociological Association; 2008 July 31; Sheraton Boston and the Boston Marriott Copley Place. Boston: ASA; 2008. [cited 2016 July 10]. Available from: http://citation.allacademic.com/meta/p_mla_apa_research_citation/2/4/2/5/6/p242562_index.html

14. Von Muhlen BK, Saldanha M, Strey MN. Women and HIV/AIDS: Intersections Between Gender, Feminism, Psychology and Public Health. Rev colomb psicol [Internet]. 2014 July/Dec [cited 2016 July 10];23(2):285-96. Available from: http://www.scielo.org.co/pdf/rcps/v23n2/v23n2a04.pdf

15. Montes GG, Aguirre SG. Sexual initiation in women with homoerotic practices in the Colombian coffee triangle. Sex Salud Soc [Internet]. 2016 Jan/Apr [cited 2016 July 10];(22):56-72. Available from: http://www.scielo.br/pdf/sess/n22/1984-6487-sess-22-00056.pdf

16. Chan SK, Thornton LR, Chronister KJ, Meyer J, Wolverton M, Johnson CK, et al. Likely Female-to-Female Sexual Transmission of HIV. MMWR [Internet]. 2014 Mar [cited 2016 July 10];63(10):209-25. Available from: http://www.cdc.gov/mmWr/pdf/wk/mm6310.pdf

17. Maia C, Guilhem D, Freitas D. Vulnerability to HIV/AIDS in married heterosexual people or people in a common-law marriage. Rev Saúde Pública [Internet]. 2008 Apr [cited 2016 July 10];42(2):242-8. Available from: http://www.scielosp.org/pdf/rsp/v42n2/6357.pdf

18. Auerbach JD, Kinsky S, Brown G, Vignetta C. Knowledge, attitudes, and likelihood of pre-exposure prophylaxis (PrEP) use among US women at risk of acquiring HIV. AIDS Patient Care STDS [Internet]. 2015 [cited 2016 July 10];29(2):102-10. Available from: http://online.liebertpub.com/doi/pdf/10.1089/apc.2014.0142

19. Nicolau AIO, Ribeiro SG, Lessa PRA, Monte AS, Bernardo EBR, Pinheiro AKB. Knowledge, attitude and practices regarding condom use among women prisoners: the prevention of STD/HIV in the prison setting. Rev Esc Enferm USP [Internet]. 2012 June [cited 2016 July 10];46(3):711-9. Available from: http://www.scielo.br/pdf/reeusp/v46n3/25.pdf

Submission: 2016/07/13
Accepted: 2017/06/16
Publishing: 2017/07/01

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