

PROMOTION OF SEXUAL RIGHTS AND HEALTH EDUCATION: KNOWLEDGE OF SEXUALLY TRANSMITTED INFECTIONS

PROMOÇÃO DE DIREITOS SEXUAIS E EDUCAÇÃO EM SAÚDE: CONHECIMENTO SOBRE INFECÇÕES SEXUALMENTE TRANSMISSÍVEIS

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ABSTRACT

Introduction: The Sexually Transmitted Diseases (STD) are recognized throughout the world as an important public health problem due to their impact on people's life quality. **Objective:** To survey the population knowledge of transmission ways, treatment and possible cure of some STDs and AIDS, and compare them with each other as well as with the knowledge of other diseases. **Methods:** An exploratory and descriptive study by the use of a questionnaire in a convenience sample composed of 403 men and women of different age groups, 252 (62.5%) women and 151 (37.5%) men. The results were compiled and analyzed by the IBM SPSS Statistics 22 software. **Results:** A different knowledge degree regarding the ways of transmission and prevention of STD/AIDS was observed. Questions about AIDS had the highest right answers' rates, above 80%. As for the transmission of certain diseases, the ones published by the media, as Aids and dengue fever, are better known and also shown high levels, above 90%. However, there was a high degree of unfamiliarity of the participants regarding those diseases not so well divulged by the health actions and government campaigns, despite their high prevalence, such as gonorrhea and syphilis. **Conclusion:** Information on STD and other widely disseminated diseases by the media and public health campaigns were incorporated by the participants of this research, showing the power and significance of health education campaigns.

Keywords: sexual rights; STD; health education.

RESUMO

Introdução: As Doenças Sexualmente Transmissíveis (DST) são mundialmente reconhecidas como um importante problema de saúde pública devido ao seu impacto na qualidade de vida das pessoas. **Objetivo:** Analisar o conhecimento da população sobre métodos de transmissão, tratamentos e possível cura de algumas DST e da AIDS, e compará-las entre si assim como quanto ao seu conhecimento sobre outras doenças. **Métodos:** Estudo exploratório e descritivo através do uso de um questionário em amostra de conveniência composta por 403 homens e mulheres de diferentes faixas etárias, 252 (62,5%) mulheres e 151 (37,5%) homens. Os resultados foram compilados e analisados pelo *software* IBM SPSS Statistics 22. **Resultados:** Foi observado um diferente nível de conhecimento sobre formas de transmissão e prevenção de DST/AIDS. Perguntas sobre AIDS tiveram o maior número de respostas corretas, acima de 80%. Quanto à transmissão de certas doenças, as publicadas pela mídia, como a AIDS e a dengue, são mais conhecidas e apresentam melhores níveis, acima de 90%. No entanto, houve alta falta de familiaridade dos participantes quanto às doenças pouco divulgadas por ações e campanhas governamentais de saúde, apesar de sua alta prevalência, como é o caso da gonorreia e da sífilis. **Conclusão:** Informação sobre DSTs e outras doenças altamente divulgadas pela mídia e por campanhas de saúde pública foram incorporadas pelos participantes dessa pesquisa, mostrando o poder e a importância de campanhas de educação da saúde.

Palavras-chave: direitos sexuais e reprodutivos; DST; educação em saúde.

INTRODUCTION

Sexually Transmitted Diseases (STD) represent significant public health problems throughout the world, comprising several infectious-contagious pathologies, mainly transmitted through sex, causing consequences such as infertility, miscarriage, and increased risk of infection by the Human Immunodeficiency Virus (HIV), responsible for the Acquired Immune Deficiency Syndrome (AIDS)⁽¹⁻⁵⁾. The World Health Organization (WHO, 2014) estimates that 500 million people acquire a curable STD (syphilis, gonorrhea, trichomoniasis and chlamydia) daily, 530 million people are infected with the genital herpes virus, and more than 290 million women are infected with the Human Papilloma Virus (HPV)⁽⁵⁾.

In Brazil, sexually transmitted infections in the sexually active population per year are estimated as: syphilis, 937,000 cases; gonorrhea, 1,541,800 cases; chlamydia, 1,967,200 cases; genital herpes,

640,900 cases; and HPV, 685,400 cases. However, such statistic numbers are lower than the real ones, given the underreporting of such harms⁽¹⁻⁴⁾.

The infection with HIV, on the other hand, is a great challenge in the fight against STDs, due to its chronic characteristic and the difficulty to control the epidemic. According to data from the United Nations Programme on HIV and AIDS (UNAIDS), there was a total of 36,700,000 people living with HIV/AIDS in the world in 2016, 18,200,000 of them under antiretroviral therapy. In 2016, there were 1.1 million deaths related to AIDS complications⁽⁵⁾.

HIV concentrates on key populations and presents a different epidemiology according to the studied region. In Africa, the virus is concentrated in areas of poverty in the Sub-Saharan region, with the highest incidence of cases in the heterosexual population, especially women. In 2015, UNAIDS data reported 25,500,000 cases in the African continent. In Europe, the USA and Latin America, new cases are particularly concentrated in populations of men who have sex with other men (MSM) and of poor black females in big cities, totalizing 4,400,000 cases⁽⁵⁾.

In Brazil, it is estimated that the incidence of the HIV virus in the MSM population is 10.5%, corresponding to 4.9% in sex workers,

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and 0.6% in general adult population⁽⁶⁾. However, there is an epidemic advance among the heterosexual population due to internalization, feminization and poverty⁽⁷⁾, and the heterogeneous scenario in which it is inserted is a challenge.

Several aspects related to the social relations of gender, including sexual violence, unequal gender relations; intercourse with older men and the unequal access to education and employment determine the low sexual bargaining power of women, increasing their chances of exposure to HIV^(5,7-9).

Moreover, people with STD face the fear of stigmas and discrimination. The prejudice about HIV, for example, leads to less diagnostic tests, secrecy supporting diagnosis — even concerning partners — and the poorly constant link with health units, resulting in greater chance of spreading the disease. Discrimination causes deep psychological damage, including guilt complex and shame, as well as the desire for self-destruction⁽¹⁰⁻¹³⁾.

In this context, it is important to note that HIV infection cases show the public policies' weakness in fighting the most frequent STDs. For example, the percentage of cases of syphilis (a curable bacterial STD) in Brazilian women is of 1.6%, which is four times the number of pregnant women with HIV⁽⁸⁾. The following new cases of STDs are registered every year in Brazil: syphilis, 937,000; gonorrhoea, 1,541,800; chlamydia, 1,967,200, genital herpes, 640,900; HPV, 685,400⁽⁹⁾.

It is worth emphasizing that the prevention policy of STDs in Brazil is anchored to the human rights reference. This is translated into defense of sexual rights dissemination, especially referring to the autonomy of each citizen to fully experience sexuality and access the necessary resources to practice safe sex⁽¹¹⁾. To achieve this goal, the provision and dissemination of correct information based on scientific research for the population have been described by the Ministry of Health (MH) as of fundamental importance for STD prevention policies. In this sense, health education strategies play a prominent role for the promotion of sexual rights, prevention of STDs and decreased vulnerability to these diseases. The MH emphasizes the importance of massive health education campaigns promoted by governmental agencies or educational actions promoted by the civil society for the dissemination of correct information for the population^(4,12,14). It is obvious, therefore, the relevance of studies and research that can help health education and public policies planning directed to STDs and HIV/AIDS prevention, considering the degree of knowledge of various population segments, main questions and misconceptions about this subject.

OBJECTIVE

To describe the degree of knowledge of transmission ways, treatment and existence of cure of some STDs/AIDS in a sample of men and women aged between 12 to 80 years old, comparing them to each other and to the knowledge of other diseases.

METHODS

An exploratory research was developed^(15,16) by researchers of a Federal educational institution in partnership with the Municipal Health Secretariat in a medium-sized municipality in the State of

Minas Gerais, with a population of 213,016 inhabitants⁽¹⁷⁾. The participants were men and women with ages ranging between 12 and 80 years. The research was developed from an extension project connected to the research entitled "Health education: sexuality and prevention of STD/AIDS", funded by PRO/PET SAÚDE and by the Research Foundation of Minas Gerais State: *Fundação de Amparo à Pesquisa do Estado de Minas Gerais* (FAPEMIG).

In 2014, a questionnaire was adapted from an instrument used in the Research into Knowledge, Attitudes and Practices (*Pesquisa de Conhecimentos, Atitudes e Práticas* – PCAP) related to STDs and AIDS of the Brazilian population with ages varying from 15 to 64 years — by the MH, held in 2011, with contributions from Marinho⁽¹⁸⁾ and Pascom⁽¹²⁾. The adapted questionnaire kept the same basic structure of the original questionnaire and addressed social and demographic data, such as age, sex and marital status, education, monthly income, ethnicity, religion and occupation. In addition, it evaluated and compared participants' knowledge about ways of transmission, treatment and cure of AIDS, syphilis, hepatitis, dengue fever, malaria, gonorrhoea and HPV. The adapted instrument consisted of 103 closed questions distributed into topic blocks, and the average application time was 40 minutes. The main change in the adapted instrument was the inclusion of an answer option for each question, so that the participant could express the unfamiliarity with the subject.

A total of 403 questionnaires were analyzed: 252 women and 151 men. A convenience sample⁽¹⁹⁾ was used and the target research regions were jointly defined with the Municipal Health Secretariat, indicating the geographical areas of STDs' highest incidence. These predetermined regions discussed three religious institutions, two public health services, five high schools and vocational education institutions, and one higher education institution. People aged 12 years or more, linked to the institutions covered by the research and who agreed to participate, were considered eligible. Any type of disability, such as self-governance constraint, critical and discriminative capacity, was considered an exclusion criterion. Participants were defined by the institution and there was no intention to submit separate analyses by institution, given the heterogeneity of participants and the impossibility of evaluating their attachment to each institution.

A Microsoft Excel spreadsheet was developed in order to store the database and the filled out questionnaires. The answers were numbered and the participants identified by codes. Data obtained were tabulated in the IBM SPSS Statistics 22 software, analyzed through descriptive statistics and presented in the frequency of the occurrence of each variable expressed in absolute figures and percentages. The questionnaires were applied by scholarship students and researchers involved in the project. The research was approved by the Research Ethics Committee under paragraph 131,321 of 11/07/2012.

RESULTS

Socio-demographic information

Total participants came to 403, as follows: 252 (62.5%) women, and 151 (37.5%) men. As for age, most of them (46.6%) were between 30 and 59 years old, 20.1% between 18 and 29, 18.6% under 18 years of age and 59 participants (14.6%) were elderly; 186 (46.2%) were

single, 135 (33.5%) married, 32 (7.9%) lived with a companion, 28 (6.9%) separated or divorced, 18 (4.5%) widowers and 4 (1.0%) participants answered “other”.

Concerning education (**Table 1**), 43.4% of the interviewees had elementary school at the most, and only 12.2% completed higher education. Upon observation of the participants' monthly household income (**Table 1**), not considering the ones who did not inform or did not want to answer, 50.1% declared that their monthly family income exceeded 3 minimum wages. At the time of the application of the questionnaires, the minimum wage was R\$ 723.99.

As to ethnicity, 156 interviewees (38.7%) considered themselves white, 43 (10.7%) black, 14 (3.5%) yellow, 177 (43.93%) browns, dark or mulattoes, 2 (0.5%) natives, 1 (0.2%) answered “other” and 10 (2.5%) did not answer. About religion, 292 (72.5%) reported being Catholic, 64 (15.9%) Evangelical, 19 (4.7%), Spiritualists, and 9 (2.2%) declared other religions. There were no responses to “umbanda/candomblé” and 19 (4.7%) answered “not applied”.

Considering their occupation, 73 (18.1%) consisted of civil servants, 92 (22.8%) formal employees, 18 (4.5%) informal employees, 29 (7.2%) freelancers, 8 (2.0%) employers, 97 (24.1%) students, 37 (9.2%) homemakers, 33 (8.2%) informed no occupation, and 16 (4%) “other occupation”.

Knowledge and information about ways of transmission of some diseases and Sexually Transmitted Diseases

The questionnaire presented questions concerning ways of transmission, treatment and cure of Aids, syphilis, hepatitis, dengue fever, malaria, gonorrhoea and HPV. **Table 2** only shows data related to right answer/wrong answer/unfamiliarity about STDs, and is divided into male and female participants. **Table 3**, on the other hand, presents the distribution of right answers by age group. The results concerning malaria and dengue fever will be presented later in the present study.

In relation to AIDS, 361 participants declared that it could not be transmitted by the sting of an insect, 28 said it could, and 14 could not opine, resulting in 89.58% of right answers and 6.95% of wrong ones. 304 interviewees considered that AIDS cannot be

transmitted through the use of a toilet in a public restroom (77.43% of right answers), 78 considered it could (19.35%), and 5.21% did not know the answer. Most of them, 395 (98.01%), answered correctly when asked whether or not AIDS can be transmitted by sharing syringes or needles, but 7 participants still believed that the disease cannot be transmitted this way. Almost everyone agreed that AIDS can be caught if a person has sexual intercourse without a condom, which means 99.75% of correct knowledge; 43 participants (10.67%) still believe that AIDS has no treatment, but 354 (87.84%) were aware that the treatment exists, and 6 (1.49%) did not know the answer. When asked whether a cure exists, 349 (86.60%) participants answered correctly, *i.e.*, “No”; 44 (10.92%) answered “Yes”, and 10 (0.25%) answered “I don't know”.

As for knowledge of syphilis, the smallest percentages of correct answers were related to its transmission in public restrooms and sharing needles/syringes; 172 participants (42.68%) knew the disease cannot be contracted through toilet use, and 115 (28.54%) wrote that this way of transmission is possible. However, 116 (28.78%) answered “I don't know” to this question. The information that syphilis can be transmitted through sharing of syringes/needles was shown to having been little divulged, since only 165 participants (40.94%) agreed with this way of transmission, and 107 (26.55%) did not know the answer. In addition, 264 (65.51%) knew that syphilis can be cured, and a high number, 87 (21.59%), did not know whether or not this disease can be cured. More participants, 295 (73.20%), answered correctly when asked if syphilis may or may not be transmitted by the sting of an insect. However, 21 (5.21%) declared that this way of contagion is possible; 321 participants stated that this pathology can be caught by a person who has sex without a condom, corresponding to 79.65% of correctness. On this topic, 30 (7.44%) participants answered incorrectly, and 52 (12.90%) had no opinion. In relation to treatment, 64 (15.88%) did not know the answer, 331 (82.13%) wrote that it exists, and 8 (1.98%), that it does not.

In relation to the eight questions concerning hepatitis, only three of them obtained a correct percentage higher than 70%, which shows the unfamiliarity level about these pathologies. 73 participants (18.11%) had the misconception that hepatitis can be transmitted by the bite of an insect, 58 (14.39%) did not know the answer, and only 272 (67.49%) knew that this way of transmission is not possible. A high number of participants, 148 (36.72%), pointed out that hepatitis B and C can be caught when using public restrooms, and 71 (17.62%) did not opine; 324 (80.40%) knew the correct concept that these viruses can be transmitted through sharing needles/syringes, 35 (8.68%) informed otherwise, and 44 (10.92%) did not have any information about it. Only 237 (58.81%) declared that hepatitis B and C can be contracted by those who do not use a condom during intercourse, 114 (28.29%) responded that this is not a way of transmission, and 51 (12.65%) marked “I don't know”. Most agreed that both hepatitis B and C can be cured, showing 55.5 and 63.03% of correct answers, respectively.

The largest number of “I don't know” answers referred to the treatment of hepatitis C (11.91%, against 7.69% for hepatitis B). 254 participants (63.03%) answered correctly concerning the hepatitis B cure, 82 (20.35%) failed to answer, and 67 (12.62%) did not opine. It is known that the cure for hepatitis C is possible, and about this matter, there was 82.13% of correct answers, 26.30% of wrong ones, and 18.36% of “I don't know” answers.

Table 1 – Education and income of participants.

Education	n (%)
Illiterate	4 (1.0)
Literate, but not attended Elementary Education	12 (3.0)
Incomplete Elementary Education	125 (31.0)
Complete Elementary Education	34 (8.4)
Incomplete High School/Vocational education	93 (23.1)
Complete High School/Vocational education	59 (14.6)
Incomplete Higher Education	27 (6.7)
Complete Higher Education	25 (6.2)
Postgraduate	24 (6.0)
Income	n (%)
Less than 1 minimum wage	23 (5.7)
From 1 to 3 minimum wages	166 (41.2)
From 3 to 6 minimum wages	118 (29.3)
More than 6 minimum wages	70 (17.4)
Does not know/does not want to answer	26 (6.5)

Source: prepared by the authors.

Considering the degree of unfamiliarity about the STD expressed by the sum of wrong and “I don’t know” answers, it is possible to verify there are some differences between men and women.

When asked about the chances of transmission of the diseases by the sting of insects, the level of unfamiliarity of men was higher for hepatitis (37.0) and HPV (23.2) than women — (29.8) and (17.5), respectively. Regarding gonorrhea, however, the level of unfamiliarity was higher for women (23.1) than for men (18.5).

About the possibility of transmission by the use of public restrooms (toilet), the level of men’s unfamiliarity was higher concerning HPV (55.1) when compared to women’s (48.4). Women showed a higher level of unfamiliarity regarding the possibilities of transmission of gonorrhea by the use of public restrooms (73.0) when compared to men (67.5).

Regarding the knowledge of STDs’ transmission by syringe or needle sharing, a higher degree of unfamiliarity and errors was observed among women; with regard to syphilis, 55.0 for men and 61.6 for women; and gonorrhea, 37.7 for men and 45.5 for women.

Considering the degree of knowledge reported by men and women in relation to the transmission possibility of STDs through sexual intercourse without a condom, it is not possible to observe significant differences between genders concerning the recognition of condom as a protection factor against syphilis, gonorrhea, and HPV. However, the unfamiliarity to sexual transmission without condoms for hepatitis was higher among men (46.3) than among women (37.8).

On the existence of treatment, women have a higher level of unfamiliarity to this possibility for gonorrhea (18.7) when compared to

Table 2 – Knowledge and information about ways of transmission of some diseases and Sexually Transmitted Diseases.

	Right answer		Wrong answer		Did not inform	
	Men	Women	Men	Women	Men	Women
Transmission by insect sting						
Aids	133 (88.1)	228 (90.5)	15 (9.9)	13 (5.2)	3 (2.0)	11 (4.4)
Syphilis	107 (70.9)	188 (74.6)	13 (8.6)	8 (3.2)	31 (20.5)	56 (22.2)
Hepatitis	95 (62.9)	177 (70.2)	36 (23.8)	37 (14.7)	20 (13.2)	38 (15.1)
Gonorrhea	123 (81.5)	193 (76.6)	12 (7.9)	13 (5.2)	16 (10.6)	45 (17.9)
HPV	116 (76.8)	208 (82.5)	8 (5.3)	9 (3.6)	27 (17.9)	35 (13.9)
Transmission by the use of public restroom (toilet)						
Aids	115 (76.2)	189 (62.2)	26 (17.2)	52 (20.6)	10 (6.6)	11 (4.4)
Syphilis	63 (41.7)	109 (43.3)	42 (27.8)	73 (29.0)	46 (30.5)	70 (27.8)
Hepatitis	68 (45.0)	116 (46.0)	55 (36.4)	93 (36.9)	28 (18.5)	43 (17.1)
Gonorrhea	49 (32.5)	68 (27.0)	82 (54.3)	131 (52.0)	20 (13.2)	53 (21.0)
HPV	76 (50.3)	130 (51.6)	40 (26.5)	72 (28.6)	35 (23.2)	50 (19.8)
Transmission by syringe or needle sharing						
Aids	146 (96.7)	249 (98.8)	5 (3.3)	2 (0.8)	0 (0.0)	1 (0.2)
Syphilis	68 (45.0)	97 (38.5)	54 (35.8)	77 (30.6)	29 (19.2)	78 (31.0)
Hepatitis	114 (75.5)	210 (83.3)	15 (9.9)	20 (7.9)	22 (14.6)	22 (8.7)
Gonorrhea	94 (62.3)	138 (54.8)	37 (24.5)	53 (21.0)	20 (13.2)	61 (24.2)
HPV	74 (49.0)	133 (52.8)	44 (29.1)	69 (27.4)	33 (21.9)	50 (19.8)
Transmission by intercourse without a condom						
Aids	150 (99.3)	252 (100.0)	1 (0.7)	0 (0.0)	0 (0.0)	0 (0.0)
Syphilis	118 (78.1)	203 (80.6)	17 (11.3)	13 (5.2)	16 (10.6)	36 (14.3)
Hepatitis	81 (53.6)	156 (62.2)	55 (36.4)	59 (23.5)	15 (9.9)	36 (14.3)
Gonorrhea	119 (78.8)	194 (77.0)	26 (17.2)	30 (11.9)	6 (4.0)	28 (11.1)
HPV	100 (66.2)	193 (76.6)	25 (16.6)	31 (12.3)	26 (6.5)	28 (6.9)
Treatment existence						
Aids	131 (86.8)	223 (88.5)	16 (10.6)	27 (10.7)	4 (2.6)	2 (0.8)
Syphilis	125 (82.8)	206 (81.7)	5 (3.3)	3 (1.2)	21 (13.9)	43 (17.1)
Hepatitis B	130 (86.1)	228 (90.5)	6 (4.0)	8 (3.2)	15 (9.9)	16 (6.3)
Hepatitis C	126 (83.4)	205 (81.3)	6 (4.0)	18 (7.1)	19 (12.6)	29 (11.5)
Gonorrhea	130 (86.1)	205 (81.3)	4 (2.6)	7 (2.8)	17 (11.3)	40 (15.9)
HPV	122 (80.8)	203 (80.6)	7 (4.6)	16 (6.3)	22 (14.6)	33 (13.1)
Cure existence						
Aids	129 (37.0)	220 (87.3)	18 (11.9)	26 (10.3)	4 (2.6)	6 (2.4)
Syphilis	105 (69.5)	159 (63.1)	19 (12.6)	33 (13.1)	27 (17.9)	60 (23.8)
Hepatitis B	102 (67.5)	152 (60.3)	23 (28.0)	59 (23.4)	26 (17.2)	41 (16.3)
Hepatitis C	95 (62.9)	128 (50.8)	29 (19.2)	77 (30.6)	27 (17.9)	47 (18.7)
Gonorrhea	123 (81.5)	188 (74.6)	9 (6.0)	17 (6.7)	19 (12.6)	47 (18.7)
HPV	104 (68.9)	172 (68.3)	19 (12.6)	34 (13.5)	28 (18.5)	46 (18.3)

*The values listed in parentheses correspond to the percentages in relation to the total of men or total of women.

men (13.9), as well as for syphilis — (18.3) compared to men (17.2). On the cure existence, it is worth noting the higher level of unfamiliarity of women concerning syphilis (36.9), hepatitis C (49.3) and gonorrhea (25.4), when compared to men — whose results were 30.5, 37.1, and 18.6, respectively

The results on the information about dengue fever show more knowledge about the disease in relation to the previously submitted information. A percentage above 90% is reported on the ways of transmission, treatment and cure. With regard to malaria, between 80 and 70% correct answers were observed in most questions involving ways of transmission, treatment and cure. However, the percentage of 81.64% of participants who were not able to answer if this disease might or not be contracted by the use of the toilet in a public restroom stands out.

Regarding gonorrhea, a high rate of unfamiliarity was observed, since an average of 22.28% of “I don’t know” answers was obtained, 15.38% about the transmission by insect sting, 18.11% on the infection through the use of toilet in public restrooms, 20.10% of contamination through sharing of needles/syringes, 8.44% about the transmission by sexual intercourse, 14.14% about the existence of treatment and 16.38% of cure. 316 participants (78.41%) answered correctly that gonorrhea cannot be transmitted by the sting of an insect and 25 (6.20%) failed. A high number of participants, 213 (52.85%), declared that gonorrhea can be caught through the use of public toilets, and 117 (29.03%) answered correctly, that this is not possible.

As for the possibility of infection through needles/syringes sharing, 232 marked it was not possible and 90 declared otherwise, corresponding to 57.57% of correct answers and 22.33% of wrong

Table 3 – Knowledge about ways of transmission, prevention, treatment and cure of Sexually Transmitted Diseases – correct answers distribution by age groups.

	Under 18 years	18 to 29 years	30 to 59 years	More than 59 years
Transmission by insect sting				
Aids	66 (88.0)	73 (90.1)	175 (93.1)	53 (89.8)
Syphilis	43 (57.3)	54 (66.7)	159 (84.6)	39 (66.1)
Hepatitis	42 (56.0)	46 (56.8)	147 (78.2)	37 (62.7)
Gonorrhea	45 (60.0)	62 (76.5)	166 (88.3)	43 (72.9)
HPV	56 (74.7)	60 (74.1)	169 (89.9)	39 (66.1)
Transmission by the use of public restrooms (toilet)				
Aids	51 (68.0)	53 (65.4)	162 (86.2)	38 (64.4)
Syphilis	20 (26.7)	35 (43.2)	95 (50.5)	22 (37.3)
Hepatitis	34 (45.3)	39 (48.1)	93 (49.5)	18 (30.5)
Gonorrhea	18 (24.0)	24 (29.6)	66 (35.1)	9 (15.3)
HPV	32 (42.7)	37 (45.7)	117 (62.2)	20 (33.9)
Transmission by syringe and needles sharing				
Aids	74 (98.7)	78 (96.3)	187 (99.5)	56 (94.9)
Syphilis	22 (29.3)	29 (35.8)	77 (41.0)	37 (62.7)
Hepatitis	59 (78.7)	63 (77.8)	156 (83.0)	46 (78.0)
Gonorrhea	26 (34.7)	44 (54.3)	138 (73.4)	24 (40.7)
HPV	23 (30.7)	35 (43.2)	117 (62.2)	32 (54.2)
Transmission by intercourse without a condom				
Aids	75 (100.0)	81 (100.0)	187 (99.5)	59 (100.0)
Syphilis	48 (64.0)	63 (77.8)	160 (85.1)	50 (84.7)
Hepatitis	31 (41.3)	41 (51.2)	125 (66.5)	40 (67.8)
Gonorrhea	40 (53.3)	60 (74.1)	161 (85.6)	52 (88.1)
HPV	46 (61.3)	53 (65.4)	151 (80.3)	43 (72.9)
Treatment existence				
Aids	60 (80.0)	68 (84.0)	177 (94.1)	49 (83.1)
Syphilis	44 (58.7)	57 (70.4)	176 (93.6)	54 (91.5)
Hepatitis B	59 (78.7)	74 (91.4)	172 (91.5)	53 (89.8)
Hepatitis C	52 (69.3)	65 (80.2)	166 (88.3)	48 (81.4)
Gonorrhea	39 (52.0)	64 (79.0)	181 (96.3)	51 (86.4)
HPV	50 (66.7)	60 (74.1)	167 (88.8)	48 (81.4)
Cure existence				
Aids	68 (90.7)	70 (86.4)	166 (88.3)	45 (76.3)
Syphilis	34 (45.3)	50 (61.7)	135 (71.8)	45 (76.3)
Hepatitis B	39 (52.0)	51 (63.0)	128 (68.1)	36 (61.0)
Hepatitis C	36 (48.0)	46 (56.8)	108 (57.4)	33 (55.9)
Gonorrhea	36 (48.0)	53 (65.4)	170 (90.4)	52 (88.1)
HPV	38 (50.7)	49 (60.5)	146 (77.7)	43 (72.9)

*The values listed in parentheses correspond to the percentages in relation to the total by age group.

ones. 313 (77.67%) said correctly that gonorrhea can be transmitted through intercourse without a condom, against 56 (13.89%) who have said that this is not a way of transmission. There were 335 right answers (83.12%) and 11 (2.73%) wrong ones regarding the existence of treatment, and 311 right answers (77.17%) and 26 (6.45%) wrong ones on the occurrence of cure.

The knowledge about the infection by HPV was also scarce. Relating to the transmission by the sting of an insect, 324 participants (80.40%) answered correctly by saying that it is not possible, 17 (4.22%) failed and 62 (15.38%) did not answer. 206 participants (51.12%) recognized that HPV cannot be contracted using public restrooms, but a high number of participants, 112 (27.79%), believed in the possibility of this way of transmission, and 85 (21.09%) answered "I don't know". Only 207 (51.36%) knew that a person cannot be infected by this virus by sharing needles/syringes, 113 (28.04%) did not know, and 83 (20.60%) did not opine.

The main transmission of HPV is sexually, and 293 (72.70%) participants agreed that a person can contract the virus during sex, 56 (13.89%) disagreed and 54 (13.40%) did not know an answer. 325 affirmed there is treatment and 23 said it does not exist, indicating 80.64% of correct answers and 5.71% of wrong ones. 55 (13.65%) didn't know. Considering that HPV cure is possible, there were 68.49% of correct answers and 13.15% of errors. 74 participants (18.36%) did not know the answer.

In this research, it is important to note that the percentage of right answers regarding the ways of transmission, existence of treatment and cure of STDs were lower, generally, among age extremes (under 18 and over 60 years of age).

DISCUSSION

Regarding the transmission of certain diseases, the research data show there is a greater knowledge of those most published by the media and Government health campaigns, as AIDS and dengue fever. Of the 6 questions on AIDS, only 1 of them obtained a percentage of less than 80.0% of correct answer. The findings of this research about the ways of transmission and prevention of HIV infection demonstrate a high level of knowledge on the subject, following the platform aimed at national surveys since 2004 and with rates higher than several developing countries. According to the trend pointed out by national studies⁽¹⁴⁾, the use of a condom is recognized by almost all participants of this research (99.7%) as a protective factor.

The answers on dengue fever also showed relatively high level of knowledge, since most questions showed a correct answers' rate higher than 90.0%. For these two diseases, there were a few "I don't know" answers, and most of them associated with the possibility of transmission of AIDS through the use of the toilet.

It was observed, however, a high degree of unfamiliarity concerning the other diseases, which are not so divulged by health actions and Government campaigns, despite their high prevalence. Knowledge of gonorrhea, for example, was insufficient, although it is an easily treated disease with a higher prevalence than that of HIV infection. The dissemination of information on STDs is essential for the population to know about the prevention ways, but also to recognize signs and symptoms that lead individuals to look for care and have

access to early diagnosis and immediate treatment, avoiding aggravations and vulnerability regarding HIV⁽¹⁴⁾.

The research data show unfamiliarity about syphilis information observed not only by the high number of incorrect answers, but also by the high percentage of "I don't know" responses.

Generally speaking, the lack of knowledge causes an impact on the promotion of sexual and reproductive rights, be it the fact that it involves individuals in misconceptions regarding the adoption of prevention measures and search for health care, be it the lack of access to correct and scientifically based information that lead to changes in behavior and break the chain of transmission of STDs. In this sense, considering the degree of unawareness expressed by men and women in relation to the STDs, some aspects deserve emphasis.

Considering the different answers by gender, it is possible to ponder the challenges involving the overcoming of the contexts of women's vulnerability. It occurs not only due to the access to correct information about STDs and to treatment, but also about the need to develop specific strategies for dealing with the violence contexts of organized hierarchical relations between men and women that strike the possibilities of adopting preventive measures for women^(5,7).

Studies argue that the major ways of STDs/AIDS prevention are the information and adherence of safe practices during sexual life^(4,5,10). However, the sexually active population in Brazil still lacks practical information about the use of condom, syringes, needles and other sharp materials sharing. This research confirmed the same trend of other national studies which point at and discuss aspects of the population vulnerability situation of young and old people on the information about STDs. In this view, some research indicates that young people believe that the use of methods other than condoms are safe in preventing STDs/AIDS, and that among young people who assume that condom is an effective method, less than half of them make regular use of it^(20,21).

With regard to the elderly, national surveys also point out that 50 to 80% of this population has an active sexual life, many of them with multiple partners and who do not make use of preventive methods, which helps to understand the great incidence rate of elderly people infected with the HIV virus.

Nowadays, it is known that the increase of HIV infection cases among elderly people do not go along with sufficient incentives to practice safe sex in this age group. Although the efforts of the MH concerning dissemination of information about STDs/AIDS prevention are recognized, educational activities are primarily targeted to the public considered more vulnerable.

Nevertheless, surveys show that prevention campaigns are not reaching the elderly population, which has also been suffering with STDs and AIDS, especially considering the specificity of the notion of risk exposure and the adoption of safe behaviors among elderly people, according to women's concerns exclusively attached to the prevention of pregnancy, which is not a concern at this time of life⁽²⁰⁻²⁶⁾.

A research on knowledge and practices of adolescents in relation to STD/HIV/AIDS held in Brazil with a group of students from 12 to 22 years of age showed some results, such as "knowledge does not imply directly in preventive practices". The vast majority of participants (94.5%) reported being aware that the use of a condom was a method to prevent STDs, however, among those who reported having active sexual life, only 53.3% used a condom during every intercourse⁽²⁰⁾.

This situation can also be observed among pregnant women in Brazil, following the example of the study of pregnant teenagers in the city of Campinas, which demonstrates that only 54.4% of them used some contraceptive method in the first intercourse, the male condom being the most widely used one. This research shows that most teenagers had adequate knowledge about methods of pregnancy and STD/AIDS prevention, but the information was not directly related to behaviors and attitudes' changes⁽²⁷⁾.

The research reveals a high degree of unfamiliarity declared by participants referring to the issues presented about syphilis, as follows: ways of transmission of the disease by sharing needles and syringes; possibilities of treatment and cure of the disease; knowledge of the use of condom as a protection factor. Syphilis, a disease considered an STD priority according to the Therapy Based on Clinical Practice Guidelines of Ministry of Health (*Protocolos Clínicos de Diretrizes Terapêuticas – PCDT/STD*)⁽⁴⁾, can be evaluated by the detection rate of cases in pregnant women and congenital syphilis. It is worth mentioning that in 2013, data from DATASUS show that the national rate of detection of syphilis in pregnant women was 7.4 per 1,000 live births; the State of Minas Gerais showed 1.35, and the municipality under study unveiled 4.5. In relation to congenital syphilis, the detection rate showed 4.7 per 1,000 of live births; in the State of Minas Gerais the detection was of 0.85, and in the studied municipality, 2.62^(28,29).

Such data indicate the urgency of the municipal government's initiatives to establish strategies for the decrease of STDs in general and of congenital syphilis as well, a sensitive indicator of prenatal care quality. In addition, this specific scenery of syphilis indicates the need for further development and continuity of studies which may elucidate knowledge, perceptions and prejudices about sexual practices and ways of prevention that might promote the empowerment of individuals and collectivities concerning sexual and reproductive health.

Finally, it is important to discuss the limits of this work. First of all, enroll the limitations as to the fact that it is not possible to affirm the existence of a direct and linear relationship between knowledge acquisition and behavior change, mainly because this is an educational process that requires reflection on the part of the individuals towards the promotion of their autonomy, including the one related to sexual practices⁽³⁰⁾. Therefore, answering correctly a question about a disease transmission does not guarantee that individuals take attitudes towards the prevention of such transmission. New researches addressing this real connection between acquisition of information and behavior change are necessary.

Another limitation of this study, which chose to follow the same cast of investigated diseases in PCAP, refers to the non-inclusion in the instrument of the research of two relevant and neglected STDs: Trichomoniasis and chlamydial infection. The prevalence of trichomoniasis reaches 10% in the general population and up to 60% among sex workers⁽³¹⁾. Chlamydia in Brazil has a prevalence of up to 35%, causing urethritis, cervicitis, Pelvic Inflammatory Disease (PID) and infertility⁽³²⁾. However, such diseases are neglected by national and international agencies, because it is mistakenly believed harmless or minor. However, in addition to the mentioned damage, these pathologies are additional risk for the acquisition of other STDs, such as Aids and syphilis^(31,32).

CONCLUSION

From the data and arguments presented in this study it is possible to conclude that the information about some diseases, which are broadly spread in the media and in public health campaigns, are incorporated by the participants of this survey. On the contrary, the other diseases that have not been a target of health education campaigns are linked to a high degree of participants' unfamiliarity.

The lack of information on the transmission, prevention and treatment of high prevalence diseases demonstrate both the situation of vulnerability of several people who participated in this research, and the lack of public investments in health education actions with a view to promote health and empowerment of the population. As far as STD/AIDS are concerned, many aspects brought up in this research help to understand the risk and vulnerability situations of many segments of the population.

However, the promotion of sexual rights is necessary, as well as understanding the possibilities of each person or group to protect themselves against HIV or other STDs are involved with different contexts of vulnerability. One cannot assume, therefore, there is a direct relationship between access to information and behaviors changes and contexts that would lead to the protection.

These results and discussions demonstrate the importance of both researches on the topic and health education, and can help to plan public policies and practices of professionals focused on sexuality and prevention of STDs with a view to achieving all STDs and all population strata. On the implications for the practice, the knowledge and discussions presented here demonstrate the significance of a proper approach of this theme by health professionals with a view to prevention and health promotion.

Conflict of interests

The authors declare no conflict of interests.

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Received on: 04.13.2017

Approved on: 07.16.2017