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Awareness of sexually transmitted infections in Poland

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ABSTRACT

Sexually transmitted infections (STIs) spread through sexual contact and can be responsible for many clinically significant complications, such as pelvic inflammatory disease, infertility, ectopic pregnancy, fetal or neonatal death, premature delivery and increased susceptibility to HIV infection. Worldwide, millions of cases of STIs, such as chlamydia, syphilis or gonorrhoea occur every year, and hundreds of millions of people are currently infected. Some STIs can be cured following appropriate therapy. Others cannot be completely cured, but medicines can be used to manage symptoms and prevent ongoing transmission. According to the World Health Organization, STIs are one of the five types of diseases for which adults most commonly seek medical support worldwide. In this paper, we present the results of the analysis of data collected in Poland on the awareness of Polish society about sexually transmitted infections.

Keywords: sexually transmitted infections, STIs, chlamydiosis, gonorrhea, syphilis

1. INTRODUCTION

Sexually transmitted infections (STIs) are infections spread by sexual contact with someone who currently has an STI. Sexual contact includes oral, vaginal and anal sex, as well as genital skin-to-skin contact. Some STIs, like chlamydia, gonorrhea and syphilis, can be cured

with the use of medication. STIs like herpes cannot be completely cured, but medicines can be used to manage symptoms [1, 2].

WHO estimated that nearly 1 million people become infected every day with any of four curable sexually transmitted infections (STIs): chlamydia, gonorrhoea, syphilis, and trichomoniasis. Chlamydia is still the most commonly diagnosed bacterial STI in highly developed countries [3].

In 2012, World Health Organization estimated that there were about 357 million new global cases of four common curable STIs: chlamydia (131 million cases), gonorrhoea (78 million cases), syphilis (6 million cases), and trichomoniasis (142 million cases) [4] – Figure 1. In WHO European region, 8.9 million cases of chlamydia, 4.7 million cases of gonorrhoea, 0.4 million cases of syphilis and 3.8 million cases of trichomoniasis have been reported in 2012 [4]. STIs belong to the most common acute conditions worldwide [5].

The complications of untreated STIs include pelvic inflammatory disease, chronic pelvic pain, infertility, ectopic pregnancy, seronegative arthropathy, as well as cardiovascular diseases [6]. In pregnant women, STIs may be responsible for fetal or neonatal death, premature delivery, pneumonia, eye infection, intra-amniotic infection and postpartum endometritis [6-10]. STIs can also contribute to an increased susceptibility to HIV infection [11]. Despite the complications, STIs remain a neglected area of clinical and public health practice [12].

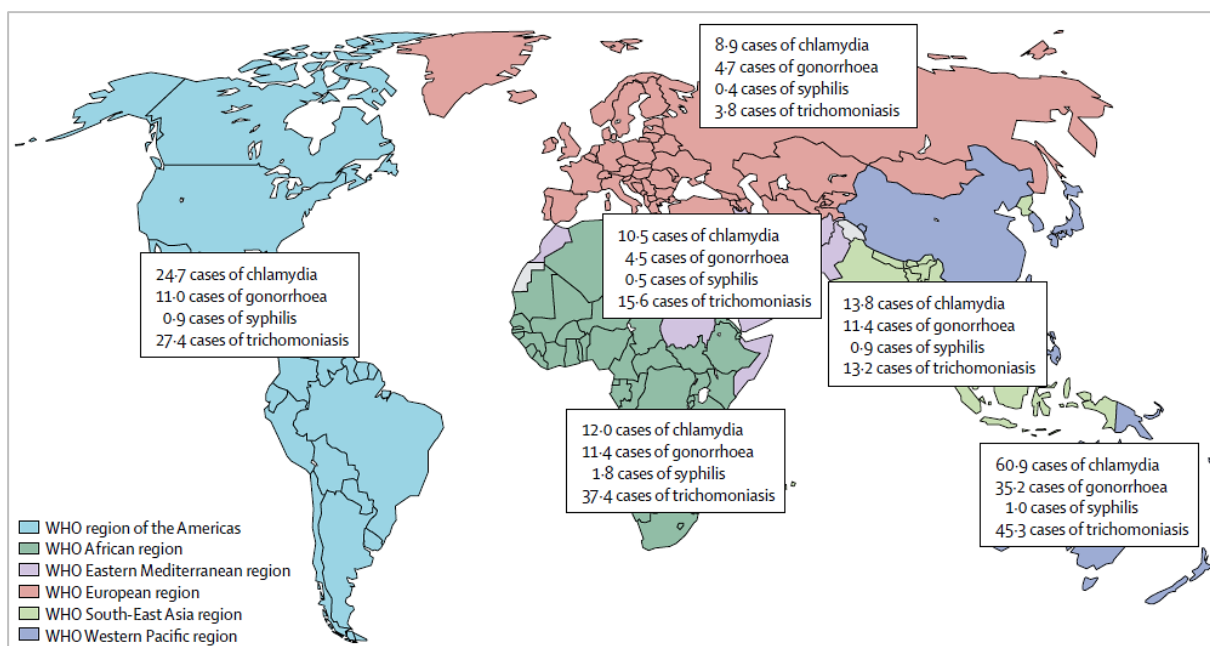


Figure 1. WHO regional estimates of new cases of four curable sexually transmitted infections. Data are estimated numbers of incident cases in millions for chlamydia, gonorrhoea, syphilis, and trichomoniasis in 2012, by WHO region [3, 4]

2. AIM OF THE STUDY

The aim of this study was to show the level of awareness among Polish society about sexually transmitted infections (STIs), as well as to cite data from the European Centre for Disease Prevention and Control report on the frequency of STIs in Poland and other European

countries. The level of knowledge was evaluated among three populations in Poland: heterosexuals excluding medical students, non-heterosexuals excluding medical students and medical students.

3. MATERIALS AND METHODS

A Poland-wide on-line survey was conducted between January and March 2019. 2205 anonymous answers were analysed. The research included 1356 (61.5%) women, 681 (31%) men, 46 (2%) trans men, 12 (0,5%) trans women and 110 (5%) non-binary people. 95,4% were aged 16-29. In order to interpret the results, we divided the study group into people who defined themselves as heterosexual persons (heterosexuals) and people who defined themselves in any other way (non-heterosexuals) constituting the LGBT+ community. 1122 (51%) of the respondents described themselves as non-heterosexuals and 1083 (49%) – as heterosexuals. Almost half of the answers (n=1080; 49%) came from students, of which 40% were medical students (n=435). Among medical students most responses came from students of the fourth year (n=95; 4.3%). Nearly half of the respondents (n=1077; 49%) lived in cities with a population of over 250,000. To compare the knowledge of heterosexual and non-heterosexual persons, medical students were excluded from both groups. Finally, three studied populations were identified: heterosexuals excluding medical students [HS] (n=735), non-heterosexuals excluding medical students [non-HS] (n=1035) and medical students [MS] (n=435). The detailed characteristics of the study group is presented in Table 1.

We asked for taking a stance to the following statements: “Most sexually transmitted infections can spread much easier than HIV”, “People can be infected with sexually transmitted diseases without realizing it, because they are often asymptomatic” and “The proper use of condoms during sexual intercourse reduces the probability of infection with sexually transmitted infections (including HIV)”. We also asked three questions: “Have you ever had a test for sexually transmitted infections (STIs) other than HIV?”, “Have you ever had any of the following symptoms?” and “From the following diseases, choose the one you think is most common”.

Table 1. Demographic data and characteristics of the study group (n=2205).

Parameter		Value (n)	Value (%)
Age	16–19	820	37,2
	20–29	1283	58,2
	30–39	79	3,6
	40–49	13	0,6
	50–59	7	0,3

	60–69	3	0,1
Sex	Women	1356	61,5
	Men	681	31
	Trans men	46	2
	Trans women	12	0,5
	Non-binary	110	5
Sexual orientation	Heterosexual	1083	49
	Non-heterosexual	1122	51
Place of residence	Village	331	15
	City with up to 50,000 inhabitants	301	13,5
	City of 50,000 to 150,000 inhabitants	263	12
	City of 150,000 to 250,000 inhabitants	233	10,5
	City of over 250,000 inhabitants	1077	49
Education	Not studying	353	16
	Disciples	772	35
	Medical students	435	20
	• 1 st year	71	3,3
	• 2 nd year	85	3,9
	• 3 rd year	85	3,9
	• 4 th year	95	4,3
	• 5 th year	86	3,9
• 6 th year	13	0,7	
	Non-medical students	645	29
Membership in the International Federation of Medical Students' Associations (IFMSA-Poland)	Yes	60	2,7
	No	2145	97,3

4. RESULTS

4. 1. The question “Have you ever had a test for sexually transmitted infections (STIs) other than HIV?”

84% HS as well as non-HS and 82% MS have never had a test for sexually transmitted infections other than HIV (Figures 2-4). Furthermore, 2% HS and 1% non-HS do not know if they have ever had such a test.

4. 2. The statement “Most sexually transmitted infections can spread much easier than HIV”

25% HS, 23% non-HS and 5% MS did not know that most sexually transmitted infections can spread much easier than HIV (Table 2). 1% non-HS does not believe this statement.

4. 3. The statement “People can be infected with sexually transmitted diseases without realizing it, because they are often asymptomatic”

Most respondents knew that people can be infected with sexually transmitted diseases without realizing it, because they are often asymptomatic (73% HS, 77% non-HS, 95% MS) - Table 3.

4. 4. The statement “The proper use of condoms during sexual intercourse reduces the probability of infection with sexually transmitted infections (including HIV)”

Almost all respondents knew that the proper use of condoms during sexual intercourse reduces the probability of infection with sexually transmitted diseases (94% HS, 95% non-HS, 99% MS) - Table 4.

4. 5. The question “Have you ever had any of the following symptoms?” (multiple choice question)

MS more often than the other groups declared that they ever had any of mentioned symptoms - 35% MS, 44% HS and 44% non-HS declare no such symptoms ever occurred (Figures 5-7). In each group, the most commonly indicated symptom was “pain/burning when urinating” (41% HS, 41% non-HS, 47% MS). MS more often than other groups indicated “pressure in the bladder area” (21% HS, 17% non-HS and 28% MS).

4. 6. The question “From the following diseases, choose the one you think is most common...”

HS and MS most often chose “genital candidiasis” (35% HS and 37% MS, respectively) - Figures 8, 10. Non-HS most often marked “genital herpes” (37%) - Figure 9. “Chlamydiosis” was marked by 7% HS, 8% non-HS and 18% MS.

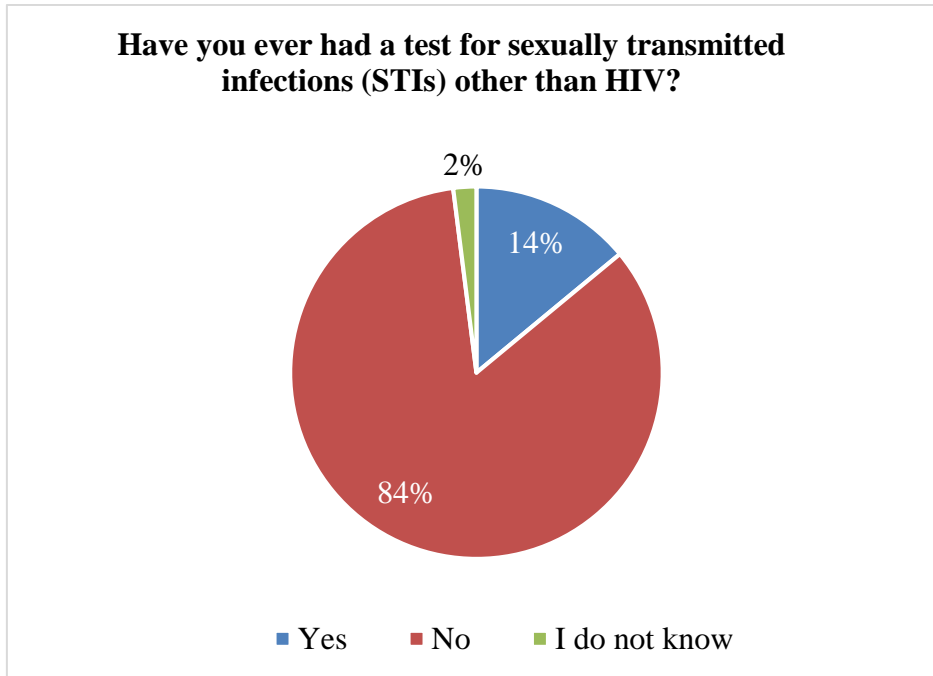


Figure 2. HS group answers to the question: “Have you ever had a test for sexually transmitted infections (STIs) other than HIV?”

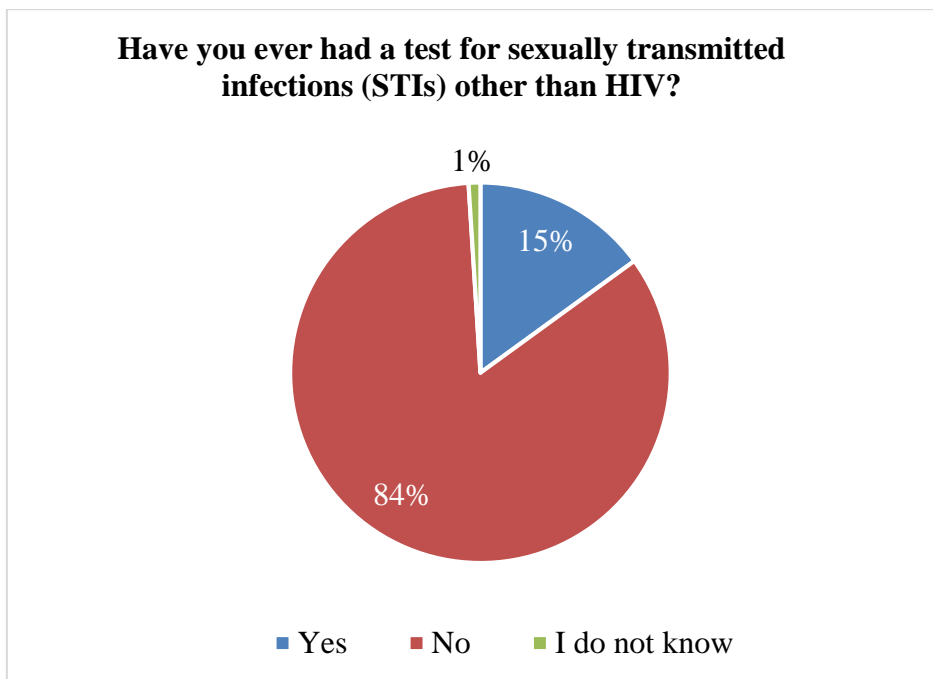


Figure 3. Non-HS group answers to the question: “Have you ever had a test for sexually transmitted infections (STIs) other than HIV?”

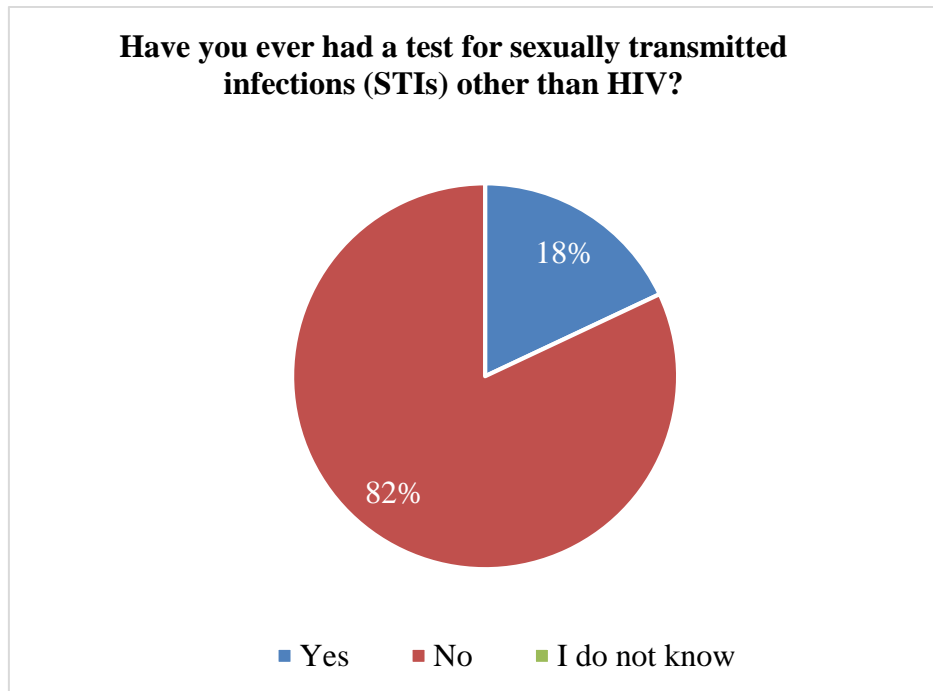


Figure 4. MS group answers to the question: “Have you ever had a test for sexually transmitted infections (STIs) other than HIV?”

Table 2. Answers to the statement: “Most sexually transmitted infections can spread much easier than HIV”

“Most sexually transmitted infections can spread much easier than HIV”			
	HS	Non-HS	MS
I already knew it	55%	55%	86%
I was not sure	20%	21%	9%
I did not know about it	25%	23%	5%
I do not understand	0%	0%	0%
I do not believe that	0%	1%	0%

Table 3. Answers to the statement: “People can be infected with sexually transmitted diseases without realizing it, because they are often asymptomatic”

“People can be infected with sexually transmitted diseases without realizing it, because they are often asymptomatic”			
	HS	Non-HS	MS
I already knew it	73%	77%	95%
I was not sure	14%	14%	4%
I did not know about it	13%	9%	1%
I do not understand	0%	0%	0%
I do not believe that	0%	0%	0%

Table 4. Answers to the statement: “The proper use of condoms during sexual intercourse reduces the probability of infection with sexually transmitted infections (including HIV)”

“The proper use of condoms during sexual intercourse reduces the probability of infection with sexually transmitted infections (including HIV)”			
	HS	Non-HS	MS
I already knew it	94%	95%	99%
I was not sure	3%	2%	1%
I did not know about it	2%	3%	0%
I do not understand	0%	0%	0%
I do not believe that	1%	0%	0%

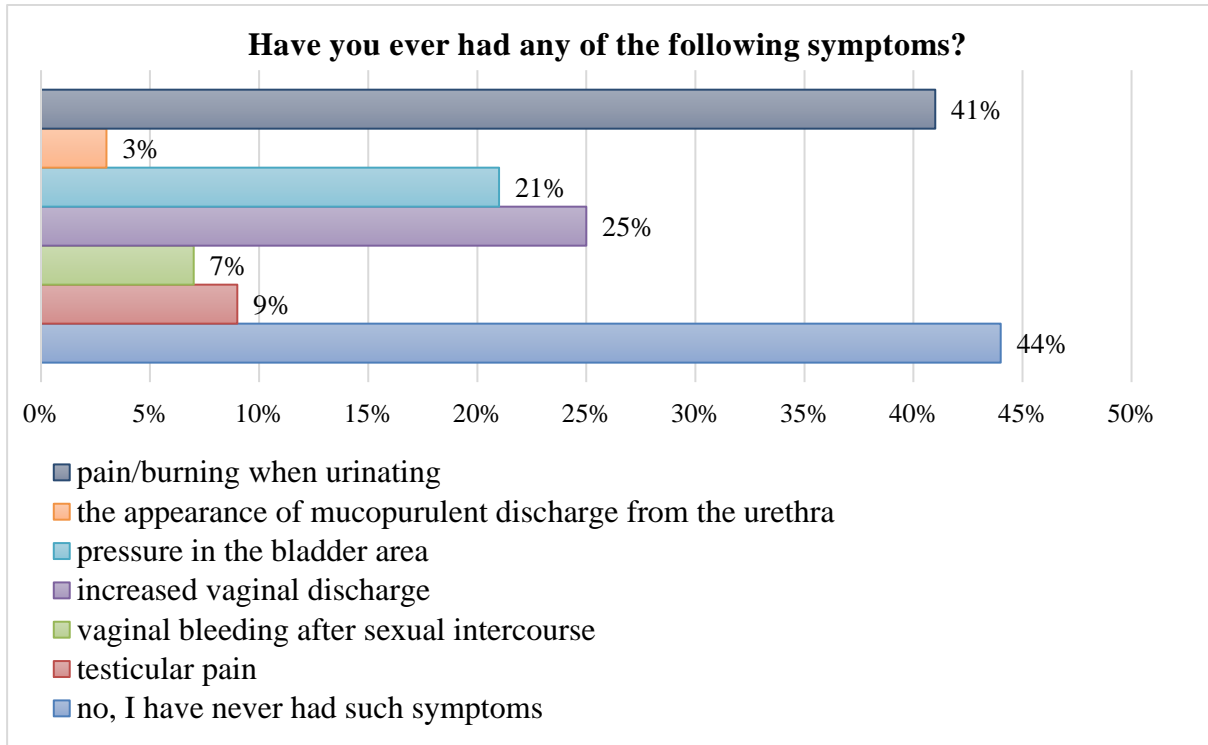


Figure 5. HS group answers to the question: “Have you ever had any of the following symptoms?” (multiple choice question)

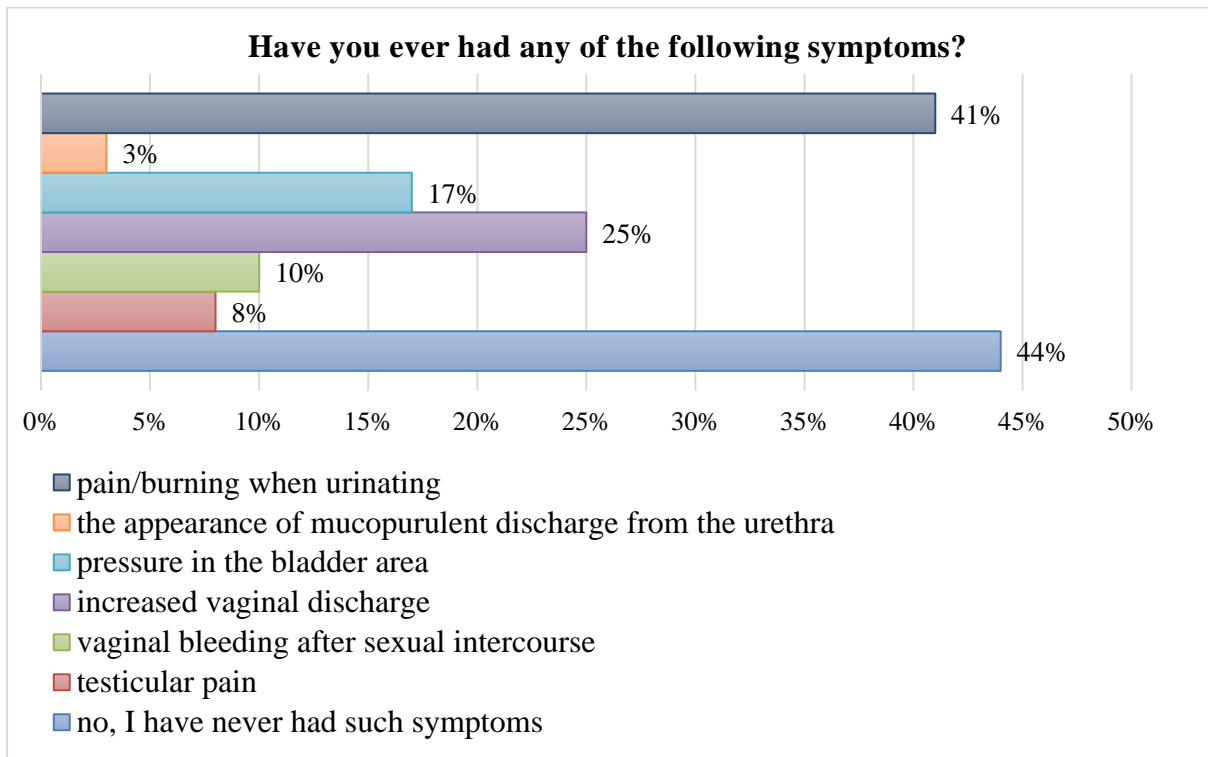


Figure 6. Non-HS group answers to the question: “Have you ever had any of the following symptoms?” (multiple choice question)

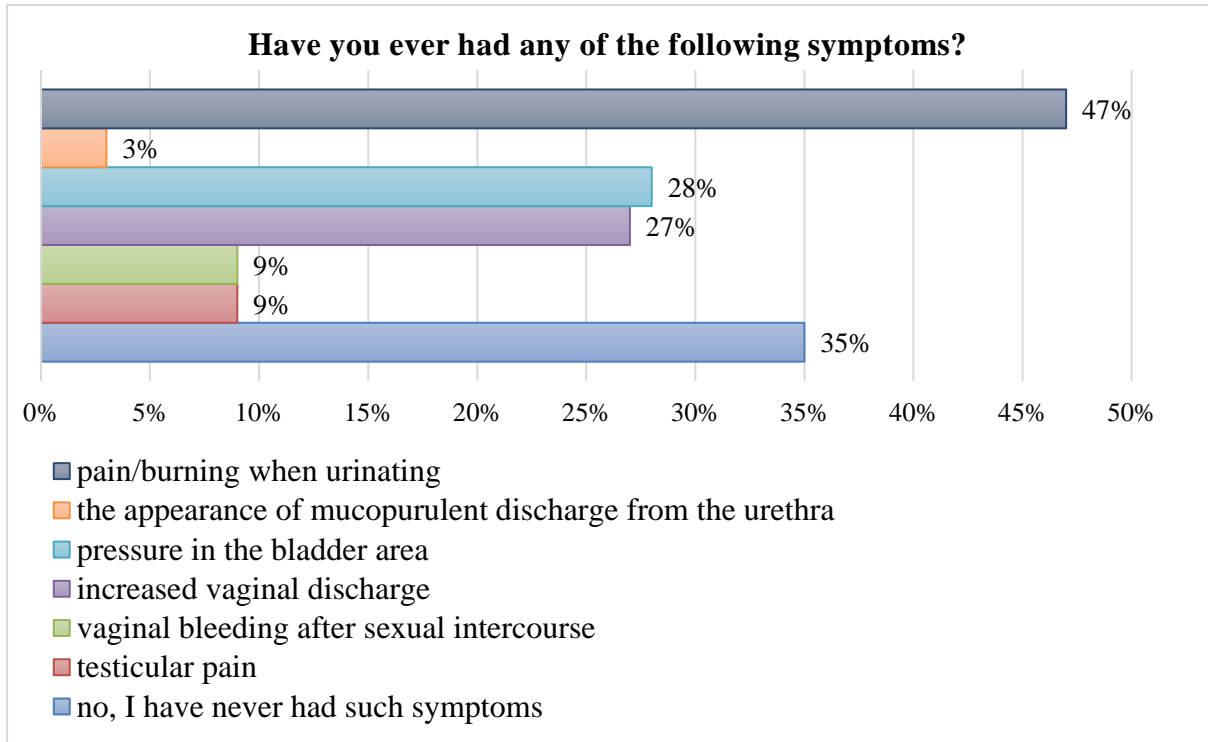


Figure 7. MS group answers to the question: “Have you ever had any of the following symptoms?” (multiple choice question)

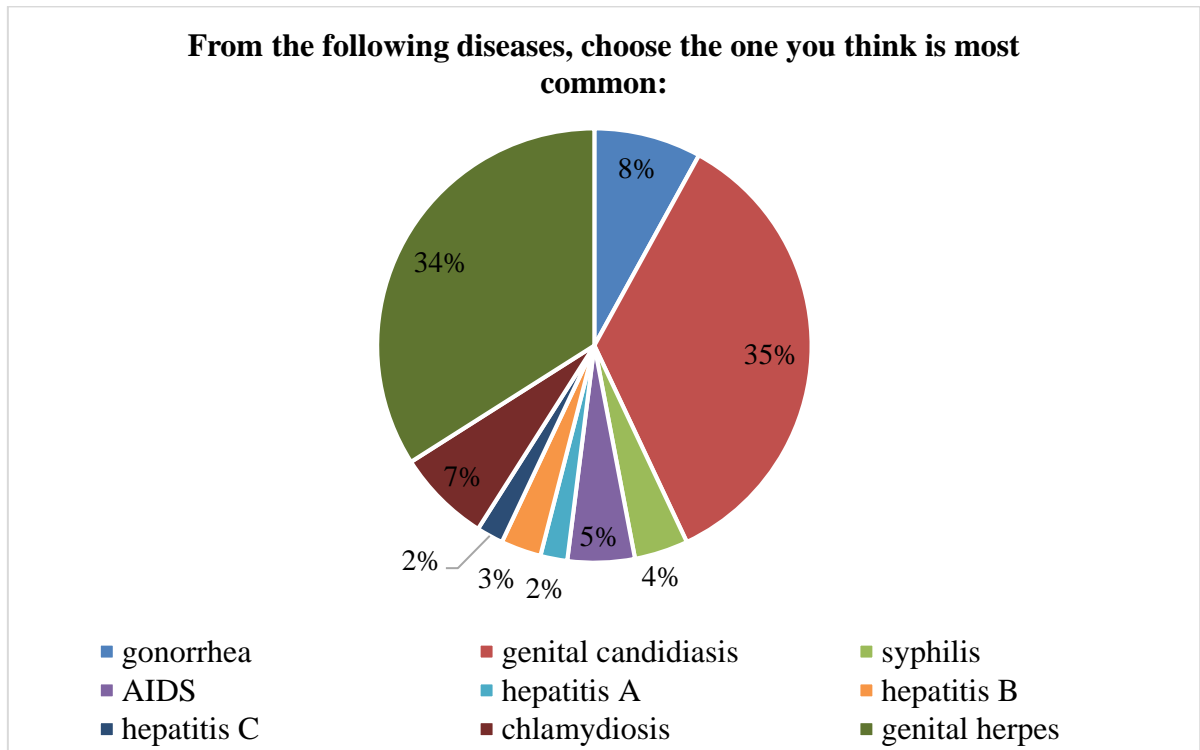


Figure 8. HS group answers to the question: “From the following diseases, choose the one you think is most common”

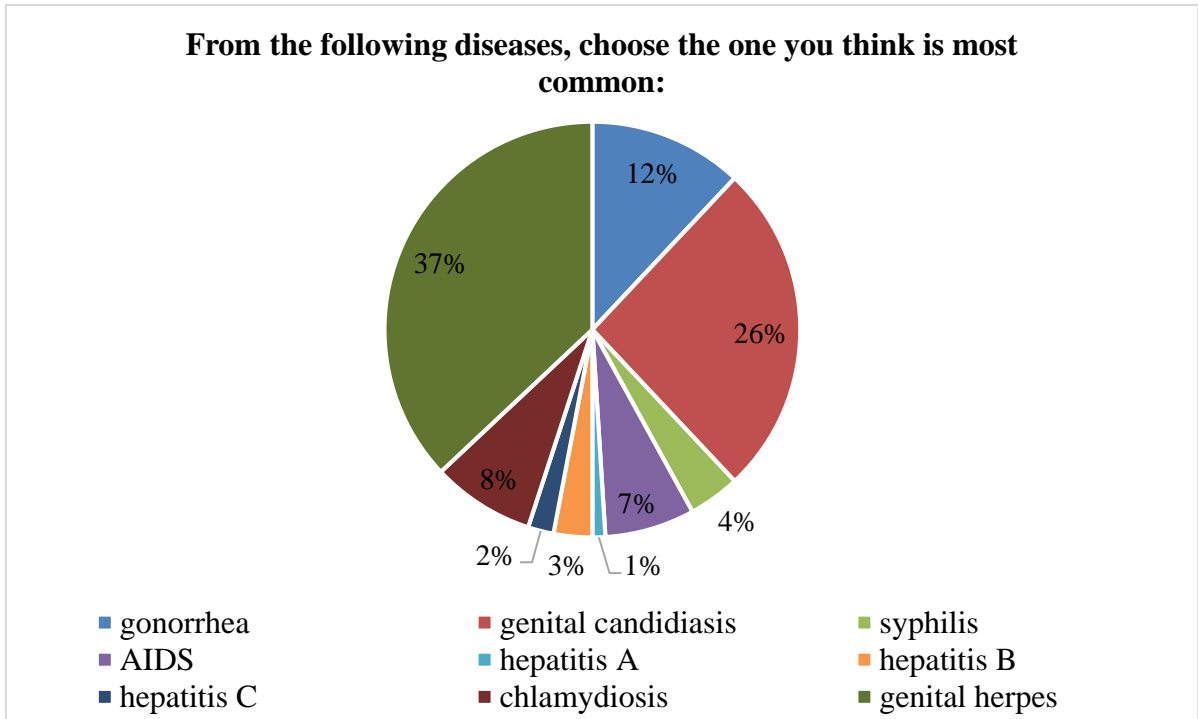


Figure 9. Non-HS group answers to the question: “From the following diseases, choose the one you think is most common”

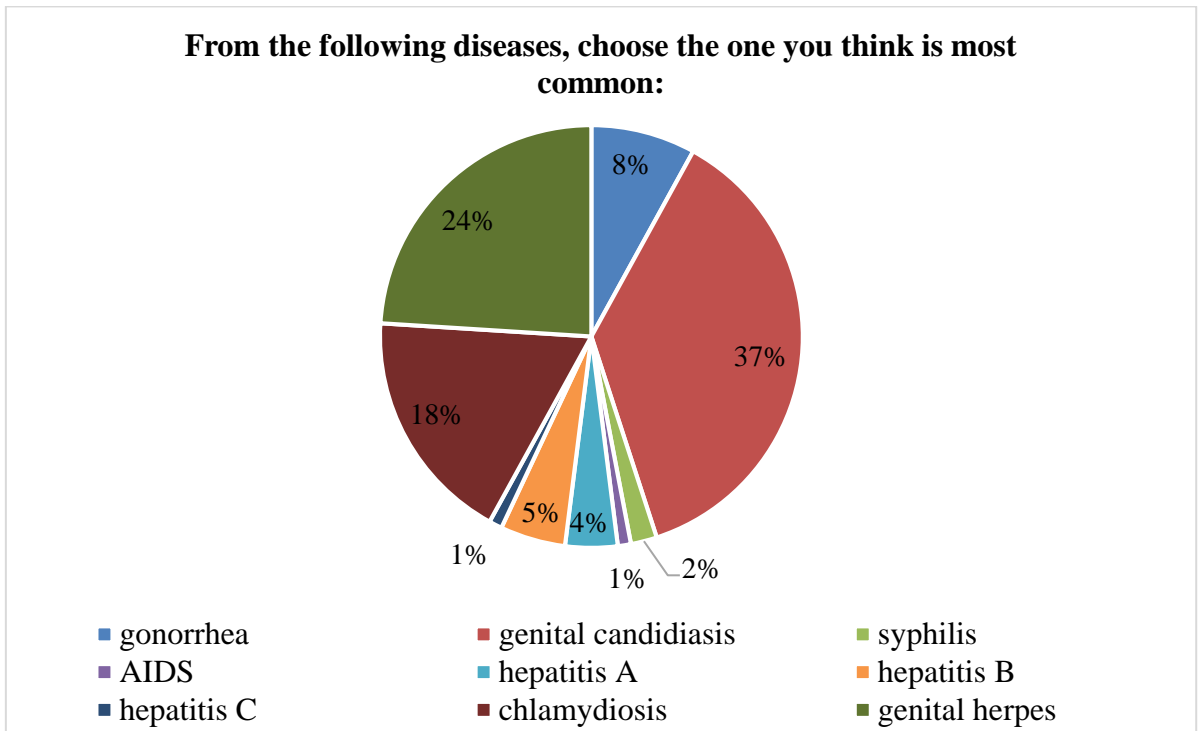


Figure 10. MS group answers to the question: “From the following diseases, choose the one you think is most common”

6. CONCLUSIONS

Most respondents have never tested for sexually transmitted infections (STIs) other than HIV. The majority of participants knew that people can be infected with sexually transmitted diseases without realizing it, because they are often asymptomatic almost all knew that the proper use of condoms during sexual intercourse reduces the probability of infection with STIs. Fewer participants knew that most STIs can spread much easier than HIV. At least half of the respondents in each group reported symptoms in the past that could be the result of STI.

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