

KNOWLEDGE OF NURSING STUDENTS ABOUT SEXUALLY TRANSMITTED INFECTIONS

CONHECIMENTO DE ESTUDANTES DE ENFERMAGEM SOBRE INFECÇÕES SEXUALMENTE TRANSMISSÍVEIS

CONOCIMIENTO DE LOS ESTUDIANTES DE ENFERMERÍA SOBRE LAS INFECCIONES DE TRANSMISIÓN SEXUAL

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Objective: to evaluate the knowledge of nursing students about sexually transmitted infections. **Method:** exploratory cross-sectional study conducted in September and October 2020. The population consisted of 221 students from all semesters of the nursing course of a private college in the state of São Paulo. The sample of 75 students was for convenience and non-probabilistic. A self-applicable instrument was used based on the “*Pesquisa de Comportamentos, Atitudes e Práticas da População Brasileira sobre IST*” of the *Ministério da Saúde*. **Results:** the students (69 – 92.0%) were female, with a mean age of 20.0 years and 56 (74.7%) had active sexual life. Most knew the signs and symptoms, forms of transmission and prevention measures for sexually transmitted infections. Condom use was considered unnecessary in sexual relations with a steady partner. **Conclusion:** the students’ knowledge was adequate, but it is still necessary to stimulate self-care and reduce unsafe sexual practices.

Descriptors: Sexually Transmitted Diseases. Knowledge. Students Nursing. Behavior. Universities.

Objetivo: avaliar o conhecimento dos estudantes de enfermagem acerca das infecções sexualmente transmissíveis. *Método:* estudo transversal exploratório realizado em setembro e outubro de 2020. *População* foi composta por 221 estudantes de todos os semestres do curso de enfermagem de uma faculdade privada do estado de São Paulo. *Amostra* de 75 estudantes por conveniência e não probabilística. *Utilizou-se* um instrumento autoaplicável baseado na “*Pesquisa de Comportamentos, Atitudes e Práticas da População Brasileira sobre IST*” do *Ministério da Saúde*. *Resultados:* os estudantes (69 – 92,0%) eram do sexo feminino, com idade média de 20,0 anos e 56 (74,7%) tinham vida sexual ativa. A maioria conhecia os sinais e sintomas, as formas de transmissão e as medidas de prevenção das infecções sexualmente transmissíveis. *O uso de preservativo foi considerado desnecessário nas relações sexuais*

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com parceiro fixo. Conclusão: o conhecimento dos estudantes foi adequado, mas ainda é necessário estimular o autocuidado e reduzir as práticas sexuais inseguras.

Descritores: Doenças Sexualmente Transmissíveis. Conhecimento. Estudantes de Enfermagem. Comportamento. Universidades.

Objetivo: evaluar el conocimiento de los estudiantes de enfermería sobre las infecciones de transmisión sexual. Método: estudio transversal exploratorio realizado en septiembre y octubre de 2020. La población consistió en 221 estudiantes de todos los semestres del curso de enfermería de un colegio privado en el estado de São Paulo. La muestra de 75 estudiantes fue por conveniencia y no probabilística. Se utilizó un instrumento auto aplicable basado en la "Pesquisa de Comportamentos, Atitudes e Práticas da População Brasileira sobre IST" del Ministério da Saúde. Resultados: los estudiantes (69–92,0%) eran mujeres, con una edad media de 20,0 años y 56 (74,7%) tenían vida sexual activa. La mayoría conocía los signos y síntomas, las formas de transmisión y las medidas de prevención de las infecciones de transmisión sexual. El uso del condón se consideró innecesario en las relaciones sexuales con una pareja estable. Conclusión: el conocimiento de los estudiantes fue adecuado, pero aún es necesario estimular el autocuidado y reducir las prácticas sexuales inseguras.

Descritores: Enfermedades de Transmisión Sexual. Conocimiento. Estudiantes de Enfermería. Conducta. Universidades.

Introduction

Sexually transmitted infections (STIs) are diseases that have a significant probability of transmission between humans through unprotected sexual contact, including vaginal sexual intercourse, oral and anal sex. Transmission can still happen from mother to child during pregnancy, childbirth or breastfeeding. If so, it also occurs by blood. STIs affect men and women with active sexual life and may manifest in the form of syndromes, such as: ulcer in the genito-anal region; vaginal discharge, urethral, anal; pelvic inflammatory disease (PID), incarnating of inguinal ganglia and scrotal edema⁽¹⁾.

STIs represent a considerable public health problem for the population and include not only the most common classical diseases, such as gonorrhoea, syphilis, cancers and venereal lymphogranuloma, but also in about 20 infections, often called "second generation" STIs, caused by bacteria, viruses, parasites, protozoa and fungal agents⁽²⁾.

Data from the *Boletim Epidemiológico do Ministério da Saúde* on human immunodeficiency virus (HIV) and Human Immunodeficiency Syndrome (AIDS) are clear regarding the increase in the number of cases of the disease in the young population,

demonstrating that this group is vulnerable to various types of STIs, such as gonorrhoea, syphilis and hepatitis. This vulnerability is due to several factors, including unprotected sexual practice⁽¹⁻²⁾.

Studies indicate that young university students, aged 18 to 29 years, are more vulnerable to STIs, considering the feeling of autonomy, rejection to follow rules, the beginning of sexual life, the variability of partners and the university scenario itself, which favors the appearance and consolidation of certain behaviors, especially those related to alcohol and drug consumption⁽³⁻⁵⁾.

Universities have a fundamental role of disseminating information about STIs to students, since most students are in a susceptible age group, besides becoming opinion makers in society as future health professionals⁽⁶⁾.

Considering that knowledge is an important instrument for the prevention of STIs and that it enables the individual to consider the risks to which he/she is exposed, as well as the consequences of such exposure, this study has as a research question: What is the knowledge of nursing students about STIs?

The aim of this study is to evaluate the knowledge of nursing students about STIs.

Method

To meet the objective of the study, a cross-sectional, descriptive-exploratory study was conducted, with quantitative analysis of the collected data.

The field of research was the undergraduate Nursing course of the Medical Sciences College at *Santa Casa de São Paulo* (FCMSCSP).

The study population consisted of 221 university students (45 in the 1st semester; 34 in the 2nd semester; 34 in the 3rd semester; 28 in the 5th semester; 15 in the 6th semester; 15 in the 7th semester; 20 in the 8th semester) regularly enrolled in the undergraduate nursing course offered by FCMSCSP. The sample of 75 students was for convenience and non-probabilistic.

Inclusion criteria: being 18 years of age or older; be regularly matriculated in the Nursing graduate course; complete the self-administered questionnaire.

Exclusion criterion: being absent from academic activities during the period of data collection, medical leave or absence of another nature.

The data collection instrument was a structured and self-administered questionnaire, composed of 2 parts: the first consisted of 6 questions about demographic data; and the second in 15 statements about STIs, with 3 answer options (I agree, I don't know, I disagree). This questionnaire used as a basis the instrument elaborated by the Ministry of Health, entitled "*Pesquisa de Comportamentos, Atitudes e Práticas da População Brasileira sobre IST* (PCAP-IST)"⁽⁷⁾.

PCAP-IST began use in 2013. Since its first application, it has been contributing to subsidize public policies to combat STIs/HIV in people aged 15 to 64 years living in the city of São Paulo⁽⁷⁾.

After being elaborated, the questionnaire was submitted to content validation by five specialists in the area of communicable diseases and STIs

– three nursing professors and two professionals from the *Centro de Testagem e Aconselhamento* (CTA) – through a Delphi technique round. The experts were instructed to express their judgment regarding the clarity and relevance of each of the items of the questionnaire through two options of answers (yes and no) and a space for recording observations. The Content Validity Index (CVI) of the instrument was 0.88, demonstrating that it was considered valid for the target audience, according to the Value of the CVI described in the literature⁽⁸⁾.

Regarding data collection, the list of students regularly enrolled in the undergraduate Nursing course and their e-mail contacts was obtained from the course secretariat. Once this information was obtained, the lead researcher sent an e-mail to each of the students with an explanatory letter about the research and an invitation to participate in the study. At the end of the e-mail there was a link from the Google Forms platform that, when clicked, directed the participant to the Informed Consent Form (ICF). After reading this term, the participant had the option of refusing or agreeing to participate in the research. In case of refusal, the proceedings were finalized; in case of acceptance, the participant was automatically directed to the data collection questionnaire.

The questionnaire remained open for answers from September 1, 2020 to October 31, 2020. After this period, the platform did not accept any more responses. Only the first two researchers had access to the participants' answers.

The data were analyzed by descriptive statistics and presented descriptively and in tables.

Because it is a research involving human beings, all ethical precepts set out in Resolution n. 466 of December 12, 2012, of the National Health Council⁽⁹⁾ were respected. The research was approved by the Ethics Committee according to *Certificado de Apresentação para Apreciação Ética* (CAAE) n. 23982919.6.0000.5479.

Results

The participants were 75 students. As for their distribution by semester, most of them were from

the first half, followed by the third semester. Regarding the response rate, there was a higher participation of students from the sixth, seventh and first semesters.

Table 1 – Distribution of study participants, according to the semester of the course. São Paulo, São Paulo, Brazil – 2020. (N=75)

Ongoing semester	n	Rate of answers % by semester
1 st Semester	19	42.2
2 nd Semester	9	26.4
3 rd Semester	11	32.3
4 th Semester	10	33.3
5 th Semester	7	25.0
6 ^o Semester	9	60.0
7 ^o Semester	8	53.3
8 ^o Semester	2	10.0
Total	75	33.9

Source: Created by the authors.

Among the participants, 69 (92.0%) were female, and the mean age was 20.09 years (minimum of 18 years and maximum of 48 years). 43 (57.3%) participants self-reported white.

When asked about relationship status, 63 (84%) reported being single and 56 (74.7%) reported active sexual life.

Participants were asked about vulnerabilities to STIs, signs and symptoms, forms of transmission and prevention measures. When asked if “a healthy-looking person can have

STIs”, 72 (96.0%) agreed. Regarding the statement “alcohol consumption or drug use can lead the person to have sex without using condoms”, 60 (80.0%) agreed.

Regarding the signs and symptoms of STIs, it was noticed that most participants recognized the main manifestations. However, a portion of them presented questions when answering “I don’t know” or “disagree” about the manifestation of discharge in the intimate region and eyesore lesions (Table 2).

Table 2 – Signs and symptoms of sexually transmitted infections, according to study participants. São Paulo, São Paulo, Brazil – 2020. (N=75)

Sentences	I agree n (%)	I do not know n (%)	I disagree n (%)
Sexually transmitted infections can manifest through wounds.	68 (90.7)	7 (9.3)	-
Sexually transmitted infections can manifest themselves through discharge in the intimate region.	68 (90.7)	6 (8.0)	1 (1.3)
Sexually transmitted infections can manifest themselves through warts in the intimate region.	70 (93.4)	5 (6.6)	-
Sexually transmitted infections can manifest as bullous lesions.	60 (80.0)	13 (17.3)	2 (2.7)

Source: Created by the authors.

Note: Conventional signal used:

- Numerical data equal to zero not resulting from rounding.

Regarding the forms of transmission, it was observed that 75 (100%) respondents agreed that a person could acquire STIs if they did not use condoms in sexual relations.

Regarding the question “STIs can be transmitted from mother to baby”, 7 (9.3%) participants answered “I don’t know” or “disagree” (Table 3).

Table 3 – Modes of transmission of sexually transmitted infections, according to study participants. São Paulo, São Paulo, Brazil – 2020. (n=75)

Sentences	I agree n (%)	I do not know n (%)	I disagree n (%)
A person can acquire sexually transmitted infections when they do not use a condom during sexual intercourse.	75 (100)	-	-
Sexually transmitted infections can be passed from mother to baby.	68 (90.7)	6 (8.0)	1 (1.3)

Source: Created by the authors.

Note: Conventional signal used:

- Numerical data equal to zero not resulting from rounding.

With regard to prevention measures, the majority of participants agreed that condoms were barriers to protection against STIs and should be used during anal, vaginal and oral

sex. Most, however, agreed with the statement “the risk of STIs transmission can be reduced if the person has sex only with a faithful and uninfected partner” (Table 4).

Table 4 – Measures to prevent sexually transmitted infections, according to study participants. São Paulo, São Paulo, Brazil – 2020. (N=75)

Variables	I agree n (%)	I do not know n (%)	I disagree n (%)
The risk of transmitting sexually transmitted infections can be reduced if a person has sex only with a faithful, uninfected partner.	50 (66.7)	4 (5.3)	21 (28.0)
Using condoms is the best way to prevent the sexually transmitted infection from being transmitted during sexual intercourse.	74 (98.7)	1 (1.3)	-
Condom use is indicated for vaginal sex.	71 (94.7)	-	4 (5.3)
Condom use is indicated for anal sex.	68 (90.7)	3 (4.0)	4 (5.3)
Condom use is indicated for oral sex.	68 (90.7)	2 (2.7)	5 (6.6)
Condom use is indicated for vaginal, anal and oral sex.	72 (96.0)	2 (2.7)	1 (1.3)

Source: Created by the authors.

Note: Conventional signal used:

- Numerical data equal to zero not resulting from rounding.

Discussion

In this study, the sample consisted of young women with active sexual life, which is consistent with previous studies^(4,10-11). According to the World Health Organization Bulletin, the age range of people affected by STIs is 15 to 49 years⁽²⁾. Additionally, unprotected sexual practice among women of reproductive age can cause infertility and miscarriage⁽¹⁰⁾. These facts reinforce the importance of nursing students studying the theme, since they constitute a risk group, according to the age group^(6,10,12).

When it comes to the appearance of the individual with STIs, in the present investigation, most students agreed with the statement that a healthy person may have STIs. A study points out that if the individual with STIs is diagnosed quickly, starts treatment early and adheres to drug therapy, the progression of the infection will be inhibited and he will not present the characteristics of someone who is “sick”⁽¹⁾.

Regarding vulnerability, it was also observed that the majority of students agreed that alcohol and drug use influenced unprotected sexual practices. This result was also found in studies

conducted in Rio Grande do Sul, Rio de Janeiro, Nigeria and Italy, which highlighted the role of alcoholic beverages and drug use in loss of senses and greater susceptibility to STIs^(4-6,11).

Regarding the use of condoms as a way of preventing STIs, all agreed with this statement. A similar result was found in previous studies, which reinforced the discernment of students regarding the importance of condom use^(5,12).

On the other hand, studies conducted with nursing students on self-care in relation to STIs showed that they did not use condoms after a certain period of the relationship and/or when they acquired confidence in their partner^(5,10,12). This finding was also observed in the present study, when participants agreed with the statement that the risk of transmitting STIs was lower when having sex with faithful partners.

The non-use of condoms with a fixed partner may be associated with the difficulty of negotiating its use or the substitution of its use by contraceptive methods, demonstrating that students underestimated the risk of contracting STIs. It is worth remembering that anyone who has an unprotected sexual relationship runs the risk of contracting an STIs, regardless of the status of the relationship, age, social class, gender and religion⁽¹⁰⁾.

Some STIs can be transmitted vertically (from the pregnant woman to fetus), at birth and during breastfeeding^(1,13). Thus, as a preventive measure for this type of transmission, prenatal follow-up, early diagnosis and treatment of pregnant women and sexual partners are recommended, in order to reduce possible gestational complications, such as abortion, premature delivery, death of the newborn and STIs in congenital form⁽¹³⁾.

Unlike the results obtained in a Turkish and another French study, which indicated that the knowledge of nursing students about STIs was insufficient⁽¹⁴⁻¹⁵⁾, the present study pointed out that most students had adequate knowledge about signs and symptoms, forms of transmission and preventive measures. However, doubts about condom use in oral, anal and vaginal sex still prevailed, which the literature corroborates^(14,16).

Regarding the limitations of the study, the first refers to the convenience sample, which, although it is a common method in exploratory studies, in view of the ease of use and availability of data, may impose certain limits on the generalization of results. Another limitation refers to the collection of data by a self-administered questionnaire, which may induce socially acceptable responses.

This study is relevant because, based on the needs identified, it will serve as the basis for the elaboration of an educational intervention study on STIs for students. It is believed that this process of knowledge construction is essential for strengthening the autonomy and self-care of nursing students on the subject.

Conclusion

This study, which evaluated the knowledge of nursing students about STIs allowed identifying students' profile regarding sexual behavior and exposure risk. As in other studies, there was no relevant difference in the answers presented by students from different semesters. In general, they had adequate knowledge about STIs, but were vulnerable to them, when they chose not to use condoms as a method of prevention in all sexual relations.

Universities, especially nursing courses, are timely places for the development of competencies for health promotion and disease prevention. In this sense, it is essential to reinforce this theme within higher education institutions, since adequate knowledge can help students reflect on their vulnerabilities and avoid unsafe sexual practices.

Collaborations:

1 – conception, design, analysis and interpretation of data: Isabelly Gonsalves de Freitas and Adriana Maria da Silva Felix;

2 – writing of the article and relevant critical review of the intellectual content: Isabelly Gonsalves de Freitas, Helena Mendes Eloi and Adriana Maria da Silva Felix;

3 – final approval of the version to be published: Isabelly Gonsalves de Freitas, Helena Mendes Eloi and Adriana Maria da Silva Felix.

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