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RESEARCH

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KNOWLEDGE AND ATTITUDE OF UNIVERSITY STUDENTS ABOUT THE USE OF CONDOMS AS A METHOD TO PREVENT

*Conhecimento e atitude de universitários sobre o uso do preservativo como método de prevenção**Conocimiento y actitud de estudiantes universitarios sobre el uso de condones como método de prevención*Anderson da Silva Moreira¹ Géssyca Cavalcante de Melo² Yhasmin Santos Silva³ Julya Thereza dos Santos Paixão⁴ 

ABSTRACT

Objectives: to analyze the knowledge and attitude of university students in the health area about condom use as a method of preventing sexually transmitted infections and to compare the group of participants who have had sex with those who have not.

Method: descriptive, cross-sectional and quantitative study on knowledge and attitude. It was performed in online format from September to December 2021. Data analysis was performed using JASP 0.9.1.0 and BioEstat 5.0 software. **Results:** of the 219 participants, 96 (43.8%) had inadequate knowledge and 116 (53.0%) had an inadequate attitude about condom use. Inadequate knowledge was associated with age group ($p=0.008$) and relationship ($p=0.000$); inappropriate attitude with age group ($p=0.001$), current academic year ($p=0.040$), religion ($p=0.005$) and relationship ($p=0.000$). **Conclusion:** actions aimed at increasing knowledge are important, which allows for better attitudes about the use of condoms.

DESCRIPTORS: Students, Health occupations; Health knowledge, Attitudes, Practice; Sexual health; Sexually transmitted diseases; Condoms.

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RESUMO

Objetivos: analisar o conhecimento e a atitude de universitários da área da saúde sobre o uso do preservativo como método de prevenção das infecções sexualmente transmissíveis e comparar o grupo de participantes que já tiveram relações sexuais dos que ainda não tiveram. **Método:** estudo descritivo, transversal e quantitativo, sobre conhecimento e atitude. Foi executado em formato on-line durante o período de setembro a dezembro de 2021. A análise de dados foi realizada por meio dos softwares JASP 0.9.1.0 e BioEstat 5.0. **Resultados:** dos 219 participantes, 96 (43,8%) possuíam conhecimento inadequado e 116 (53,0%) atitude inadequada acerca do uso do preservativo. O conhecimento inadequado esteve associado com a faixa etária ($p=0,008$) e relacionamento ($p=0,000$); a atitude inadequada com a faixa etária ($p=0,001$), ano acadêmico em curso ($p=0,040$), religião ($p=0,005$) e relacionamento ($p=0,000$). **Conclusão:** são importante ações voltadas ao aumento do conhecimento, o que possibilita melhores atitudes sobre o uso de preservativos.

DESCRITORES: Estudantes de ciências da saúde; Conhecimentos, Atitudes e prática em saúde; Saúde sexual; Doenças sexualmente transmissíveis; Preservativos.

RESUMEN

Objetivos: analizar el conocimiento y la actitud de estudiantes universitarios del área de la salud sobre el uso del preservativo como método de prevención de infecciones de transmisión sexual y comparar el grupo de participantes que han tenido relaciones sexuales con los que no. **Método:** estudio descriptivo, transversal y cuantitativo sobre conocimientos y actitudes. Se realizó en formato online de septiembre a diciembre de 2021. El análisis de datos se realizó mediante el software JASP 0.9.1.0 y BioEstat 5.0. **Resultados:** de los 219 participantes, 96 (43,8%) tenían conocimientos inadecuados y 116 (53,0%) tenían una actitud inadecuada sobre el uso del preservativo. El conocimiento inadecuado se asoció con el grupo de edad ($p=0,008$) y la relación ($p=0,000$); actitud inapropiada con grupo de edad ($p=0,001$), curso académico actual ($p=0,040$), religión ($p=0,005$) y relación ($p=0,000$). **Conclusión:** las acciones dirigidas a aumentar el conocimiento son importantes, lo que permite mejores actitudes sobre el uso del preservativo.

DESCRIPTORES: Estudiantes del área de la salud; Conocimientos, Actitudes y práctica en salud; Sexual health; Enfermedades de transmisión sexual; Condones.

INTRODUCTION

Sexuality can be defined as an essential human issue, which includes sex, sexual orientation, eroticism, gender identities and roles, intimacy and reproduction, and may be influenced by cultural, psychological, biological, socioeconomic, historical, religious and spiritual aspects.¹

During sexual intercourse, there is a relevant exchange of bodily fluids, which is directly related to the transmission of Sexually Transmitted Infections (STI) and Acquired Immunodeficiency Virus (HIV), especially when there is inadequate use or non-use of condoms.²

According to data from the World Health Organization (WHO), released in 2019, in the world there are more than 376 million new annual cases of chlamydia, gonorrhoea, trichomoniasis, and syphilis among people aged 15 to 49 years.³ In Brazil, in the year 2019, the Ministry of Health pointed out about 1 million new cases of STI in the population aged 18 years or older.⁴

From this perspective, college students constitute a group susceptible to STIs. Entering higher education promotes new challenges and situations that will shape their personality. The sensations and emotions that are initiated reinforce the belief of invulnerability of youth, which can be represented by sexual freedom that exposes them to risky health behaviors.^{5,6}

In view of the above, the objective of the present article was to analyze the knowledge and attitude of college students in the health area regarding the use of condoms as a method of

STI prevention and to compare the group of participants who have already had sexual intercourse with those who have not yet had sex.

METHODOLOGY

This is a descriptive study of the Knowledge, Attitude, and Practice (KAP) survey type, with a cross-sectional design and quantitative approach. In this study, practice was not verified, as it was not included in the research objectives.⁷

The research setting was a public university in the health area, located in the state of Alagoas. Data collection took place online, during the period from September to December 2021, through the Google forms access link sent to the institutional e-mails of the university students.

The inclusion criteria were: students of in-class bachelor's courses, enrolled in the first academic semester of 2021, aged 18 years or older, and who were not in a mandatory internship and/or in the last year of the course. Academics who had locked the undergraduate course during the data collection period were excluded.

According to data provided by the educational institution, the population of academics who met the inclusion criteria corresponded to 677 university students. The sample size calculation was performed with a confidence level of 95% and a sampling error of 5%, which resulted in a representative sample of 246

Table 1 – Cont.

1 or 2	38(55.0)	31(45.0)	69	46(59.7)	31(40.3)	77
3 or 4	19(70.4)	8(29.6)	27	30(78.9)	8(21.1)	38
Color				0.763 ^a		0.507 ^a
White	28(62.2)	17(37.8)	45	37(63.8)	21(36.2)	58
Black/ brown	29(59.2)	20(40.8)	49	39(69.6)	17(30.4)	56
Family income (in real)				0.353 ^b		0.156 ^b
Less than 1,100.00	9(64.3)	5(35.7)	14	12(80.0)	3(20.0)	15
1,100.00 to 3,300.00	30(68.2)	14(31.8)	44	41(70.7)	17(29.3)	58
More than 3,301.00	16(51.6)	15(48.4)	31	18(54.5)	15(45.5)	33
Source				0.978 ^a		0.300 ^a
Capital	30(58.8)	21(41.2)	51	51(69.9)	22(30.1)	73
Interior/other state	26(59.1)	18(40.9)	44	26(60.5)	17(39.5)	43
Religion				0.089 ^a		0.005^a
Christian	40(55.6)	32(44.4)	72	46(58.2)	33(41.8)	79
Non-Christian/Does not have	16(76.2)	5(23.8)	21	29(85.3)	5(14.7)	34
Gender				0.203 ^a		0.117 ^a
Male	15(71.4)	6(28.6)	21	20(80.0)	5(20)	25
Female	42(56.0)	33(44.0)	75	57(63.4)	33(36.6)	90
Gender Identity				1.000 ^c		0.553 ^c
Cisgender	56(59.6)	38(40.4)	94	75(66.4)	38(33.6)	113
Trans / non-binary	1(100.0)	0(0.0)	1	2(100.0)	0(0.0)	2
Sexual orientation				0.203 ^a		0.197 ^a
Straight	42(56.0)	33(44.0)	75	59(64.1)	33(35.9)	92
Other	15(71.4)	6(28.6)	21	18(78.3)	5(21.7)	23
Relationship				0.000^a		0.000^a
Single	23(42.6)	31(57.4)	54	23(43.4)	30(56.6)	53
Stable partnership	33(80.5)	8(19.5)	41	51(85.0)	9(15.0)	60
Total	57	39		77	39	

I do not wish to answer" responses were excluded for statistical analysis.

*HHSI =Already had sex +HNYHSI =Not yet had sex (at the time of data collection)

^aPearson's chi-square ^bWilliams G-test ^cFisher's exact

graduate studies ($p=0.040$; $OR=0.39$; $CI\ 95\%=0.16-0.97$), those who were not Christians or had no religion ($p=0.005$; $OR=0.24$; $CI\ 95\%=0.08-0.68$) and college students who had stable partnerships ($p=0.000$; $OR=0.13$; $CI\ 95\%=0.05-0.33$).

Regarding knowledge, some questions had a higher frequency of wrong answers, as shown in table 2. It was found that 171 (78.8%) of the participants knew that it is necessary to hold the tip of the condom to put it on ($p=0.006$; $OR=2.54$; $95\% CI=1.27-5.08$), while another 170 (78.0%) did not know about the importance of using more lubricant ($p=0.014$; $OR=3.00$; $95\% CI=1.20-7.49$) and 79 (36.4%) believed or did not know that the female condom should not be used together with the male condom ($p=0.014$; $OR=0.46$; $95\% CI=0.24-0.86$). Regarding condom use on sex toys, 76 (35.2%) responded that they did not need to use ($p=0.000$; $OR=4.58$; $95\% CI=2.40-8.76$). Regarding the aforementioned associations, they were strongly related to college students who HNYHSI.

In Table 3, it can be seen that for oral sex, 80 (37.0%) participants did not think its use was necessary ($p=0.050$; $OR=1.85$; $95\% CI=0.99-3.47$), especially the college students who HNYHSI.

DISCUSSION

The results pointed out gaps in the knowledge and attitude of students regarding condom use as a method of STI prevention. Regarding the characterization of the sample, there was a predominance of the age group between 18 and 21 years. This profile was also more prevalent in different studies carried out with this population.^{6,13}

Still in the social characterization of the sample, we observed a predominance of females, Caucasians, and heterosexual participants. Similar results are noticed in investigations carried out in different regions of Brazil.^{6,14-16} In view of the singularities that involve the different social groups that make up universities, it is essential to know the profile of these students, since biological, social, cultural, and socioeconomic factors can influence the sexual practices of individuals.¹⁷

In this study, 96 (43.8%) of the interviewed students showed inadequate knowledge about condoms. The literature points out that college students' knowledge about STIs is low, especially aspects related to symptoms, transmission and prevention.⁶

From this perspective, there was an association between inadequate knowledge and individual aspects of the students,

Table 2 – Association and distribution of the questions with the highest number of wrong answers among college students who HHSI (n = 162) and those who HNYHSI (n = 57). Alagoas, Brazil, 2021.

Questions	HHSI HNYHSI			
	N (%)	n (%)	Total (100%)	
Does the condom have a right side and a wrong side?				0.172*
Yes ^V	133(76.0)	42(24.0)	175	
Don't/don't know ^F	29(65.9)	15(34.1)	44	
To put on a male condom, is it necessary to hold the tip?				0.006*
Yes ^V	134(78.4)	37(21.6)	171	
Don't/don't know ^F	27(58.9)	19(41.3)	46	
To remove the male condom, must the penis be erect (hard)?				0.321*
Yes ^V	43(79.6)	11(20.4)	54	
Don't/don't know ^F	118(72.8)	44(27.2)	162	
When removing a male condom, should one hold the tip?				0.062*
Yes/don't know ^F	109(70.3)	46(29.7)	155	
No ^V	52(82.5)	11(17.5)	63	
Is it necessary to use more lubricant along with the condom to prevent rupture?				0.014*
Yes ^V	42(87.5)	6(12.5)	48	
Don't/don't know ^F	119(70.0)	51(30.0)	170	
Can I use the external (male) condom together with the internal (female) one?				0.014*
Yes/don't know ^F	51(64.5)	28(35.5)	79	
No ^V	110(79.7)	28(20.3)	138	
Should condoms be used on sex toys?				0.000*
Yes ^V	119(85.0)	21(15.0)	140	
Don't/don't know ^F	42(55.3)	34(44.7)	76	
Total	162	57	219	

"I do not wish to answer" responses were excluded for statistical analysis.

^TTrue ^FFalse * Pearson's Chi-square

Table 3 – Association and distribution of the main attitude-related questions among college students who HHSI (n = 162) and those who HNYHSI (n = 57). Alagoas, Brazil, 2021.

Attitudes	HHSI HNYHSI			
	n (%)	n (%)	Total (100%)	
Do you agree or disagree with the statement: "Condoms are reliable".				0.952*
I agree ^A	129(74.6)	44(25.4)	173	
I disagree/don't know/no opinion ^I	33(75.0)	11(25.0)	44	
You think that using a condom is necessary:				0.425*
In ALL sexual relations ^A	138(75.4)	45(24.6)	183	
In SOME sexual relations/None/Not sure ^I	22(68.7)	10(31.3)	32	
You think that using a condom during oral sex is:				0.050*
It is always necessary ^A	108(79.4)	28(20.6)	136	
Not needed/not needed/don't know ^I	54(67.5)	26(32.5)	80	
Total	162	57	219	

The "do not wish to answer" responses were excluded for statistical analysis.

^AAdequate ^IInadequate *Pearson's chi-square

such as age group and relationships. Studies show that young people demonstrate certain levels of knowledge about condom use; however, the quality of information related to knowledge is insufficient to ensure the adoption of safe sex practices.^{17,18}

It is known that the university experience allows young people to have new experiences, since at this stage it is possible for them to go to different places, in addition to expanding their circle of friendships. With this, they have access to different ways of thinking and acting, which can also influence their expression of sexuality.¹⁹

In the context of the participants who have HHSI and are older than 22 years, the statistical significance of inadequate knowledge can be explained by the fact that the beginning of sexual life, added to a greater experience, may signal a greater number of partners throughout life. Moreover, the Brazilian reality signals the high prevalence of early initiation of sex life, thus contributing to greater vulnerability to STIs.¹⁹

Regarding sexual partnerships, the present investigation showed that inadequate knowledge was also associated with having stable sexual partnerships. The literature frequently mentions the association between vulnerability to STIs and the variation in sexual partners.^{18,20}

There is, then, a tendency to decrease the use of condoms as the stability of affective relationships consolidates. The adoption of this behavior may lead to increased vulnerability, a fact that may occur in situations that expose them to risk, such as the period of immunological window for STIs and the occurrence of extramarital relationships.²¹

Despite the existence of technologies for the prevention of HIV infection and other STIs, such as post-exposure prophylaxis (PEP) and pre-exposure prophylaxis (PrEP), prevention strategies are strongly based on the use of condoms, as this is a highly consistent, effective, and low-cost method.²²

Regarding age group, as well as knowledge, the inadequate attitude was strongly associated with college students aged 22 years or older. Several studies have pointed the age group as a significant characteristic in the process of adopting safe sex practices.^{19,22-23} Corroborating the findings of this study, an investigation conducted with 1215 university students in southern Brazil found that there was a trend toward decreased condom use as the age group increased.¹⁵

Another association raised by this research was inadequate attitude and having a stable partnership. The literature points out that emotional involvement and the establishment of trusting relationships may encourage the belief that condoms are optional in sexual relations.²³ Additionally, individuals in stable relationships tend to show a higher priority in preventing unwanted pregnancy and STIs. In this sense, they substitute the use of condoms for other contraceptive methods.²⁴

The inappropriate attitude was also associated with those who stated that they were not Christian or had no religion. Following or not a religious doctrine involves issues that influence how the individual deals with issues inherent to life, including their sexual and reproductive health.²⁴ Seeking to evaluate the rela-

tionship between religiosity and sexual attitude among Europeans over 18 years old, researchers found that agnostics and atheists adopted more liberal behaviors when compared to those who held some belief.²⁵

Although the associations between male participants with inadequate knowledge and attitudes did not show statistical significance, the literature points out that men are more associated with inadequate practices, exposing them to greater risk. This can be justified due to the greater number of sexual partnerships, in addition to the early onset of sexual life. In addition, they are more associated with low risk perception, thus increasing their vulnerability to STIs.^{18,20}

About the questions with higher frequencies of wrong answers, an association was observed between these and the college students who HNYHSI. Despite the use of condoms being a frequent theme for the population in this research, it is evident the lack of capillarity and incipient knowledge and appropriate attitudes in the adoption of safe sex practices, especially among those who have not yet started their sexual lives.

Moments of sexual education corroborate not only for the reduction of risk behavior, but also stimulate the autonomy and self-care of the individual. As with the use of condoms, the deconstruction of myths and correct guidance on their use is essential for young people to exercise their sexuality in a consistent manner, avoiding unfavorable outcomes, such as STIs or even an unplanned pregnancy.^{24,26}

This study is limited by the fact that it took place only at a university in Alagoas. In this perspective, it is suggested that other studies expand the investigation to reach university students from public and private institutions, in order to obtain a different social context. It is believed that the present investigation can contribute to know the characteristics of the population regarding condom use and thus develop strategies for discussion and encouragement of safe sex practices.

CONCLUSION

The results of this study strengthen the conception that young college students, despite a high level of education, have a set of individual, social, and programmatic factors that influence knowledge and attitudes favorable to condom use in their sexual practices. It was observed that students who HNYHSI had lower knowledge and higher chances of inadequate attitudes when compared to college students who HHSI.

Thus, the understanding of university managers and the scientific community about the reality that guides these young people favors the development of actions and strategies capable of acting on their needs, increasing knowledge and enabling favorable attitudes towards the theme.

FINANCING

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