

**KNOWLEDGE AND  
PREVALENCE OF ISTS  
AMONG GRADUATES  
OF THE MEDICINE  
COURSE AT THE ESTATE  
UNIVERSITY CENTER OF  
RIBEIRÃO PRETO**

---

*Allan Carrasco Duarte*

<https://orcid.org/0000-0001-5510-4729>

*Ana Laura Folcheti Garcia*

<https://orcid.org/0000-0002-8716-6390>

*Kerolaine Cristina Cônsoli*

<https://orcid.org/0000-0002-5848-463X>

*Lara Sandielly de Almeida Guerra*

<https://orcid.org/0000-0003-1175-6359>

*Rafael Rached Elias*

<https://orcid.org/0000-0002-3542-188X>

*Analu Egydio dos Santos*

<https://orcid.org/0000-0002-4648-0703>

*Carla Duque Lopes*

<https://orcid.org/0000-0003-0702-5043>

All content in this magazine is licensed under a Creative Commons Attribution License. Attribution-Non-Commercial-Non-Derivatives 4.0 International (CC BY-NC-ND 4.0).



**Abstract:** To identify the prevalence, knowledge and behavior of medical students in relation to sexually transmitted infections (STIs), guiding the behavior in the face of prevention and health promotion, having knowledge of the possible effects of the disease over time. Conducting an individual electronic questionnaire, randomly distributed to students from the first to the eighth period of the medicine course at the Centro Universitário Estácio de Ribeirão Preto, São Paulo. Most students aged 20 to 23 years old, single and frequent sexual partners with casual partners. Of the 181 responses, 43.7% of students do not use condoms during sexual intercourse and misinformation does not seem to justify this practice. Most students showed knowledge about the contagion and main diseases resulting from STIs and 5% reported having had sex with STI carriers, of which 2 students reported having contracted syphilis. Even though they are carriers of information, young medical students at Centro Estácio in Ribeirão Preto are in a vulnerable situation when it comes to STIs.

**Keywords:** Students, STI, prevalence, questionnaire and medicine.

## INTRODUCTION

Sexually Transmitted Infections (STIs), caused by more than 30 etiological agents and transmitted mainly through sexual contact (FONTE et al., 2018a). According to data from the World Health Organization (WHO), 94% of Brazilians are aware of the protective effectiveness of condoms and studies show that 23.5% of the sexually active population used condoms during sexual intercourse in the 12 months that the survey was carried out (PCAP 2013), 2016). Data from the Ministry of Health, 2019, show that about 2.5% of sexually active Brazilians contracted an STI between 2010 and 2018 (BOLETIM EPIDEMIOLOGICO, 2019).

The consumption of psychoactive substances is often higher among students, increasing the probability of experiencing dangerous occasions, including unprotected sex. Such negative behavior, opportunity for partner variability and lifestyle changes in the academic sector make the population of young university students susceptible to STIs (FONTE et al., 2018a). Therefore, young people from higher education courses in the health area have lower chances of contagion due to the increase in the level of prevention according to the best instructions. (CARDOSO et al., 2017). Adopting this line of reasoning, this work aims to analyze the prevalence of students from the medical course at Centro Estácio de Ribeirão Preto who are susceptible to sexually transmitted infections and science about the main STIs.

## METHODOLOGY

Cross-sectional, descriptive and quantitative epidemiological study, with students of the medicine course at Centro Universitário Estácio de Ribeirão Preto/ SP in the year 2020. Research carried out by an individual questionnaire, containing 20 questions, applied via digital platform (Google Forms). The criteria for the elaboration of questions were described by Questionpro et al. (2020), there were no subdivisions by gender, age, race, year of graduation and carried out with six classes (1st to 8th period), obtaining 181 responses, analyzed by percentage to distinguish the collected sample. The project was included in the Research Ethics Committee, in the approved opinion number 2,190,926, CAEE 70621517.0.0000.5581 of the Centro Universitário Estácio de Ribeirão Preto. Research participants received the Free and Informed Consent form electronically based on the guidelines contained in CNS Resolution N°466/2012, MS.

## RESULTS

A total of 181 returns were obtained and it appears that the data were among students aged between 17 and 45 years, with the highest participation of women, 63.5% (115) and 35.4% (64) by men, the dominant age group. of young people between 20 and 23 years old (13% aged 20 years old, 12% aged 21 or 22 years old and 10% aged 23 years old) attending the third university period (24.9% of the responses) or second period (17.1%) and the other periods with similar results. Regarding marital status, the majority declared themselves single (115 responses, 63.5%), while 29.8% (54) were in a stable relationship. The presence of sexual activity among students is high, eighty students (44.2%) have weekly sexual activity, followed by monthly activities (20.4%), comprising more than 60%, while the others were divided into “rare, daily and never”, totaling 35.4% (Figure 1).

Most students label themselves as single and the minority reported having casual partners in the last 12 months representing 26.7% and more than thirty-nine percent (39.4%) claimed to have had sexual intercourse with casual partners. As for the use of condoms during intercourse, 52.4% of 166 students said they used it, 43.4% denied it and 4.2% said they did not remember (Figure 2).

Furthermore, the female condom was rarely reported in the student group, more than ninety percent of men said they had never used this type of individual protection (90.9%) and women (93.2%). Interestingly, the percentages become discrepant when comparing the use of female condoms between the sexes, the male public (9.1%) reported more use of condoms when compared to women (6.8%). Due to the significant number of unprotected sexual relations, an attempt was made to identify influencing elements of such conduct, the majority (94.4%) agreed

that the use of alcohol or drugs influence this conduct and (5.6%) disagreed. Trying to understand whether students have notions about the possibilities of transmission, as explained in Figure 3, the majority (165) state that penile-vaginal intercourse is the most prevalent, followed by anal sex without the use of condoms (144) and oral sex without the use of personal protection. Only 30 undergraduates exposed the existence of other means of contamination.

AIDS was the disease most linked to sexual contagion transmitted in the absence of condoms (98.9%), followed by syphilis (93.3%) and few objected that Dengue (3.3%) could be sexually transmitted. On the other hand, the results positively related to safety in guiding possible patients when it comes to STIs, more than eighty percent (81.7%) said they felt able to direct patients with carriers against 18.3%.

Next, it was asked if they knew people with STIs and more than forty percent of the students (46.7%) claimed to have information about people with STIs, and asking if they had sex with people with an STI, nine students (5%) reported that they knew after to the relationship, that the partner was a carrier (Figure 4). Of these, 8 said they did not use condoms during intercourse and six did not undergo the test for syphilis and of the 3 who did, two obtained a positive result.

## DISCUSSION

Of every 10 Brazilians, four are between 15 and 29 years old, totaling 50 million young people (FONTES et al., 2017). Many university students are at high risk, as they are initiating their sexual life, in this sense, entry into institutions favors the emergence and consolidation of behaviors related to the intake of alcohol, drugs and unprotected sexual practices (FONTE et al., 2018a). In agreement, our data showed that most

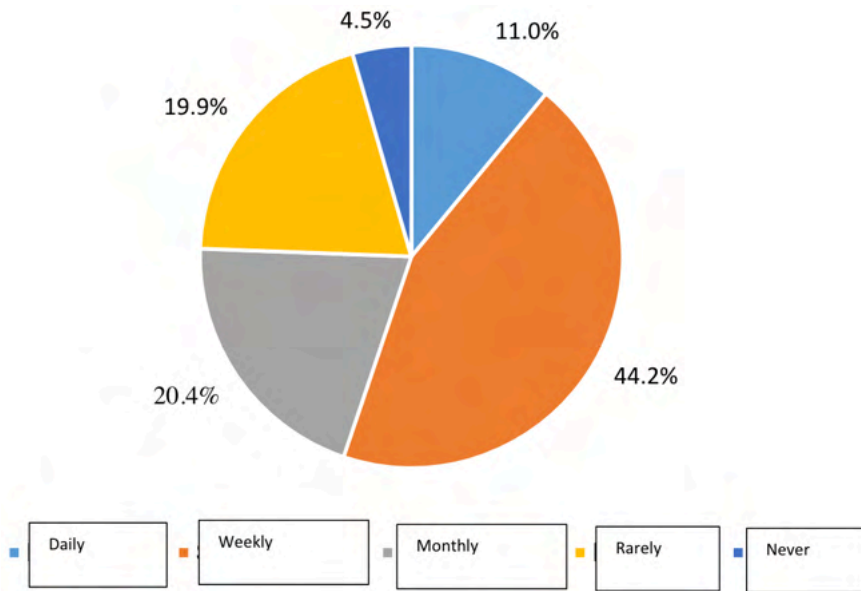


Figure 1 – Frequency of sexual relations of the student of the first periods of the Faculty of Medicine.

Source: Authors.

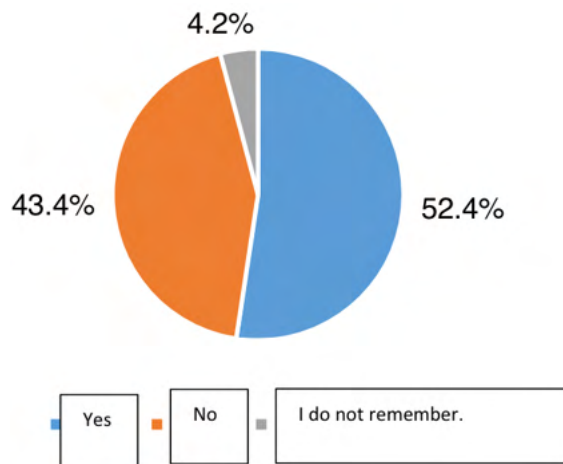


Figure 2- Percentage of condom use during sexual intercourse among medical students.

Source: Authors.

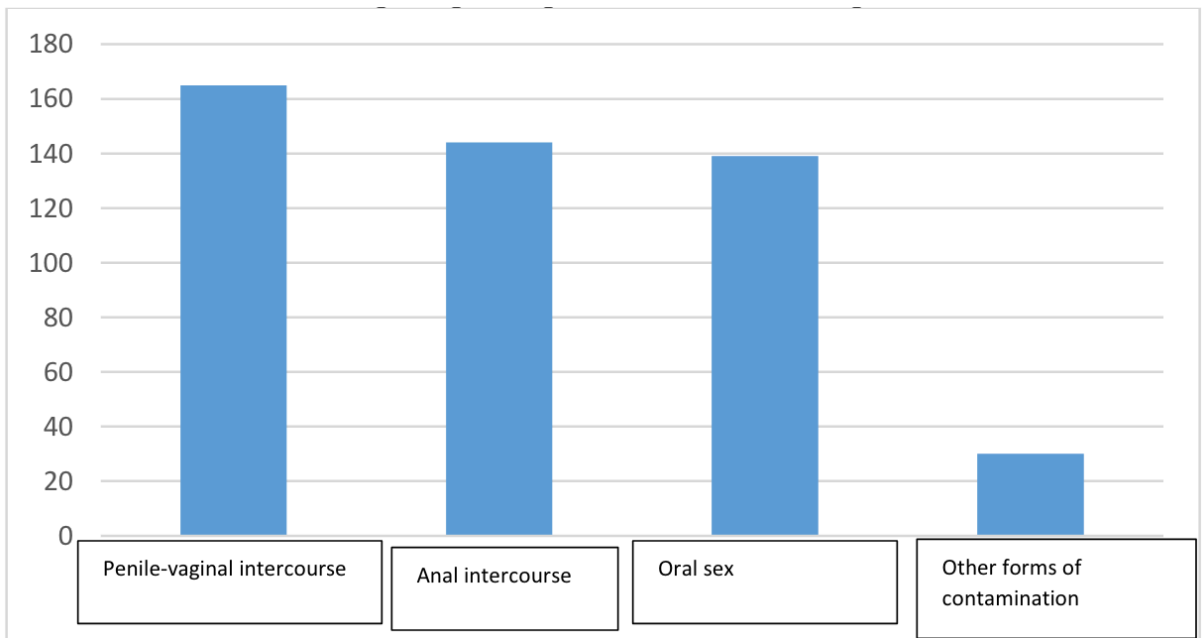


Figure 3 – Knowledge regarding the means of contagion of STIs.

Source: Authors

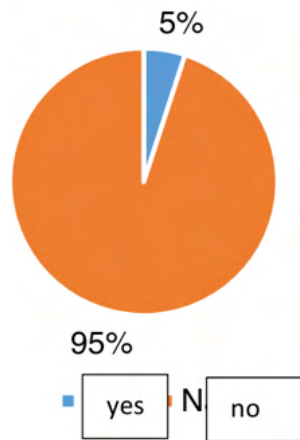


Figure 4 – Medical students who had sex with a carrier de IST.

Source: Authors.

medical students were between 20 and 23 years old and revealed that they are mostly single and have sexual activity (44.2% report weekly activity). Comparing with the study of academics from a University of Rio de Janeiro, 74.5% of the students reported sexual activity in the last 30 days, 24.4% said a sexual assiduity lower than the monthly rate (ARAGÃO et al., 2011) corroborating our findings. found.

The study carried out by the Federal University of Ceará (UFC), of the 211 academics in the health area, 160 were sexually active with a steady sexual partner and 51 people (24.2%) with a casual partner (FALCÃO JÚNIOR et al., 2007) , similarly, 39.4% of the students at Centro Estácio in Ribeirão Preto have casual partners. According to the study carried out by Unesco (UNESCO et al., 2002), the basic challenge in the subject of STIs is to change behaviors, due to affective and privacy aspects rooted in sociocultural norms, adding access to universities and distancing from family members, coercing them to learn to deal with the new dualities. On the other hand, youth is one of the most intense and rich periods of life, inviting the experience of new habits, behaviors and maturity, proving to be delicate with regard to infection by diseases due to unprotected sexual practices (FONTES et al., 2017).

Medical students, despite having access to information on STIs, are vulnerable and are susceptible to acquiring infections (MACHADO et al., 2019; MANOEL; TREVISOL, 2017). Even though condoms are a good contraceptive and preventive method, they are no longer incorporated into the sexual routine of academics due to factors associated with the time of relationship, greater sexual contact, lack of preventive knowledge or non-acceptance of the sexual partner (a) NOGUEIRA et al., 2018). Our

data showed that 44.2% of the students did not use any type of condom during sexual intercourse. Therefore, the results obtained in this study are not uncommon, considering that the main preventive method pointed out was the male condom (MOKGESTSE; RAMUKUMBA, 2018), and such a choice is usually linked to practical factors (SARMENTO et al., 2018), in addition to the scarce dissemination and education tactics regarding the use and inclusion of the female condom in sexual relations (KALCKMANN, 2013).

Even with advantages, the study by Silva et al. (2020a) shows that women have deficient information about the contraceptive method, correlated with the lack of educational activities on preventive sexual methods. In this study, 93.3% of the women responded that they had never used such a condom during intercourse, as it may be associated with lack of knowledge and lack of dexterity in handling condoms, causing uncertainty during the act (ACOSTA et al., 2015).

Studies related to the behavior of students regarding drug use demonstrate that it can impair decision-making, which associated with safe sexual practices makes them vulnerable (SILVA et al., 2020b). The results cite that more than 90% of the sample population agree that the consumption of alcoholic beverages interferes with the use of condoms during sexual intercourse and support the study carried out by Souto and contributors (SOUTO et al., 2020) demonstrating that the use of these substances favored sexual practice without a condom, propagating STIs. Checking the evaluation of university students regarding the knowledge of the forms of transmission of STIs, at the Veiga de Almeida University, in Rio de Janeiro, a high awareness of syphilis and HIV was shown, with 78% of young people aged 18 to 24 years and 89%

of young people aged 25 to 29 in relation to syphilis (FONTE et al., 2018b). As previously exposed in the present data, students have knowledge about the means of transmission, with AIDS being the most associated with sexual infection transmitted in the absence of condoms (98.9%) followed by syphilis (93.3%) in the age group from 20 to 20. 23 years.

Research at the State University of Campinas showed that students are known to be exposed to sexual relations with people with STIs. In this study, 8.6% of the students knew they had had an STI, while 8.4% were not sure about it and almost 5% reported having had a relationship with someone who had an STI (CASTRO et al., 2016). Our work shows a correlation, five percent of the students revealed that they had later knowledge that they had had sex with a partner with an STI. Such behavior is mainly due to trust in the partner, since less than 20% of them used condoms properly. Most of the students suspected of contracting STIs in our study reported not having undergone the test, while two of those who underwent the test had a positive result. Similar data was observed in the research carried out by the Faculty of Medical Sciences of the University of the State of Rio de Janeiro. When interviewing 356 adolescents, 109 were sexually active with STIs (TAQUETTE et al., 2004)

## CONCLUSION

The present study proves the seriousness of caution and awareness during the course of medicine. Our data are worrying as almost half of the students deny the use of condoms during sexual intercourse. It is concluded that even with information about such infections, the behavior of young people does not reflect learning. Understanding factors that prevent the transformation of information into active practice is essential to avoid unnecessary exposure of these young people to sexually transmitted infections. This way, it is extremely important to continue to disseminate and raise awareness, especially among young health academics, allowing information to be transmitted in an agile, explanatory and illustrative way, seeking to make people increasingly aware of the risks that arise. they put it every time they choose to have an unprotected sexual relationship, thus motivating the self-care of young students.

## REFERENCES

- ACOSTA, D. F. et al. **A camisinha feminina sob o olhar do homem**. Revista de Enfermagem UFPE, vol. 9, n. 1, 2015. Disponível em:<<https://periodicos.ufpe.br/revistas/revistaenfermagem/article/view/10305>>.
- ARAGÃO, J. C. S. et al. **Comportamento Sexual de Estudantes de um Curso de Medicina do Rio de Janeiro**. Revista Brasileira de Educação Médica, vol. 35, n. 3, p. 334-340, 2011. Disponível em:<<https://www.scielo.br/j/rbem/a/TqGzqJzFww3C9c3nMW5CpYK/?format=pdf&lang=pt>>.
- BOLETIM EPIDEMIOLÓGICO. **Secretaria de Vigilância em Saúde e Ministério da Saúde. Sífilis**, out 2019. Disponível em:<<http://www.aids.gov.br/pt-br/pub/2019/boletim-epidemiologico-sifilis-2019>>.
- CARDOSO, B.C.R. et al. **O conhecimento dos jovens universitários sobre a prevenção de HIV/AIDS e outras DSTs**. Brazilian Journal of Surgery and Clinical Research, v.20,n.2, p. 80-83, 2017. Disponível em:<[https://www.mastereditora.com.br/periodico/20171001\\_162832.pdf](https://www.mastereditora.com.br/periodico/20171001_162832.pdf)>.
- CASTRO, E. L. et al. **O conhecimento e o ensino sobre doenças sexualmente transmissíveis entre universitários**. Ciênc. Saúde coletiva, vol. 21, n. 6, junho 2016. Disponível em:< <https://www.scielo.br/j/csc/a/trKSmLBwFPd3LC4x64N4Tnf/abstract/?lang=pt>>.
- FALCÃO JÚNIOR, J. S. P. et al. **Perfil e Práticas Sexuais de universitários da área de saúde. Escola Anna Nery**, vol. 11, n. 1, Mar 2007. Disponível em:< <https://www.scielo.br/j/ean/a/gXHtBVLBWkd9MpngXQRwVfF/?format=pdf&lang=pt>>.
- FONTE, V. R. F. de. et al. **Conhecimento E Percepção De Risco Em Relação Às Infecções Sexualmente Transmissíveis Entre Jovens Universitários**, Cogitare Enfermagem, v. 23, n. 3, 2018 (a). Disponível em:<<https://revistas.ufpr.br/cogitare/article/view/55903>>.
- FONTE, V. R. F. de. et al. **Jovens universitários e o conhecimento acerca das infecções sexualmente transmissíveis**. Escola Anna Nery, vol.22, n. 2, 2018 (b). Disponível em:< <https://www.scielo.br/j/ean/a/5HqmrYZPWj4yPFnPts9mSsH/?lang=pt&format=pdf>>.
- FONTES, Miguel Barbosa et al. **Fatores determinantes de conhecimentos, atitudes e práticas em DST/Aids e hepatites virais, entre jovens de 18 a 29 anos, no Brasil**, Ciência & Saúde Coletiva, v. 22, n. 4, p. 1343–1352, 2017. Disponível em:< <https://www.scielo.br/j/csc/a/dTkqDBpQTrPRHfNSzgDgt3t/abstract/?lang=pt>>.
- KALCKMANN, S. **Preservativo feminino e dupla proteção: desafios para os serviços especializados de atenção às DSTs e Aids**. Temas em Psicologia, vol. 21, n. 3, p. 1145-1157, Dez 2013. Disponível em:< <http://pepsic.bvsalud.org/pdf/tp/v21n3/v21n3a20.pdf>>.
- MACHADO, I. C. P. et al. **A negligência no uso de preservativo e a exposição ao risco de infecções sexualmente transmissíveis no ensino superior: um paradoxo entre informações e práticas**. Brazilian Journal of Development, vol. 5, n. 11, p. 24358-24372, 2019. Disponível em:< <https://www.brazilianjournals.com/index.php/BRJD/article/view/4508>>.
- MANOEL, A. L.; TREVISOL, F. S. **Comportamento sexual de estudantes de medicina do Brasil: um estudo multicêntrico**. DST j. bras. Doenças Sex Transm, vol. 29, n. 2, p. 44-49, Out 2017. Disponível em:< <http://www.jbdst.inpub.solutions/publicas/jbdst/arquivos/15091255997WH5VWSXQJ5NIRW9FNERIGTW4JX1HO/2177-8264-JBDST-29-02-00044.pdf>>.
- MOKGETSE, M.; RAMUKUMBA, M. M. **Female condom acceptability and use amongst young women in Botswana**. Curationis, vol. 41, n. 1, 2018. Disponível em:< <https://curationis.org.za/index.php/curationis/article/view/1887/2336>>.
- NOGUEIRA, F. J. de S. et al. **Prevenção, risco e desejo: estudo acerca do não uso de preservativos**. Revista Brasileira em Promoção da Saúde, vol. 31, n. 1, 2018. Disponível em:< <https://periodicos.unifor.br/RBPS/article/view/6224>>.
- PCAP (Pesquisa de Conhecimentos, Atitudes e Práticas na População Brasileira) 2013. Secretaria de Vigilância em Saúde. Departamento de DST, Aids e Hepatites Virais, 21 Nov 2016. Disponível em:< <http://www.aids.gov.br/pt-br/search/content/pcap>>.
- QUESTIONPRO. **Amostra por conglomerados. Um tipo de amostragem probabilística**. QuestionPro, 2020. Disponível em:< <https://www.questionpro.com/blog/pt-br/amostra-por-conglomerados/>>.



SARMENTO, M. do S. R. de A. et al. **Comportamentos sexuais e o uso de métodos contraceptivos em universitárias da área da saúde.** REME: Revista Mineira de Enfermagem, vol. 22, 2018. Disponível em:< <http://reme.org.br/artigo/detalhes/1248>>.

SILVA, J. G. et al. **A Ótica da Mulher acerca do Preservativo Feminino/Women's Viewpoint about the Female Condom.** Revista de Psicologia, vol. 14, n. 51, p.502-510, 2020(a). Disponível em:< <https://idonline.emnuvens.com.br/id/article/view/2592>>.

SILVA, T. D. A. et al. **Comportamento sexual e ocorrência de sífilis em estudantes universitários da área da saúde.** Rev. Enfermagem Contemporânea, vol. 9, n. 1, 2020(b). Disponível em:< <https://www5.bahiana.edu.br/index.php/enfermagem/article/view/2530>>.

SOUTO, R. D. et al. **Comportamento sexual dos estudantes de medicina: diferenças entre os sexos e fatores influenciadores.** Brazilian Journal of Development, vol. 6, n. 10, 2020. Disponível em:< <https://www.brazilianjournals.com/index.php/BRJD/article/view/18028>>.

TAQUETTE, Stella. R. et al. **Doenças sexualmente transmissíveis na adolescência: estudo de fatores de risco.** Rev. Soc. Bras. Med. Trop, vol. 37, n. 3, maio-junho 2004. Disponível em:< <https://www.scielo.br/j/rsbmt/a/LQccsCDyqQFSx7FWjFZdN7K/?format=pdf&lang=pt>>.

United Nations Education, Scietific and Cultural Organization (UNESCO), United Nations Program on HIV/AIDS (UNAIDS). **AIDS: o que pensam os jovens.** Brasília: UNESCO, 2002. Disponível em:< <http://www.dominiopublico.gov.br/download/texto/ue000037.pdf>>.