

RESEARCH ARTICLE (ORIGINAL) 8

Factors influencing condom misuse from the perspective of young university students

Fatores que influenciam o uso inadequado do preservativo na perspectiva de jovens universitários

Factores que influyen en el uso inadecuado del preservativo desde la perspectiva de los jóvenes universitarios

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Resumo

Enquadramento: O comportamento de risco sexual de jovens relacionado com as infeções sexualmente transmissíveis envolve o início da vida sexual, variabilidade de parceiros, práticas casuais, (des)uso de preservativos e consumo de substâncias psicoativas.

Objetivo: Identificar os fatores que influenciam o uso inadequado do preservativo na perspectiva de jovens universitários.

Metodologia: Estudo descritivo, qualitativo, realizado numa universidade privada carioca brasileira com 30 jovens universitários, que integraram três grupos focais. Análise de dados utilizando a técnica de análise lexical e do IRaMuTeQ.

Resultados: Emergiram cinco classes, entre elas: o uso de álcool como determinante do comportamento de risco; uso inadequado de preservativos, associado ao risco de infeção; pouca informação sobre a prevenção dessas doenças; e uso de preservativos. Nas práticas sexuais, os participantes faziam uso descontinuado do preservativo e preocupavam-se mais com a ocorrência de uma gravidez não planeada.

Conclusão: A assunção dos comportamentos sexuais de risco pelos universitários denota vulnerabilidades nos âmbitos individual-social evidenciando-se a necessidade de se desenvolver estratégias efetivas de educação para a saúde e de intervenções terapêuticas.

Palavras-chave: preservativos; adulto jovem; infeções sexualmente transmissíveis; assunção de riscos; sexo sem proteção

Abstract

Background: The sexual risk-taking behaviors of young people regarding Sexually Transmitted Infections (STIs) are associated with sexual debut, partner variability, casual sex activities, (lack of) use of condoms, and substance abuse.

Objective: To identify the factors influencing condom misuse from the perspective of young university students.

Methodology: A descriptive qualitative study was conducted at a private university in Rio de Janeiro, Brazil, with 30 young university students participating in three focus groups. Data were analyzed using the lexical analysis technique and IRaMuTeQ software.

Results: The following five classes emerged: alcohol use as a determinant of risky behaviors; condom misuse associated with the risk of infection; lack of information on STI prevention; and condom use. Participants reported using condoms inconsistently and being more concerned about the occurrence of an unplanned pregnancy.

Conclusion: University students' sexual risk-taking behaviors reveal individual and social vulnerabilities and highlight the need to develop efficient health education and therapeutic interventions strategies.

Keywords: condoms; young adult; sexually transmitted infections; risk-taking; unsafe sex

Resumen

Marco contextual: El comportamiento sexual de riesgo de los jóvenes relacionado con las infecciones de transmisión sexual implica el inicio de la vida sexual, la variabilidad de las parejas, las prácticas casuales, el (no) uso de preservativos y el consumo de sustancias psicoactivas.

Objetivo: Identificar los factores que influyen en el uso inadecuado del preservativo desde la perspectiva de los jóvenes universitarios.

Metodología: Estudio descriptivo y cualitativo, realizado en una universidad privada de Río de Janeiro, Brasil, con 30 jóvenes universitarios que participaron en tres grupos focales. El análisis de datos se llevó a cabo mediante la técnica del análisis léxico y del IRAMUTEQ.

Resultados: Surgieron cinco clases, entre ellas, el consumo de alcohol como determinante del comportamiento de riesgo; el uso inadecuado del preservativo, asociado al riesgo de infección; la poca información sobre la prevención de estas enfermedades, y el uso del preservativo. En las prácticas sexuales, los participantes hacían un uso discontinuo del preservativo y se mostraban más preocupados por la aparición de un embarazo no planificado.

Conclusión: La adopción de conductas sexuales de riesgo por parte de los estudiantes universitarios denota vulnerabilidades en el ámbito individual y social, lo que pone de manifiesto la necesidad de desarrollar estrategias eficaces de educación sanitaria e intervenciones terapéuticas.

Palabras clave: condones; adulto joven; infecciones de transmisión sexual; asunción de riesgos; sexo inseguro



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Introduction

Sexually transmitted infections (STIs) are responsible for several conditions that compromise individuals' quality of life and sexual and reproductive health during all stages of the life cycle (World Health Organization [WHO], 2016). STIs are among the most common acute conditions worldwide, particularly among young adults (Ramos et al., 2020). STIs also indirectly favor the sexual transmission of the Human Immunodeficiency Virus (HIV) and can lead to cellular changes, which precede some types of cancer. More than 30 types of STIs are caused by etiological agents such as protozoa, fungi, viruses, and bacteria (WHO, 2016).

The young adult age group is considered the most vulnerable to STIs due to sexual risk behaviors (SRBs; Hurley et al., 2017; Darré et al., 2018). Sexual behavior is influenced by the social environment and peer groups, the individual vulnerability associated with alcohol and/or illegal substance use, and the inconsistent use (or lack of use) of condoms, thus increasing the risk of acquiring STIs. Condom use is considered the best strategy to prevent STIs and unplanned pregnancies (Spindola et al., 2020).

Background

Studies evaluating condom use are more frequent with individuals belonging to priority attention groups, such as adolescents, men who have sex with men (MSM), sex workers, and people with HIV. However, young university students' sexual behavior and condom use need to be further explored scientifically, focusing on socio-cultural determinants (Spindola et al., 2020).

A research study conducted with 902 students from a public university in Minas Gerais (Brazil) assessed the prevalence and factors associated with SRBs and found that the most prevalent SRBs among university students were low fruit and vegetable intake, lack of aerobic exercise, and inconsistent condom use, the latter being more frequent among those who lived with a partner (Lima et al., 2017). The lack of condom use among married individuals or those living with partners is mentioned in several studies. These indicate that other factors can interfere with this decision, such as the feeling of trust in the partner, the length of the relationship, and the idea of romantic love, as mentioned by Pinchoff et al. (2017) and Spindola et al. (2020).

Adherence to condom use was investigated in a study with 3,482 individuals in the interior of north-eastern Brazil and considered fragile in all age groups. Adherence to condom use was also identified in earlier age groups among men participants who did not have a steady relationship and those who had a higher level of education. The preference for different contraceptive methods and the trust in the partner were reasons for not using condoms (Nascimento et al., 2017). Condom use is most often justified by a personal interest in preventing STIs (Lima et al., 2017; Darré et al., 2018).

Young people's vulnerability regarding STIs involves

sexual debut, partner variability, casual sexual activities, inconsistent use of condoms, and psychoactive substances (PS). These factors increase the likelihood of young people experiencing risky situations, such as unprotected sex (Antoniassi & Gaia, 2015; Andrade et al., 2016; Spindola et al., 2020) and justify the implementation of the present study.

Considering the factors influencing risk-taking sexual behaviors in a STI-vulnerable population, condom misuse and its influencing factors from the perspective of young university students were defined as this study's object.

Research Question

What factors influence condom misuse from the perspective of young university students?

Methodology

This is a descriptive study with a qualitative approach, which allows broadening the interaction between research participants to describe the debate, ongoing training, and understanding and interpretation of information to achieve the researcher's expected outcomes (Souza, 2020). The study was conducted at a private university in Rio de Janeiro, Brazil. Choosing a campus with several undergraduate programs was intentional, as it allowed the researchers to know and evaluate the behaviors of young adults from different areas of knowledge. The selected institution offers 26 programs on the same campus, with more than 15,000 students regularly enrolled in undergraduate, postgraduate, master, and doctoral programs. The Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines were followed to report the results. Students from both sexes (15 men and 15 women) were included, aged 18-29 years, with no restrictions regarding their academic program or period. The convenience sample was composed of 30 regularly enrolled university students, present at the time of data collection, which was carried out based on the recommendations applicable in qualitative research, particularly the principle of theoretical saturation of the data collected. Data saturation was expressed by the contents' ability to reflect the multidimensionality of the studied phenomenon, always bearing in mind the quality of the outcomes. The minimum number of participants in qualitative studies ($n \leq 30$) was also ensured, and there was no loss of participants. Data were initially collected through a questionnaire of sociodemographic characterization, followed by the Focus Group (FG) technique, carried out during three previously scheduled meetings after obtaining the participants' consent. The meetings took place in a reserved room with the main researcher, who acted as mediator, and two master's degree students, who acted as observers. The participants were equally distributed, with five men and five women in each FG, in accordance with the gender representation criteria pre-established in the main research. The FG is a type of group interview consisting

of 8-12 participants, based on communication and interaction, and aimed at gathering detailed information on a specific theme (suggested by the researcher) from a group of selected participants. The purpose is to collect information that allows understanding the perceptions, beliefs, and attitudes about a theme, product, or service (Souza, 2020).

Following the participants' authorization, the meetings were recorded with a media player (MP5) to ensure greater content reliability. One of the researchers transcribed the full recordings using Word software, version 2016 (Microsoft Windows) and stored them in a database. A script prepared by the authors was used as a data collection instrument, with topics regarding sexual conduct, STI prevention - such as condom use and sexual health care -, among other factors mentioned in the international literature (WHO, 2016). Data collection occurred from June to November 2016, with each FG having a mean time length of 90 minutes.

The lexical analysis technique, assisted by the Interface *R Pour les Analyses Multidimensionnelles de Textes et de Questionnaires* (IRaMuTeQ) software, was used to assess the discourse data during the data analysis and treatment phase.

A Descending Hierarchical Classification (DHC) was carried out. After processing and grouping the words according to their occurrence, the software created a class dendrogram. The classes were formed according to the relationship between the different Initial Context Units (ICUs), which presented similar words. To classify and establish the relationship between the classes, these ICUs were grouped according to the occurrence of the words and considering their roots, thus generating Elementary Context Units (ECUs) and creating a dictionary with reduced forms, using the Chi-square test (χ^2).

Five classes emerged from the software's successive binary divisions of the analysis corpus during the analysis process. This study described and analyzed classes 5, 3, and 2 as their content was more closely related to this study's proposed objective.

All the ethical and legal principles governing research with human beings were followed. The participants signed the

Free and Informed Consent Form before the data collection and after being informed of their participation's potential risks, benefits, and contributions. The students' anonymity was guaranteed using an alphanumeric code composed of up to three digits (e.g., P1, P2..., P30).

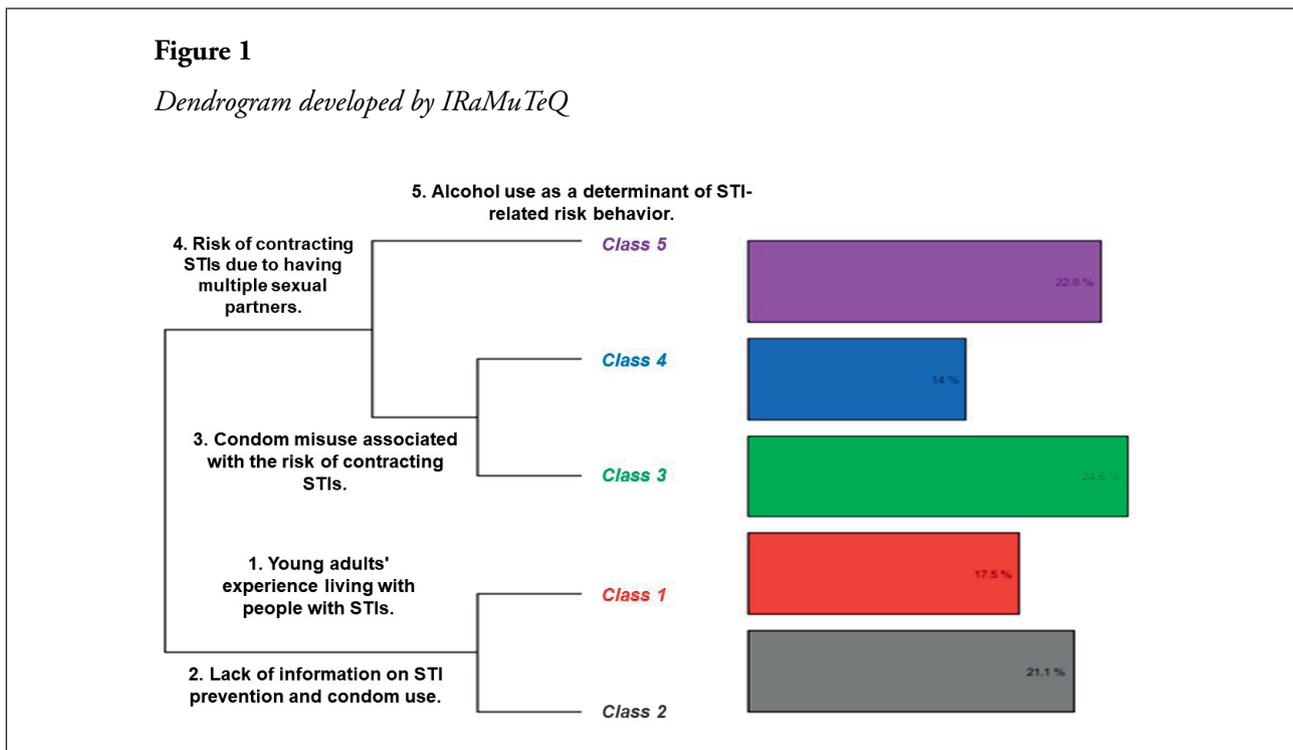
This study is part of a main research study called "Sexuality and vulnerability of young people in times of sexually transmitted infections", linked to the Postgraduate Program in Nursing of the State University of Rio de Janeiro. The main research study was approved by the Research Ethics Committee (CEP) of the study's host institution in 2016 (Opinion No. 1,577,311 and CAAE - Certificate of Presentation for Ethical Appreciation No. 56763316.1.0000.5291).

Results

The social profile of the 30 participants (15 men and 15 women) revealed that 26 (86.67%) were between 18-24 years old, and four (13.33%) were between 25-29 years old. Regarding the participants' relationship status, 23 (76.67%) were not in a romantic relationship, and six (23.33%) were. Twenty-nine (96.67%) participants did not have any children, and 27 (90%) lived with their parents. Concerning their area of knowledge, 20 (66.67%) students were from health sciences and 10 (33.33%) from applied social sciences.

The processing and grouping of word occurrences were carried out during the discourse analysis of the results and presented in the DHC by the dendrogram shown in Figure 1. Besides presenting the classes, Figure 1 also demonstrates the association between them. Each class has a different color, and the ECUs have the same color of the class to which they belong.

The relationship between the classes is read from left to right. The corpus was initially divided into two sub-corpora, with class 5 emerging and later divided again, resulting in classes 4 and 3. The other sub-corpus was subdivided into classes 1 and 2. This study presents classes 5, 3, and 2 as their contents are more closely related to its research objective.

Figure 1*Dendrogram developed by IRaMuTeQ*

Note. STI = Sexually transmitted infection.

Emerging from the first binary division of the corpus, class 5 consisted of 22.81% of the text segments (TSs) included. STI risk-related behaviors were associated with alcohol abuse, particularly at parties, and described as common, contributing to increased sexual risk-taking behaviors among participants, as shown in the following transcripts: “There are parties with drugs and alcohol, and I can give them a try and end up intoxicated and not use the condom” (P4, Man). “When I drink alcohol and use drugs, it is even more common to have sexual intercourse without a condom” (P11, Woman). “What happens at parties is that you go out without condoms, and you drink alcohol, and it [sexual intercourse] will happen anyway, so you just have to take the contraceptive the next day” (P16, Woman).

I had sexual intercourse with a man . . . who was so drunk that he couldn't even put the condom on properly . . . I think that the perception of any situation completely changes when the person is intoxicated. (P23, Woman)

Class 3 concentrated 24.56% of the TSs of the corpus and identified the inconsistent use of condoms. Although the students reported that these were the most effective STI prevention methods, they did not use condoms, with their discourses sometimes expressing a “sense of invulnerability.”

“I have friends who have been in a relationship for years and haven't used condoms for a long time because the girl takes contraceptives every month” (P4, Man). “I began my sexual life very early and didn't have appropriate information, many times I didn't use a condom” (P19, Man). “When I was 20 years old, I discovered that I didn't know how to put on a male condom, I didn't know and I had to learn. (P17, Woman) “It is quite typical for young people

to think that you will never suffer consequences of your [sexual] activities, . . . even because it is almost impossible to find female condoms” (P10, Woman). “I think that this idea of being vulnerable is related to irresponsibility. We are very irresponsible” (P19, Man).

Class 2 accounted for 21.05% of the TSs in the corpus and addressed STIs and prevention methods. Students considered that ignorance about STI prevention was associated with the lack of information and having little previous experience. Another perception observed was the acknowledgment of the high incidence of STIs among young people, which is not often discussed in the university context, as demonstrated by the following excerpts of the statements:

“We know more about HIV and syphilis, we don't know about the other STIs” (P19, Man). “When I started having sex, I took many risks, I became very vulnerable, precisely because I didn't know, didn't have this knowledge, which I acquired throughout my life, from things that I researched and saw” (P26, Woman).

There is a lot of talk about HIV, an infection that is not very frequent, we should think much more about syphilis, gonorrhea, which we can acquire daily. In fact, HIV does not kill as much as it did in the past, which is why young people stopped using condoms compared to our parents' generation. (P9, Man)

Discussion

The study participants' sociodemographic characterization regarding sex, age, and relationship status was similar to that found in other studies (Heredia et al., 2017; Spindola et al., 2020; Darré et al., 2018).

The use of alcohol as a determinant of risky behavior for

STI acquisition was characterized by young university students' insertion in social interaction situations. They feel more participative at parties and say that it is common to use alcohol in groups. This behavior influences the habit of not using condoms in casual sexual activities, where the partner is often unknown, and the encounters are unplanned. Thus, it is worth noting that among the multiple SRBs, alcohol and drug abuse are among the factors that contribute most to the risk of developing STIs (Lima et al., 2017).

A study that measured the effect of sociodemographic and vulnerability variables on alcohol use among 301 university students found that 80.4% of the women's alcohol use was moderate, and 19.6% was considered harmful. Factors significantly impacting the consumption pattern were the age of onset of alcohol use, socioeconomic status, type of drink consumed, and influence of social networks. Factors of vulnerability to alcoholism, such as a preference for distilled spirits, active participation in social networks that encourage consumption, and the onset of alcohol use at ages between 14 and 16, are aspects that may favor harmful alcohol use (Heredia et al., 2017).

Alcohol use can favor sexual risk-taking behaviors, such as neglecting condom use, particularly in young women, as shown in the discourses presented in class 5. This fact is corroborated by other studies, such as Lakunchykova & Burlaka (2017). Within this context, cigarette and alcohol use are presented as significant risks for the lack of condom use during sexual activities and are more prevalent among young women, thus expressing greater vulnerability (Guo et al., 2018).

The results from class 5 indicate that young people who use alcohol more frequently are more likely to have unprotected sexual intercourse. When comparing groups of alcohol-using and non-alcohol-using young people, it is observed that alcohol users are more vulnerable to unprotected sexual intercourse, have reduced ability to refuse unwanted sexual intercourse, or negotiate condom use with partners (Hurley et al., 2017; Lakunchykova & Burlaka, 2017).

These behaviors can be justified by the changes in the power of decision-making and expectations caused by using PS before sexual activities, or even during because young people feel less receptive to using condoms in sexual intercourse, as described in the studies of Manoel and Trevisol (2015) and Hurley et al. (2017). The authors Manoel and Trevisol (2015), in a multicenter cross-sectional study with 459 Brazilian undergraduate medical students, demonstrated that, regarding alcohol/drug use, 6.2% of the students usually used them before sex and 18.9% had already stopped using condoms for this reason. Although health sciences undergraduate students have greater access to information on STI prevention, barrier methods, contraceptives, and infections transmitted by unprotected sex, it is not guaranteed that they will adopt safer sexual practices, as demonstrated by this study, in which 36% of the sample were young health students. Sexual vulnerability can be caused by the lack of perception of the risks of STIs. Individuals with poor-risk perception are limited in their ability to negotiate condom use with

their partners. Condoms (male and female) as barriers are important allies in STI prevention strategies, and their lack of use, according to the WHO (2016), affects sexual/reproductive health in both sexes.

Appropriate condom use is considered a safe and effective method for preventing STIs and avoiding unplanned pregnancies (WHO, 2016). In this context, participants signal a sense of safety when using the morning-after or contraceptive pill. However, these are not 100% safe contraceptive methods and do not protect against STIs. In the university setting, students' alcohol and drug use at parties are recurrent, contributing to sexual risk-taking behaviors among young people, such as the lack of condom use, as demonstrated by this study. Other research studies corroborate these results and add that the use of PS increases the occurrence of different types of violence, as highlighted by Antoniassi Júnior and Gaya (2015).

Supporting the evidence on the lack of condom use and the risk of violence associated with the use of PS, a study with 902 university students from Minas Gerais (Brazil) observed that 63.1% of the participants had inconsistent condom use, being this the most prevalent SRB. They also described significant associations between the male sex and alcohol abuse, illicit drug use, and involvement in brawls (Lima et al., 2017). It is also important to note that, historically, men tend to consume more alcohol than women despite the significant increase of women drinkers in the last 20 years (Heredia et al., 2017).

Emotional, social, and physical transformations mark the stages of adolescence and youth, with the tendency for sexual risk-taking behaviors. In these developmental stages, the most vulnerable youth tend to engage in sexual risk-taking behaviors associated with the use of PS and in situations of unprotected sex, demonstrating different biopsychosocial vulnerabilities (Bertoli et al., 2016).

The misuse of condoms, associated with the risk of acquiring some STI, was related to an early sexual debut, lack of knowledge about how to use condoms, young people's sense of invulnerability, feeling of security regarding the negotiation of condom use in steady relationships, and the use of oral contraceptives to prevent unplanned pregnancies, which overlaps the risk of acquiring STIs. Sexual risk-taking behaviors by young university students and poor self-perception regarding vulnerability are frequent among exposed youth who are not aware of their real vulnerability since many factors overlap with the risk of acquiring STIs, such as unplanned pregnancies (Bertoli et al., 2016; Yared et al., 2017). Thus, this study's participants' discourses allowed understanding that using the pill (contraceptive method) outweighs the need for STI prevention.

It is also evident that young women have low adherence to the use of female condoms, which, in most cases, leaves the use of condoms under the partner's responsibility. This transfer of responsibility is associated with the lack of knowledge about the method and how to use it and low levels of trust in the resource. Thus, women's decision-making/control over contraceptive methods is often limited to preventing unplanned pregnancies (Obembe et al., 2017). The factors male gender, older age at the time of sexual

debut, absence of a steady partner, and casual sexual activities increase the likelihood of using condoms during sexual intercourse. A population-based survey of 821 sexually active young people aged 15-24 years found that, among male participants, condom use in the last sexual intercourse was associated with being single, having received free condoms, having casual sexual activities in the last year, and same-sex partnerships, and, among female participants, with the sexual debut at an age older than 15 years (Gutierrez et al., 2019).

Condoms were widely recognized, and the consistency of condom use during sexual debut was also identified, with free access to condoms being a decisive factor for their use by young people (Gutierrez et al., 2019). Thus, it would be important for young people to have access to male and female condoms at university for STI prevention from a student health care perspective.

The university stage, during which students study a health care program or continue to interact within the university institution with graduates in this area, can have a double effect. On the one hand, it can promote illness due to the different vulnerabilities they are exposed to. On the other, it can disseminate knowledge and motivation to think about the health-disease process and health care. The university environment is expected to strengthen the students' abilities and facilitate the adoption of healthy living and health habits, thus making the university a health-promoting agent (Santana et al., 2020).

Considering the consistency of condom use among young people, an international study conducted with 316 university students over 18 years old in West Africa revealed that 51.8% of the participants had already started their sexual life, with their sexual debut occurring at a mean age of 17.9 ($SD = 3.2$ years), 48.5% had more than one sexual partner, with 15.9% of these having had at least five sexual partners, and 67.5% reported using at least one contraceptive method during sexual intercourse (Darré et al., 2018).

In Brazil, a quantitative study carried out with 768 young people from a private university in Rio de Janeiro observed that 85.16% of the participants had an active sex life, of which 62.54% did not use condoms in all their sexual activities. Moreover, 84.83% said they had sexual intercourse with a steady partner, of which 44.01% used condoms, and 47.86% had sex with casual partners, of which 63.58% reported using condoms (Ramos et al., 2020).

STI prevention is the main reason why young people use condoms with casual sexual partners (Darré et al., 2018; Gutierrez et al., 2019; Nascimento et al., 2017). An aspect consistent with this study's results, in which condom use is more frequent with casual sex partners. However, this study's participants mention that the motivation for using condoms is to prevent unplanned pregnancies and not STIs. The sense of security revealed by the study participants in steady relationships and the negotiation for condom use indicate the idea of romanticized sex, in which sexual experiences are perceived and wrapped under a cloak of protection. Thus, there is a heuristic conception that those who love protect, and this perception favors the lack of condom use instead of increasing it. Hence, the expectation

of a steady and faithful partner brings the confidence to assume the risk of acquiring STIs.

Condom lack of use and/or disuse in steady relationships is usually high among young people. In this context, "trust in the partner" is the main motivation for using hormonal contraceptive methods (such as the pill) to prevent unplanned pregnancies. However, they maintain vulnerability to STIs (Nascimento et al., 2017; Pinchoff et al., 2017). The present study has similar results, with female university students revealing the predominant use of hormonal contraceptives with steady partners and condoms with casual ones.

The low level of information on STI prevention and condom use described in this study illustrates the lack of knowledge among young university students on the different types of STIs, associated transmission mechanisms, and forms of prevention. STIs correspond to more than 30 acute diseases and affect all segments of the population, in different proportions, worldwide. Historically, there is consensus regarding HIV-related risks, with the primary concern being STI-related risk-taking behaviors (WHO, 2016). Thus, it is important to emphasize the need for greater dissemination of the different types of (in)curable STIs that exist (e.g., chlamydia, gonorrhoea, trichomoniasis), ways of transmission, prevention, and treatment, given their increasing epidemiological importance (WHO, 2016).

Studies conducted with young university students of the same age range and similar characteristics as this study's participants revealed that their knowledge about the forms of STI transmission was below average, which may reflect their low perception of risk (Spindola et al., 2020). Moreover, people have greater knowledge about the characteristics of the male condom than the female condom.

A recent study (Andrade et al., 2016), with 300 women over 18 years old, reported that the most mentioned precautions regarding condoms were validity, opening the condom package, and packaging and storage conditions. They also reported having poor knowledge about male and female condoms, hindering their ability to use and negotiate with their partner. This result is similar to other studies (Andrade et al., 2016; Obembe et al., 2017).

Evidence on female condoms indicates that the lower dissemination and distribution of these by health services for free can be seen as a possible reason for the low adherence and dissemination of related knowledge (Gutierrez et al., 2019; Obembe et al., 2017; Pinchoff et al., 2017). Moreover, it is highlighted that, even with possible knowledge about existing vulnerabilities regarding STI risk-taking, young university students may still engage in different sexual risk-taking behaviors (Yared et al., 2017).

In the discourses of young university students, it is possible to observe that they are familiar with STI prevention measures. However, this knowledge is not reflected in their adoption of safer sexual practices. Thus, there is a need for further studies that can evaluate the factors associated with the consistent use (or not) of condoms by young university students in their sexual activities.

A limitation of this study is that it was developed in only one private university and only portrays the studied group's perspective. For future research, further studies on the

theme are recommended, with different research designs, to capture the specificities of young university students' groups regarding condom use and considering variables such as sex, age, and sexual preference. There is also a need for further studies that seek to understand how the knowledge of young university students can impact their sexual behavior to prevent STIs.

Conclusion

This study analyzed young university students' condom use from the perspective of STI prevention and identified sexual risk-taking behaviors, such as excessive use of PS, participation in group parties, lack of negotiation of condom use with the partner, and poor knowledge of condom use. Based on the analysis of the results, it was possible to observe the university students' adoption of sexual risk-taking behaviors and poor self-perception of vulnerability. Furthermore, it was noted that young university students live in an environment that should promote their health and consider the different factors involved in STI exposure.

The professional efforts related to STI prevention in the young-adult age group must recognize the presence of excessive alcohol/drug use, group relationship patterns, and sexual risk-taking behaviors. Educational programs and initiatives that address the different roles in the conception of gender, portraying men and women's uniqueness and vulnerabilities, are necessary. Moreover, higher education institutions should contribute more effectively to raising awareness and promoting university students' health within this context. Given that the participants were young university students, health education practices can be carried out by health professionals, for example, nurses. These practices implemented in the university setting favor students' awareness of the risk behaviors they are exposed to, such as the use of PS and unprotected sex.

The present study significantly contributes to further reflections on the evidence presented, promoting the rethinking of nursing care and educational approaches aimed at university students and regarding sexual practices, STI prevention, conceptions of vulnerability associated with sexual risk-taking behaviors, and the relationship with alcohol abuse, as well as possible poor knowledge of barrier methods. Additionally, the university's key role in promoting educational activities to stimulate health care at the individual and collective levels is highlighted, emphasizing sexual health, and promoting STI prevention as a health strategy.

Author contributions

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Writing - analysis and editing: Oliveira, B. I., Spindola, T., Melo, L. D., Marques, S. C., Moraes, P. C., Costa, C. M.

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