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Perception of sexual practices and sexually transmitted infections among young university students in Lima, Peru

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ABSTRACT

Objective: To determine the perceptions about sexual practices and sexually transmitted infections in young people at Universidad Nacional de Ingeniería, Lima, Peru. **Materials and methods:** Descriptive study, with a quantitative and cross-sectional approach. The sample consisted of 361 young people from four engineering programs from the first to the fifth year. A questionnaire was designed and submitted to expert judgment; content validity by means of the binomial test was p = 0.016; and reliability was carried out by means of a pilot test, resulting in a Cronbach's alpha of 0.783. **Results:** The majority of those surveyed were male (87.8%), single (97.2%) and 63.7% had already initiated their sexual life; the average age of sexual debut was 18.2 years. Moderately favorable perceptions about sexually transmitted infections were prevalent in both genders: 77.3% in women and 71.6% in men. Regarding sexual practices, 65.9% of the female sex and 77.9% of the opposite sex showed moderately favorable perceptions. **Conclusions:** Young people in an engineering university have moderately favorable perceptions regarding sexual practices and sexually transmitted infections.

Keywords: sexual behavior; sexually transmitted infections; young adult.

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INTRODUCTION

Young people experience various physical, social and/or emotional changes. At the same time, they represent a vulnerable population prone to risk behaviors such as the use of tobacco and narcotics, violence, and risky sexual behavior (1). Similarly, young university students interact with new individuals who broaden their self-awareness and influence their thoughts, behaviors, and changes in their sexual conduct (2), which are associated with an increase in unplanned pregnancies and sexually transmitted infections (STIs) (3, 4). This population is often sexually active, so they are prone to contracting and transmitting the human immunodeficiency virus (HIV) (5, 6).

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STIs are transmitted by sex, including anal, vaginal, or oral intercourse, and can be caused by different microorganisms (7, 8). In the United States, approximately half of STIs occur in individuals aged 15 to 24. Young people have a high risk of getting infected for different reasons (9), such as lack of access to accurate information or a low probability of getting informed due to fear, ignorance, shame, or lack of experience, as well as early initiation of sexual activity. Another contributing factor is alcohol consumption, which reduces risk perception and influences risky sexual behaviors among young people, such as not using condoms, thereby increasing their exposure to STIs and unexpected pregnancies (4, 10, 11).

At the same time, STIs are a major epidemiological and public health concern worldwide due to their potential consequences such as infertility, pelvic inflammatory disease, anogenital cancer, psychosexual disorders, among others. Therefore, priority should be given to measures aimed at reducing the incidence of these infections. According to the World Health Organization (WHO), approximately 38 million sexually active individuals aged 15 to 49 in the Americas suffer from a treatable STI (chlamydia, gonorrhea, syphilis and/or trichomoniasis), which can lead to poor health outcomes, such as genital symptoms, complications during pregnancy, infertility, an increased risk of HIV transmission, and psychosocial consequences (12).

In 2022, in Peru, 5,761 new cases of HIV infection were reported. The male-female ratio was 4.1, with 4,627 cases reported in men and 1,134 in women. In addition, 2,187 new cases of infection were reported among young people aged 18 to 29 (13). In this way, risky sexual behaviors are still present among students of both sexes, although they are more frequent in men, as they tend to initiate their sexual activity at an early age, have sex with partners without any intimate relationship, exhibit impulsive sexual behaviors, and have a high tendency to participate in risky sexual practices (3, 14).

For all of the above, universities should not only ensure academic training and skill development for employment and economic security for their students, but also guarantee comprehensive sexuality education (15), as adolescents and young adults often acquire knowledge about education and sexual life from sources that often do not contain accurate information.

This study provides updated information on university students' perceptions regarding sexual practices and STIs, enabling nursing professionals to design educational programs, awareness campaigns, and educational talks to strengthen knowledge of sexual and reproductive health, and contribute to the reduction of risky sexual behaviors, thereby promoting a safe sexual life. Therefore, the general objective was to determine perceptions of sexual practices and STIs among university students in Lima, Peru.

MATERIALS AND METHODS

A descriptive study with a quantitative and cross-sectional approach was conducted (16). The study included 361 university students from the first to the fifth year of studies of the Faculties of Civil, Electrical, Electronic, Industrial, Systems, and Mechanical Engineering at the Universidad Nacional de Ingeniería (UNI), Lima, Peru. A convenience sampling method was applied. Regarding the inclusion criteria, 18-29-year-old students enrolled in 2023, who voluntarily agreed to participate in the study, were considered. Participants with medical leave, reserved enrollment, or those who were absent on the day of data collection were excluded from the study.

The survey technique was used for data collection, and the instrument employed was a scale developed by the researchers, consisting of three parts: 1) Questions about sociodemographic data (age, sex, study semester, marital status, among others); 2) 20 premises measuring perceptions of sexual behaviors; and 3) 18 premises that measure perceptions of STIs. Responses were recorded using a Likert scale, where: 1 = "Strongly disagree"; 2 = "Disagree"; 3 = "Neither agree nor disagree"; 4 = "Agree"; and 5 = "Strongly agree".

The instrument was validated by the expert judgment of ten professionals. The binomial test was used to assess agreement in the validity of content, yielding significant values ($p = 0.016$). To determine reliability, a pilot test was conducted with 32 students of the faculties of Civil, Industrial, Electrical and Electronic Engineering of a public university. The statistical test used was Cronbach's alpha, obtaining a value of 0.783, indicating that the instrument was reliable.

The study was approved by the Ethics Committee of the Universidad Peruana Cayetano Heredia, and authorizations were given by the deans of each faculty of the university where the study was conducted. The instrument was administered during university students' break hours in recreation areas. Data collection took a month and a half, occurring twice a week. The instrument was administered with prior authorization through an informed consent form, in which students were clearly informed about the purpose of the study and had the freedom to accept or decline their participation in the research. At the

same time, they had the right to leave at any time. A convenience sampling method was used to ensure the anonymity of participants. The collected data were coded and securely stored on the researchers' computer. The information obtained was not used to the detriment of university students. Finally, in gratitude for their participation, they were given an informational brochure on sexual behaviors and STIs.

The data were encoded and then entered into a database created in Microsoft Excel 2019 for further processing using the statistical software STATA version 17.0. Descriptive statistics were used for the analysis. The database will be kept for at least three years before being destroyed.

RESULTS

Table 1 shows the sociodemographic data of the study population, where 87.8% of participants were male, while 12.2% were female. On the other hand, 97.2% were single; 1.9% were cohabiting; and 0.8% were married. Regarding sexual orientation, 94.2% said they were heterosexual; 1.7% said they were homosexual; and 2.5% said they were bisexual. Finally, the participants' ages ranged from 18 to 28, with an average age of 20.5.

Table 1. Sociodemographic variables of university students.

General data	n	%
Sex		
Female	44	12.2
Male	317	87.8
Marital status		
Unmarried or cohabiting	3	0.8
Cohabitant	7	1.9
Single	351	97.2
Sexual orientation		
Heterosexual	340	94.2
Homosexual	6	1.7
Bisexual	9	2.5
Others	6	1.7
Age		
Mean	20.5	
Standard deviation	2.4	
Minor	18	
Adult	28	

Table 2 shows that 63.7% of university students already initiated their sexual life, whereas 36.3% did not. In addition, the average age at which they initiated their sexual activity was 18.2 years, while the youngest age was 10, and the oldest was 24.

Table 2. Sexual life of university students.

Sexual life	n	%
Initiated their sexual life		
Yes	230	63.7
No	131	36.3
Age they initiated their sexual life		
Mean	18.2	
Standard deviation	2.0	
Minor	10	
Adult	24	

In Table 3, perceptions of sexual practices among the students from the UNI were identified. It was found that 76.5% had a moderately favorable perception, while only 0.8% had an unfavorable perception.

Table 3. Perceptions of sexual practices among university students.

Perception	n	%
Unfavorable	3	0.8
Moderately unfavorable	24	6.6
Moderately favorable	276	76.5
Favorable	58	16.1
Total	361	100.0

Table 4 shows the perceptions of STIs among the students from the UNI. It was observed that a moderately favorable perspective predominated at 72.3% while only 0.3% had a favorable perception.

Table 4. Perceptions of sexually transmitted infections among university students.

Perception	n	%
Unfavorable	3	0.8
Moderately unfavorable	96	26.6
Moderately favorable	261	72.3
Favorable	1	0.3
Total	361	100.0

DISCUSSION

Regarding the sociodemographic characteristics of the 361 students from the UNI who participated in the study, a marked predominance of the male gender was observed. This gender disparity in Engineering programs is not exclusive to Peru, but it is a phenomenon observed worldwide. Several reasons explain this gender gap in career choices, including deeply rooted gender stereotypes, traditional social roles, a lack of female role models in the field of engineering, and possibly cultural and educational barriers (16). In short, the choice of the Engineering career continues to show a notable gender disparity due to the aforementioned reasons.

It was recorded that the earliest age of sexual initiation activity was 10 years old in a male participant, indicating a premature onset of sexual activity. In contrast, the latest age observed was 24. These practices tend to occur during early adolescence, a stage in which some studies have shown a higher risk of not using condoms and getting STIs, including high-risk human papillomavirus (HPV) (17).

Although the research findings showed a moderately favorable perception of sexual practices in 76.5%, only 0.8% expressed an unfavorable perception. When reviewing responses to the premises, 42.94% of university students indicated that condoms only protect against unwanted pregnancies. However, Quiroz-Mora and Valencia-Molina (18) emphasize that condoms are crucial in the fight against the spread of HIV, as they are currently the only method that can protect against STIs and HIV. This demonstrates that some young people lack adequate information on these issues, highlighting the importance of promoting comprehensive, accessible and evidence-based sexual education. In addition, it is essential to foster an environment where young people feel comfortable discussing sexuality-related topics, without fear of judgment or embarrassment. Providing adequate resources and support can also help young people make healthy and safe decisions regarding their sexual lives.

On the other hand, moderately favorable perceptions of STIs were prevalent in both genders, reaching 77.3% among women and 71.6% among men. However, among men, only 0.3% expressed a favorable perception, while 0.9% had an unfavorable perception. In the case of women, both perceptions were 0%. This disparity can be attributed to the different perceptions that men and women have about the most relevant sources of information on sexuality. Men showed greater diversity in their sources, frequently mentioning friends, siblings, books, or the lack of sexual education. On the other hand, women identified doctors and their mothers as their primary sources of information in this area (19).

In short, it is essential to properly educate young people about sexual practices and STIs, as they are considered a vulnerable group prone to engaging in risky behaviors (10). An unreliable source of information without scientific support can negatively impact the development of young people, placing them in a high-risk group characterized by early sexual activity, unprotected intercourse, and multiple partners, which can lead to unwanted pregnancies and diseases (20).

A limitation of the study is that, although validity was assessed with 10 experts and the binomial test yielded significant values for content validity, the binomial test may not be the most suitable method to evaluate the complexity of criterion and construct validity, as these require assessing the relationship between the instrument and an external criterion or construct.

CONCLUSIONS

The average age of sexual initiation was 17, with the minimum age being 10 and the maximum, 24. The perceptions of students from the UNI regarding sexual practices were moderately favorable, as half of the respondents fully agreed that having sex without using a condom is a risky behavior and that asking a partner about their STIs history is a protective factor. The perceptions of students from the UNI regarding these infections were moderately favorable, as nearly half agreed that individuals who frequently change partners and those who have multiple sexual partners at the same time are more likely to get an STI. Finally, it is recommended to continue researching with this instrument in future studies, applying a random sampling method.

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Authorship contribution:

MCG and MFF: conceptualization, data curation, formal analysis, research, methodology, project

administration, validation, visualization, writing of original draft, writing - review & editing.

CCMM: formal analysis, research, methodology, validation, writing - review & editing.

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