



## ORIGINALES

### Knowledge of Peruvian nursing students about the Human Papilloma Virus

Conocimientos de los estudiantes peruanos de enfermería sobre el virus del papiloma humano

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<https://doi.org/10.6018/eglobal.547161>

Received: 13/11/2022

Accepted: 5/03/2023

#### ABSTRACT:

**Objective:** To determine the level of knowledge of nursing students about the Human Papilloma Virus in a Private University in northern Peru.

**Method:** Quantitative, descriptive, cross-sectional; the sample was census constituted by 90 nursing students at the end of the university career, an instrument already validated internationally was applied with a Cronbach's Alpha of 0.76 of 15 questions applied via Google questionnaire for the health emergency; the established inclusion and exclusion criteria were taken into consideration.

**Results:** The level of general knowledge of the university nursing students was very good (43.3%). 92.2% of the total were women and 7.8% were men; 71.4% of men and 41.0% of women have had more than one sexual partner. 75% of nursing students who went from the jungle report more than one sexual partner, contrary to 33.8% of nursing students from the coast report more than one sexual partner.

**Conclusion:** The knowledge that prevailed among the university nursing students was good and very good; however, it is noteworthy that the majority had more than one sexual partner, a situation that leads to the development of programs to promote awareness of responsible and risk-free sexual health among future nurses.

**Keywords:** Human Papilloma Virus, prevention, nursing student, sexual health.

#### RESUMEN:

**Objetivo:** Determinar el nivel de conocimiento de las estudiantes de enfermería sobre el Virus del Papiloma Humano en una universidad privada en el norte del Perú.

**Método:** Cuantitativa, descriptivo, transversal; la muestra fue censal constituida por 90 estudiantes de enfermería del final de la carrera universitaria, se aplicó un instrumento ya validado internacionalmente con un Alpha de Cronbach de 0,76 de 15 preguntas aplicadas vía cuestionario Google por la emergencia sanitaria; se tuvo en consideración los criterios de inclusión y exclusión establecidos.

**Resultados:** El nivel de conocimiento general de los estudiantes universitarios de enfermería fue muy bueno (43.3%). el 92.2% del total fueron mujeres y el 7.8% fueron varones; el 71.4% de varones y 41.0% de mujeres han tenido más de una pareja sexual. El 75% de estudiantes de enfermería que fueron de la selva reportan más de una pareja sexual, contrario al 33.8% de estudiantes de enfermería de la costa reportan más de una pareja sexual.

**Conclusión:** El conocimiento que predominó entre las estudiantes universitarias de enfermería fue bueno y muy bueno; sin embargo, llama la atención que la mayoría tuvo más de una pareja sexual situación que conlleva a desarrollar programas para fomentar la concientización de la salud sexual responsable y libre de riesgos entre las futuras enfermeras.

**Palabras clave:** Virus del papiloma humano, prevención, estudiante de enfermería, salud sexual.

## INTRODUCTION

Statistics reported by the World Health Organization (WHO) specify that 80% of the world's population that engages in sexual activity will be infected with a disease transmitted through this route, including cervical cancer <sup>(1)</sup>.

This pathology is related to the sexual behavior of the woman or her partner <sup>(2-4)</sup>; however, it is the woman who develops cervical cancer, with women from poorer social strata being more affected <sup>(5)</sup>; leading to the female population in Latin America and the Caribbean having mortality rates three times higher than those of the United States and Canada <sup>(6)</sup>.

Adolescence is the stage of life where there are various hormonal changes; In this sense, they are prone to wanting to experience their first sexual relations, but the lack of education, parental guidance, a State lacking public policies to carry out an integrated work between parents, teachers and health personnel that can guide young people from the beginning of their sexual life, leads many to actively develop it at an early age and without using adequate protection, exposing themselves to the spread of sexually transmitted infections (STIs), unwanted pregnancies and exposure to the Human Papilloma Virus (HPV) <sup>(7)</sup>.

In Peru, nursing has been resuming the work it did for decades with adolescents; because they were occupied by other health professionals; health policies currently recognize the responsibility of nurses in school education and many are already in these spaces now <sup>(8)</sup>. In this sense, the work is not only to promote knowledge about this pathology but to raise awareness and strengthen reproductive health with adolescents.

The broad vision of the epidemiological course of HPV infection seeks to improve knowledge and preventive practices in order to develop strategies to achieve healthy styles in sexual life that limit the spread of various STIs among the vulnerable group of adolescents <sup>(9)</sup>.

The main advances in science on this subject have been to identify that HPV represents the main cause of cervical-uterine cancer; for this reason, vaccines represent the main health strategy to avoid deaths due to the disease <sup>(10)</sup>.

In this sense, the health team and particularly nurses are called to know the epidemiology, clinical aspects, prevention, consequences in order to develop care aimed at achieving greater knowledge and acceptance of the vaccine; however, if

there are health personnel or future nurses with little or no knowledge to be able to promote HPV prevention, little or nothing will be achieved in Peruvian territory <sup>(8)</sup>.

In Peru, the Rural Urban-Marginal Service (SERUMS) represents the opportunity where the nursing graduate leads the prevention strategies proposed by the State <sup>(9)</sup>. Therefore, it is important to reveal the situation of this problem with nursing students who are close to graduating who in their profile must demonstrate knowledge to improve coverage, thus strengthening the teaching of different curricular experiences aimed at raising awareness regarding the commitment of the Ministry of Health. (MINSA) with immunization against HPV <sup>(10)</sup>.

Cancer of the cervix is a disease that increases the statistics of morbidity and mortality in Peru and being one of the greatest advances in science prevention through vaccine whose prevention strategy leads us to think that knowledge represents an important element to have a preventive attitude especially in young women such as nursing students, who will be future health professionals who will promote health and disease prevention, ideally assessing the knowledge they have regarding HPV that can predict its future behavior as health professionals.

This research strengthens the line of research in life sciences and human health care, the results of which contribute to developing programs that improve the conceptual foundations of a disease that causes death if it does not have a preventive approach; Its application to different contexts to improve educational strategies at the university level will contribute to strengthening the comprehensive training of the future nurse with cognitive skills in prevention, behaviors imbued with values of one of the diseases that represents the cause of millions of deaths in women. ; thereby reducing maternal mortality in the long or medium range and avoiding households with loss of human lives and the expense invested in treatment, recovery that cervical cancer represents. The objective was to determine the level of knowledge of university nursing students regarding HPV at a private university in northern Peru.

## METHODS

It was a quantitative investigation of a non-experimental design, the cross-section <sup>(11)</sup> was used, without manipulation of variables, the data was collected in the second semester of 2022.

The area of academic records of the School of Nursing of the Señor de Sipán University reported a population of 90 students who belonged to the last year of training in the year 2022. The final sample was made up of the total population, since statistically it was small, called a census sample. The inclusion criteria were: Nursing student enrolled in the last year of training, of legal age, who signed the informed consent, who had internet service. Nursing students who did not wish to be part of the research, who found themselves with a permit or medical rest, who returned instruments with incomplete completion, were excluded.

Data collection began prior to project approval by the Research Committee of the USS School of Nursing, resolution No. 0238-2022/FCS-USS was issued, which approved the study; Once this was done, permission was requested to proceed to collect the data. The researcher applied the data collection instrument virtually, using Google

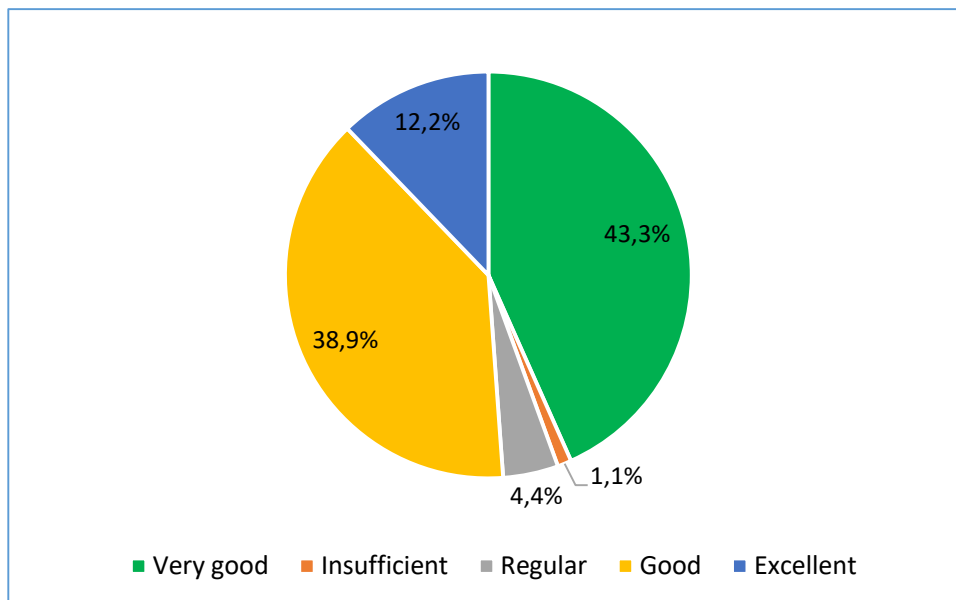
forms, in the upper part the participants were informed of the objectives of the research, and they requested your authorization to continue; the approximate time to fill out the questionnaire on "level of knowledge about HPV" was 12 minutes, this was created by Guevara and Cardozo (23), with a high reliability achieved through Cronbach's alpha 0.768; It consists of 15 questions and closed answers. The assessment scale to measure knowledge was: Insufficient (1-3); Regular (4-6), Good (7-9), Very good (10-12), Excellent (13-15).

After collecting the data, the SPSS 25.0 statistic was used to organize them and show the results in tables; absolute frequencies and relative frequencies were considered. The non-parametric Kruskal-Wallis H tests have been used, obtaining a value of 6.484 and p value = 0.039 ( $p < 5\%$ ), concluding that there are significant differences in knowledge about the Human Papilloma Virus and having had more than one sexual partner. . The analysis of Spearman's Rho correlation coefficient concludes that there is no significant correlation between knowledge about the Human Papilloma Virus and the age of nursing students ( $p = 0.485$ ;  $p > 5\%$ ). Within the ethical aspects , those of the Belmont Report (24) have been considered, which mentions respect for people, ensuring beneficence and equity. The anonymity of the respondents has been reserved.

## RESULTS

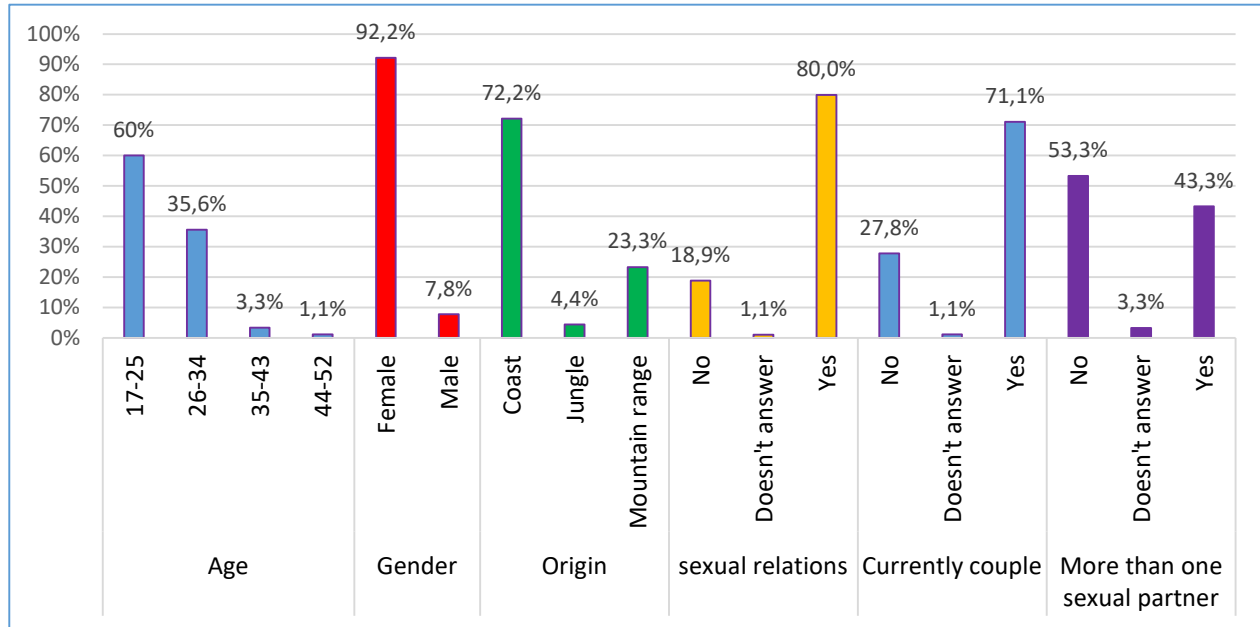
### Level of knowledge about the Human Papillomavirus in Peruvian nursing students

**Figure 1.** A total of 90 university nursing students, 43.3% have a very good level of knowledge about HPV, only 12.2% excellent knowledge.



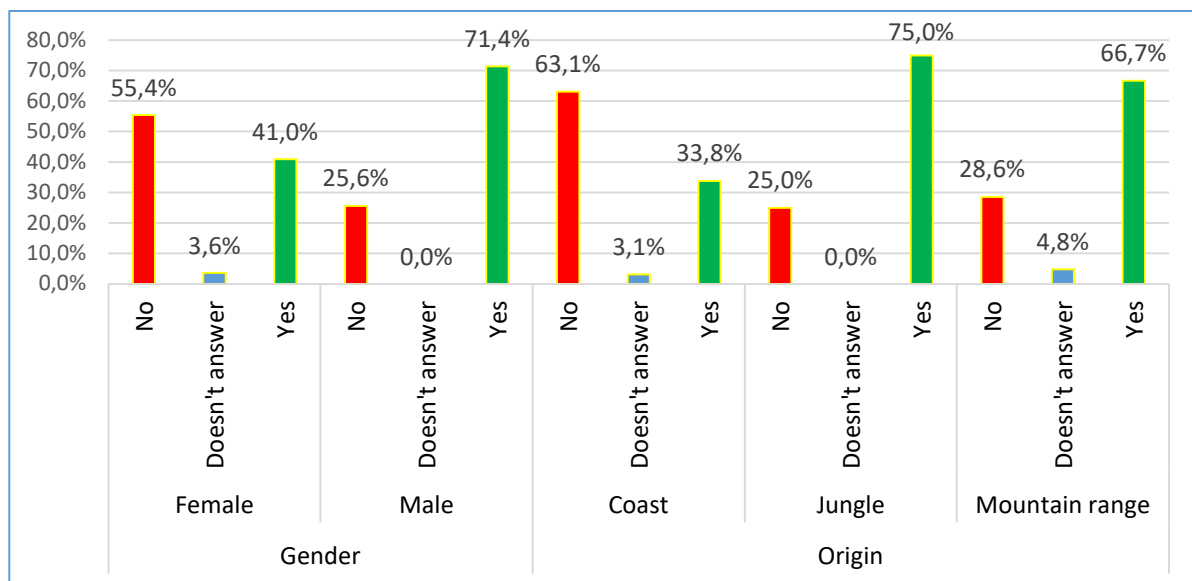
## Epidemiological characteristics of Peruvian nursing students

**Figure 2.** Of 90 university nursing students, 60% are between 17-25 years of age, only 1% between 44-52 years. 92.2% are female. 72.2% come from the coast, 4.4% from the jungle. 80% report that they have had sexual relations, 71.1% indicate that they do currently have a sexual partner. 53.3% have not had more than one sexual partner and 43.3% who have had more than one sexual partner.



### Distribution of Peruvian nursing students according to sex, origin and having more than one sexual partner

**Figure 3.** 71.4% of male university nursing students and 41% of females report having more than one sexual partner, 75% who come from the jungle region and 33.8% who come from the coastal region report having more than one sexual partner respectively.



## DISCUSSION

Nursing in the university context has been promoting quality training according to the public health needs of Peru and the world; however, apparently this is not associated with the practice of values that ensure responsible sexual behavior that protects adolescents from the transmission of diseases such as HPV that can lead to death at an early age.

Cervical cancer represents a consequence of becoming infected with HPV <sup>(12)</sup> ; In addition, initiating sexual life early is related to its high incidence, which motivated this investigation.

The sociodemographic characteristics describe a sample primarily from the coast, female, aged between 17 and 25 years old, all have started their sexual life, placing almost the same proportion between those who had only one sexual partner and those who had more than a sexual partner. Relevant data that leads to rethinking the university training of future nurses, who, having started their sexual relations with more than one sexual partner, show an indicator that justifies developing an intervention program among students that promotes safe practices of sexual education; that are not contemplated in the quality models for the licensing of the Peruvian university supervised by the National Superintendence of Educational Quality (SUNEDU) <sup>(13)</sup> nor the quality model of the professional nursing career proposed by the National System of Evaluation, Accreditation and Educational Quality Certification (SINEACE), both attached to the Ministry of Education in Peru (MINEDU) <sup>(14)</sup>.

The proven predominance of female nursing students in university education is part of their history as a profession; This has also been found in studies by the National Institute of Statistics on health professionals <sup>(15)</sup> where it is reported that despite the slight progressive increase in the percentage of male nurses, their presence is still small in relation to women; For this reason, the results are of interest to this professional group because, being women who are affected by cervical cancer, it is relevant that preventive measures be prioritized from the academy <sup>(16)</sup>.

The age of the analysis units of the sample classifies them within the stage of youth, since all of them have started their sexual life and almost half with more than one sexual partner, despite the fact that the level of knowledge is reported as very good and good (82.2%). It is important to specify that according to the ages of the participants they are classified in the stage of youth where the person begins to experience their sexual life <sup>(17)</sup> , which would support the data that 80% have started their sexual relations.

Regarding the majority of origin from the coast followed by the jungle region, it is highlighted that both the mistaken beliefs, stigmas, and fears related to HPV, especially in rural areas, overlap and are evident in acting against the development of sexual life that could save their lives <sup>(18)</sup>.

Since the units of analysis are university nursing students who will soon become nursing graduates, it is necessary that the increase in their health promotion activities, such as the development of educational campaigns for reproductive health, must be based on scientific data. experiential workshops that lead them to reflect on the



problem encountered, where technology can be used to make the message friendlier, use clear language, understanding the diversity of origin and gender.

Regarding HPV knowledge, almost the entire sample (82.2%) had a good and very good level. These results are similar to those of Hernández-Márquez et al <sup>(17)</sup> where the average score achieved in their sample regarding HPV was 11 (range 0-22). Being 57.1% of women who demonstrated to have the medium level of knowledge and 23.2% the low level of knowledge in 23.2%, only 19.7% was high. In this study, the findings detected that the increase in the level of knowledge occurs in the youngest; In the same way, there was a higher level of knowledge in those people with a higher level of education ( $p < 0.05$ ). This explains that in the present investigation, the sample belonging to a university level of the nursing career, the levels of knowledge are good and very good; however, there is no significant correlation between knowledge about HPV and the age of nursing students ( $p = 0.485$ ;  $p > 5\%$ ), far from what was found by Hernández-Márquez <sup>(17)</sup>.

Results contrary to these findings are reported by Contreras-Gonzales <sup>(18)</sup> who reports a low level of general knowledge among the participants who were university preparatory students, concluding that it can influence health malpractice, such as having multiple sexual partners or not using the condom before sexual contact.

In the present study, almost half of the women (41%) and almost all of the men (71.4%) have more than one sexual partner, a risk behavior that exposes them to the virus if, in addition to this, it would also be associated with not use protection barriers, smoking among others. It is noteworthy that students who have had more than one sexual partner have a very good level of knowledge about the Human Papilloma Virus (46.2%), while those who have not had more than one sexual partner only presented a good level of knowledge. (41.7%).

Given this, it is necessary to raise awareness of the risks, prevention measures to start self-care campaigns through a healthy sexual life; given that as future nurses they are going to be agents for the promotion of sexual health and agents for the prevention of diseases such as cervical cancer, where having more than one sexual partner is risky behavior; as well as the start of an active sexual life at an early age, is a gateway to this disease and other STIs.

Similar results were found by Contreras <sup>(18)</sup> in his research, where there is evidence of a high percentage of young adolescents with an active sexual life who have had 1 and two partners (34%); 16.5% up to more than three sexual partners, this situation places them at potential risk for HPV, STIs; being able to develop some cancer according to the gender. Along the same lines, Puente <sup>(31)</sup> in his study found that more than half of adolescents (52.5%) had more than 2 sexual partners.

Situation that leads us to deduce that this fact is not exclusive to countries like Peru or to populations of non-university students. In this sense, nursing is the task of developing strategic alliances with families, the organized community, schools, the Ministry of Health in order to strengthen values and principles that strengthen a sexually healthy life.

This epidemiological situation was also found in the study by Hernández Márquez et al <sup>(17)</sup> who reports that knowledge increases in young women with higher education. For

its part, another investigation highlights that the difference regarding the level of knowledge and age for women would find its explanation in two situations: the first is that younger women have greater access to information from the media, including the Internet, television, radio Likewise, the policies of the Ministry of Health of the different countries emphasize the care of women of childbearing age <sup>(19)</sup>.

It is important that the findings of this research envision strategies to educate and strengthen the high level of knowledge developing a healthy sexual life and campaigns to immunize against HPV, encourage and develop the performance of cytology in the case of university students and for the case of the men should also be included because almost all of the participants reported more than one sexual partner, so it is urgent to include them since they could also develop genital cancer, although on a smaller scale, but they are the true transmitters of HPV.

Early sexual relations, promiscuity of both women and men, women with a high number of pregnancies, childbirth at an early age, depressed immune system, prolonged use of contraceptives, and poor nutrition increase the probability of developing a HPV infection <sup>(20, 21)</sup>.

Although when looking for the relationship between knowledge about HPV and the age of nursing students, it is obtained that there is no relationship ( $p = 0.485$ ;  $p > 5\%$ ); It would be interesting to delve into more characteristics of the sample, its environment, the instrument used, which could represent one of the limitations of the study, as well as it would be interesting to approach a multicenter study in order to achieve a larger sample.

Arias and Pineda <sup>(22)</sup> reported that the older the students in the sample and study, the level of knowledge was also higher, obtaining a high level in this research; students between 28 and 35 years of age obtained high knowledge (31%) and students between 21 and 27 years of age represent the highest percentage in the "Don't know" category (22%).

Different situation found in the present investigation where most of the participants were between 17-25 years old with a good and very good level of knowledge; This could be because the sample was eminently from university nursing education. In this sense, no association was found between knowledge of HPV and age.

Finally; Knowledge regarding a public health phenomenon acts as a protection or risk factor. Although it is made clear that having a high level of knowledge does not imply that they take actions to prevent health complications, or stop certain risk behaviors as evidenced in these results.

## CONCLUSIONS

The level of knowledge that prevailed about HPV in university nursing students was good and very good, it was a sample where the majority were female adolescents and from the coast; on average, almost all of them have started sexual relations and more than half of men and women have more than one sexual partner, the percentage of men predominating; there is no significant correlation between knowledge about HPV and the age of nursing students ( $p = 0.485$ ;  $p > 5\%$ ). Although knowledge acts as a



protection or risk factor for a public health phenomenon, the study reveals that having a high level of knowledge does not imply that they take actions to prevent health complications, or stop certain risk behaviors as described. It is evident in these results, for this reason it is proposed that the Educational Quality Models led by the Ministry of Education (MINEDU) in Peru address the comprehensive training of the actors in the learning process.

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ISSN 1695-6141

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