

ORIGINAL ARTICLE

BETWEEN RISKS AND PREVENTION: YOUNG UNIVERSITY HEALTH STUDENTS' SOCIAL REPRESENTATIONS ABOUT THE HUMAN PAPILLOMAVIRUS

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ABSTRACT

Objective: to identify the social representations of young university students in the health area about the Human Papillomavirus and to analyze how they develop risk factors and prevention strategies against this infection. **Method:** an exploratory and descriptive study based on the Theory of Social Representations and carried out from July 2018 to July 2020 using the Free Word Association Test with 200 students from 14 health areas at a public university in Rio de Janeiro, Brazil. The data were analyzed by means of Correspondence Factor Analysis using the Tri-Deux 5.2 program. **Results:** the university students' representations vary according to gender and sexual orientation. However, they only direct responsibility for prevention of the disease to women. **Conclusion:** identifying young people's representations about the Human Papillomavirus contributes so that Nursing can devise strategies to face it through the training of these future professionals.

DESCRIPTORS: HPV; Young Adult; Prevention of diseases; Health Vulnerability; Nursing.

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INTRODUCTION

The Human Papillomavirus (HPV) is associated with *condyloma acuminatum*, infecting both men and women in the genital, anal and oropharynx region, in addition to promoting cervical cancer. HPV is highly incident and causes several types of cancers, with cervical cancer as the main one, and represents an important public health problem, especially in developing countries¹. In Brazil, 16,590 new cervical cancer cases are expected per year by 2022 and the estimated risk for every 100,000 women is 15.43².

HPV transmission occurs mainly in unprotected sex, with a significant incidence in the first sexual activities that normally occur in youth³. In the population of young people under 25 years of age, the prevalence of HPV can reach nearly 30% and the highest risk of infection can reach 70% among young university students, with the university context encouraging students to seek a new social role, to establish new interpersonal relationships and group interactions, to share social representations about the phenomena that surround them, and to be influenced in their way of thinking and acting in the face of life situations, including their sexual behavior⁴⁻⁵.

Social representations are responsible for guiding behaviors and reshaping the elements of the environment in which they occur. It is understood that university students have their own social representations, that is, they elaborate new meanings and reconstruct thoughts and behaviors, which come from common sense associated with the reified universe⁶.

Academic contents, which make up the reified universe of science, contribute to the elaboration of social representations, which in this study are about the HPV phenomenon. In this context, it is assumed that content about this infection has, at some point, been taught in the undergraduate courses of young university students in the health area. In this sense, the Theory of Social Representations (TSR) gives people back their importance in the formation of the social aspects, as it guarantees their active participation, as agents of the transformation of a given social reality that will be constantly reconstructed⁶.

In view of the above, the following guiding questions emerged: How do young university students in the health area represent HPV and how do they understand the risks and prevention of this infection? Thus, the objectives of this research were to identify the social representations of young university students in the health area about the Human Papillomavirus and to analyze how they develop risk factors and prevention strategies against this infection.

METHOD

This is a qualitative study conducted with young university students in the health area, based on the theoretical contribution of Social Representations⁶. The research participants were 200 young university students, who were invited by the researcher at the university campus through non-probabilistic, random and convenience sampling. The inclusion criteria were young-young (18-24 years old) and young-adult (25-29 years old)⁷ individuals enrolled and attending any of the 14 health courses at the Federal University of Rio de Janeiro (*Universidade Federal do Rio de Janeiro*, UFRJ), namely: Biophysics, Biology, Biomedicine, Nursing, Pharmacy, Physiology, Speech Therapy, Gastronomy, Medicine, Microbiology, Nutrition, Dentistry, Psychology and Occupational Therapy. The exclusion criteria corresponded to university students whose enrollment was locked during the data collection period.

Data collection was carried out in person at UFRJ by two Scientific Initiation scholarship

holders, who are undergraduate Nursing students, after the training provided by the main researcher. It is worth mentioning that a pilot test was carried out with seven university students from different graduation areas and of both genders, although they were not counted in the final sample of the study.

The techniques for data production were a questionnaire with questions to draw the socioeconomic, demographic, sexual and reproductive health profile of the research participants and application of the Free Word Association Test (FWAT), from July 2018 to July 2020. The mean time with each research participant was 20 minutes and the analysis began after data saturation.

As for the Free Word Association Test (FWAT), it is a technique of the open research type that is structured in the evocation of answers given from inducing stimuli, which allow the semantic universes of words that group certain populations to be highlighted, being a structure subjected to the influence of the cultural environment and personal experience⁸. In this study, three inducing stimuli were used: "HPV", "Risk of HPV" and "HPV Prevention", based on the following question: Write down up to three words that come to your mind when you see the inducing word/term. The participants wrote the first three words that came to their minds on their own form, individually and separately for each inducing stimulus.

The data on the participants' characterization were organized in a database in the IBM-SPSS Statistics software (version 25) and later submitted to a simple descriptive statistical analysis, with clipping by gender, through means and frequency distribution⁹. For the analysis of the FWAT data in the Tri-Deux software (version 5.2) according to Correspondence Factor Analysis (CFA), a database was created with the aid of a spreadsheet containing the terms evoked by the university students for each stimulus, with each participant receiving a code that is part of the rules for creating this database along with the software, which also allows for their anonymity.

Thus, the coding consisted in the letter "J" for young ("*Jovem*" in Portuguese, the consecutive number of the participant in FWAT, and the fixed variables defined: gender/sex (SEX1 = Female and SEX2 = Male) and sexual orientation (ORI1 = heterosexual, ORI2 = bisexual, and ORI3 = homosexual); these two characteristics were chosen based on studies¹⁰. In summary, it was as follows: J123 - Young individual interviewed number one, male and homosexual.

Through the statistical results presented, this software makes it possible to verify the existing links between the variables, in addition to being possible to understand how the social representations are structured and organized⁸. CFA of the evocations in FWAT using the Tri-Deux software allows defining the relations of proximity and distance between the semantic universes of the representational field, according to the fixed variables and the opinion variables or inducing stimuli. In this way, it makes it possible to analyze the similarities between the answers of a specific group of the most evoked words through the graphical representation of the factorial plan⁹.

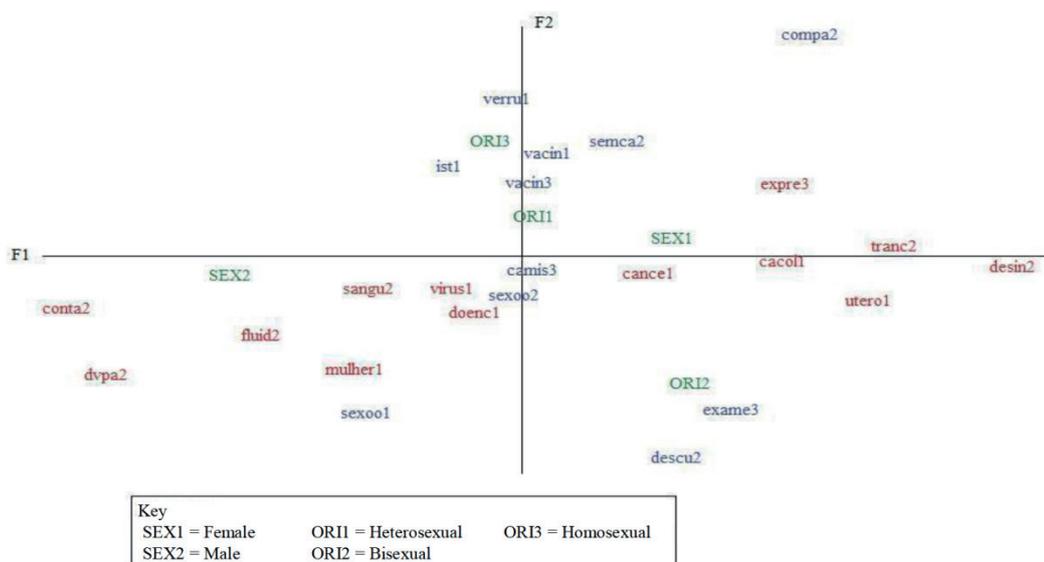
The interpretations were analyzed in the light of the TSR according to Serge Moscovici, for making it possible to draw an analysis of how the social context interferes in construction of the subject and how it influences behaviors and attitudes. However, incorporation of this knowledge in everyday life only occurs if it has some meaning or if it affects the person in some way¹¹.

This study was approved by the Research Ethics Committee of the Anna Nery Nursing School and the São Francisco de Assis Health Care Institute of the Federal University of Rio de Janeiro (EEAN/HESFA/UFRJ) with approval under number 2,672,335.

RESULTS

A total of 200 university students participated in the research, most of them women, corresponding to 139 (69.5%) women and 61 (30.5%) men. Regarding sexual orientation, 130 (65%) identified themselves as heterosexual, followed by 36 (18%) bisexual and 34 (17%) homosexual. The courses in the health area were as follows: 50 (25%) from Nursing, 26 (13%) from Pharmacy, 23 (11.5%) from Biomedicine, 18 (9%) from Speech Therapy, 16 (8%) from Medicine, 12 (6%) from Microbiology, 12 (6%) from Biophysics, 12 (6%) from Physiology, 12 (6%) from Nutrition, eight (4%) from Psychology, six (3%) from Biology, two (1%) from Occupational Therapy, two (1%) from Dentistry and one (0.5%) from Gastronomy. The predominant age group in the groups was named "young-young individuals" with 187 (94%), followed by "young-adult individuals" with 12 (6%). The main source of information on sexual and reproductive health accessed was friends (85%), followed by the Internet (80%).

As for CFA, Graph 1 represents both axes: axis F1 (horizontal axis, in red) and axis F2 (vertical axis, in blue). The Gender (SEX) and Sexual Orientation (ORI) fixed variables are indicated in green. The numbers accompanying the evocations are equivalent to the inducing stimulus, namely: 1- HPV; 2- Risk of HPV; and 3- HPV Prevention.



Graph 1- Factorial plan of the young university students' Social Representations about HPV, Rio de Janeiro, RJ, Brazil, 2020

Source: Tri-Deux Software Report, version 5.2.

In factor 1 (F1), arranged in the horizontal line on the right, related to the female participants, the young university students' objectifications were identified in relation to the HPV, Risk of HPV and HPV Prevention inducing stimuli that contributed to composition of the factorial plan (FM). Regarding the HPV stimulus, the most representative words and their factor matchings (FMs) were as follow: uterus (FM: 125); cervical cancer (FM: 92) and cancer (FM: 24). For *Risk of HPV* stimulus, the words were the following: congenital transmission (FM: 190) and misinformation (FM: 60). For the *HPV Prevention* stimulus, the most significant word was preventive examination (FM: 24).

Still on axis 1 (F1), on the horizontal line to the left, the male participants' objectifications

were identified in relation to the HPV and Risk of HPV inducing stimuli; however, for the HPV Prevention stimulus, no words with considerable factor loadings were identified for composition of the factorial plan. For the *HPV* inducing stimulus, the words woman (FM: 39); virus (FM: 17) and disease (FM: 15) were the ones with the highest significance; while for the *Risk of HPV* stimulus, the following words emerged: contact (FM: 120); several partners (FM: 88); fluids (FM: 45) and blood (FM: 41).

Figure 1 graphically presents the most representative evocations in the CFA emitted by the university students, according to the Gender fixed variable, for each inducing stimulus.

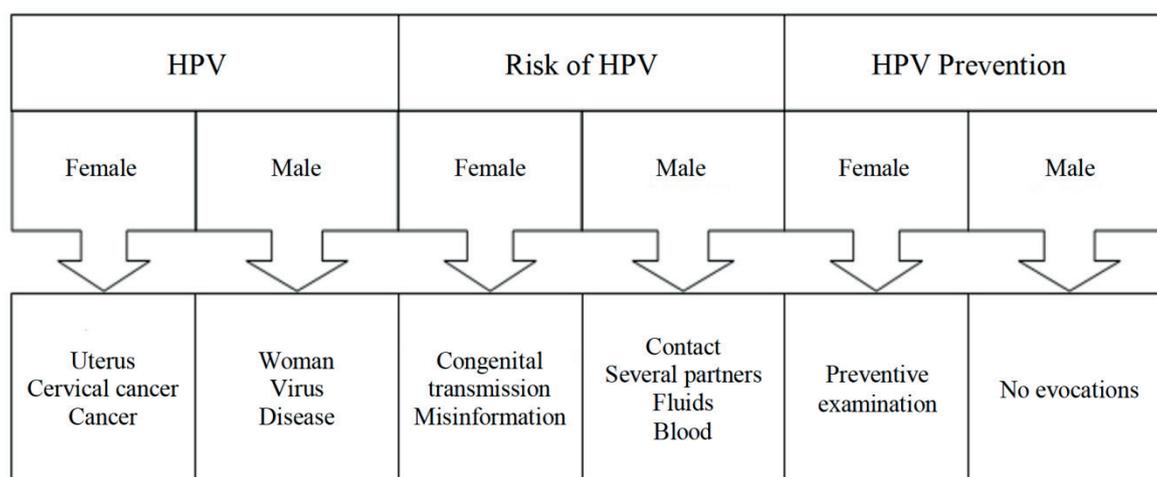


Figure 1 - Scheme of the university students' evocations according to gender. Rio de Janeiro, RJ, Brazil, 2020

Source: Authors (2020)

The F2 axis, on the lower vertical line, corresponds to the participants who defined their sexual orientation as bisexual, with the most representative word being sex (FM: 112) for the *HPV* stimulus. As for the *Risk of HPV* stimulus, the following words appeared: carelessness (FM: 296) and sex (FM: 56); as for *HPV Prevention*, the following terms emerged: exam (FM: 116) and condom (FM: 70).

On the F2 axis, on the upper vertical line, we have the representations of the participants self-declared as with the heterosexual and homosexual sexual orientations, where the most representative words for the *HPV* stimulus were wart (FM: 84); STI (FM: 41) and vaccine (FM: 19). For the *Risk of HPV* stimulus, the words sex without a condom (FM: 111) and sharing personal objects (FM: 99) were the most significant. Only one word emerged with representation in the *HPV Prevention* stimulus: vaccine (FM: 59).

Figure 2 graphically presents the most representative evocations in CFA emitted by the young university students, according to the Sexual Orientation fixed variable, for each inducing stimulus.

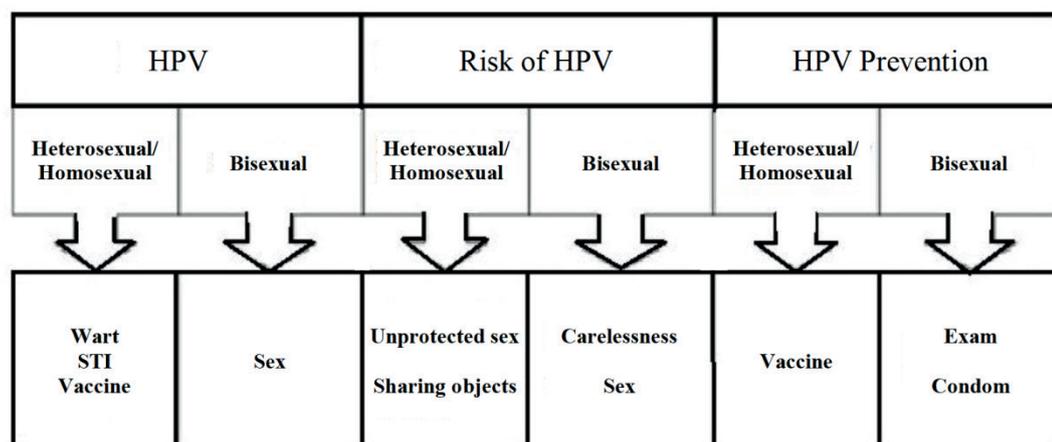


Figure 2 - Scheme of the university students' evocations according to sexual orientation. Rio de Janeiro, RJ, Brazil, 2020

Source: Authors (2020)

DISCUSSION

Based on Moscovici's TSR, through the words evoked by these young individuals, meanings are observed that relate to the social dimensions of gender and human sexuality, but also of the academic knowledge of the reified universe. For the female group, the representation given to the *HPV* stimulus is based on an anchoring process on the consequences of this infection related to the female body, mainly through the Uterus and Cancer evocations. This elaboration is based on the consensual universe that is reinforced by science itself, which historically brings up the female body pathologization model¹².

In the TSR, the historical and cultural values, contents and meanings about the representation object are considered. Through the anchoring process, society transforms the social object into an instrument that it can use⁶. In this sense, these constructions anchored in female body pathologization evidence the influence of the social belief of male sovereignty and structural *machismo* sustained in our society, in the these young people's representations about HPV, factors that are strongly related to the sociocultural constructions in relation to gender inequalities. The representation of HPV as a "women's disease" can exert a direct influence on the low demand of young males for sexual and reproductive health services¹³.

The formulations and guidelines emphasize, as a priority, the female population as the protagonist of actions and health programs for Sexually Transmitted Infections (STIs) and HPV, distancing males from these directions¹². Henceforth, HPV is considered a risk factor for penile cancer, represented by 40% of the cases¹⁴, but young people do not bring up this pathology in their evocations, as they elaborate the meanings of this infection as only related to the female body.

The words *cervical cancer*, *cancer*, *virus* and *disease* evidence an organization of the HPV representation to the reified universe, based on science and scientific knowledge about this infection. This inference can be based on the fact that they are university students in the health area, who attribute the formal and academic exposure to information related to human papillomavirus as part of the undergraduate courses curriculum, but also to the cumulative acquisition of diverse social information related to HPV¹⁵.

As for the *Risk of HPV* stimulus, the word *congenital transmission*, evoked by the female segment, shows a construction that is based on a consensual universe and on the feminine stereotype, through an ideal of the woman as pregnant, mother, protector and responsible for the safety of her child, ratifying the gender issue related to the representations

of vulnerability to HPV¹⁶.

As for the word *misinformation*, in this evocation meanings are evidenced that relate to the knowledge and quality of the information received about this infection and the risk conferred by lack of this knowledge. Despite being young university students in the health area, according to the profile of the participants included in this research, it was evidenced that the main source of information on sexual health and reproductive health corresponded to conversations with friends and to the Internet, which reinforces the representation anchored in the consensual universe.

It is noted that the academic environment in which these young people are inserted is in second-to-last place among the aforementioned information sources, represented by the figure of the professor. This fact reinforces the importance of common sense in the elaboration of the social representations about HPV. The weaknesses in the diverse information received on this topic actually represents a barrier to putting into practice effective ways of preventing and combating HPV, leading to greater vulnerability in the face of this situation¹².

One of the main barriers to the prevention and early detection of the HPV infection is the low availability and accuracy of good quality information, irregular condom use, difficult access to health services and low vaccination coverage¹⁷. However, a possible strategy to be used by health professionals and by those who work in the training of these young people is the university itself, which, through scientific dissemination in the classroom, interactive virtual social networks, conversation circles and specific student health care, can be proposals that bring these young people closer to the theme for qualified information.

For the male group to make HPV familiar, which is one of the purposes of the social representations⁶, it was necessary to bring up specific elements of HIV to be able to elaborate this virology. As HIV is more approached by health professionals, the media and society when it comes to STIs, this virus is socially strongly confused with the HPV virus¹².

The importance of dissemination in health issues and the provision of good quality information to all young individuals is reiterated, regardless of whether they are future health professionals. To be effective for young people, health dissemination strategies can be thought from Internet use and through interactive content, as it is a tool closer to these young people and that would reach them more efficiently, although it is necessary to have sources of qualified information for greater safety and reliability¹⁰.

Also in relation to the *Risk of HPV* stimulus, the words *contact* and *several partners* were also evidenced for the male group. This representation is based on a common sense of the relationship between STIs and promiscuity originating from the consensual universe of the old denomination of venereal diseases, referring to Venus, which in Greek mythology was the goddess of love¹⁸.

These contents of *several partners* related to the participants' knowledge regarding the risk of HPV are closely related to social memory, reflecting on the historical-cultural and symbolic meaning that instructs reactions, behaviors and thoughts in relation to this sexual infection¹⁹. In this research, social memory is presented as an umbrella concept, encompassing personal, common, collective, oral, and documentary stories, practices and public memories of the group of nurses who created care at the time. Social representation can be understood as a set of proposals and explanations that arise within everyday life in the course of interpersonal communications. In today's society, it is equivalent to the myths and belief systems of traditional societies; and can also be seen as the contemporary version of common sense²⁰.

Also with regard to the male segment, the *HPV Prevention* stimulus is represented as an infection that affects an external group, not threatening their group; therefore, the hegemonic representation of "I don't", "my group doesn't belong" applies, as well as denial that the infection can affect the inner group²¹. This representation directly interferes in the

preventive practices adopted by this group, delegating responsibility for the prevention process to the other. On the other hand, for the female segment, the word *preventive examination* recalls the anchorage attributed by this group to the first *HPV* stimulus, with embodiment of this infection; therefore, the prevention means would be exclusively focused on the preventive examination of the cervix.

On the F2 axis, on the upper vertical line, we can see the indications of representations around HPV for the participants who defined their sexual orientation as heterosexual and homosexual. These indications were presented in a similar way, as they are arranged on the same plane as the graph, showing approximations in relation to the contents and meanings referring to the research object. Still on this axis (F2), the lower vertical line displays the elements of the participants who defined their sexual orientation as bisexual.

The explanations for such meanings attributed to HPV by sexual diversity come from the social construction of reality that generates social models, which have their own language, ideology and imaginaries. These constructions determine the ideas shared by the group and influence the behaviors that are desirable or accepted by this same segment²⁰. Based on the results of the analysis of the correspondence factorial plan, it is inferred that the hetero- and homo-affective segments differ from the bisexual group, which presented explanations and meanings of their own. This differentiation can be based on the conception that society perceives bisexuality as a phase of indecision, refusal to expose homosexuality, reaffirming heteronormativity, also pointing out that it would be the union between male-female in a psycho-corporal-sexual multimode that brings up explanations and their own meanings regarding issues related to sexuality and sexual health²².

In the group represented by young heterosexuals and homosexuals in the *HPV* stimulus, the *Wart* and *STI* evocations emerged, indicating an imagery dimension of this infection anchored in its clinical characteristics and properties. In this context, to make sense of HPV, the participants seek reified knowledge about the origin of the problem, represented by a sexually transmitted infection.

Unlike the representations regarding the gender variable, when these representations by sexual orientation are analyzed, HPV is not related as a cause of cervical cancer, but its clinical image, corroborating previous studies in which the representation of HPV is constructed through the image of the physical and aesthetic aspects of this infection^{13,23}. Thus, HPV was objectified as *Wart*, materializing it and giving shape and concreteness to the infection investigated.

The word *Vaccine* was also mentioned by this group, both in the meaning of HPV and in its prevention. This word may have become representative after HPV vaccination was included in the National Immunization Program (*Programa Nacional de Imunização*, PNI) of the Unified Health System (*Sistema Único de Saúde*, SUS) in 2014, whose campaign was broadcast on communication channels. This inclusion popularized the HPV vaccine, which until then was something only achievable to part of the population with higher purchasing power. The media are important propagators of social representations, which maintain the ability to create, produce and reproduce, as well as disseminate a large amount of information, assuming an important role in the behavior and formation of social groups²⁴.

In this line of reasoning, in a hierarchical and logical representational field, it is possible to understand that the risk of contracting HPV for this segment of heterosexuals and homosexuals was based on the attitudinal dimension of unprotected sex, that is, *without condom use*. This representation is related to the conception of HPV as an STI, evidenced by the representation attributed to the first stimulus, so that the danger of being contaminated would be anchored in unprotected sex. Another form of contagion understood was *sharing personal objects* that would be contaminated by this virus. As social representations are categories that serve to classify circumstances, phenomena and people and to put things in order, it helps us to define priorities and actions, in addition to being a subsidy to understand the logic that supports the choices made by the individuals²⁰.

For the group of bisexuals, mostly consisting of women, the word *Sex* was the most representative to compose the HPV factorial plan, indicating, as in the previous group, an anchorage in the main form of transmission of this infection: the sexual route. The word *Carelessness* was quite representative for the bisexual group, and, as it is mostly made up of women, it can be inferred that this finding is anchored in the female stereotype that is related to care, which impacts all areas of women's lives, even regarding choice of the profession²⁵. In this context, the reasons why this segment related the risk of HPV to careless sexual practice can be understood. In view of this representation, prevention makes sense with the words *Exam* and *Condoms*, relating preventive care for this infection to performing tests in general and to safer sex through condom use.

The study limitation is based on the research being restricted to university students in the health area and only to a single public university. It is suggested to broaden the discussion to encompass other undergraduate courses and other public and private educational institutions.

CONCLUSION

With this study, it is concluded that the social representations of young university students in the health area about HPV and their influence on the risks and prevention strategies are linked to the academic knowledge gradient, although they are also carried by their social context and gender.

Knowing young people's representations about HPV contributed for Nursing to devise strategies to cope with this STI through the training of these future professionals and to implement care measures that consider their social environment, behaviors, attitudes beliefs and knowledge. It is suggested that the human papillomavirus theme be worked on through interdisciplinary and intersectoral actions with university students, addressing gender and sexuality issues, as cross-sectional issues to sexually transmitted infections.

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Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work - Queiroz ABA, Carvalho AL de O, Silva JCM da; Drafting the work or revising it critically for important intellectual content - Queiroz ABA, Carvalho AL de O, Silva JCM da, Bezerra J da F, Pinto CB, Santos GS dos; Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved - Carvalho AL de O, Silva JCM da. All authors approved the final version of the text.

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