

Health education for the prevention of uterus cancer resulting from HPV: a literature review

Educação em saúde para a prevenção de câncer do colo de útero decorrente do HPV

Educación sanitaria para la prevención del cáncer de cuello uterino por HPV: una revisión de la literatura

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RESUMO

Objetivo: analisar o que a literatura descreve a respeito da forma de transmissão, prevenção e rastreamento do HPV; os métodos de prevenção de câncer de Cólon relacionado ao HPV; bem como as ações educativas a respeito do HPV voltadas a adolescentes. **Método:** Trata-se de uma revisão integrativa da literatura. As pesquisas dos artigos foram feitas nas bases de dados SCIELO, BDNF, LILACS, MEDLINE, utilizando os descritores: Educação em saúde, Papilomavirus, Saúde do adolescente. Os critérios de inclusão estabelecidos na estratégia, foram de artigos originais, em português, disponível na íntegra e publicados entre 2016 a 2021. **Resultados:** Foram incluídos nesta revisão de literatura 12 artigos científicos. Com isso, emergiram-se três temas: Estratégia de prevenção relacionadas a transmissão de HPV; Detecção precoce do câncer do colo de útero; relação entre HPV e o câncer de colo de útero; esquema vacinal na prevenção primária contra o HPV. **Conclusão:** verifica-se que o câncer de colo de útero é um problema sério de saúde pública no Brasil, sendo também uma das principais causa de morte no mundo. É de fundamental importância o acompanhamento para detecção precoce, o que pode prevenir esta neoplasia.

Descritores: Educação em saúde; Papilomavirus; Saúde do adolescente.

ABSTRACT

Objective: analyze what the literature describes about the transmission, prevention and tracking of HPV; HPV-related colon cancer prevention methods; as well as educational actions about HPV aimed at adolescents. **Método:** this is a integrative review of the literature. At article searches were made in the database SCIELO, BDNF, LILACS, PUBMED, MEDLINE, REBEN using the keywords: health education, Papilomavirus, teen health. The Inclusion discretion established in the strategy were original articles in portuguese, available in full and published between 2016 to 2021. **Results:** Thirteen scientific articles were included in this literature review. With that, three topics emerged: prevention strategy related to HPV transmission; Early detection of cervical cancer; Relationship between HPV and Cervical Cancer; Vaccination scheme for primary prevention against HPV. **Conclusion:** cervical cancer is a public health problem in Brazil, being one of the leading causes of death in the world. It is of fundamental importance the effective screening for early detection, which can prevent neoplasia.

Descriptors: Health education; Papilomavirus; Adolescent health.

RESUMEN

Objetivo: analizar lo que describe la literatura sobre la transmisión, prevención y seguimiento del VPH; Métodos de prevención del cáncer de colon relacionados con el VPH; así como acciones educativas sobre VPH dirigidas a adolescentes. **Método:** Ésta es una revisión integradora de la literatura. Los artículos fueron buscados en las bases de datos SCIELO, BDNF, LILACS, MEDLINE, utilizando los descriptores: Educación en salud, Papilomavirus, Salud adolescente. Los criterios de inclusión establecidos en la estrategia fueron artículos originales, en portugués, disponibles íntegramente y publicados entre 2016 y 2021. **Resultados:** Se incluyeron 12 artículos científicos en esta revisión de la literatura. Así, surgieron tres temas: estrategia de prevención relacionada con la transmisión del VPH; Detección temprana del cáncer de cuello uterino; relación entre el VPH y el cáncer de cuello uterino; calendario de vacunación en prevención primaria contra el VPH. **Conclusión:** parece que el cáncer de cuello uterino es un grave problema de salud pública en Brasil, y también es una de las principales causas de muerte en el mundo. El seguimiento para la detección temprana es de fundamental importancia, lo que puede prevenir esta neoplasia.

Descritores: Educación sanitaria; Papilomavirus; Salud de los adolescentes.

Introduction

Cervical Cancer (CC) is the fourth most common gynecological cancer in women in the world and the leading cause of death in developing countries.¹ In Brazil it is the second most frequent cancer among women, with the highest incidence rate in the North, Northeast and Midwest regions, while in the South and Southeast regions it occupies the fourth and fifth position.² Human papillomavirus (HPV) infection can cause cervical lesions and progress to cervical cancer, especially subtypes 16 and 18 that are present in 70% of cases of uterine cancer at high oncogenic risk.³

There are an estimated 570,000 new cases per year worldwide, reaching about 311,000 deaths. In females, it is the fourth type of cancer with the highest presence and the fourth leading cause of mortality worldwide. The incidence and mortality is more evident in developing and underdeveloped countries.⁴

In Brazil, in 2019 there were 6,596 deaths from neoplasia. In that year, of the deaths recorded by this disease, 5.33 deaths were detected in relative terms per group of 100,000 women. In 2020, 16,710 cases of CC were estimated, corresponding to approximately 15.38 death events per 100,000 Brazilian women.⁵

It was from the Pap smear studies in 1941 that the paptholitic examination emerged, which is used and recommended by the World Health Organization (WHO) as a simple and low-cost screening method, capable of detecting changes in pre-neoplastic phases. At this stage, healing can be achieved with relatively simple measures, reducing the worsening of cervical cancer.⁶

It is noteworthy that the evolution of this disease is "silent". In this sense, it is necessary to perform periodic preventive tests, in case of finding of the disease, medical treatment should be seek as soon as possible. And the determining factors of the high rate of CANCER OF CC is linked to the inefficiency of the Health System, mainly due to: the lack of adequate screening; the low efficiency of tracking programs; the difficulty of interpreting the reports by the majority of health professionals.^{7,8}

The efficacy of CC treatment can be correlated with measures of interaction between the population and health professionals, who should be trained to know and treat symptoms. In addition, it is necessary to develop socio-educational practices, through clear messages, quick and facilitated access to health services.^{9,10}

According to the WHO, some of the symptoms in the early stage related to cervical cancer are: increased vaginal discharge, sometimes smells bad, bleeding after intercourse. In the advanced stage, the symptoms are: persistent back pain, leg or pelvis pain, weight loss, loss of appetite and fatigue. Other related factors that lead to an increase in the rate of people infected with CC is: early initiation of sexual life, smoking and prolonged use of oral contraceptives, multiparity and immunosuppression.^{11,3}

Cervical cancer, caused by the HPV virus (Human Papillomavirus), can be prevented through the use of condoms in sexual relations and vaccination, made available by the Public Health System. The Ministry of Health recommends that pap smears be performed regularly in women in order to diagnose possible manifestations of HPV and precancerous lesions.¹²

Transmission of the virus occurs through direct contact with contaminated skin or mucosa, causing genital warts and cancer-precursor lesions, predominantly those of the cervix and anogenital tract. The main form of contagion is through sexual intercourse, occurring even in the absence of vaginal or anal penetration. Continuing, there may be transmission from the mother to the fetus during childbirth. Also in this theme, there are people with HPV who are asymptomatic, unaware that they are carriers of the virus, potentiating transmission.¹³

With the aim of preventing cervical cancer and reducing the incidence of cancer mortality, the Ministry of Health, through the National Immunization Program (PNI), included in its calendar and implemented the quadrivalent vaccine (HPV-Q), which enables active protection against human papillomavirus types 6, 11, 16 and 18, its goal is to vaccinate 80% of the target population.¹⁴

What does the literature describe about the form of transmission, prevention and screening of HPV? What is known about HPV-related colon cancer prevention methods? What are the educational actions regarding HPV aimed at adolescents according to the scientific literature?

Thus, the objective of this study was to analyze what the literature describes regarding the form of transmission, prevention and screening of HPV; hpv-related colon cancer prevention methods; as well as educational actions regarding HPV aimed at adolescents.

Method

This is an integrative review of the literature conducted through scientific articles with exploratory qualitative approach, focused on the education and prevention of cervical cancer due to HPV. For the search for the selected articles, the following Descriptors in Health Science (DeCS) were used, followed by the Boolean operator "and": "Papillomavirus" (HPV) and "Health Education" and "Adolescent Health". The research was conducted through the Virtual Health Library (VHL), Latin American Literature on Health Sciences (LILACS), Nursing Database (BDENF), scientific electronic library online (SCIELO) and Medical Literature Analysis (MEDLINE).

When determining which studies would be included in this research, the identification of prominent questions was adopted, as well as the information to be extracted from each selected study, the method was started in the definition of the guide question, considered the most important phase of the review. In this phase, the following guide question was obtained: What does the literature prescribe about the form of TRANSMISSION, prevention and screening of HPV?

The inclusion criteria established were: articles published from 2016 to 2021, in Portuguese that answered the guide question. Exclusion criteria include: articles prior to 2016, indexed in more than one or duplicates on the same basis, review articles, monographs, as well as studies that did not present aspects that contributed to the objective of this study.

Researching the aforementioned databases and applying the inclusion and exclusion criteria, 35 articles were found in the VHL, 38 in LILACS, 34 in BDENF, 7 in SCIELO and 2 articles in the MEDLINE database, a total of 116 articles. After this, the titles and abstracts were read, reaching a number of 102, after a careful

reading, 12 articles were identified that corresponded to the objective of this review, these being the final sample.

Results

Among the studies included in this review, we highlight the type of study and the methodological strategy used. In this tuning point, five articles were observed that are quantitative studies, correlated with factors that influence the low result of adeforestation in cytopathological examinations; an article refers to qualitative analysis, with predominance of different levels of knowledge, doubts and erroneous conceptions; three are from cross-sectional studies, describing the lack of hpv prevention; one is based on scientific evidence, which points to public health problems, more specifically linked to sexually transmitted infection, being the most dominant in the world; and three are descriptive, which address the low aforeputand the reason for not performing the cytopathological examination.

In the underwritten table, the relevant information about the 12 articles contained in this integrative review is contained. The methodology that integrates its content helps the interpretation and synthesis of scientific papers, through comparison of the data evidenced in the analysis of the articles.

Table 1- Distribution of articles according to title, authors, objective, method, and year of publication. Brasília (DF), Brazil, 2021.

Title	Objective	Method	Conclusion	Year
Human papillomavirus (HPV) and its association between cervical and anal lesions in women	Evaluate the specific type association between cervical and annaic infections, as well as the cytopathological aspects of the annaic lesions by the HPV virus in women from São Luiz, Maranhão.	Cross-sectional analytical study with 27 women attended at the UFMA clinical research center between August 2012 and July 2015, through interviews and complementary exam achievements.	Cervical HPV infection is a risk-suggestive factor for the development of infection in the anal region.	2016
Knowledge, attitude and practice about the colpocytological examination and its relationship with the female age	To verify the association between the knowledge, attitude and practice of women in relation to the colpocytological examination and the age group.	This is a cross-sectional research associated with the knowledge, attitude and practice survey in a Primary Health Care Unit.	The study demonstrated a relationship between age group and knowledge, attitude and practice of colpocytological examination	2016
Factors associated with changes in cervical-uterine cytopathological examination in southern Brazil	To identify factors associated with changes in cervical-uterine cytopathological examination.	This is an analytical study with the participation of 390 women who presented cytopathological alterations in a municipality in the state of Paraná in the period of 2012.	Sociodemographic characteristics were determinant for high-risk lesions and development of cervical cancer, especially in women with low schooling and black or brown race/color.	2017

<p>Practical Knowledge of the Cytopathological Examination of the Cervix among Academics from Different Areas</p>	<p>To verify the knowledge and coverage of cytopathological examination of the cervix among the academics in the health and human sciences and the reasons for not performing the test.</p>	<p>Descriptive study, with a quantitative approach, carried out with academics from the health and human sciences areas of a Higher Education Institution.</p>	<p>The main reasons for not performing the cytopathological examination, among the students, were the lack of time, not consulting gynecologists and not considering it important or not knowing the exam.</p>	<p>2017</p>
<p>Records of colpocytological examinations in family health strategies</p>	<p>In order to analyze the Record Books of the results of colpocytological examinations, 10 Family Health Units were selected</p>	<p>This is a descriptive, analytical, retrospective cross-sectional study and quantitative approach. The data collection period occurred during the first half of 2017.</p>	<p>It was observed the absence of standardization of the record regarding the results among the units analyzed, since considerable percentages of data without completion and information were seen for different aspects in the exams</p>	<p>2018</p>
<p>Knowledge and attitudes about human papillomavirus and vaccination</p>	<p>To unsee the knowledge and attitudes of girls, mothers, teachers and health professionals about human papillomavirus and vaccination.</p>	<p>Qualitative study, conducted through focus groups, in public elementary schools and health units of the Health District IV of Recife-PE, between June and July 2015.</p>	<p>Different levels of knowledge - doubts and misconceptions - on the subject were unveiled. However, attitudes were favorable to the adoption of immunization. Realities that need to be problematized in the nurse's educational practice.</p>	<p>2018</p>
<p>Immunization Against HPV of girls from Public and Private Schools: Evaluation on the knowledge of parents and guardians and adhering.</p>	<p>Verify the knowledge of parents or guardians of students aged 9 to 13 years of public and private schools in Araguari-MG about HPV, cervical cancer and forms of prevention and establish possible relationship between whether or not to include vaccination of daughters</p>	<p>The present study has a quantitative, descriptive and observational approach, constructed from data collection through the application of a structured questionnaire.</p>	<p>Therefore, it is clear that health education measures need to be implemented by educational managers and health professionals, thus raising awareness among the school community and the general population.</p>	<p>2018</p>
<p>Active search for increased pap smear test aveto</p>	<p>Describe the implementation of the active search for users as a strategy to</p>	<p>This is a mixed, descriptive and exploratory study, of the action research type, carried out</p>	<p>It is concluded that the active search of women for their screening is of great importance for early</p>	<p>2020</p>

	increase papanicolau test support.	during the extension project entitled "Active search in the prevention of cervical cancer: strategies for increased papanicolaum test adhering"	diagnosis and improvement of the prognosis of CC, and there is a need to improve papanicolaos support.	
HPV infection - Diagnostic screening and conduct in HPV-induced lesions	The main objective of exceptional treatment is to rule out stromal invasion and assess the state of surgical margins	Content production is based on scientific evidence on the proposed theme and the results presented contribute to clinical practice	Wide population coverage through organized screening and vaccination may substantially decrease HPV-induced diseases	2021
Vaccination coverage against human papilloma virus (HPV) and associated factors in academics of a university in Goiás southwestern	To verify the coverage of the HPV vaccine in women enrolled in health courses at a university in the southwestern state of Goiás and the factors associated with vaccination.	This is a cross-sectional study, including university students from health courses, aged 18 years or older. A standardized and self-administered questionnaire was used.	The research revealed an extensive possibility for interventions with the objective of achieving greater vaccination coverage among university students.	2021
Vaccination coverage of the human papilloma virus in the Brazilian context. Health and environment	The objective of this study was to carry out health education actions on HPV prevention with vaccine administration for schoolchildren in the municipal public network of Belém-PA.	The action was the result of the extension project that implemented actions of Health Education and HPV vaccination action in Elementary and High Schools in the municipality of Belém-PA, with methodology based on problematization through the Maguerez Arc Model.	Actions that link health education and vaccination strategies tend to have greater engagement of the target audience. In-depth knowledge tends to provide greater support for an effective and safe form of prevention such as the vaccine.	2021
Brazilian Protocol for Sexually Transmitted Infections 2020: human papillomavirus (HPV) infection	Epidemiological and clinical aspects are presented, as well as guidance for managers and health professionals in the diagnosis, treatment and prevention of HPV infection.	This document was prepared on the basis of scientific evidence and validated in discussions and consensus among experts	This theme represents an important public health problem, since this sexually transmitted infection is the most prevalent in the world, capable of triggering the oncogenic process of cervical cancer, besides enabling the occurrence of anogenital warts.	2021

Discussion

After the analysis of the articles included in this research, it was possible to group the results into three thematic categories: prevention strategy related to HPV transmission; early detection of cervical cancer; relationship between HPV and cervical cancer; and vaccination regimen in primary HPV prevention.

Prevention strategy related to HPV transmission: Early detection of cervical cancer

Infections caused by HPV are predominant in adolescence, with a higher prevalence in the first years of sexual activity in the Health System, the coverage of cytopathological examination is still low, even knowing its benefits. Its periodic performance would be the best strategy for cervical cancer screening.

When compared to people aged in adolescence with the group of adult women, screening tests in the second age group reach the lowest frequency. Therefore, it is recommended to direct education projects related to CC, with the purpose of disclosing the importance of cytopathological examination, promoting the use of condoms, informing the need to know sexual partners and thus reducing or eliminating the incidence of cervical cancer.¹⁶

Sexual activity is the main form of HPV transmission, and may occur through oral-genital, genital-genital, manual-genital or delivery contact.

Infected people are usually asymptomatic, produce no clinical or subclinical manifestations, and their latency period can last for months to years. However, 1% to 2% of infected people develop anogenital warts and 2% to 5% experience changes in oncophical colpocytology. It should be noted that the person infected with a certain viral type of HPV does not prevent them from acquiring other types of contamination of this disease, and multiple infections may occur.¹⁷

To detect cancerous lesions early, the diagnosis is made from the completion of the preventive examination (Pap smear). The Unified Health System (SUS), through its public equipment (health centers, hospitals, UBS, etc.) offers free collection of gynecological preventive tests. Therefore, it is essential to recognize that in the adolescence phase it needs to be aware of the importance of the examination for the early detection of CC and also clearly information about the etiology of the disease.¹⁸

It is understood that in the control, prevention and diagnosis, nursing professionals assume an active role in encouraging gynecological examinations. It is noteworthy that nurses should be able to assume responsibility for performing the Pap smear test and educational actions on site, seeking to find ways to prevent CC and other types of cancer. Nurses should implement strategies to approach the patient, promote a friendly environment, stimulate connections between health professionals and clients in order to expand papanicolaou test adem.¹⁹

Lack of prevention is one of the main causes of the appearance of these neoplasms mainly in women. This indicates that this public is not preventing itself in the appropriate way, through vaccine and preventive gynecological tests. It was observed during the research that the reasons that interfere negatively in the performance of the cytopathological examination, often is the lack of time,

the fear of the results and the shame. However, the non-performance of the test, if the disease is present, makes the diagnosis late, causing a lower chance of cure.²⁰

In case of cc, it is recommended that the patient reundergo the Pap smear at an interval of one year, if he obtains the negative result for cancer cells, with two consecutive normal tests and without alterations, he may then have an interval of three years. The sample to be considered satisfactory should have a sufficient amount of well-distributed, fixed and corthed cells so that it has a good visualization and thus achieves the correct completion of the diagnosis. Finally, the responsible professional will decide whether the sample is satisfactory observing the conditions, such as anatomical limitations, age, menstrual cycle and examination objective.²¹

Relationship between HPV and Cervical Cancer

Cervical cancer is one of the most frequent caused by persistent HPV infection by oncogenic types. The main feature, after infection with HPV, is the abnormal growth of cells of the cervix. If the immune system is not able to fight the virus, the evolution of these abnormal cells occurs.

Thus, if not diagnosed and treated early, these abnormal cells may progress from a pre-cancer injury to a cancer. Most HPV infections are asymptomatic with slow progression until they present symptoms such as vaginal bleeding, discharge, and pain. This infection is more common in adolescents and adult women, with a peak prevalence in the first years of sexual activity.¹⁶

Lesions related to viral types with low oncogenic risk are usually low-grade squamous lesions, similar to the histopathological diagnosis of mild dysplasia or Cervical Intraepithelial neoplasia (CIN-1). Therefore, high-risk ONCOGENIC HPV infection is usually associated with high-grade squamous intraepithelial lesions and the histopathological diagnosis of cin 2 or CIN 3 intraepithelial neoplasia and in situ adenocarcinoma (AIS). In addition to the cervix, other epitheliums are able to suffer this oncogenic action by the HPV virus, causing vaginal, vulvar, perian, penile and annal intraepithelial neoplasms.²²

HPV contamination has a reduction by the immune response of the host, its progression is 80% in 16 months, especially in cases of infection by oncogenic types of the virus. However, 3% to 10% of infected women progress to a persistent infection over the years, forming a risk factor for invasive epithelial neoplasia. In general, this process begins with a phase of preinvasive diseases, with changes restricted to the layers of the epithelium, which diagnosed and treated early allow the cure.²³

Vaccine regimen in primary HPV prevention

Preventive HPV vaccination should be done before puberty, in adolescence, is currently one of the main preventive factors of CC. Its main objective is to reduce the number of infections, the costs of diagnosis and their treatment. As stated earlier, the phase of best efficacy is located in young people who have not started sexual activity. The inclusion of the HPV vaccine in the national

adolescent vaccination calendar represents a public health strategy to strengthen actions to prevent cervical cancer.²⁴

Vaccination in adolescence is offered free of charge in basic health units and in public and private schools. The vaccination campaign takes place gradually. In 2014, the target population of vaccination was directed to female adolescents aged 9 to 13 years who did not start sexual activity, and from 2017 male adolescents were also included in immunization. The vaccine is offered in this age group, before exposure of the virus, due to its high efficacy and its higher production of antibodies, found in the infection naturally acquired within two years.²⁵

Parents' ignorance about HPV is one of the main factors contributing to low vaccination of children and pre-adolescents, aged 9 to 13 years, which is the target audience, because it is at this stage that the level of antibodies provided by vaccination is higher than the natural immunity produced by HPV infection.²⁴⁻²⁵

Full information about the vaccine can promote well-being related to health, quality of life in the transition from adolescence to adulthood. It should be emphasized that the use of HPV vaccines should not replace other forms of protection, such as condom use and routine gynecological tests, since vaccines do not prevent all types of cancerous HPV.²⁶

The objective of the PNI is to achieve the vaccination coverage of the first and second dose of at least 80% to achieve the goal of reducing the incidence of this cancer in the coming decades in the country. Vaccination, together with preventive examination (Pap smear), is complemented as actions to prevent this cancer, with the possibility of reducing transmission.²⁷

Final Considerations

By performing this study, it was found that most scientific studies report that cervical cancer is a public health problem in Brazil and worldwide, being one of the main causes of death. Thus, effective screening for the early detection of this infection is of fundamental importance, avoiding cellular changes that may evolve to cancer. If diagnosed and treated early, it reduces morbidity and mortality, so it is necessary to perform periodic preventive examination (Pap smear).

In principle, the importance of primary treatment and prevention of cervical cancer is observed, reducing the risk of papillomavirus (HPV) contagion. Thus, campaigns are carried out that include health interventions such as vaccination in adolescents and the use of condoms in sexual relations. HPV vaccination is the first step in reducing cases of cervical cancer.

We conclude that the investment in health education, targeting children and pre-adolescents, from 9 to 13 years old, is the best way to combat HPV, due to the development of antibodies in this age group. This reinforces the need for vaccination. As well as, the performance of health professionals, especially nurses, with the objective of establishing a link between public equipment (UBS, UPA, hospitals, etc.), their agents and society (family entities), with the focus of involving adolescents and raising awareness of the need for vaccination and condom use during sexual intercourse.

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