

ORIGINAL ARTICLE

## Strategies used by Primary Care Nurses in the prevention of cervical cancer: integrative review

*Estratégias utilizadas por Enfermeiros da Atenção Primária na prevenção do câncer de colo do útero: revisão integrativa*

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### KEYWORDS

Health education  
Nursing  
Cervical cancer prevention  
Women's health

### ABSTRACT

**Objective:** to identify, in the scientific literature, the strategies used by primary care nurses to prevent cervical cancer.

**Methods:** An integrative review of the EMBASE, LILACS (BVS), SCOPUS, and Web of Science databases between March and April 2023. After the search, the selected articles were read in full, and the data were extracted for analysis. The final sample consisted of 5 studies.

**Results:** the main strategies used were educational interventions, with a predominance of lectures and subsequent invitations or collection of material to carry out the preventive exam. Conversation circles (culture circles), telephone guidance, and the provision of a self-completed clinical form during the nursing consultation were also used.

**Conclusions:** the studies made it possible to identify positive strategies for preventing cervical cancer, which could direct nurses to increasingly invest in methodologies aimed at increasing women's autonomy.

### PALAVRAS-CHAVE

Educação em saúde  
Enfermagem  
Prevenção de câncer de colo do útero  
Saúde da mulher

### RESUMO

**Objetivo:** identificar, na literatura científica, as estratégias utilizadas por enfermeiros da Atenção Primária para a prevenção do câncer de colo do útero.

**Métodos:** revisão integrativa nas bases de dados EMBASE, LILACS (BVS), SCOPUS e *Web of Science*, entre março e abril de 2023. Após a busca, seguiu-se com leitura na íntegra dos artigos selecionados e extração dos dados para análise. A amostra final foi constituída por 5 estudos.

**Resultados:** as principais estratégias utilizadas foram intervenções educativas, com predominância de palestras e posterior convite ou coleta de material para a realização do exame preventivo. Também foram utilizadas rodas de conversa (círculo de cultura), orientações por contato telefônico e oferta de ficha clínica auto preenchível na consulta de enfermagem.

**Conclusões:** os estudos possibilitaram identificar estratégias positivas na prevenção do câncer de colo do útero, podendo direcionar enfermeiros a investir cada vez mais em metodologias voltadas a uma maior autonomia das mulheres.

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## INTRODUCTION

Cervical cancer remains one of the most common tumors in the world, being the fourth most prevalent type of cancer among women and responsible for the fourth cause of cancer-related mortality in this population, with 310 thousand deaths per year<sup>1</sup>. When diagnosed early and with adequate treatment, cervical cancer is preventable and curable<sup>2</sup>.

Infection caused by high-risk human papillomavirus (HPV) is one of the leading causes of cervical cancer development, particularly infections associated with HPV-16 and HPV-18 (70%)<sup>3</sup>. In Brazil, the estimated number of new cases from 2023 to 2025 is 17,010, corresponding to a risk of 15.38 cases per thousand women<sup>4</sup>.

Primary health care (PHC) is one of the pillars of the Brazilian Unified Health System (SUS), which approaches the daily lives of people and the community. Activities to prevent cervical cancer are developed in the SUS, mainly aimed at interventions to combat risk factors for the development of cancer, screening, and early detection of the disease<sup>5</sup>.

The preventive cervical cancer test (Papanicolaou or Pap smear) is effective for the early detection of changes that could develop into cancer and is one of the best prevention strategies<sup>6</sup>. Other prevention measures can be implemented to reduce the incidence and mortality caused by cervical cancer, such as vaccination against HPV, smoking control, and tests that detect the disease early<sup>7</sup>.

Nurses working in PHC are essential in raising awareness of the need to conduct preventive screening for cervical cancer and in looking for and monitoring women<sup>8</sup>. These professionals must be trained to perform the cytopathological examination and to develop and apply strategies that aim to strengthen the professional-user bond, favoring increased adherence to the examination<sup>9</sup>. In this context, it is crucial to know the strategies to prevent cervical cancer adopted by nursing in PHC.

In this sense, the study was based on the following research question: "What are the strategies used by PHC nurses to promote cervical cancer prevention?" Thus, this study aimed to identify, in the scientific literature, the strategies used by PHC nurses to prevent cervical

cancer.

## METHODS

This is an integrative review of the literature conducted by elaborating on the research question, choosing databases and inclusion and exclusion criteria, choosing the information to be used from the selected articles, evaluating the studies, interpreting the results, and presenting the review<sup>10</sup>.

A question that outlined the search was developed using the PICo strategy (population, interest, and context): P, cervical cancer; I, strategies; Co, prevention. This acronym allowed a more reliable search based on an evident research question, guiding the study according to the objectives<sup>11</sup>.

Due to their relevance and scope, the databases chosen were EMBASE, LILACS (BVS), SCOPUS, and Web of Science, which were accessed from March to April 2023. The inclusion criteria were original studies that already answered the guiding question in the abstract and were available in full text in Portuguese, English, and Spanish. Reviews, theses, dissertations, manuals, protocols, experience reports, notes, and editorials were excluded, as well as duplicate articles in the databases that were selected only once.

The controlled descriptors were taken from the Medical Subject Headings (MeSH) and its Portuguese counterpart *Descritores em Ciências da Saúde (DeSC)*: *enfermagem; nursing; enfermería; enfermeiro; nurse; enfermeros; neoplasias do colo do útero; uterine cervical neoplasms; neoplasias del cuello uterino; atenção primária à saúde; primary health care; atención primaria de salud*. Boolean operators AND and OR were used to perform the crossings, as shown in Table 1.

The files from each database were imported into the RAYYAN application<sup>12</sup> for the title and abstract to be read by two independent reviewers, considering the eligibility criteria. A third reviewer decided on the differences. Next, a form created in Google Forms and previously tested by the researchers was applied to assist in data extraction. The following information was collected from the studies: publication title, author(s),

**Table 1** – Search strategies according to the databases used in the study.

Base/database	Crossing
Web of Science - core collection	((ALL=("Enfermagem" OR "Nursing" OR "Enfermería" OR "Enfermeiro" OR "Nurse" OR "Enfermeros")) AND ALL=("Neoplasias do Colo do Útero" OR "Uterine Cervical Neoplasms" OR "Neoplasias del Cuello Uterino" )) AND ALL=("Atenção Primária à Saúde" OR "Primary Health Care" OR "Atención Primaria de Salud")
Scopus	( ALL ( 'enfermagem' OR 'nursing' OR 'enfermería' OR 'enfermeiro' OR 'nurse' OR 'enfermeros' ) AND ALL ( 'neoplasias AND dog AND colo AND dog AND útero' OR 'uterine AND cervical AND neoplasms' OR 'neoplasias AND del AND cello AND uterino' ) AND ALL ( 'Atenção primordia à Saúde' OR 'Primary Health Care' OR 'Atención primarily due Salud' ) )
LILACS via BVS	((enfermagem OR nursing OR enfermería OR enfermeiro OR nurse OR enfermeros ) AND ((neoplasias do colo do útero OR uterine cervical neoplasms OR neoplasias del cuello uterino) ) AND ((atención primária à saúde OR primary health care' OR 'atención primaria de salud') AND ( db:("LILACS"))
Embase	('enfermagem' OR 'nursing' OR 'enfermería' OR 'enfermeiro' OR 'nurse' OR 'enfermeros') AND ('neoplasias do colo do útero' OR 'uterine cervical neoplasms' OR 'neoplasias del cuello uterino') AND ('atención primária à saúde' OR 'primary health care' OR 'atención primaria de salud') AND [embase]/lim

year of publication, country, journal, type of study, strategies adopted, and main results. The selected studies were read and analyzed in depth by the researchers to answer the review's guiding question. A descriptive analysis of the studies was conducted in full, with the preparation of a summary table that summarized the main findings and contributions of the studies.

## RESULTS

The study selection process resulted in five articles being included in the final sample. Figure 1

describes the article selection flow following the PRISMA recommendations<sup>11</sup>.

Fifty-two articles were identified, and after observing the title, summary, and application of the inclusion and exclusion criteria, 48 articles were pre-selected for full reading, and only 5 were included in the final sample of this review. The 5 articles included were published between 2015 and 2021 in English and Portuguese and were conducted in Brazil. The types of study were: randomized controlled experimental (1), exploratory descriptive with a qualitative approach (2), interpretative with a qualitative approach (1), and quasi-experimental (1). Table 2 summarizes the title, authorship, year of publication, country, journal, type of study, strategies used, and main results.

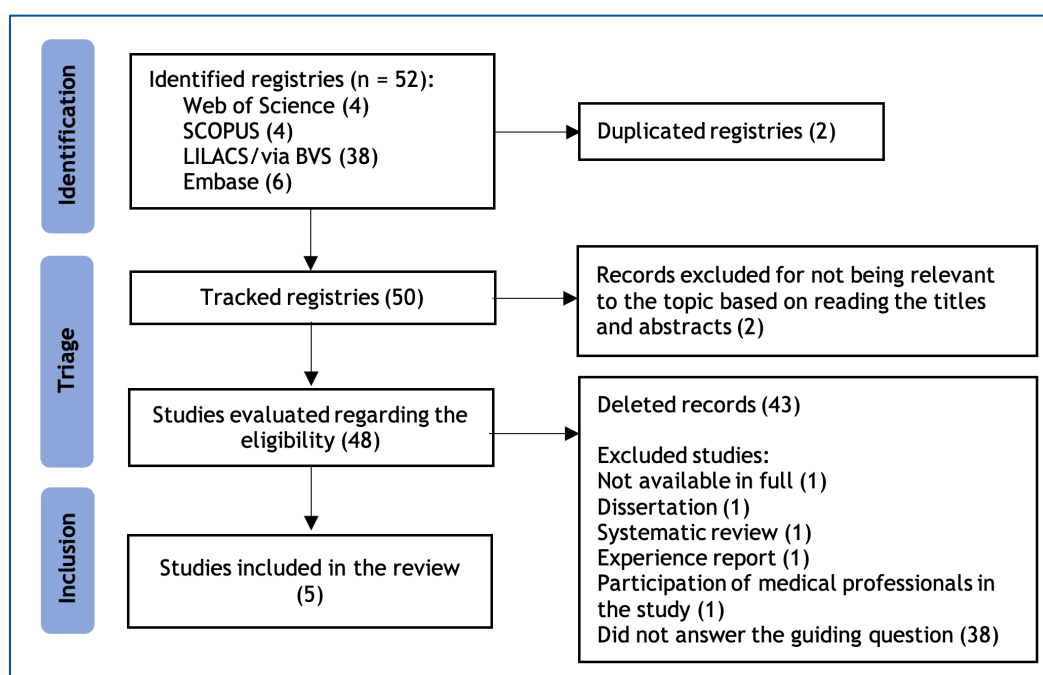


Figure 1 - Flow diagram of articles included in the review.

## DISCUSSION

Based on the selected studies, the tracking and follow-up of women with results in the preventive examination for cervical cancer declined in 2020, in addition to delays in starting treatment in the North, Northeast, and South regions. The need to improve early detection strategies and establish ways to evaluate and monitor the actions developed becomes clear<sup>18</sup>.

The studies included in this review<sup>13-17</sup> presented educational interventions, with a predominance of lectures, with a subsequent invitation or the carrying out of the preventive exam and guidance during the nursing consultation as strategies most used by PHC nurses to prevent uterine cervical cancer. Conversation circles<sup>16</sup>, telephone contact<sup>14</sup>, and the provision of a self-completed clinical form<sup>15</sup> were also used during the nursing consultation to prevent cervical cancer.

The nurse's role in the Family Health Strategy, part of PHC, is fundamental. From the point of view of preventing cervical cancer, alongside the health team

and the population, nurses perform essential activities, including nursing consultations, Pap smears, and educational activities<sup>19</sup>.

Cytopathological examination, known as Pap smear, is part of the cervical cancer prevention program. It is safe, accessible, and effective, reducing mortality from cervical cancer by up to 80%<sup>20</sup>.

Many women still do not undergo preventive examinations, even though they are offered in PHC, which can lead to the progression of the disease and limit the chances of a cure<sup>21</sup>. Raising awareness about performing the exam is necessary, which can increase adherence. Hence, the importance of health education.

Health education is an essential strategy in the PHC<sup>22</sup>, and this strategy has undergone changes in conceptions over time. It is considered that it has already taken place from an authoritarian process to a positivist aspect to shed light on the impact of the social determinants of health, suggesting ways to modify reality. From a traditional viewpoint, it correlates the field of public health with health promotion and disease

**Table 2** – Description of articles included by title, authorship, year of publication, country, and journal.

Title	Author, year	Journal	Type of study	Strategies used	Main results
Controle do câncer do colo do útero: ações desenvolvidas pelo enfermeiro à luz do discurso do sujeito coletivo	Correio et al., 2015 <sup>13</sup>	Revista de Pesquisa Cuidado é Fundamental Online	Interpretive study with a qualitative approach	Health education activities (lecture). Verbal invitation to carry out preventive care during daily care	It characterized the situational diagnosis of the region and encouraged reflections on the assistance provided by the ESF nurse
Intervenções por telefone para adesão ao exame colpocitológico	Lima et al., 2015 <sup>14</sup>	Revista Latino-Americana de Enfermagem	Quasi-experimental study	Educational intervention by telephone and scheduling of preventive examination	Efficacy in women's adherence to colpocytological examination
Autopreenchimento da ficha clínica no rastreamento do câncer de colo de útero: percepções da mulher	Nepomuceno et al, 2015 <sup>15</sup>	Revista de Enfermagem do Centro Oeste Mineiro	Qualitative descriptive study	Offer of a self-filling clinical form at the nursing consultation	Reduction in negative feelings related to cervical and breast cancer screening and prevention consultations; potential strategy to increase adherence to screening appointments
Comparison among the efficacy of interventions for the return rate to receive the Pap test report: randomized controlled clinical trial	Vasconcelos et al., 2017 <sup>16</sup>	Revista Latino-Americana de Enfermagem	Randomized controlled experimental study	Educational intervention based on the principles of Paulo Freire (Culture Circle)	Increased the proportion of return visits to receive the Pap smear test report
Atuação do enfermeiro na prevenção do câncer do colo de útero em Unidades de Saúde	Dias et al., 2021 <sup>17</sup>	Journal of Health & Biological Sciences	Exploratory, descriptive study with a qualitative approach	Health education actions and collection of cytopathological material to carry out the exam	Described and discussed the role of Primary Care nurses in preventing cervical cancer, seeking to give new meaning to prevention actions

prevention<sup>23,24</sup>.

The present study follows the conception adopted by Fittipaldi, O'Dwyer, and Henriques<sup>25</sup>, where health education constitutes an instrument for the dialogic construction of knowledge and stimulates autonomy, popular participation, and the protagonism of subjects in your own care.

Another strategy observed in the studies of this review was health education carried out over the telephone, with subsequent scheduling of a preventive examination for cervical cancer<sup>14</sup>. In this sense, technologies are important for education and health promotion, facilitating the teaching-learning process by providing educational and technological resources in a structured manner<sup>26</sup>.

Nursing care has benefited from these technologies, using diverse materials and making patient health education more attractive<sup>27</sup>. Telephone support has been increasingly used as an appropriate way to support healthcare<sup>28</sup>.

A systematic review<sup>29</sup> demonstrated, for example, that using telephones is a viable technology for

promoting breastfeeding, thus becoming an alternative to improving the care offered.

A previous study<sup>30</sup> with patients undergoing oncological and outpatient chemotherapy demonstrated that monitoring patients by telephone, carried out by nurses, is a possible and practical strategy, especially concerning self-efficacy, with positive impacts on the emotional support provided to patients, strengthening the bond.

Another study<sup>31</sup> also points out the importance of follow-up carried out via telephone by nurses to provide continuity of care for patients at home. To this end, health professionals need training to achieve the expected results when using technologies to promote care, thus supporting the harmony between human and technological progress<sup>32</sup>.

An exciting intervention identified among the studies was the offer to self-complete the clinical form in the nursing consultation to control cervical cancer<sup>15</sup>. The above-mentioned study demonstrated that this strategy was adhered to by most participating women and became a way of encouraging the provision of care.

This study clarifies the preference for writing rather than verbalizing more intimate health information<sup>15</sup>.

Feelings of fear and shame associated with preventive screening can contribute to low adherence to cervical cancer screening<sup>33</sup>. In this way, providing more information to women in the nursing consultation improves communication with the professional, maximizes trust, allows the sharing of fears and doubts related to the exam, and allows a better choice of actions to be developed<sup>33</sup>.

This review also identified health education based on Paulo Freire's principles as a prevention strategy against cervical cancer. The theories of Paulo Freire, a Brazilian educator and philosopher, are suitable not only for education but also for health. A concept he created is that the culture circle is a dynamic space for collaborative learning, construction of knowledge, and new perspectives. In these circles, people come together for an educational process to investigate topics that interest the group itself<sup>34</sup>.

Previous work<sup>35</sup> identified that health promotion combined with Paulo Freire's thinking showed promise in producing and identifying themes that help in overcoming problems in the Family Health Strategy. Furthermore, it improved the work process between members of the healthcare team and communication between everyone (professionals, users, and leaders) and clarified the difference between promoting health and preventing diseases. They also emphasize that empowering the community can reduce disparities between professionals and users, positively bringing them closer together.

Encouraging different health education practices can positively affect people's lives. Therefore, knowing

the behavior of PHC nurses about the subject contributed to outlining a profile of the activities carried out by these professionals to prevent and combat cervical cancer and to highlight the need for reflection on the assistance offered by nurses.

As limitations identified in this review, the reduced number of articles included and the period during which they were published, until 2017, stand out. The COVID-19 pandemic may also have contributed to a decrease in the application of other interventions among the population, resulting in fewer studies. Another limitation to be considered is the nationality of the studies found, as they were all national. Therefore, interventions performed by primary care nurses in other countries may differ from those highlighted here.

As an extension of the results found in this review, it is proposed that, in the future, other findings regarding the topic can be identified so that there can be a better comparison of the strategies used by nurses in primary care in the prevention of cervical cancer, as well as how to identify their effects on the population of women assisted.

## CONCLUSION

Health education was the primary cervical cancer prevention strategy used by PHC nurses. It is necessary to invest in the training of nursing professionals so that they can offer different educational strategies and technologies, considering the characteristics of local and population contexts to enable a better understanding of information.

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**Individual contribution of the authors:**

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Data analysis and interpretation: MCNSEM, MCNP, AGNF

Data collection: MCNSEM, LMSJ

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