

**HEALTH EDUCATION FOR PEOPLE WITH CANCER IN TREATMENT WITH ANTINEOPLASTIC: INTEGRATIVE REVIEW**

**EDUCACIÓN EN SALUD PARA PERSONAS CON CÁNCER EN TRATAMIENTO CON ANTINEOPLÁSTICOS: REVISIÓN INTEGRATIVA**

**EDUCAÇÃO EM SAÚDE PARA PESSOA COM CÂNCER EM TRATAMENTO COM ANTINEOPLÁSTICO: REVISÃO INTEGRATIVA**

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**ABSTRACT**

**Objective:** to identify what has been produced on health education for people with cancer undergoing antineoplastic treatment. **Method:** This is an integrative literature review, carried out in PubMed, Virtual Health Library, Scientific Electronic Library Online and Latin American and Caribbean Literature on Health Sciences. The descriptors “Neoplasia”, “Antineoplastic” and “Health Education” and MeSH Terms “Antineoplastic Agents” and “Health Education” were used in PubMed. The inclusion criteria were articles with full text, available in full, available online and free of charge, and published in the last five years. The study corpus consisted of 11 articles. **Results:** The findings revealed educational actions mostly developed with adults, in the hospital setting. As for the strategies used, the use of printed information stands out, with emphasis on the treatment and its side effects. The health education practices proved to be positive in relation to the patient’s health. **Final considerations:** Finally, we highlight the importance of expanding the scenario and age group of the target audience to carry out health education activities with cancer patients, in order to contemplate children and adolescents and the psychosocial aspects of cancer.

**Keywords:** Health Education; Neoplasms; Antineoplastic Agentes.

**RESUMEN**

**Objetivo:** identificar lo producido sobre educación en salud para personas con cáncer en tratamiento antineoplásico. **Método:** Se trata de una revisión integrativa de la literatura, realizada en PubMed, Biblioteca Virtual en Salud, Biblioteca Científica Electrónica en Línea y Literatura Latinoamericana y del Caribe en Ciencias de la Salud. En PubMed se utilizaron los descriptores “Neoplasia”, “Antineoplastic” y “Health Education” y los términos MeSH “Antineoplastic Agents” y “Health Education”. Los criterios de inclusión fueron artículos con texto completo, disponibles en su totalidad, disponibles en línea y de forma gratuita, y publicados en los últimos cinco años. El corpus de estudio estuvo compuesto por 11 artículos. **Resultados:** Los hallazgos revelaron acciones educativas mayoritariamente desarrolladas con adultos, en el ámbito hospitalario. En cuanto a las estrategias utilizadas, se destaca el uso de información impresa, con énfasis en el tratamiento y sus efectos secundarios. Las prácticas de educación en salud demostraron ser positivas en relación a la salud del paciente. **Consideraciones finales:** Finalmente, destacamos la importancia de ampliar el escenario y grupo etario del público objetivo para realizar actividades de educación en salud con pacientes oncológicos, con el fin de contemplar a los niños y adolescentes y los aspectos psicosociales del cáncer.

**Palabras clave:** Educación en Salud; Neoplasias; Antineoplásicos.

**RESUMO**

**Objetivo:** identificar o que vem sendo produzido sobre educação em saúde para pessoa com câncer em tratamento com antineoplásico. **Método:** Trata-se de uma revisão integrativa da literatura, realizada nas bases de dados PubMed, Biblioteca Virtual em Saúde, Scientific Electronic Library Online e Literatura Latino-Americana e do Caribe em Ciências da Saúde. Foram utilizados os descritores “Neoplasia”, “Antineoplásico” e “Educação em Saúde” e MeSH Terms “Antineoplastic Agents” e “Health Education” na PubMed. Teve-se como critério de inclusão, artigos com texto completo, disponível na íntegra, disponíveis na modalidade online e gratuito, e publicados nos últimos cinco anos. O corpus do estudo foi composto por 11 artigos. **Resultados:** Os achados revelaram ações educativas majoritariamente desenvolvidas com adultos, no cenário hospitalar. Quanto as estratégias utilizadas, destaca-se o uso de informativos impressos, com ênfase sobre o tratamento e seus efeitos colaterais. Sendo que as práticas de educação em saúde mostraram-se positivas com relação à saúde do paciente. **Considerações finais:** Por fim, destaca-se a importância de ampliar o cenário e a faixa etária do público alvo para a realização de atividades de educação em saúde com pacientes oncológicos, a fim de contemplar crianças e adolescentes e os aspectos psicossociais do câncer.

**Palavras-chave:** Educação em Saúde; Neoplasias; Antineoplásicos.

## INTRODUCTION

Cancer, also called neoplasm, is currently considered a public health problem in Brazil and worldwide<sup>(1)</sup>. In 2020 there were 19.2 million new cases and 9.9 million people died from this disease worldwide. In Brazil, cancer is the second leading cause of death among the general population<sup>(2)</sup>.

In adult men, the most common types of neoplasm are the prostate (29.2%), colon and rectum (9.1%) and respiratory system (7.9%). And, in women, breast cancer (29.7%), colon and rectum (9.2%) and cervical (7.5%) are the most prevalent<sup>(3)</sup>.

In children and adolescents, cancer is the first nonpreventable disease that kills the most<sup>(4)</sup>. The most frequent neoplasms in this age group are acute leukemia, lymphomas, solid tumors and central nervous system<sup>(5)</sup>.

Cancer is not constituted as a disease only, it encompasses more than 100 different types of malignant diseases that are characterized by rapid and disorderly growth of cells, forming sometimes very aggressive and uncontrollable tumors that can invade adjacent tissues or organs at a distance, causing several consequences, including death<sup>(6)</sup>. Its emergence is related to genetic factors, aging and the population's life habits<sup>(7)</sup>.

The treatment of cancer is done mainly through surgery, radiation therapy and chemotherapy. The methods can be performed simultaneously or separately, and are indicated according to the location, extent, histopathological characteristics of the lesion and

the patient's condition<sup>(8)</sup>. However, chemotherapy is the most widely used form of antineoplastic treatment in the world today<sup>(9)</sup>.

Because chemotherapy is a systemic drug treatment, it does not differentiate between cancer cells and healthy cells, affecting both cells in the same way and causing several side effects<sup>(10)</sup>. The most common are nausea, vomiting, weakness, diarrhea, weight loss, edema, mucositis and alopecia<sup>(6)</sup>. Such effects can reach up to 80% of patients on chemotherapy, which further weakens the patient and sometimes compromises treatment<sup>(9)</sup>.

Thus, cancer patients experience several challenges, including the evolution of the disease, painful treatment and routine changes<sup>(11)</sup>. In addition, doubts regarding cure and fear of death are frequent among the sick<sup>(12)</sup>. Family members can also manifest feelings such as sadness, fear, hopelessness and tiredness in the face of long periods of hospitalization, when this is necessary<sup>(13-14)</sup>.

In this sense, the actions of health education in the treatment of cancer aim to provide individualized comprehensive care for patients, inform about the stages of treatment, always in the sense of minimizing possible complications, directing mainly to self-care<sup>(6)</sup>. Given the importance of health education for improving the quality of life and reducing health problems of people undergoing treatment with cancer, this study becomes important as it will make it possible to identify what has been produced on this subject. In addition, it will point out the gaps in scientific production, which will

serve as a strategy for the development of studies related to the theme.

Given the above, this study aims to identify what has been produced about health education for people with cancer and in treatment with antineoplastic. And, as a research question: what has been produced about health education for people with cancer and in treatment with antineoplastic?

## METHODS

It is a research of the integrative literature review type, which involves the grouping of scientific productions on a certain theme, in order to systematize studies already published and present them in a synthesized form in a new work. For this, the criteria established by Mendes, Silveira and Galvão<sup>(15)</sup> that discuss the integrative review in six defined stages were used as a basis.

In the first stage occurs the identification of the theme and research question, the second is the establishment of criteria for inclusion and

exclusion of studies, the third is the categorization of studies, the fourth is the evaluation of selected studies, the fifth is the interpretation of the results and the sixth the presentation of the review<sup>(15)</sup>.

Following the steps presented, for the construction of the research question adopted the peak strategy, an acrostic in which the P corresponds to the participants – cancer patients, I to the phenomenon of interest – health education actions and Co to the context of the study – treatment with antineoplastic.

The survey of studies was conducted in the PubMed databases, Virtual Health Library (VHL), Scientific Electronic Library Online (SciELO) and Latin American and Caribbean Literature in Health Sciences (LILACS). Searches were conducted between April and June of 2022.

For the search was used the combination of descriptors in SciELO, VHL and LILACS. And, MeSH Terms in PubMed as described in the following table:

**Chart 1-** Search strategies

Bases	Search strategies
PubMed	("antineoplastic agents"[MeSH Terms] AND "health education"[MeSH Terms]) AND ((ffrft[Filter]) AND (english[Filter] OR portuguese[Filter] OR spanish[Filter]) AND (2018:2022[pdat]))
VHL	mh:((mh:(( ( "NEOPLASIA" ) OR "ANTINEOPLASICO" ) AND "EDUCACAO EM SAUDE")) AND ( fulltext:("1") AND la:( "en" OR "pt" OR "es" )) AND (year_cluster:[2018 TO 2022]))
SciELO	(( ( "NEOPLASIA" ) or "ANTINEOPLASICO" ) AND "EDUCACAO EM SAUDE") Filters applied: (Collections: Brazil) (Year of pulication: 2018) ( Year of pulication: 2019) ( Year of pulication: 2021)

<b>LILACS</b>	"ANTINEOPLASICO" OR "NEOPLASIA" [Subject descriptor] and "EDUCACAO EM SAUDE" [Subject descriptor] and 2018 OR 2019 OR 2020 OR 2021 OR 2022 [Country, year of publication]
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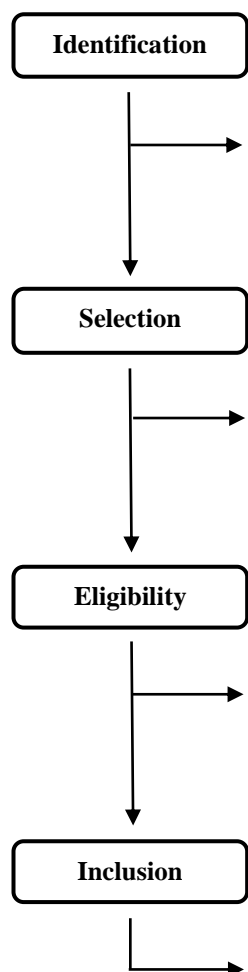
**Source:** Researchers, 2022.

The inclusion criteria were: articles with full text, available in full, online and free, and published in the last 5 years, between 2018-2022, considering a wide time interval, but sufficient to capture current publications. And, as exclusion criteria: theses, dissertations, ministerial manuals and literature review studies.

The selected languages were English, Portuguese and Spanish.

The process of identification, selection, eligibility and inclusion are described in the Organizational Chart describing the research process (Figure 1), as follows:

**Figure 1** – Descriptive organizational chart of the research process



**Source:** Researchers, 2022.

For the categorization of the articles, a synoptic table was elaborated, which contains the *corpus of analysis*, with the following information: identification, author, title and objectives.

## RESULTS

The articles that constitute the *analysis corpus* are represented in the table below:

**Chart 2** – Articles that make up the *analysis corpus*

Identification	Author	Title	Objective
A1	BEZERRA PMM. et al.	The effectiveness of an oral health education and prevention program on the incidence and severity of oral mucositis in pediatric cancer patients: a non-randomized controlled study	To investigate the effectiveness of an Oral Health Education and Prevention Program on the incidence and severity of oral mucositis in patients with pediatric cancer.
A2	YE Z. et al.	Video Education Reduces Pain and Anxiety Levels in Cancer Patients Who First Use Fentanyl Transdermal Patch: A Randomized Controlled Trial	To evaluate the effectiveness of using a quick response code (QR) in video education to guide the appropriate use of Fentanyl transdermal patches and manage pain, depression and anxiety levels in cancer patients
A4	SCHLEIMER LE. et al.	Assessing and Addressing the Need for Cancer Patient Education in a Resource-Limited Setting in Haiti	To investigate patients' knowledge and attitudes towards cancer and its treatment and adapt, implement and evaluate an education booklet for low-literacy cancer patients
A5	INCE Y, YILDIRIM USTA Y.	The Effect on Nausea and Vomiting of Structured Education Given to Male Lung Cancer Patients Receiving Chemotherapy	To investigate the effect on nausea and vomiting of structured education given to male patients with lung cancer undergoing chemotherapy
A6	POURFALLAHI M. et al.	The effect of informational-emotional support program on illness perceptions and emotional coping of cancer patients undergoing chemotherapy	To evaluate the effect of an informational-emotional support program led by nurses on the perception of the disease and on the emotional coping of cancer patients undergoing chemotherapy
A7	PERDIGÃO MMM. et al.	Educational technology for fatigue management related to antineoplastic chemotherapy	To build and validate an educational technology (ET) on fatigue and non-pharmacological strategies to

manage this symptom in people with cancer undergoing outpatient antineoplastic chemotherapy treatment.

<b>A8</b>	HORTENSE FTP, BERGEROT CD, DE DOMENICO EBL.	Construction and validation of clinical contents for development of learning objects	To describe the process of construction and validation of clinical contents for health learning objects, aimed at patients undergoing treatment for head and neck cancer.
<b>A9</b>	ROSA BVC. et al.	Development and validation of audiovisual educational technology for families and people with colostomy by cancer	To produce and validate an educational technology in the form of a video for people and families who experience a colostomy and cancer.
<b>A10</b>	DA SILVA LCA. et al.	Educational Approach to Cancer Patients: Strategies for Guidance on Chemotherapy Treatment	To propose a guidance model for cancer patients about chemotherapy treatment, through a printed newsletter and the creation of a patient diary.
<b>A12</b>	TAKANO T. et al.	Effectiveness of self-help workbook intervention on quality of life in cancer patients receiving chemotherapy: results of a randomized controlled trial	A self-help book is expected to support cancer patients in coping with physical and psychosocial suffering, facilitate communication with the medical team and improve quality of life.
<b>A16</b>	HUANG K. et al.	Effect of the patient information brochure in communicating the risks associated with crizotinib treatment to patients with non-small cell lung cancer (NSCLC) in Europe	To assess whether patients' knowledge of key risks and actions needed to minimize key risks was in line with the information provided in the Crizotinib package insert.

**Source:** Researchers, 2022.

Regarding the approach of the studies, seven studies had quantitative analysis (A1, A2, A5, A6, A7, A12 and A16), three qualitative (A4, A8 and A9) and one qualitative (A10).

As for the participants in the publications of the 11 selected articles, eight (A2, A4, A5, A6, A7, A10, A12 and A16) were performed

only with adults, two with adults and children (A8 and A9) and only one with children (A1).

Concerning the type of technology used for health education actions, printed information such as booklets, self-help books, booklets, leaflets and folders were used in seven studies (A4, A5, A6, A7, A10, A12 and A16). Thus, it was the most used health education strategy for

educational actions, including this tool was effective in all studies. In addition, the videos were used in four (A1, A2, A8 and A9), and the games and technologies in one (A1), as well as the verbal guidelines (A6).

The booklet, besides representing a low cost strategy, provides the dissemination of information about cancer and its treatment (A4). Also, a booklet made and provided by nurses had a positive effect on the severity of nausea in men with lung cancer undergoing treatment with antineoplastic drugs (A5).

Most educational actions had chemotherapy and its effects as the main theme (A1, A4, A5, A7, A8, A10 and A16), while aspects of the disease were addressed in three (A2, A8 and A9) and mental health was addressed in two actions (A6 and A12).

In relation to the scenario where the studies were developed, the hospital environment was the scenario for carrying out educational activities in six studies (A1, A2, A4, A5, A8, A9 and A10), three were returned in chemotherapy outpatient clinics (A6, A7 and A12), two at the patient's home (A9 and A16), one of which began in the hospital and extended to the home after patient discharge (A9).

The development of health education actions and prevention of injuries with children, proved to be effective with the use of games and video presentations. This can be evidenced as one of the studies points out that the use of these strategies led to a significant reduction in the relative risk of developing oral mucositis (A1).

Also, it was observed the use of technologies for health education, especially the videos, which proved effective in adults with cancer, since it was presented the use of an analgesic adhesive, which resulted in the reduction of pain and anxiety levels (A2).

Two articles discussed the creation and validation of educational videos for patients with head and neck neoplasms, and family members who experience cancer and the use of colostomy, in both videos, were evaluated as relevant and potentiating educational actions by the thematic experts (A8 and A9).

Given the above, it is inferred that most educational actions are carried out only with adults, which highlights the importance of developing educational actions and the development of educational technologies that have children and adolescents as participants. This study reveals that there are gaps in knowledge about the educational actions developed in the pediatric oncology area.

## DISCUSSION

Health education aims to promote improvement in the health of the population, through guidelines that foster behavior changes and the acquisition of knowledge<sup>(16)</sup>. It also aims to make individuals autonomous from their choices and decisions about issues involving their health<sup>(17)</sup>.

It is known that treatment with antineoplastic drugs is a time of anguish, fear and uncertainty. However, health education for patients with cancer and chemotherapy use is

essential, as it provides knowledge about self-care and helps patients better manage the side effects of treatment and pain management, which reduces anxiety and provides better quality of life<sup>(18)</sup>. This fact can be evidenced at the time that all educational actions aimed at this public, showed satisfactory results with regard to patient health.

The use of diversified health education strategies stands out. There are numerous tools for carrying out educational activities in health, and this diversity is well accepted by the participating population, consolidated by easy access and clarity of information<sup>(19)</sup>.

The fact that the hospital is the preferred scenario for the development of health education strategies justifies because it is a place where chemotherapy is performed. The hospital environment provides the creation of a bond between professionals and patients, enhancing communication and the exchange of knowledge through health education practices<sup>(20)</sup>.

Given the technological advance, interactive tools have been shown to be effective due to their versatility, practicality and greater scope<sup>(19)</sup>. However, despite the technological advancement and the increasing access to digital media, print media is still the main choice for carrying out these activities. The printed and illustrated materials are presented as a palpable method that allows repeated consultations to the information provided, have easy visualization of information, direct and practical access and when compared with isolated verbal guidance, demonstrate better content capture<sup>(18)</sup>.

It is also noticed that the themes related to the disease and its treatment are the most used, which shows the maintenance of the biomedical model, centered on the disease. This fact is also evidenced in a study to which it states that valorization of the disease still dominates the professional conducts, impairing the understanding of the human being as a biopsychosocial being<sup>(17)</sup>.

There is still a small number of educational activities aimed at children and adolescents, although much is done to guide and train their families and caregivers. However, it is extremely important that health professionals develop strategies that contemplate the pediatric population, their understanding of the world, expectations and their singularities<sup>(21)</sup>.

## FINAL THOUGHTS

This study demonstrated the relevance of educational actions in cancer patients using antineoplastic drugs, while the findings show that educational practices are beneficial and relate to better health conditions and quality of life of patients.

It also showed that health education practices occur mostly in the hospital setting, with adult patients and evidence of treatment and side effects.

Thus, it highlights the importance of expanding the scenario, being necessary actions in Primary Health Care, and the age group of the target audience to perform health education activities with emphasis on cancer patients. It



also points to the need to develop studies and health education actions with children and adolescents, as well as involving the psychosocial aspects of cancer.

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