

Health education in self-care against breast cancer

Educação em saúde no autocuidado contra o câncer de mama

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RESUMO

Estudo de revisão integrativa com objetivo de conhecer como as ações de educação em saúde influenciam o autocuidado durante o tratamento quimioterápico para câncer de mama. A pesquisa foi estruturada em seis etapas e buscou responder a seguinte questão norteadora: Como as atividades de educação em saúde interferem no autocuidado da mulher com câncer de mama em quimioterapia? Foram utilizados dados primários em bases de dados de livre acesso com critérios estabelecidos para busca em periódicos nos idiomas português, inglês e espanhol através das modalidades de pesquisa e níveis de evidência no período de 2000-2017. Nas publicações analisadas, todas publicadas em língua inglesa, observou-se que o papel do enfermeiro na educação em saúde e as estratégias adotadas promovem fortalecimento de ações de autocuidado e autogerenciamento das reações adversas pela paciente e possibilitam melhoras na qualidade de vida pós quimioterapia. Torna-se importante o investimento em ações educativas à mulheres nesta modalidade de tratamento por permitir maior impacto na prevenção de complicações oriundas das reações adversas, potencialização do autocuidado e redução dos custos com tratamentos adicionais.

Descritores: Neoplasia das mamas; Quimioterapia; Educação em Saúde; Autocuidado.

ABSTRACT

Integrative review study aiming to understand how health education actions influence self-care during chemotherapy treatment for breast cancer. The research was structured in six stages and sought to answer the following guiding question: How do health education activities interfere with the self-care of women with breast cancer in chemotherapy? We used primary data in free access databases with established criteria for searching in journals in Portuguese, English and Spanish through research modalities and levels of evidence in the period 2000-2017. In the analyzed publications, all published in English, it was observed that the role of nurses in health education and the strategies adopted promote self-care actions and self-management of adverse reactions by the patient and enable improvements in quality of life after chemotherapy. It is important to invest in educational actions for women in this treatment modality because it allows greater impact in the prevention of complications resulting from adverse reactions, self-care enhancement and reduction of costs with additional treatments.

Descriptors: Breast Neoplasms; Chemotherapy; Health Education; Selfcare.

NOTA

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INTRODUCTION

Breast cancer is a heterogeneous group of diseases, with different behaviors. The heterogeneity of this cancer can be observed by the varied clinical and morphological manifestations, different genetic signatures and consequent differences in the therapeutic responses¹.

The incidence of this type of tumor in women increases progressively from the age of 40 and in Brazil, 59,700 new cases of breast cancer are estimated for each year of the 2018-2019 biennium, with an estimated risk of 56.33 cases every 100 thousand women². In the face of this scenario, in recent years, investment has been made in actions aimed at promoting measures for screening and early diagnosis of the disease that increase access to women's evaluation methods and enable greater intervention of health professionals in the objective of offering treatment as soon as possible³.

With the confirmation of the disease, the woman with breast cancer goes through a treatment that is usually composed of surgery, chemotherapy, radiotherapy, hormone therapy and immunotherapy, which can be indicated alone or in combination⁴. Chemotherapy (QT) is highly utilized and is adjusted for tumor staging and indication of association with other therapies. Its use decreases the chances of recurrence, treatment of undetectable metastases, and allows for greater survival of the woman⁵.

Routinely this treatment modality brings with it numerous side effects, which relate to the fact that they do not exclusively affect the tumor cells⁶. The most frequent effects among women with breast cancer in chemotherapy are hematological, gastrointestinal and related to cardiotoxicity, hepatotoxicity, pulmonary toxicity, neurotoxicity, reproductive dysfunction, bladder and renal toxicity, metabolic alterations, dermatological toxicity and allergic reactions and anaphylaxis⁷.

To manage these effects, it is necessary to define an individual therapeutic planning by Nursing and other professionals that excels in health education actions in order to reduce unwanted effects and enhance self-care. Once a woman is oriented she becomes an active participant in the treatment and learns to develop individual strategies to reduce the effects with less anxiety and reducing possible health complications⁸.

In this perspective, it is the responsibility of the nurse and the health team to act in an accurate and joint way to meet demands, both preventive and health promotion and curative. Thus, it is important that there is an approximation between the team and users of health services, since it allows a diffusion of technical-scientific knowledge, uniting them and demystifying the disease and treatment, because the closer to the population, the greater the possibility of making possible the identifica-

tion of risk factors and the search for prevention and diagnosis of complications⁹.

This study aims to know how the actions of health education work on self-care during the chemotherapy treatment for breast cancer.

METHOD

An integrative review of the literature, which is a method that provides the synthesis of knowledge and the incorporation of the applicability of results of significant studies in practice¹⁰. The main purpose of this method is to gather and synthesize the studies carried out on a given subject, constructing a conclusion, based on the results evidenced in each study, but investigating similar or similar problems. The studies included in the review are systematically analyzed in relation to their objectives, materials and methods, allowing the reader to analyze pre-existing knowledge about the subject under investigation¹¹.

The research was guided by the guiding question: "How do health education activities interfere with the self-care of women with breast cancer in chemotherapy?" The LILACS Databases (Latin American and Caribbean Literature in Health Sciences), MEDLINE (Medical Literature Analysis and Retrieval System Online) and BDNF (Nursing Database) were selected as the research environment. The journals' searches were guided by the following eligibility criteria: Articles published between 2000 and 2017 were included; Published in languages: Portuguese, English and Spanish; With free access in the databases listed and screened as a product of the search of the controlled descriptors of the Health sciences (DECS-BIREME): Breast Cancer / Breast Neoplasms / Breast Neoplasms / chemotherapy / chemotherapy / chemotherapy; education in health / health education / Health Education and Self Care / Selfcare / Self Care using the Boolean connector "and" for crossings of the descriptors. Repeated productions, graduation and dissertation work, theses, dissertations, editorials, abstracts, opinion letters and literature reviews, abstracts of congress proceedings, newsletters and base files of programs or strategies of popular intervention in this care modality were excluded.

Following the model of the review¹¹, the development of the study covered the following methodological path: In the first stage, a research question was established and the criteria for its effectiveness were established. In this sense, the second step where the articles were selected were numbered in ascending order, according to their order of appearance in the databases related to publications in the area of health sciences. In the third stage, the study summaries were read in order to understand their relation with the purpose of this study and guiding question and to allow their categorization using the validated

instrument¹⁰ as a means of standardizing more relevant data in the accomplishment of the review studies. The studies that did not fit were eliminated from the sample composition of this review. In the fourth phase / stage a critical analysis of the studies identified as components of the study sample was developed. At this stage, its relationship with criteria related to its methodological quality, importance and representativeness of the information mentioned herein as well as the authenticity of the data discussed are critically verified. After the categorization and critical reading of the studies in the fifth stage, the product of the critical analysis was instrumented and the interpretation of the impact data for the study was interconnected to the theoretical product developed in the health sciences¹² to classify studies by level of evidence namely: Level I: Evidence comes from a systematic review or meta-analysis of all relevant randomized controlled trials or from clinical guidelines based on systematic reviews of randomized controlled trials; Level II: Evidence derived from at least one well-delineated randomized controlled trial; Level III: Evidence obtained from well-delineated clinical trials without randomization; Level IV: Evidence from well-delineated cohort and control case studies; Level V: evidence from a systematic review of descriptive and qualitative studies; Level VI: evidence derived from a single descriptive or qualitative study; and

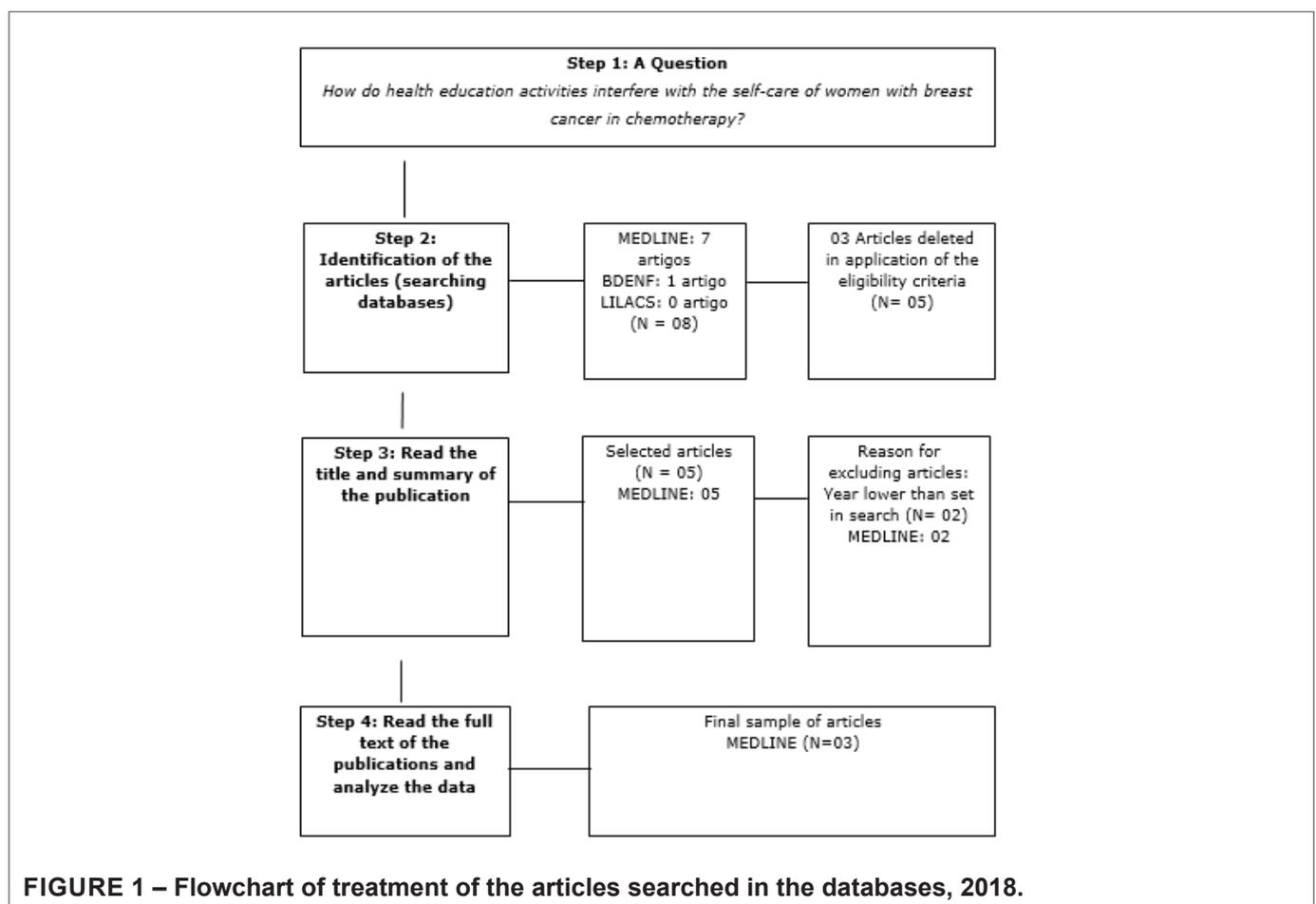
Level VII: evidence from the opinion of authorities and / or expert committee reports¹³.

In the last step, we express the results of the search and analysis to show the contributions of this to better understand the process together with the practice and to establish, from this collection of information, measures to improve the development of these actions.

RESULTS

The research in the listed databases was carried out in February and March of 2018 and figure 1 highlights the development of the process outlined for the treatment of the sample generated from the application of the eligibility criteria proposed for research. The technique generated the contingent of 08 articles for the application of the evaluation steps and, after the development of these, allowed the critical analysis of 07 studies. The final selection process, developed from the analysis of the abstracts of publications, promoted the constitution of a sample composed of 03 publications.

From the articles analyzed, it was observed that 100% (n = 3) were published in international and English-language journals, with few publications in Portuguese and Spanish. It was also contacted that the publications did not present a publication year that offered a theoretical framework for their development and, in their totality,



present a quantitative methodology. Regarding the definition of the level of evidence, one of the manuscripts was classified in level VI and the others in level IV.

Thus, the information of the selected studies was structured using the data of the instrument applied: title of the publication, authors, year and journal, according to table 1. Meanwhile, the other instrument used structured contemplated: objective, research modality, level of evidence and synthesis of results, as shown in Table 2.

DISCUSSION

Breast cancer morbidity increases over the years and the search for treatment is becoming more widespread in collective spaces in order to perform an early diagnosis and insertion of the woman immediately to the treatment. Chemotherapy is one of the ways to reduce complications due to the disease, as well as to ensure a better prognosis and longer survival for patients¹⁷. However, because it is a form of systemic treatment, it indiscriminately affects all cells of

TABLE 1 – Synthesis of studies on health education and chemotherapy against breast cancer, 2018.

ID	TITLE OF PUBLICATION	AUTHORS	YEAR	MAGAZINE
01	Self management Pilot study on women with breast cancer: Lesson Learnt in Malaysia ¹⁴ .	SY Loh CH Yip T Packer KF Quek	2010	Asian Pacific Journal of cancer prevention
02	Feasibility of Quality of life assessment in routine clinical oncology practice: A Tunisian Study ¹⁵ .	A. Masmoudi M. Frikha J. Daoud	2009	Earnest Mediterranean Journal
03	The effect of education in managing side effect in women receiving chemotherapy for treatment of breast cancer ¹⁶ .	Susan A. Williams M. Schreier	2004	Oncology Nursing Forum

TABLE 2 – Synthesis of studies on health education and chemotherapy against breast cancer, 2018.

ID	GOAL	RESEARCH MODALITY	LEVEL OF EVIDENCE	SUMMARY OF RESULTS
01	To evaluate the implementation of a self-care program for women with breast cancer.	Exploratory in the form of action research.	VI	It was observed from the application of a pre and post test with the participants of the self-care program that there was reduction in the adverse effects for chemotherapy especially anxiety, fatigue, depression and insomnia.
02	To assess the feasibility of quality of life assessment (QOL) in a cohort of women with breast cancer in adjuvant chemotherapy.	Exploratory cohort type.	IV	It was evidenced that the application of the specific questionnaire for the evaluation of QoL with women with breast cancer (QLQ-C30) presented limited results, especially for not being able to evaluate conditions related to body image, personal nature and sexuality among the participants. This limitation of factors was due to the Islamic religion and the level of education of women for the realization of the stories
03	To determine the efficiency of self-care informative audio tapes on side effects of chemotherapy among breast cancer patients.	Experimental case control type.	IV	Positive self-care results were found for adverse reactions in patients who listened to the tapes 30 minutes before and at the time after the chemotherapy session. There was a reduction in the symptoms of insomnia, fatigue, nausea, vomiting and changes in taste in women who listened to the tapes two or more times. It was also evidenced that the chemotherapy administration environment is not ideal for educational activities because it exposes the woman to a situation of stress and increased anxiety.

the body, especially those of rapid proliferation, producing adverse effects, which are directly related to the patient's condition, staging of the disease and drugs used¹⁸.

The impact of these effects on women's daily treatment and daily lives are so damaging that they can result in the suspension of sessions or even lead to the death of the patient. In order for the treatment to occur as well as possible, it is necessary for the patient to be aware of the adverse effects of chemotherapy, knowing the ways of detecting, preventing and ameliorating them¹⁹. In reducing these impacts and the consequence of maintaining the antineoplastic treatment, it is the responsibility of the Nursing team to guide the patient for her integral treatment, providing her with the skills to be active and conscious throughout this care process.

The studies analyzed^{14,15,16} point out, in its entirety, the importance of the nursing professional's action in carrying out health education actions during chemotherapy treatment. These actions must occur continuously and seek strategies that minimize abandonment and enhance self-care actions and health-seeking behavior by women. In a study applying educational activities to patients under chemotherapy treatment from the nursing consultation, it was observed that the activities enabled the development of an attention based on the humanistic view and that guaranteed a care of the individual in its totality. It was also inferred that the importance of education performed by the nurse during the chemotherapy sessions guarantees measures to prevent more effective complications by reducing interventional therapy and unnecessary treatments to the patient²⁰.

Another relevant aspect worked in the publications is the teaching / intervention methodologies adopted by the professionals and the patients' adherence to the proposed actions. In these, it is evidenced that the strategies adopted by nursing must be varied in order to guarantee the attraction of the woman for participation, arousing their interest, as well as should not be performed in the infusion environment of chemotherapy because they generate stress and anxiety to the patient.

Health education can be mediated by technologies that help the individual and family to adopt or modify behaviors that allow a healthy state, enabling the professional to promote various strategies for health promotion¹⁹. In a study involving relatives of patients diagnosed with breast cancer²¹, it was evidenced that the family participation in educational activities for rehabilitation promotes an opportunity for knowledge of the disease and reorganization of life not only of the woman affected by the disease, but also of the members of the sociofamiliar network. Regarding the development of intervention strategies for health education developed by nursing, studies refer to the use of educational videos about pro-

cedures and interventions during the treatment, which ensure better adaptation of patients to chemotherapy, as well as the provision of measures to meet the different needs of these patients promoting the strengthening of its autonomy and collaborating so that it has an active participation in the health-disease process²². Another tool used as a means of strengthening patient education actions in chemotherapy is telemonitoring that emerges as an amplifier of the patient's bond with the team. Contact performed throughout the intervals, between infusion dates and/or routine visits, allows follow-up to reach another dimension, patients are evaluated while symptoms are present. Just when the chemotherapy treatment is more difficult, nursing care and follow-up become essential. Thus, telephone contact appears as a potential tool for integral care, an effective tool for the reestablishment of women²³.

The use of educational manuals as a way to support the information offered to patients during chemotherapy is mentioned in one of the studies as a good strategy, and there is a barrier to their use because of the low access to education in the countries studied, which does not make this strategy with high impact in this population. A study implemented in the Federal District¹⁹, Brazil, it was evidenced that the use of informative manuals and telemonitoring to strengthen the behaviors of patients in chemotherapy and self-care in the face of adverse reactions showed high effectiveness in the orientation of family and patients related to food, treatment and feeling of improvement of health standard. The patients also voiced a reduction in post-chemotherapy effects and a reduction in the use of back-up services to manage these clinical conditions.

Women with breast cancer undergoing chemotherapy often have to deal with numerous complications during treatment, which can interfere with the performance of usual activities and the maintenance of quality of life²⁴. During treatment the main effects or toxicities are hematological, gastrointestinal, cardiotoxicity, hepatotoxicities, pulmonary toxicity, neurotoxicity, reproductive dysfunction, bladder and renal toxicity, metabolic alterations, dermatological toxicity and allergic reactions besides the possibility of anaphylaxis⁷.

One of the studies analyzed¹⁵ investigated the complications related to chemotherapy treatment and its interference in the maintenance of Quality of Life (QoL) of patients with breast cancer. In this study, a reduction in the quality of life was observed, especially due to changes related to diet (nausea, vomiting and loss of taste), anxiety and reduced sleep capacity and rest with consequent fatigue. The study used telemonitoring as a guideline for patients to self-care and found in their results that the higher the patient adherence to the education measures proposed in the telephone contact, the greater the

compliance with the nursing guidelines, the reduction of self-medication for management of signs and symptoms after chemotherapy and greater capacity for self-care.

In a study conducted in the interior of São Paulo, Brazil, it was demonstrated that the use of chemotherapy as a treatment for breast cancer in Brazilian women was not associated with a poorer QoL, but the study had as a limitation the use of a generic questionnaire and not there were references of association of the treatment to the accomplishment of health education activities related to the treatment²⁵.

The process of health education as well as the educational process itself provide reflection, based on strategies that allow changes in attitudes and behaviors. The nurse, in turn, must understand the essence of health education and, in this way, exercise care under the aspect of a critical and transformative education favoring well-being and contemplating in their actions, both individual and collective, the needs biopsychosocial^{26,27}.

A study⁷ that used the quality of life assessment instrument associated with breast neoplasia (QLQ-C30) among 13 patients following treatment resulted in fatigue, nausea and vomiting symptoms as having the greatest impact on patients' quality of life. Another aspect evaluated in the study is the impairment of cognitive ability, physical functioning and fatigue after completing chemotherapy with evidence of worsening of general health. In this study, there was also no relation between the impact of health education activities on the maintenance of QoL and self-care of the women be.

CONCLUSION

The analysis of the manuscripts provided an active reflection on the importance of the actions of health education in the chemotherapeutic treatment for breast cancer because it shows that its implementation promotes impacts from the actions related to well-being, quality of life, health maintenance and prevention of complications. The Nursing professional is an active subject of the actions and needs more support and openness in the administration services of this therapy to implement these actions. Evidence shows that when these ideals are applied in the development of actions aimed at patients undergoing chemotherapy, there is a high potential impact on the reduction of adverse effects that are determinant for their survival.

In their totality, the studies are from international publications and show that in Brazil there is a need for further investigation with strong evidence levels so that low-cost and easy-to-operate actions become a high impact in reducing complications and even mortality among these patients.

The study presents as a limitation the number of current sources in the literature on this subject, which leads us to indicate the conduction of researches with methodologies of greater evidence in the area and that demonstrate more specific results in strengthening self care, management of signs and symptoms after chemotherapy and in maintaining the quality of life of the patients being treated.

REFERENCES

- 1- INSTITUTO NACIONAL DO CÂNCER – INCA. Breast Cancer Control - Concept and Magnitude. [serial online]. Available from: http://www2.inca.gov.br/wps/wcm/connect/acoes_programas/site/home/nobrasil/programa_controle_cancer_mama/conceito_magnitude. cited: 24 may 2018.
- 2- INSTITUTO NACIONAL DO CÂNCER – INCA. Estimativa 2017: incidence of cancer in Brazil / National Cancer Institute José Alencar Gomes da Silva. [serial online]. Rio de Janeiro: INCA, 2016. Available from: <http://www.inca.gov.br/estimativa/2017/estimativa-2017-v11.pdf>. cited: 24 may 2018.
- 3- MINISTÉRIO DA SAÚDE. Department of Primary Health Care. Control of cervical and breast cancers / Ministry of Health, Department of Health Care, Department of Primary Care. 2. ed. Brasília: Editora do Ministério da Saúde, 2013.
- 4- Costa WB et al. Women with Breast Cancer: Interactions and perceptions about Nurse care. *Rev. Min. Enferm* [Internet]. 2012 [acesso em 20 mai 2018]; 16(1): 31-37. Disponível em: <http://reme.org.br/artigo/detalhes/497>
- 5- MG dos SANTOS, Fuly PSC. Home visit and Health Education, promoting quality of life in cancer patients. *Rev enferm UFPE on line* [Internet]. 2014 [acesso em 18 mai 2018]; 8(4):904-909. Disponível em: <https://periodicos.ufpe.br/revistas/revistaenfermagem/article/view/9759/9883>.
- 6- Rodrigues FSS, Polidori MM. Confrontation and resilience of patients undergoing chemotherapy and their families. *Brazilian Journal of Cancerology* [Internet]. 2012 [acesso em 19 mai 2018]; 58 (4): 619-627. Disponível em: http://www.l.inca.gov.br/rbc/n_58/v04/pdf/07-artigo-enfrentamento-resiliencia-pacientes-tratamento-quimioterapico-familiares.pdf
- 7- Machado SM, Sawada NO. Evaluation of the quality of life of cancer patients on adjuvant chemotherapy. *Texto Contexto Enferm*, [Internet]. 2008 [acesso em 19 mai 2018]; 17(4): 750-7. Disponível em: <http://www.redalyc.org/pdf/714/71411240016.pdf>
- 8- Cunha FF, Vasconcelos EV, Silva SED, Freitas K de O. Representations of cancer patients on the treatment of antineoplastic chemotherapy. *Rev Cuidado é fundamental* [Internet]. 2017 [acesso em 20 mai 2018]; 9 (3): 840-847. Disponível em: http://www.seer.unirio.br/index.php/cuidadofundamental/article/view/5579/pdf_1
- 9- Vidal AKL. Verification of knowledge of the population of Pernambuco about oral cancer and risk factors - Brazil. *Pesq bras odontopediatria clin integr*. 2012; 12(3):383-87.
- 10- Souza MT, Silva MD, Carvalho R de. Integrative Revision: What it is and how to do. *Einstein* [Internet]. 2010 [acesso em 18 mai 2018]; 8(1 Pt 1):102-6. Disponível em: http://www.scielo.br/pdf/eins/v8n1/pt_1679-4508-eins-8-1-0102
- 11- Mendes KDS, Silveira RC de CP, Galvão CM. Integrative review: research method for incorporating evidence into health and nursing. *Texto contexto enfermagem* [Internet]. 2008 [acesso em 18 mai 2018]; 17(4): 758-64. Disponível em: <http://www.redalyc.org/pdf/714/71411240017.pdf>
- 12- Pompeo DA, Rossi LA, Galvão CM. Integrative review: initial stage of the validation process of nursing diagnosis. *Acta paul. enferm.* [Internet]. 2009 [acesso em 18 mai 2018]; 22(4):434-438. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0103-21002009000400014
- 13- Dantas RFDB et al. Characterization of chronic lesions in the elderly served in the family health strategy. *Revista de enfermagem UFPE online* [Internet]. 2016 [acesso em 19 mai 2018]; 11(5):1943-52. Disponível em: <https://periodicos.ufpe.br/revistas/revistaenfermagem/article/view/23330/18924>
- 14- Loh SY, Yip CH, Packer T, Quek KF. Self management Pilot study on women with breast cancer: Lesson Learnt in Malaysia. *Asian Pacific Cancer Prev.*[internet]. 2010 [acesso em 16 mai 2018]; 11: 1239-1299. Disponível em: https://www.researchgate.net/profile/Siew_Yim_Loh/publication/266376238_Self_Management_Pilot_Study_on_Women_with_Breast_Cancer_Lessons_Learnt/links/542e0cac0cf27e39fa95fddb/Self-Management-Pilot-Study-on-Women-with-Breast-Cancer-Lessons-Learnt.pdf
- 15- Masmoudi A, Frikha A, Daoud J. Feasibility of Quality of life assessment in routine clinical oncology practice: A Tunisian Study. *Esastern Mediterranean Journal* [internet]. 2009 [acesso em 16 mai 2018]; 15(2). 362-368. Disponível em: http://apps.who.int/iris/bitstream/handle/10665/117647/15_2_2009_0362_0368.pdf?sequence=1&isAllowed=y
- 16- Williams AS, Schreier AM. The effect of education in managing side effect in women receiving chemotherapy for treatment of breast cancer. *Oncology Nursing forum* [internet]. 2004. 31 [acesso em 16 mai 2018]; 31(1): 16-23. Disponível em: https://www.researchgate.net/profile/Ann_Schreier/publication/8919757_The_Effect_of_Education_in_Managing_Side_Effects_in_Women_Receiving_Chemotherapy_for_Treatment_of_Breast_Cancer/links/54d8d28d0cf25013d03fdbc1/The-Effect-of-Education-in-Managing-Side-Effects-in-Women-Receiving-Chemotherapy-for-Treatment-of-Breast-Cancer.pdf
- 17- Guimarães RCR et al. Nursing actions against reactions to chemotherapy in cancer patients. *Revista de Pesquisa Cuidado é Fundamental Online* [internet]. 2012 [acesso em 18 mai 2018]; 7(2):2440-2452. Disponível em: <http://www.redalyc.org/html/5057/505750946034/>.
- 18- Soares LC et al. Chemotherapy and its adverse effects: Oncology client's report. *Cogitare Enferm* [internet]. 2009 [acesso em 18 mai 2018]; 14(4):714-9. Disponível em: <http://www.redalyc.org/pdf/4836/483648977019.pdf>
- 19- Cruz FOAM, et al. Implementation of educational manuals in nursing consultation: opinion of patients submitted to antineoplastic chemotherapy. *Rev. Enfermagem UFPE online* [internet]. 2017 [acesso em 19 de mai 2018]; 11 (5):

- 1757-62. Disponível em: <https://periodicos.ufpe.br/revistas/revistaenfermagem/article/view/23320/18903>
- 20- Soffiatti NRT. Nursing consultation in chemotherapy outpatient clinic: emphasis on educational actions. *Cogitare Enferm* [internet]. 2000 [acesso em 21 mai 2018]; 5 (n. esp.): 69-72. Disponível em: <https://revistas.ufpr.br/cogitare/article/view/44872/27296>
- 21- Nascimento AN do, Castro DS de, Amorim MHC, Bicu do SDS. Coping strategies of relatives of women affected by breast cancer. *Ciência cuidado e Saúde* [internet]. 2011 [acesso em 21 mai 2018]; 10 (4): 789-794. Disponível em: <http://eduem.uem.br/ojs/index.php/CiencCuidSaude/article/viewFile/18324/pdf>
- 22- Razera APR, Buetto LS, Lenza N de FB, Sonobe HM. Educational Video: teaching-learning strategy for patients undergoing chemotherapy. *Ciência cuidado e Saúde* [internet]. 2013 [acesso em 21 mai 2018]; 13(1): 172-177. Disponível em: https://www.researchgate.net/profile/Luciana_Buetto2/publication/283712450_VIDEO_EDUCATIVO_ES-TRATEGIA_DE_ENSINO-APRENDIZAGEM_PARA_PACIENTES_EM_TRATAMENTO_QUIMIOTERAPICO/links/5643f6ac08ae9f9c13e3cc5d.pdf
- 23- Vaz DC, Silva CRL da, Silva RCL da. Face and telephone follow-up of symptoms in women with breast cancer undergoing chemotherapy. *Revista de enfermagem UERJ* [internet]. 2016 [acesso em 22 mai 2018]; 24 (5): e15577. Disponível em: <http://www.facenf.uerj.br/v24n5/v24n5a16.pdf>
- 24- Amorim JR, Silva IA, Shimizu IA. Sleep quality assessment in patients with breast cancer in chemotherapy. *Rev. Bras. Mastologia* [internet] 2017 [acesso em 22 mai 2018]; 27 (1): 3-7. Disponível em: http://www.rbmastologia.com.br/wp-content/uploads/2017/01/MAS-v27n1_3-7.pdf
- 25- Conde DM, Pinto-Neto AM, Freitas Junior R, Aldrighi JM. Quality of life of women with breast cancer. *Rev. Bras Ginecol Obstet* [internet]. 2006 [acesso em 23 mai 2018]; 28 (3): 195-204. Disponível em: <http://www.scielo.br/pdf/%0D/rbgo/v28n3/30847.pdf>
- 26- Maia JS, Santos MSC, Moraes MP, Maia LF dos S. Health education and quality of life. *Just recently* [internet]. 2014 [acesso em 22 mai 2018]; 4(11): 5-9. Disponível em: <http://recien.com.br/index.php/Recien/article/view/70/131>
- 27- Ramos SSR, Rodrigues LMS, Silva TASM, Balbino CM, Souza MMT, Silvino ZR. Knowledge, Myths and Implications for Nursing Care in Male Breast Cancer. *Revista Enfermagem atual* [internet]. 2017 [acesso em 05 jul 2018]; 17(83): 67-72. Disponível em: <https://revistaenfermagematual.com.br/uploads/revistas/21/revista.pdf>