R E V I S T A   O N L I N E   D E   P E S Q U I S A

CUIDADO É FUNDAMENTAL

UNIVERSIDADE FEDERAL DO ESTADO DO RIO DE JANEIRO • ESCOLA DE ENFERMAGEM ALFREDO PINTO

NURSING DIAGNOSTICS ASSOCIATED WITH THE QUALITY OF LIFE OF WOMEN WITH BREAST CANCER IN CHEMOTHERAPY

Diagnósticos de enfermagem associados a qualidade de vida de mulheres com câncer de mama em quimioterapia

Diagnósticos de enfermería asociados a la calidad de vida de mujeres con cáncer de mama en quimioterapia

Shirley Dósea dos Santos Naziazeno[1], Matheus Santos Melo[2], Joseilze Santos de Andrade[3], José Rodrigo Santos Silva[4], Ana Maria de Almeida[5], Leila Luíza Conceição Gonçalves[6]

How to cite this article:

ABSTRACT

Objective: To identify nursing diagnoses in women with breast cancer in chemotherapy through the cross-mapping of health problems with the NANDA-I taxonomy. **Method:** A cross-sectional descriptive study carried out with five nurses and 75 women with breast cancer in chemotherapy, developed in three phases: survey of health problems by health-related quality of life assessment instruments; cross-mapping of health problems with defining characteristics, related factors, risk factors and diagnostic titles; validation of mapping by judges. **Results:** 24 health problems associated with 13 nursing diagnoses were identified. Eight were identified, with content index validity ≥0.8. **Conclusion:** The study allowed the mapping of nursing diagnoses from identified health problems, through quality of life instruments, in women with breast cancer under chemotherapeutic treatment.

Descriptors: Breast Neoplasms; Chemotherapy; Quality of Life; Nursing Diagnosis; Nursing.

1 Master in Nursing from the Federal University of Sergipe (2017). Specialist in Cardiac Nursing and Cardiovascular Surgery at FANESE (2007) and Urgency and Emergency at FANESE (2007). Graduated in Nursing from the Federal University of Sergipe (2005).

2 Specialist in Hospital Epidemiology at the Multiprofessional Residence of the Federal University of Sergipe (2019). Specialist in Occupational Nursing by Faculdade Futura (2018). Graduated in Nursing from the Federal University of Sergipe (2017).

3 PhD in Sciences at the Ribeirão Preto College of Nursing, University of São Paulo - USP (2013). Master in Health Sciences from the Federal University of Sergipe (2005). Nursing Specialist in Surgical Center and Central of Material and Sterilization by the Federal University of Bahia (1995). Graduated in Nursing from the Federal University of Sergipe (1994).

4 PhD in Biometrics and Applied Statistics by the Federal Rural University of Pernambuco (2014). Master in Biometrics and Applied Statistics by the Federal Rural University of Pernambuco (2011). Graduated in Statistics from the Federal University of Sergipe (2008).

5 PhD in Nursing from the University of São Paulo (1997). Master in Nursing from the Federal University of Rio de Janeiro (1991). Graduated in Nursing from the University of São Paulo (1978).

6 PhD in Sciences by the Inter-Doctoral Program of EE / EERP / USP (2013). Master in Nursing from the UFBA School of Nursing (2001). Graduated in Nursing from the School of Nursing at the Federal University of Bahia (2000).

RESUMO

Objetivo: Identificar diagnósticos de enfermagem em mulheres com câncer de mama em quimioterapia por meio do mapeamento cruzado dos problemas de saúde com a taxonomia NANDA-I. **Método:** Estudo descritivo transversal realizado com cinco enfermeiros e 75 mulheres com câncer de mama em quimioterapia, desenvolvido em três fases: levantamento dos problemas de saúde por meio de instrumentos de avaliação da qualidade de vida relacionada à saúde; mapeamento cruzado dos problemas de saúde com características definidoras, fatores relacionados, fatores de risco e títulos diagnósticos; validação do mapeamento por juízes. **Resultados:** Foram identificados 24 problemas de saúde associados a 13 diagnósticos de enfermagem. Oito foram identificados, com índice de validade de conteúdo ≥ 0,8. **Conclusão:** O estudo permitiu realizar o mapeamento de diagnósticos de enfermagem a partir de problemas de saúde identificados, por meio de instrumentos de qualidade de vida, em mulheres com câncer de mama em tratamento quimioterápico.

Descritores: Neoplasias da Mama; Quimioterapia; Qualidade de Vida; Diagnóstico de Enfermagem; Enfermagem.

RESUMÉN

Objetivo: Identificar diagnósticos de enfermería en mujeres con cáncer de mama en quimioterapia a través del mapeo cruzado de los problemas de salud con la taxonomía NANDA-I. **Método:** Estudio descriptivo transversal realizado con cinco enfermeros y 75 mujeres con cáncer de mama en quimioterapia, desarrollado en tres fases: levantamiento de los problemas de salud por medio de instrumentos de evaluación de la calidad de vida relacionada a la salud; el mapeo cruzado de los problemas de salud con características definidoras, factores relacionados, factores de riesgo y títulos diagnósticos; validación del mapeo por jueces. **Resultados:** Se identificaron 24 problemas de salud asociados a 13 diagnósticos de enfermería. Ocho fueron identificados, con índice de validez de contenido ≥0,8. **Conclusión:** El estudio permitió realizar el mapeo de diagnósticos de enfermería a partir de problemas de salud identificados, por medio de instrumentos de calidad de vida, en mujeres con cáncer de mama en tratamiento quimioterápico.

Descriptores: Neoplasias de la Mama; Quimioterapia; Calidad de Vida; Diagnóstico de Enfermería; Enfermería.

INTRODUCTION

Breast cancer is the second most common type of cancer in the female population in Brazil, and antineoplastic chemotherapy is one of the most widely used forms of treatment.[1] However, the use of this therapy, which aims to destroy cancer cells and reduce distant metastases, can causing adverse reactions that compromise vital functions may cause physical and psychological changes, altering health-related quality of life (HRQoL).[2]

When it comes to the health-related quality of life of women with breast cancer, several aspects are involved from the perception of the disease to the adverse reactions of therapies that affect psychological, functionality, health and social relationships. In the literature there are seven specific instruments for assessing the health-related quality of life of these women, among which the European Organization for Research and Treatment of Core Cancer Quality Life Questionnaire- Breast Cancer Specific Module (EORTC-BR23) is one of the has better psychometric validity and assesses the occurrence of treatment effects.[3]

Moreover, it is known that through the Nursing Process it is possible to give quality to the care offered by nurses and that the quality of health care can be measured through the effects of patient care. That includes changes in health status, behavior, knowledge, satisfaction and quality of life.[4-5] Thus, this instrument can be useful in the development of the oncology nursing process by enabling the identification of health problems caused by the disease or by the treatment and determination of nursing diagnoses, favoring the use of standardized language by nursing.

It is noteworthy that the use of nursing standardized language, such as NANDA-I's taxonomy of nursing diagnoses, is still not homogeneous in Brazil.[6] Although studies on quality of life developed by nursing help to provide better care,[6-7] There are still few Brazilian studies that use health-related quality of life assessment tools to identify health problems and map nursing diagnoses.

Thus, the aim of this study was to identify nursing diagnoses in women with breast cancer undergoing chemotherapy by cross-mapping health-related quality of life problems with the NANDA-I taxonomy.

METHOD

This is a cross-sectional descriptive study conducted in two clinical oncology outpatient clinics in a northeastern Brazilian capital. The methodological development took place in three phases: 1) survey of health problems through instruments related to health-related quality of life; 2) cross-mapping of health problems with defining characteristics, related factors, risk factors and NANDA-I diagnostic titles; 3) validation of mapping by judges.

For the first phase, it was determined that the study population consisted of women diagnosed with breast cancer who were undergoing chemotherapy treatment at the research institutions. Inclusion criteria were women diagnosed with breast cancer, aged 18 years or older, having the ability to verbalize to respond to the instrument items, being undergoing antineoplastic chemotherapy for the first time, and from the second session. Women who were undergoing palliative chemotherapy were excluded.

Through the chemotherapy agenda and new case record book, 19 women in outpatient A and 61 in B were identified, totaling 80. Of these, 75 women met the inclusion criteria and agreed to participate in the study. One woman refused to participate and four were not located at the services during data collection.

The survey of health problems, conducted from May to July 2016, was carried out through the application of the

European Organization for Research and Treatment of Core Cancer Quality Life Questionnaire (EORTC QLQ-C30) and the Breast Cancer Specific Module (EORTC-BR23), in the translated and validated versions for Brazilian Portuguese. Divided into three domains, the EORTC QLQ-C30 contains 30 questions that assess: Global Health Status / Quality of Life (ESG / QL); Functional scales composed of items that evaluate physical and paper performance, cognitive, emotional and social functioning; Symptom scales that assess fatigue, pain, nausea, vomiting, dyspnea, insomnia, loss of appetite, constipation and diarrhea. The instrument also assesses the financial impact of treatment and disease. EORTC QLQ-BR23 is a complementary module of QLQ C-30, specific for women with breast cancer. It has 23 questions and measures chemotherapy side effects, body image, sexual function and satisfaction, arm and breast-related symptoms, hair loss disorders, and future prospects.[8]

Health problems were considered to be answers with a score equal to or higher than two points in the EORTC QLQ-C30 functional and symptom scales and more than 50.0% of QLQ-BR-23, except for the functional scale "sexual pleasure" in which scores below three were considered. From the considered health problems, the clinical judgment was performed to elaborate the nursing diagnoses, considering the related factors, the defining characteristics and the risk factors of NANDA-I taxonomy II, 2015-2017. Nursing diagnostic titles were mapped relating them to health problems, domains, classes, definitions of diagnostic titles, related factors, defining characteristics and risk factors of NANDA-I, version 2015-2017.

In order to verify agreement on the mapping of nursing diagnoses, nurse judges were sought through theses and dissertations in the databases of the Higher Education Personnel Improvement Coordination. In this search, the keywords "quality of life", "nursing diagnoses" and "cancer" with boolean operator AND were used. Also, the scoring system for the selection of expert nurses to validate nursing diagnoses10 was adapted, which were: to be a master or doctor of nursing with a dissertation or thesis in the area of nursing diagnoses, breast cancer or quality of life; have published research on nursing diagnoses, breast cancer or quality of life; have published article on nursing diagnoses, breast cancer or quality of life in an indexed journal; have recent clinical practice of at least one year with nursing diagnoses.

It was identified, through analysis of the lattes curriculum against the adapted criteria[9], 14 judges, who obtained a minimum score of five points and a maximum of 12 points. The snowball strategy was used in which nurses invited to be judges indicate colleagues for considering judges on the subject. Through this strategy, nine nurses were appointed who met the selection criteria adopted. Thus, 23 nurses were selected and invited, but only five participated in the agreement verification.

In addition to the invitation sent by e-mail to participate in the agreement check and the Informed Consent Form, the diagnostic mapping table, as mentioned above, and the agreement verification tool, which had a three-point Likert scale were sent, defined as: 1 - strongly agree; 2 - partially agree; 3 - strongly disagree, plus spaces for comments and suggestions. Three response options were determined because they are sufficient, fit small samples and require shorter response times[10].

The researchers analyzed the instruments returned by the judges. In this first analysis, six of the 19 nursing diagnoses initially raised were excluded, considering the judges' comments and suggestions. Such exclusion occurred due to similarity with other nursing diagnoses or not being in agreement with the associated health problems. Thus, 13 nursing diagnoses were considered for statistical analysis.

For tabulation and statistical analysis of data, a Microsoft Excel / Windows (Office 2016) program database was created, which was validated after double typing. The Microsoft Excel / Windows (Office 2016) program was used for the relative frequency descriptive statistical analysis for quality of life instruments issues to identify the relevant health problems and the R software, version 3.5.0 to calculate the Coefficient of Concordance Tau (τ) and the Content Validity Index (CVI).

The Tau Concordance Coefficient (τ)[11] was calculated and the result showed that there was a positive agreement between Judges A, C and E, a disagreement between Judge D with Judges A and C, and for Judge B it was not possible to calculate the coefficient of agreement once this judge answered 1 for all items. For each nursing diagnosis, the Content Validity Index (CVI) was calculated. This index measures the proportion or percentage of specialists who are in agreement with certain aspects of instruments and their items. When the CVI was greater than or equal to 0.8, the nursing diagnosis was considered approved, since a minimum agreement of 0.8027 for new instruments and unanimity in the evaluation process of the individual items is recommended, when five or less subjects participated[12].

The study respected the ethical precepts of research involving human beings in all its phases, as provided for in Resolution 466/2012. It had a favorable opinion for its development by the Research Ethics Committee of the Federal University of Sergipe with Opinion No. 3,225,694 and CAAE: 08303619.4.0000.5546.

RESULTS

The average age of the women in the study was 49.9 ± 12.2 years, 39 (52.0%) lived without a partner, 57 (76.0%) self-reported mixed race, 56 (74.7%).) belonged to the low socioeconomic class, 27 (36%) were illiterate or had incomplete elementary school and 62 (82.7%) were submitted to chemotherapy protocol composed of adriamycin, cyclophosphamide and taxol.

Twenty-four health problems were identified, highlighting concerns about future health, financial difficulties and lack of sexual desire reported by 53 (70.7%) of the participants. From the health problems, 13 nursing diagnoses were mapped, according to NANDA-I taxonomy II, 2015-2017, as shown in Chart 1.

Chart 1 - Distribution of the percentage frequency of health problems identified from the EORTC QLQ-C30 and QLQ-BR23 instruments by diagnostic titles. Sergipe, Brazil – 2019

EORTC Question-Health Problems	%	Nursing Diagnoses
01- Difficulty making great efforts	69,3	Fatigue
02- Difficulty when performing a long walk	58,7	
10- Need to rest	66,0	
36- Indisposition	50,7	
09- Pain	62,7	Acute Pain
38- Headache	54,7	
47- Pain in the affected arm or shoulder	54,7	Chronic Pain
50- Pain in the diseased breast area	64,0	
11- Problems Sleeping	54,7	Insomnia
21- Nervousness	61,3	Unstable Emotional Control
22- Concern	65,3	
23- Irritation (easily)	64,0	Stress by Change Syndrome
21- Nervousness	61,3	Anxiety
22- Concern	65,3	
23- Irritation (easily)	64,0	
43- Concern about future health	85,3	
25- Difficulty remembering things	53,3	Impaired Memory
28- Financial difficulties	73,3	Risk of feeling helpless
31- Dry mouth	57,3	Risk of Impaired Oral Mucosa
32- Different taste when eating	53,3	
33- Sore, irritated or watery eyes	62,7	Impaired Comfort
37- Hot Flushes	53,3	
43- Concern for future health	85,3	Fear

EORTC Question-Health Problems	%	Nursing Diagnoses
44- Absence of sexual desire	76,0	Ineffective Sexuality Pattern
45- Absence of sexual intercourse	68,0	

Source: data from own research and NANDA-I, 2015-2017

After the judges' analysis and adjustments, according to the comments and suggestions provided, the seven problem-focused diagnoses identified with CVI higher 0.8 were: pharmacological agent-related insomnia, anxiety, physical discomfort, and fear manifested by changes in the pattern concentration. sleep, difficulty initiating and maintaining sleep, and compromised health status; fatigue linked to increased physical exertion, physiological condition (anemia, illness) characterized by increased need for rest, physical symptoms (pain, nausea, vomiting, lack of appetite, depression), tiredness, impaired ability to maintain habitual and activity routines insufficient physical and energy; impaired memory associated with anemia, electrolyte imbalance, and neurological impairment evidenced by forgetfulness, forgetting to take action at a scheduled time, inability to remember (events, actual information if an action was taken), inability to retain new information; ineffective sexuality pattern linked to lack of skills regarding sexuality alternatives, lack of meaningful person characterized by change in sexual activity, relationships with significant person and sexual behavior, change in sexual role; anxiety associated with threat to current condition, death threat, stressors, major change (economic condition, environment, health condition, role function, role condition) evidenced by agony, anxiety, apprehension, restlessness, insomnia; uncertainty, irritability, fear, nervousness, worry, worry about changing life events; fear related to separation from the support system (illness, chemotherapy) manifested by apprehension, diminished self-assurance, excitement, restlessness, fear, fear, increased tension, stimuli perceived as threat, increased alertness; focus directed to the source of fear; impaired comfort linked to treatment regimen (chemotherapy), illness-related symptoms, insufficient resources (eg, financial, social, knowledge), insufficient situational control characterized by discomfort with the situation, discontent with the situation, irritability, and feeling discomfort.

The only mapped diagnosis of CKD syndrome greater than 0.8 corresponded to stress-related change syndrome related to compromised health status, ineffective coping strategies, impaired psychosocial functioning, impotence, unpredictability of experience manifested by anxiety, increased illness, physical symptoms (metastasis, nausea,

vomiting, inappetence, diarrhea), dependence, insecurity, fear, worry.

Regarding risk diagnoses, two were identified with CVI greater than 0.8: risk of feeling helplessness evidenced by anxiety, low self-esteem, insufficient knowledge to control the situation, financial disadvantage, progressive illness, ineffective coping strategies and unpredictability of the course the of sickness; risk of impaired oral mucosa evidenced by chemotherapy.

DISCUSSION

In clinical practice, identified nursing diagnoses can support nursing consultation and care for women with breast cancer by creating a terminology subset. In addition, the frequent use of electronic medical records by health institutions may favor the registration of the nursing process and the prescription of care. It is noteworthy that this study innovates in its methodology by using an instrument for assessing HRQoL with reliable psychometric validity to survey health problems and, from these, perform the cross-mapping of nursing diagnostic titles.

The "concern for future health" was the prevailing health problem among women with breast cancer. From this, the diagnoses anxiety and fear were identified, as well as in an integrative review eight diagnoses focused on the problem and two most frequent risk diagnoses in hospitalized adults / elderly with cancer.[13] A stigmatizing disease such as cancer still raises many doubts about its cure, especially when it is diagnosed at an advanced stage. Similar feelings prevailed in a qualitative research conducted with women treated for breast cancer that revealed a feeling of distress at the diagnosis.[14] Both the diagnosis of cancer and the treatments and adverse reactions favor the emergence of these feelings that result from the possibility of death, physical changes, performance of social and financial roles.

Faced with the diagnosis anxiety and fear, nursing should propose in the care plan, interventions that include listening to the concerns that women present, promote individual and collective health education actions, resolving doubts about the disease and treatments and control of adverse reactions. In situations where these diagnoses require team intervention, women should be referred to professionals such as social workers, physiotherapists and psychologists, so that the physical, psychological and financial demands are met as much as possible.

Anxiety and fear have been identified in other studies as factors related to insomnia.[7,15] In oncology, insomnia is multifactorial, and its occurrence may be influenced by the stress of the diagnosis physical discomfort, emotional distress and hospital environment, which can make the patient cancerous more vulnerable.

Therefore, the insomnia diagnosis should be identified during the nursing process as well as the possible associations with the intensity of fatigue and depression, since in this condition there is a reduction in quality of life. Measures aimed at sleep hygiene, progressive relaxation and the promotion of comfort may be prescribed by nurses to improve sleep quality.[16]

Another frequent problem among women was "financial difficulty", a risk factor associated with the risk of feeling helpless, signaled as worrying by the women surveyed, which can greatly affect women's health.

To intervene with patients at risk of helplessness, nurses should assess the impact of the patient's life situation on roles and relationships, encourage family involvement when appropriate, promote situations that encourage patient autonomy, and refer women to government and non-governmental organizations or support groups that provide support to people with cancer.[17]

From four health problems, the diagnosis fatigue was identified and defined. Fatigue in cancer patients is generally treated nonspecifically with rest and treatment of medical comorbidities and symptoms such as anemia, hypothyroidism, pain, depression and insomnia.[18] Therefore, identifying associated fatigue and comorbidity, as well as applying interventions Adequate measures are part of nursing care to improve the patient's quality of life, as these factors affect the patients' routine.[19]

It is noteworthy that both acute and chronic pain were reported by most women interviewed as well as these two diagnoses were identified in adult and elderly patients hospitalized for cancer, although they did not reach the ideal CVI in this study.[7]

Memory is part of cognitive functions and its impairment can interfere with social and professional relationships. Reduction of domains of cognitive functions, including verbal and working memory, may occur due to chemotherapy. It is noteworthy that psychological distress resulting from the disease and treatments can generate cognitive dysfunctions.[20] Thus, nursing care is important for clients with impaired memory, such as: identifying alterations in memory and other cognitive functions, guiding cancer patients regarding possibility of this occurrence.

Given some identified health problems and treatment, an association with the risk diagnosis of impaired oral mucosa was identified. This diagnosis is commonly related to severe oral mucositis that affects approximately 20.0% of people undergoing chemotherapy and 3.0% to 10.0% of women diagnosed with breast cancer undergoing doxorubicin chemotherapy. and taxane. In a study conducted in Australia to assess the incidence and severity of chemotherapy adverse reactions, the occurrence of mucositis in 176 (72.0%) breast

cancer patients undergoing chemotherapy was identified.[21] The presence of oral cavity changes as an adverse reaction of chemotherapy demands attention from nurses in outpatient follow-up, since they cause pain, compromise eating and can impair nutritional status.

The diagnosis stress-change syndrome, identified from health problems such as nervousness, irritation and worry, has been identified because chemotherapy in most cases involves situations such as fear of death, lifestyle change, frailty, financial dependence, change in self-image, decreased self-care, social and family isolation, among others, which may contribute to the development of stress in the patient. Coping strategies for this problem are based on social, emotional, problem and religion support, as stress can compromise treatment adherence and rehabilitation.[3,22] Therefore, it is up to the nurse to empathically assist, advise on the recovery process, explain chemotherapy adverse reactions, and encourage sharing of your concerns.

From the identification of problems such as "absence of sexual desire" and "absence of sexual relations", the standard diagnosis of ineffective sexuality was selected. Changes in body image, breast removal and alopecia, accompanied by adverse reactions such as fatigue, pain and vaginal dryness can affect women, compromising the exercise of sexuality.[2]

Thus, nurses should create strategies that can include the issue of sexuality in the care plan and educational practices. Offering adornments such as handkerchiefs, wigs, make-up, handcrafted or industrialized breast implants and support group participation can improve quality of life, self-esteem and sexuality.[2]

CONCLUSION

The study identified the most frequent health problems affecting women with breast cancer undergoing chemotherapy susceptible to nursing interventions, as well as mapping 13 NANDA-I nursing diagnostic titles. Thus, this research may contribute to the planning of nursing care for women with breast cancer undergoing chemotherapy, by standardizing a specific diagnostic language for this group, providing support to the nursing process and contributing to the construction of future research.

Despite the coherence and relevance to nursing, it is pointed as limiting factors of this study the use of non-probabilistic sample, which does not guarantee the generalization of the results.

REFERENCES

1. Ministério da Saúde (BR). Instituto Nacional de Câncer José Alencar Gomes da Silva. Coordenação de Prevenção e Vigilância. Estimativa 2018: incidência de câncer no Brasil [Internet]. 2017 [citado 2019 jan. 27]. Disponível em: http://www.inca.gov.br/estimativa/2018/estimativa-2018.pdf

2. Paterson CL, Lengacher CA, Donovan KA, Kip KE, Tofthagen CS. Body image in younger breast cancer survivors: a systematic review. Cancer Nurs. 2016; 39(1):39-58. doi: https://doi.org/10.1097/NCC.0000000000000251

3. Nguyen J, Popovic H, Chow E, Cella D, Beaumont JL, Chu D, et al. EORTC, QLQ-BR23 e FACT-B para a avaliação da qualidade de vida em pacientes com cancer de mama: uma revisão de literatura. J Comp Eff Ress. 2015; 4(2):157-66. doi: https://doi.org/10.2217/cer.14.76

4. Donabedian A. The seven pillars of quality. Arch Phatol Lab Med. 1990; 14.

5. Vituri DW, Évora YDM. Total Quality Management and hospital nursing: an integrative literature review. Rev Bras Enferm. 2015; 68(5):660-7. doi: http://dx.doi.org/10.1590/0034-7167.2015680525i

6. Ferreira AM, Rocha EN, Lopes CT, Bachion MM, Lopes JL, Barros ALBL. Diagnósticos de enfermagem em terapia intensiva: mapeamento cruzado e Taxonomia da NANDA-I. Rev Bras Enferm. 2016;69(2):307-315.doi: http://dx.doi.org/10.1590/0034-7167.2016690214i

7. Cesar ESL, Nery IS, Silva ADM, Nunes JT, Fernandes AFC. Quality of life of women with breast câncer undergoing chemotherapy. Rev Rene. 2017; 18(5):679-86. doi: https://doi.org/10.15253/2175-6783.2017000500016

8. Aaronson NK, Ahmedzai S, Bergman B, Bullinger M, Cull A, Duez NJ, et al. The European Organization for Research and Treatment of Cancer QLQ-C30: a quality-of-life instrument for use in international clinical trials in oncology. J Natl Cancer Inst. 1993; 85(5):365–76. doi: https://doi.org/10.1093/jnci/85.5.365

9. Fehring RJ. Methods to validate nursing diagnoses. Heart Lung J Crit Care [Internet]. 1987 [citado 27 Jan 2019]; 16(6):625–9. Disponível: https://pdfs.semanticscholar.org/11f7/d8b02e02681433695c9e1724bd66c4d98636.pdf

10. Dalmoro M, Vieira K. Dilema na construção de escalas Tipo Likert: o número de itens e a disposição influenciam nos resultados RGO [Internet]. 2013 [citado 2 fev 2019]; 6(3):1-14. Disponível em: https://bell.unochapeco.edu.br/revistas/index.php/rgo/article/view/1386/1184

11. Kendall MG, Smith BB. The problem of m rankings. Ann Math Stat. 1939; 10(3):275-87. doi: https://doi.org/10.1214/aoms/1177732186

12. Alexandre NMC, Coluci MZO. Content validity in the development and adaptation processes of measurement instruments. Cienc Saúde Coletiva. 2011; 16(7):3061-8. doi: https://doi.org/10.1590/S1413-81232011000800006

13. Jomar RT, Bispo VRS. The most common nursing diagnosis among adults/seniors hospitalised with cancer: integrative review. Ecancermedicalscience. 2014; 8:462. doi: https://doi.org/10.3332/ecancer.2014.462

14. Mattias SR; Lima NM; Santos IDL; et al. Câncer de mama: sentimentos e percepções das mulheres diante do diagnóstico. Rev Fund Care Online. 2018; 10(2):385-390. DOI: http://dx.doi.org/10.9789/2175-5361.2018.v10i2.385-390

15. Wang ML, Liu JE, Su YL, Xue CC. Experiences and insomnia-associated factors in Chinese breast cancer survivors: a qualitative study. J Clin Nurs. 2016; 25(13-14):1923-30. doi: https://doi.org/10.1111/jocn.13208

16. Duman M, Tashan ST. The effect of sleep hygiene education and relaxation exercises on insomnia among postmenopausal women: A randomized clinical trial. Int J Clin Pract. 2018; 24(4):e12650. doi: https://doi.org/10.1111/ijn.12650

17. Batista DRR, Mattos M, Silva SF. Living with cancer: from the diagnosis to the treatment. Rev Enferm UFSM. 2015; 5(3):499-510. doi: https://doi.org/10.5902/2179769215709

18. Pegorare ABGS. Pain and fatigue in patients with breast cancer. Rev Eletr Estácio Saúde [Internet]. 2014 [citado 27 Jan. 2019]; 3(2):1-11. Disponível em: http://revistaadmmade.estacio.br/index.php/saudesantacatarina/article/viewFile/839/556

19. Gomes RA, Coelho ACO, Moura DCA, Cruz JS, Santos KB. Avaliação da qualidade de vida de pacientes com doença oncohematológica em quimioterapia. Rev Enferm UFPE on line. 2018; 12(5):1200-5. doi: https://doi.org/10.5205/1981-8963-v12i5a231413p1200-1205-2018.

20. Seliktar N, Polek C, Brooks A, Hardie T. Cognition in breast cancer survivors: hormones versus depression: Survivor cognition hormone treatment and depression. Psychooncology. 2015; 24(4):402-7. doi: https://doi.org/10.1002/pon.3602

21. Saito H, Watanabe Y, Sato K, Ikawa H, Yoshida Y, Katakura A, et al. Effects of professional oral health care on reducing the risk of chemotherapy-induced oral mucositis. Support Care Cancer. 2014; 22(11):2935-40. doi: https://doi.org/10.1007/s00520-014-2282-4

22. Lufiego CAF, Schneider RH, Bós AJG. Evaluation of stress and anxiety in patients undergoing chemotherapy to relaxation. Psicol Saúde Doenç. 2017; 18(3):789-800. doi: https://doi.org/10.15309/17psd180313.

Corresponding author
Matheus Santos Melo
Address: Rua Dr. Benedito Guedes, 416, Coroa do Meio
Aracaju/SE, Brazil
Zip code: 49.036-070
E-mail address: matheussmelo@live.com
Telephone number: +55 (79) 99975-3192