



Concept of risk for breast cancer in nursing research*

Conceito de risco para câncer de mama em pesquisas de enfermagem

Concepto de riesgo para cáncer de mama en investigaciones de enfermería

Anna Paula Sousa da Silva¹, Cristina Maria Galvão², Ana Fátima Carvalho Fernandes³, Marcos Venícios de Oliveira Lopes³

ABSTRACT

Objective: To analyze the concept of risk for breast cancer in research in the nursing discipline. **Methods:** The study followed the methodology of conceptual analysis proposed by Walker and Avant, and was conducted using the databases SCOPUS and CINAHL. The selection was made using exclusionary and inclusionary criteria, resulting in a sample of 12 articles. **Results:** We identified the principle uses of the concept of risk, defining attributes, antecedents and consequences of the concept. **Conclusion:** The evaluation of the concept of risk for breast cancer has enabled a broader understanding of the phenomenon, especially for the early detection of disease and the vulnerability of patients at risk of developing neoplasia.

Keywords: Nursing; Breast neoplasms; Vulnerability/analysis; Research; Risk.

RESUMO

Objetivo: Analisar o conceito de risco em pesquisas sobre câncer de mama na área da Enfermagem. **Métodos:** O estudo seguiu a metodologia de análise conceitual proposta por Walker e Avant, e foi desenvolvido por meio de consulta às bases de dados SCOPUS e CINAHL. A seleção foi realizada pelos critérios de inclusão e exclusão, constituindo uma amostra de 12 artigos. **Resultados:** Foram identificados os principais usos do conceito de risco, atributos definidores, antecedentes e consequentes do conceito. **Conclusão:** A avaliação do conceito de risco para câncer de mama possibilitou uma compreensão mais ampla do fenômeno, com destaque para a detecção precoce da doença e a vulnerabilidade de pacientes com risco de desenvolver a neoplasia.

Descritores: Enfermagem; Neoplasias da mama; Vulnerabilidade; análise; Pesquisa; Risco

RESUMEN

Objetivo: Analizar el concepto de riesgo en investigaciones sobre cáncer de mama en el área de la Enfermería. **Métodos:** El estudio siguió la metodología de análisis conceptual propuesta por Walker y Avant, desarrollado por medio de consulta a las bases de datos SCOPUS y CINAHL. La selección fue realizada por los criterios de inclusión y exclusión, constituyendo una muestra de 12 artículos. **Resultados:** Fueron identificados los principales usos del concepto de riesgo, atributos definidores, antecedentes y consecuentes del concepto. **Conclusión:** La evaluación del concepto de riesgo para cáncer de mama permitió una comprensión más amplia del fenómeno, especialmente para la detección precoz de la enfermedad y la vulnerabilidad de pacientes con riesgo de desarrollar la neoplasia.

Descriptorios: Enfermería; Neoplasias de la mama; Vulnerabilidad/análisis; Investigación; Riesgo

* Study conducted at the "Universidade Federal do Ceará" – UFC, Fortaleza (CE), Brazil.

¹ Master in Nursing, Department of Nursing, "Universidade Federal do Ceará" – UFC, Fortaleza (CE), Brazil.

² Ph.D. in Nursing, Ribeirão Preto School of Nursing, "Universidade de São Paulo" – USP, Ribeirão Preto (SP), Brazil.

³ Ph.D. in Nursing, Department of Nursing, "Universidade Federal do Ceará" – UFC, Fortaleza (CE), Brazil.

INTRODUCTION

The first record of the term “risk” dates back to the 14th century, from the Spanish *riesgo*. However, this word did not have a connotation of potential danger yet. Etymological studies on the word “risk” suggest that it derived from the Latin word *rescum*, “that which cuts”, used to describe situations related to sea travels, meaning “danger hidden in the sea”. At that moment, the concept of possibility also appeared. According to Epidemiology, risk has a different mathematical meaning, i.e. it refers to the probability of an event occurring or not, combined with the magnitude of losses and gains involved in the action performed⁽¹⁻²⁾.

The risk or vulnerability is not associated with the existence of a certain danger, but rather the probability of undesirable behavioral characteristics appearing, based on the combination of individuals or groups of individuals with a series of factors. Thus, to prevent primarily means to watch, i.e. to anticipate the appearance of undesirable events in the populations considered to be at risk⁽³⁻⁴⁾.

Vulnerability refers to individuals whose “normal” biological status has been altered. This status refers to their life cycle or social condition and, consequently, the groups to which they belong are understood as deficient or harmed with regard to the “way they live their life”. Descriptors also point to an ethical dimension in the sense of protection and defense of these groups⁽⁵⁻⁶⁾.

The risk is individualized and “the notions of *at risk* and *of risk* become mixed up; vulnerability and threat come closer together”. Thus, it is necessary to understand the intertwinement between the notions of risk and vulnerability to develop this discussion, where vulnerability is a concept that complements risk. The use of the term “vulnerability” usually appears in scientific studies that primarily deal with environmental risks and, to a less degree, socioeconomic risks⁽⁷⁾.

The contribution of nursing research, especially research on breast cancer that formulates hypotheses using the concept of risk, represents the guidelines for the search for paradigms that reveal concrete determinants, values and customs, aiming to help the improvement in nursing care, and the well-being and quality of life of individuals and society.

Thus, the need arose to analyze the concept of risk in research on breast cancer in the field of nursing.

METHODS

The analysis of the concept of risk was performed using the steps of the methodology proposed by Walker and Avant: selection of the concept; determination of the objectives of the conceptual analysis; identification of the possible uses of the concept; determination of

the critical or essential attributes and of the antecedents and consequences of the concept⁽⁸⁾.

Conceptual analysis may have different objectives, such as: to clarify the meaning of a concept, to develop an operational definition, and to add/renew an existing theory⁽⁹⁾. In the present study, conceptual analysis aimed at explaining this phenomenon in the area of Nursing, especially with regard to breast cancer, providing resources that may serve as the basis for future research.

Articles published in periodicals obtained from the Scopus and Cumulative Index to Nursing and Allied Health Literature (CINAHL) databases were used to identify the several uses of the concept of risk, as they include studies aimed at the field of Nursing, based on the following descriptors: risk and breast neoplasms.

The following inclusion criteria were established: article fully available online; written in English, Portuguese or Spanish; associated with the guiding questions: What definitions of risk were found? What is the importance of the concept of risk for Nursing within the theme of breast cancer?

Editorials, letters to the editor, and articles that did not deal with the theme relevant to the objective of the present study were excluded from it.

First, 446 articles were identified in the sources described. Abstracts were read to confirm if there were aspects that could serve as the basis for the expected conceptual analysis. A total of 30 articles were subsequently submitted to full reading. The final study sample was comprised of 12 articles⁽¹⁰⁻²²⁾.

Thus, a selective and goal-oriented reading of the articles that served as the basis for the conceptual analysis was performed, when the extracts that corresponded to aspects of interest were emphasized, i.e. those that referred to critical or essential attributes, antecedents and consequences of the risk.

The defining attributes, also known as critical attributes, are characteristics that function as elements for differential diagnoses, i.e. they distinguish what is an expression of the concept and what is not. The attributes could vary according to the context in which they are included and, consequently, those that are more frequently associated with the concept must be identified in the most distinct contexts possible⁽⁸⁾.

The identification of antecedents and consequences of the concept is represented by the surveys of incidents or events that take place before and after the phenomenon, respectively. However, they can coincide with the defining attributes or not⁽⁹⁾.

RESULTS

The survey conducted enabled the identification of risk as a concept present in several Nursing studies on

breast cancer. Thus, it was observed that this concept is usually found in studies whose objectives are aimed at interventions on the risk factors for this neoplasia.

It is important that all health professionals, especially nurses, assess women's risk for breast cancer. Those at a higher risk often need primary or secondary prevention, including strategies that reduce the development of this disease⁽¹⁰⁻¹¹⁾.

Health professionals must become accustomed to assessing the risk of breast cancer and provide adequate counseling about strategies to reduce this risk in women.

Nurses can increase the survival rate of women with breast cancer in the long term by assessing the risk of development of cancer and its early detection. The growing evidence suggests that the risk of development of this disease can be reduced when there are interventions aimed at this purpose⁽¹²⁾.

Consequently, what stands out is the nurses' need to develop a model that can predict the individual risk of cancer and promote a selection to identify individuals with a higher probability of developing it, aiming to increase the detection of this neoplasia⁽¹³⁾.

The assessment of the risk of breast cancer can be a useful intervention to increase the participation of nurses in early neoplasia detection processes. Educational programs that inform about early breast cancer detection methods, including self-exam, mammography and clinical exam of breasts, must be offered to women at a high risk of developing this disease, after risk assessment is performed⁽¹⁴⁾.

DISCUSSION

Defining attributes, antecedents and consequences

After the identification of uses of the concept, researchers sought to determine the critical or essential attributes, antecedents and consequences of the concept of risk⁽⁸⁾, related to the theme of breast cancer described by authors of the articles analyzed.

One attribute considered to be relevant for the concept of risk of breast cancer was associated with early detection. One third of women who had a diagnosis of neoplasia could be successfully treated if diagnosed during the first stage of this disease⁽¹³⁾.

Main secondary cancer prevention programs must reach women at a high risk⁽¹⁴⁾. Thus, if breast cancer is detected at an early stage, the survival rate is 97%. However, if it is only diagnosed at an advanced stage, this rate decreases to 21%⁽¹⁵⁾.

Early diagnosis is very important for the treatment of this type of cancer, because it contributes to the recovery and slowing down of the development of such disease, avoiding complications and guaranteeing the improvement in quality of life and standard of living

of women⁽¹⁶⁾.

The efficiency of secondary breast cancer prevention programs, especially that of detection through mammography, is one of the determinants of early diagnosis of this disease, which could result in the decrease in high mortality indices⁽¹⁷⁾.

Another important attribute for the concept of risk is vulnerability, a term frequently used in the literature, meaning "disaster" and "danger". It derives from the Latin verb *vulnerare*, which means "to cause harm or injury"⁽¹⁸⁾.

Vulnerability to develop neoplasia is not associated with the existence of a certain danger, but rather the probability of the onset of undesirable situations, based on the several factors that affect women. Thus, to prevent primarily means to watch, i.e. to anticipate the onset of undesirable events, in women considered to be at risk⁽¹⁹⁾.

The understanding of the context of vulnerability with regard to breast cancer is aimed at the search for the synthesis, i.e. to bring the abstract aspects associated and associable with the disease process to more concrete and specified health care planning. In addition, the links and mediations between phenomena of these plans should be the object of knowledge about vulnerability to cancer, seeking universality rather than the greater reproducibility of its phenomenology and inference⁽¹³⁾.

The articles analyzed pointed to risk factors for breast cancer and unhealthy life habits, such as physical inactivity and unhealthy eating habits, as the main antecedents for the concept of risk.

The presence of risk factors for neoplasia was emphasized in the articles studied as an important antecedent for the concept of risk. One third of all cancer cases can be prevented by making dietary changes, stopping smoking and exercising regularly. In the majority of cases, the factors identified were body mass index, menarche, menopause, family history, pregnancy and childbirth, breast-feeding, alcohol use, smoking, diet, education and use of oral contraceptives⁽¹³⁾.

Breast cancer is associated with women's reproductive life cycle: early menarche, nulliparity or advanced age for a first pregnancy, late menopause, inadequate diet and lack of physical activity, in addition to hormonal factors, whether endogenous (high levels) or exogenous (prolonged use of oral contraceptives or hormonal replacement during menopause)⁽¹⁶⁾.

The incidence of breast cancer varies greatly among populations, being mainly influenced by lifestyle and depending on primary risk factors. An analysis of the lifestyles of women throughout time can help researchers to assess the effect of these lifestyles on their subsequent development or prevention of conditions that develop cancer. One study showed that the risk factors established

for breast cancer could vary, according to the tumor's estrogen receptor (ER Profile) and progesterone receptor (PR)⁽²⁰⁾.

Another study prioritized the clarification of the existence of risk factors for breast cancer, aiming to assess the risk of Korean women. According to this study, the development of a valid reliable instrument of assessment of risk of neoplasia is the most reliable way for early disease detection. The majority of research efforts were concentrated on the identification of specific risk factors. The first step required to develop an accurate predictive model for Korean women was the gathering of information with relevant and comprehensive variables that had not been shown yet⁽¹⁴⁾.

The following are some of the prevention options for women at a high risk: healthy life habits, chemoprevention, prophylactic mastectomies, and breast cancer surveillance⁽¹¹⁾. However, the evidence available is restricted to supporting many of these preventive measures aimed at risk factors. With the growing complexity of knowledge about breast cancer prevention, nurses are challenged to understand and support women's needs by maintaining a practice founded on evidence that promotes health and prevents diseases.

Another antecedent associated with the concept of risk for breast cancer is the development of healthy life habits. The efficacy of these practices often remains controversial in view of the limited and at times conflicting pieces of evidence⁽¹⁵⁾. Primary prevention aims to reduce the risk of breast cancer, requiring a restriction in alcohol use, greater intake of fruits and vegetables, an increase in physical activity, and avoidance of excessive body weight.

Changes in lifestyle, surgery and drug use may prevent the development of cancer in selected women^(12,20). The assessment of risks and adequate consultations are necessary to minimize the risk of development of neoplasia. Thus, interventions for primary breast cancer prevention will soon become one of the most efficient means to reduce the incidence, morbidity and mortality of this disease.

One third of all cancer cases can be prevented by making dietary changes, stopping smoking and exercising regularly. Another third can be successfully treated if diagnosed in the first stage of disease. For this reason, it is recommended that women should adapt to these lifestyle changes, in addition to their having regular health check-ups⁽¹³⁾.

In the articles analyzed, three consequences of the concept of risk for breast cancer were identified: low self-esteem, need for emotional support, and development of educational strategies.

The first important result of the analysis was the

presence of low self-esteem and psychosocial factors manifested by women with neoplasia, which not only threaten their health, but also put at risk their body image and sexuality⁽¹¹⁾. Breasts symbolize femininity. Thus, breast cancer not only endangers women's health, but may also pose a risk to their self-esteem and deteriorate their quality of life⁽¹⁴⁾.

Another result derived from the analysis is the need to provide emotional support to women, to develop specific strategies to reduce the stress caused by the risk of having this disease, to provide counseling for them to cope with breast cancer, and to support their decision for treatment and rehabilitation⁽¹²⁾.

Women can decide if they should seek the assessment of individual risks, which will also include the assessment of genetic susceptibility for those with a strong family history of cancer; in this case, when the possibility of genetic tests is considered, they may require the decision for support⁽²¹⁾.

The discovery of the presence of risk for the development of breast cancer can encourage women to make decisions that include prophylactic mastectomy and chemoprophylaxis, as these are primary prevention options. Nonetheless, these decisions are very difficult, requiring emotional support due to psychological suffering, the risks of surgery, and the benefits of reducing the risk of the disease⁽¹⁸⁾.

A third result derived from the analysis is the development of educational strategies. Health care providers are challenged to adequately educate women about the risk of breast cancer and to identify women who are at a high risk and who require greater care to reduce the risk of breast cancer⁽¹⁵⁾.

Continuing education programs may be necessary to guarantee the development of accurate abilities and knowledge to assess the risk of women having breast cancer⁽¹⁰⁾. The nurses' role is to provide emotional support, information, help and comfort to improve women's coping abilities and feelings of empowerment, seeking better decisions for their health, reducing suffering and anguish, and promoting health, self-care, and the adequate use of services⁽²²⁾.

The need to perform more research on the development of the concept of risk in breast cancer should be emphasized among the gaps found in this theme, aiming to establish priorities of nursing care for women at a high risk.

CONCLUSION

The results of the conceptual analysis performed and the understanding of the question of "risk of breast cancer" pointed to certain implications for both health care practice and research.

Based on the attributes of the concept analyzed, researchers observed that the identification made enables nursing professionals to obtain greater clarification and understanding of the phenomenon, focusing on the early detection of breast cancer and the vulnerability of patients associated with the risk of developing this neoplasia.

With regard to the antecedents associated with the risk of developing this disease, researchers found that the performance of professionals primarily aimed at the clarification of risk factors for breast cancer enables positive results in the assessment and identification of the presence of such factors in women at a high risk, thus supporting primary prevention of this disease.

Providing guidance on lifestyle changes to patients contributes to the reduction in the development of neoplasias in women exposed to this risk. The assessment

of associated factors and guidance on healthy life habits are necessary to reduce the risk of developing this disease. Nursing interventions for primary breast cancer prevention can become one of the most efficient means to reduce their incidence and mortality.

With regard to the results of the concept, the presence of low self-esteem and the need for emotional support are frequently found in patients who are at a high risk of developing cancer. For this reason, nursing professionals must develop specific strategies to manage the stress caused by the risk of having breast cancer, to provide counseling on how to cope with this disease, and to support the decision for treatment and rehabilitation.

Thus, it could be concluded that nursing interventions provide effective instruments to meet the needs of patients when applied to health care.

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