

Fighting Breast Cancer with Knowledge: Prevention, Detection, and Education

Riley Osborne

Margret H. Rollins School of Nursing

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H. Snyder, RN

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Breast cancer is a significant health concern for women, impacting physical and emotional well-being. Early detection, education, and the development of evolving treatments are crucial for improving outcomes. Ongoing research provides insight into prevention strategies that enhance quality of life and nursing care. As a leading concern in women, breast cancer requires early detection, ongoing research for treatment/therapy options, prevention strategies, and patient education to improve outcomes while enhancing nursing care.

Statement of the Problem

Cancer is often misunderstood; it is a highly complex disease that takes many lives, but by knowing how it works, this disease can be less scary for many. Cancer is staged 0-4, with stage 0 indicating abnormal cells that have not spread, stages 1-3 showing cancer spread to nearby tissue, and stage 4 indicating metastasis (National Cancer Institute [NCI], n.d.). The pathophysiology is that breast cancer develops from abnormal mammary epithelial cells and is often influenced by genetic (BRCA 1 and 2 mutations), hormonal, and environmental factors. It is classified as invasive, spreading from milk ducts or lobules into healthy tissue, or noninvasive, remaining confined. While it can affect anyone, it primarily impacts women over 40, making regular exams starting at this age essential. Some signs and symptoms can include new or growing lumps, breast pain, nipple discharge when not breastfeeding, and skin changes. (Dynamic Health, n.d.). Overall, understanding the essential background of breast cancer can be beneficial for patients who may be at risk or actively going through it.

Breast cancer is the most common cancer in women nationwide; it impacts individuals socially, emotionally, and physically, both during and after treatment. Many patients struggle with the idea and changes in physical appearance, which is often one of the most challenging

aspects, deeply affecting body image. In 2024, there were 310,720 new cases and approximately 42,250 deaths from breast cancer that year (NCI, n.d.). There are many ways to screen for breast cancer, but the question is what age we should start those screenings. Cadet et al. (2025) state, “Whereas ACOG recommended that CBE screening be done at 1- to 3-year intervals for women between 25 and 39 years old and at 1-year intervals for women aged ≥ 40 years” (Cadet et al. 2025). At the same time, it is still found appropriate to start screening at 40 years old for women with no additional risk factors. Many women are finding out they have breast cancer at a younger age; waiting can lead to cancer lying unknown until it is at stage four and is in multiple areas of the body, leading to a worse prognosis. There is a 5-year survival rate after being diagnosed with localized breast cancer is 99.6%; for distant or metastasized breast cancer, the rate is 31.9% (NCI, n.d.). With metastasis, the chances of survival are significantly lower when compared to early-stage cancer. From 2017-2021, 52.2% of breast cancer cases were diagnosed in women aged 55-74, and 28.6% of cases were diagnosed in women aged 20-54 (NCI, n.d.). Furthermore, the increase in cases and the number of deaths from this disease is not only increasing the demand for oncology nurses in the hospital and outpatient settings; It also increases the need for doctors and researchers. We need more nurses who are skilled in providing both medical and emotional support in these sensitive situations to ensure adequate care and education for them and their families.

Risk Reduction/Treatment of the Problem

In addition, community education is key to reducing late-stage breast cancer diagnoses, especially modifiable lifestyle choices that influence cancer risk. Poorolajal et al. (2021) found that nutrition, physical activity, alcohol, and smoking all had an impact on the risk of developing cancer. The amount of chemicals in cigarettes and alcohol can cause DNA damage, and since

DNA is responsible for cell growth, the damage can lead to the formation of cancer cells. Many lifestyle factors can increase breast cancer risk, but knowing about them can help encourage reducing these risks. However, it's not always easy for individuals to eliminate all their risk factors at once, as many are coping with additional challenges outside of their diagnosis. Building rapport with patients and offering support can help determine how to assist them further. Genetic testing for BRCA1 and BRCA2, two main genes known for their involvement in breast cancer development, is another method for identifying individuals at higher risk. Some researchers suggest that individuals who are carriers of these genes or are likely carriers should begin education on the risks at the age of 18. When patients reach 25, they should undergo a yearly exam at least 1-2 times a year to facilitate early detection (Daly et al., 2021). Hereditary genetic mutation tests can encourage earlier screenings to detect abnormalities caused by these genes before the recommended age. While many other risk factors exist, these are often ones that can be monitored and educated on thoroughly.

In addition to BRCA mutation screenings, self-exams, ultrasounds, and mammograms are crucial for early cancer detection. BRCA 1 and 2 testing is usually recommended for those with a family history of breast cancer; these mutations can be dormant or evolve into cancer cells, and early screenings facilitate proactive care. Meanwhile, self-exams are no longer routinely taught during medical visits, but they remain a valid method for detecting changes early, especially for those unable to access clinical screenings. Encouraging self-exams is crucial for patients to become familiar with their bodies and to seek help when changes are detected. Another article mentions how mammography has been used to identify cancers that cannot yet be seen or felt, leading to the early detection of many of these cancers. They have also found that women with thicker or denser breast tissue often benefit from an ultrasound due to the increase in quality and

contrast of the image it provides (Tadesse et al., 2023). These are the three primary screenings commonly used for breast cancer, ranging from high-risk individuals to those with no additional risk. They also help you become familiar with your body and recognize what to report while at home.

There are several treatment options for breast cancer, including surgery, chemotherapy, radiation, hormone therapy, and immunotherapy. Surgery is common for advanced cancer, poor prognosis, or BRCA mutation carriers seeking risk reduction. The extent depends on cancer spread and may involve a mastectomy, which can affect body image and require emotional support. Non-surgical options include IV or oral chemotherapy, radiation, hormone therapy to slow cancer growth, and immunotherapy to help the immune system fight cancer. Treatment choice depends on the tumor's progression and the patient's overall health.

The goal of educating patients about breast cancer risk reduction and treatment is to provide them with the knowledge to make informed health decisions. Preventive measures, such as a healthy diet, regular exercise, and avoiding harmful habits, lower risk. Patient advocacy ensures access to proper screenings, care, and support, boosting confidence in managing their health.

Planning of Teaching Content

The primary learning objectives are to teach learners how to self-screen for breast cancer and assess their risk. This will involve using realistic fake breasts, one with a simulated mass for comparison. Learners will also gain knowledge on how to prevent breast cancer and identify individual risk factors. Various teaching strategies will be employed, including speakers, written materials, and hands-on demonstrations. Visual aids will reinforce key concepts, and pamphlets will be provided for at-home reference. This approach will equip learners with the tools to assess

their breast health and take steps toward prevention and early detection.

Conclusion

In conclusion, breast cancer is a significant nationwide health concern that impacts individuals and communities socially, emotionally, and physically. Promoting self-screening, early testing, and access to diverse treatments is key to reducing the burden of this disease. Additionally, adopting healthier lifestyle choices can lower the risk of and encourage individuals to take control of their health. From a nursing perspective, it is crucial to equip patients with the latest research findings, treatment options, and screening techniques, enabling them to make informed decisions about their health. Nurses play a vital role in advocating for screenings and promoting healthy behaviors. This paper educates communities about cancer in an accessible manner, emphasizing the importance of raising awareness among younger women to promote healthier futures.

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