



Breast Cancer Female Workers' General Knowledge

Fatma Saber Nady¹, Hanan Elzeblawy Hassan^{2*} and Sahar Gamal Zaki³

¹Lecturer of Maternal & Newborn Health Nursing, Faculty of Nursing, Beni-Suef University, Egypt

²Professor of Maternal and Newborn Health Nursing, Faculty of Nursing, Beni-Suef University, Egypt

³Demonstrator of Maternal & Newborn Health Nursing, Faculty of Nursing, Beni-Suef University, Egypt



Abstract

Background: Breast cancer stages include lobular carcinoma in situ, which is often not classified as cancer, but rather lobular neoplasia. Mammography is recommended for screening without obvious symptoms. Treatment options include hormone therapy, chemotherapy, radiation therapy, surgery, and targeted therapy. Surgery is the most popular course, with various techniques like lumpectomy and mastectomy. Chemotherapy is a medication-based treatment that kills or inhibits cancer cell growth, considering factors like tumor size, stage, type, receptor type, status, number of aberrant lymph nodes, and cancer spread risk.

Aim: The current study was conducted to assess female workers' general knowledge regarding breast cancer.

Methods:

Design: A descriptive design was utilized.

Subjects and Settings: A purposeful sample, 323 working women between the ages of 18 and 60 who were not suffering from cancer, chemotherapy, radiation, or psychological disorders was selected from Beni-Suef University.

Tools: Structured Interviewing Questionnaire Sheet and women's general knowledge about breast cancer.

Results: 27.6% of the studied female workers were in the age group 20-30 years, 30.0% had intermediate. Moreover, 72.1% had poor knowledge compared to 10.2% that had good level of knowledge, 2.8% & 1.5% of females who aged 30 to less than 40 years & university education, respectively, had good knowledge compared to 35.0% & 35.6% that had poor knowledge.

Conclusion: Based on the findings of the present study, it can be concluded that educational level affected female workers' knowledge regarding general information about breast cancer.

Recommendations: Create an educational program to raise women's knowledge of breast cancer and prevention strategies.

Keywords: Breast Cancer; Female Workers; General Knowledge

Introduction

Stages of breast cancer: in most cases, lobular carcinoma in situ at Stage 0 is not classified as cancer. Despite the word "carcinoma" in the name, the term refers to the formation of aberrant, non-invasive cells in the lobules. For this reason, some experts prefer the term "lobular neoplasia," which describes the aberrant cells accurately without labeling them as cancer. On the other hand, lobular carcinoma in situ can suggest that a woman is more likely to acquire breast cancer [1-5].

In Stage 1, breast cancer is visible, although it is limited to the region where the initial aberrant cells started to form. Since the breast cancer was discovered early on, treatment options are quite good. There are two divisions within Stage 1: Stage 1A and Stage 1B. The tumor's size and the lymph nodes that exhibit cancerous growth define the difference [6]. Stage 1A breast cancer refers to tumors up to two centimeters in size, not affecting lymph nodes, and penetrating normal breast tissue without moving outside the breast [7]. Stage 1B breast cancer is characterized by small clusters of cancer cells in lymph nodes, larger than 0.2 millimeters but not larger than 2 millimeters, rather than a tumor [8]. Stage 1 cancer requires immediate treatment, typically radiation, surgery, or a combination, with hormone therapy and chemotherapy, and is treatable but requires immediate

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*Correspondence:

Dr. Hanan Elzeblawy Hassan, Ph.D.,
Professor of Maternal & Newborn
Health Nursing, Faculty of Nursing,
Beni-Suef University, Egypt,
E-mail: nona_nano_1712@yahoo.com
/ORCID: <https://orcid.org/0000-0002-9308-3081>

Received Date: 19 May 2026

Accepted Date: 07 Jul 2026

Published Date: 09 Jul 2026

Citation:

Nady FS, Hassan HE, Zaki SG. Breast Cancer Female Workers' General Knowledge. WebLog J Cancer Clin Res. wjacr.2026.g0904. <https://doi.org/10.5281/zenodo.21441212>

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attention [9].

Stage II invasive breast cancer is classified into IIA and IIB subcategories. Stage IIA invasive breast cancer is characterized by a tumor size of 2 centimeters or smaller, a tumor size of 2 centimeters but not larger than 5 centimeters, or no tumor visible [10]. Stage IIB of invasive breast cancer is defined by a tumor size between 2 and 5 centimeters, small clusters of cells in lymph nodes, cancer spread to axillary lymph nodes or near the breastbone, or axillary lymph node size [11]. Stage III breast cancer is classified into IIIA, IIIB, and IIIC subcategories. Stage IIIA indicates invasive breast cancer, non-detected tumors, lymph node detection, tumor size over 5 centimeters, or small clusters in lymph nodes, or a tumor larger than 5 centimeters [12]. Stage IIIB describes invasive breast cancer, a tumor ranging in size, spreading to breast skin, chest wall, edema, ulcer, and reaching up to nine lymph nodes [13]. Stage IIIC invasive breast cancer refers to the cancer spreading to lymph nodes above or below the collarbone, axillary lymph nodes, or close to the breastbone, with ten or more axillary lymph nodes [14]. Stage IV invasive breast cancer, also known as advanced and metastatic, has spread to other organs beyond the breast and surrounding lymph nodes, and may be a recurrence of prior cancer [15].

The method used for screening should be appropriate for each patient's risk of breast cancer (e.g., the NCCN advises annual mammography for women over 40 with average risk). If a lesion is found during screening, more testing is necessary to assess the breast abnormalities. Lastly, it is appropriate to use biopsy analysis and biomarkers to confirm the diagnosis and evaluate the prognosis if all investigations point to a high possibility of cancer [16-22].

Mammography is a recommended X-ray-based breast cancer screening technique for healthy individuals without obvious symptoms, detecting the entire soft tissues and skin of the breast [23-26]. Mammography comes next to ultrasound. In the parts of the breast that mammography finds difficult to access, ultrasound technology can use sound waves to create images that can be used to identify cancer. Examining the type and density of a breast lump might also be beneficial. Breast ultrasound imaging provides information on the location and size of a tumor, as well as whether it is solid or fluid-filled and requires a biopsy to rule out cancer. This assessment is swiftly evolving into a standard process for identifying lumps in young ladies [27-30].

Using radio waves and magnets, Magnetic Resonance Imaging (MRI) scans the breasts and creates images. When scanning breasts in individuals who are more likely to develop breast cancer or who have previously been diagnosed and treated for the disease, mammography and Magnetic Resonance Imaging (MRI) are used together. Physicians advise against using MRIs for women who are in good health or who have a decreased risk of acquiring cancer [31].

The gold standard for diagnosing breast cancer is a breast biopsy. Breast biopsies come in a wide variety of forms. Concurrent breast imaging, clinical breast examination, and biopsy are done to improve diagnostic accuracy and eliminate as many false negative results as feasible (triple test) [32]. Fine needle aspiration, to remove cells from an aberrant region or breast lump, a thin prickle is used. The particle can be directed with the help of ultrasound. The area where the prickle will be introduced may be anesthetized with a limited anesthetic [33].

Breast cancer treatment options include hormone therapy, chemotherapy, radiation therapy, surgery, and targeted therapy [34-

37]. Surgery is the most popular course, removing the tumor and any close margins. Various surgical techniques, such as lumpectomy and mastectomy, are available. Partial mastectomy removes a larger piece of the breast, while skin-sparing mastectomy removes the areola, breast, nipple, and sentinel lymph nodes while leaving the breast skin intact. Simple mastectomy removes the areola, breast, nipple, and sentinel lymph nodes, while modified radical mastectomy preserves the chest wall while removing the entire breast [38-43]. Chemotherapy is a medication-based treatment that kills or inhibits cancer cell growth, taking into account factors like tumor size, stage, type, receptor type, status, number of aberrant lymph nodes, and cancer spread risk [44-47].

Aim of the Study

The current study was conducted to assess female workers' general knowledge regarding breast cancer

Subject and Method

Research design

The study employed an interventional, quasi-experimental research design with a pretest and a posttest to achieve its objectives.

Subjects and settings

As a purposeful sample, 323 working women between the ages of 18 and 60 who were not suffering from cancer, chemotherapy, radiation, or psychological disorders were selected from Beni-Suef University.

Tools of data collection

Tool I: A Structured Interviewing Questionnaire Sheet

The researcher created it after reviewing pertinent literature. It focused on the age and educational attainment of the female subjects, among other personal information.

Tool II: women's general knowledge about breast cancer

The study aimed to evaluate women's general information about breast cancer, such as the definition of breast cancer, a woman's risk of developing breast cancer, warning signs, the primary treatment for early-stage breast cancer, the purpose of chemotherapy in breast cancer treatment, the purpose of radiation therapy in breast cancer treatment, the most common site of breast cancer metastasis, screening procedures for early detection, and the importance of screening for breast cancer treatments (14 Questions). System of scoring: All questions received a total score of degrees, with correct responses earning points and incorrect ones gaining zero points, with categories including good, average, average, and poor scores.

Statistical design

The data was analyzed using SPSS version 20 to compare women's understanding and use of preventive behaviors, using mean, standard deviation, number, and percentage distribution.

Results

Figure 1 shows that 50.8% of the studied female workers were in the age group of 30-40 years, 27.6% their age 20-30 years, and 21.7% were more than 40 years old.

Figure 2 presents that 30.0% of the studied women had intermediate, 45.8% had university, and 24.1% had post graduate education.

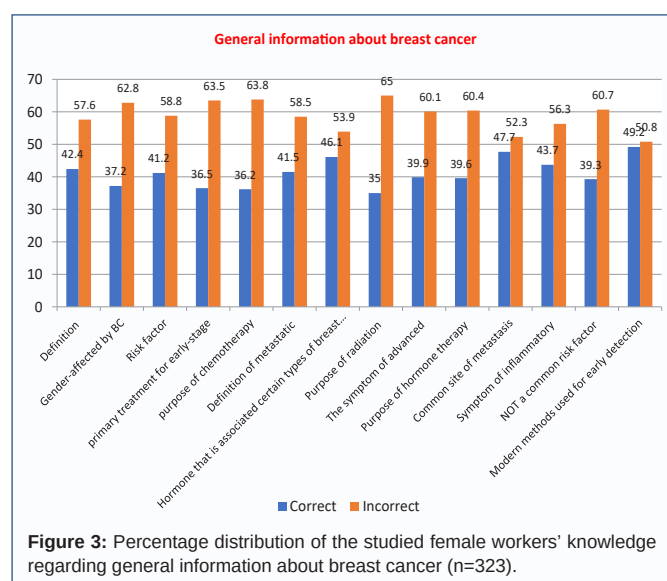
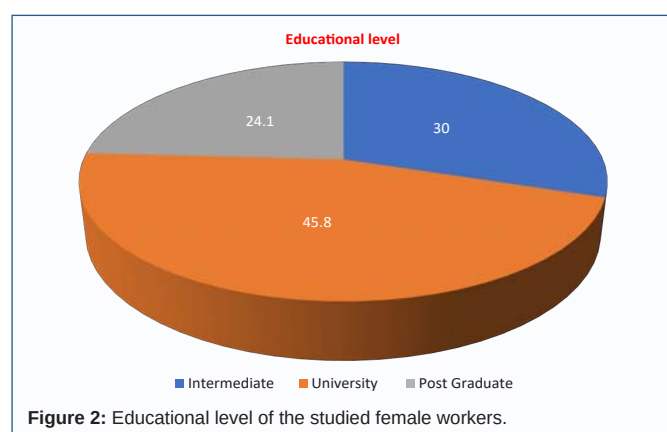
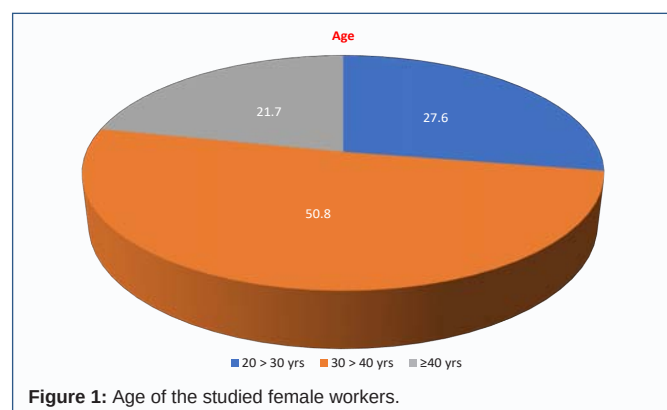
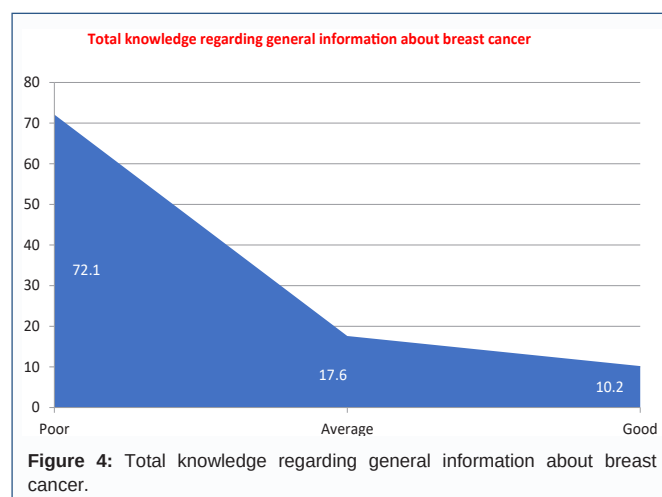


Figure 3 shows female workers' knowledge regarding general information about breast cancer. It reveals highly percentage of incorrect answer in all items compared to the correct one.

Figure 4 presents female workers' total knowledge regarding general information about breast cancer. It reveals that 72.1% of the studied women had poor knowledge compared to 10.2% that had good level of knowledge.

Table 1 reveals the relation between age and education of the studied female workers and their total knowledge about breast cancer. It clarifies that 2.8% & 1.5% of females who aged 30 to less than 40



years & university education, respectively, had good knowledge compared to 35.0% & 35.6% that had poor knowledge.

Discussion

Breast cancer screening uses mammography, ultrasound, and MRI to detect soft tissues and skin, while breast biopsies are the gold standard. Treatment options include hormone therapy, chemotherapy, radiation therapy, surgery, and targeted therapy. Surgery is the most popular course, while chemotherapy inhibits cancer cell growth based on factors like tumor size and stage. The aim of the study was assessing female workers' general knowledge regarding breast cancer [48-57].

According to age of the studied female workers, the finding of the present study revealed that the age of more than half of the studied female workers was in the range of 30 to more than 40 years, with a mean age of 35.91 ± 7.122 years [57]. This came in agreement with Mahmoud *et al.*, (2020), who investigated the "effect of the health belief model-based education on preventive behaviors of breast cancer" and reported that the mean age of study subjects was 35.90 ± 6.45 years [58]. The mean age of the studied female workers was greater in the current study compared to Abd-Elaziz *et al.*, (2021), who investigated the "effect of breast-self-examination programme on women's awareness for early detection of breast cancer" and found that the mean age of the participants was 32.6 ± 4.7 years. This difference is related to differences in target population and sample size, which was a large sample of highly educated and employed females [59].

In relation to educational level, the present study revealed that less than half of the studied female workers had university education. This finding agreed with Masoudiyekta *et al.*, (2015), who implemented a study titled "The health belief model in predicting breast cancer screening behavior of women in Dezfu health centers" and proved that less than half of the sample participating in the study had a diploma [60].

On the other hand, this finding is also in congruence with Shakweer & Hamza (2016) that evaluated "practicing breast self-examination and early detection of breast cancer" and reported that two-thirds of the samples had primary education [61]. From the researcher's point of view, these disparities in the demographics of the individuals and study sites may account for this, as most of the female workers in the present study are from urban areas who are interested in education.

Table 1: Relation between age and education of the studied female workers and their total knowledge about breast cancer.

Items	No	Poor (n=232) %	Average (n=78) %	Good (n=13) %	X ² (p value)
Age					
20>30 yrs.	89	19.8	6.5	1.2	4.748 (0.314)
30>40 yrs.	164	35.0	13.0	2.8	
≥40 yrs.	70	17.0	4.7	0.0	
Educational level					
Intermediate	97	24.1	5.6	0.3	26.074 (0.000 ^{**})
University	148	35.6	8.7	1.5	
Above university	78	12.1	9.9	2.2	

Concerning general knowledge of breast cancer, the current study revealed that incorrect answers regarding all items of general knowledge about breast cancer were more prevalent among all studied women. Additionally, female workers' total general knowledge level about breast cancer was observably poor, as only one-tenth of them had a good level of knowledge. The finding was in the same line with studies conducted by many researchers [57, 62, 63].

The study found no significant relationship between age and total knowledge score among females, but poor knowledge was prevalent among those aged 30-40, with a minority having good knowledge. This finding is supported by Ahmed *et al.*, (2019), who assessed "the effect of a health promotion program on female breast self-examination knowledge and practice" and found that there was no statistically significant relationship among the studied women's total knowledge score regarding their age at both pre and post-intervention phases [64].

Conversely, this finding is in contrast with Kumarasamy *et al.*, (2017), who addressed the "determinants of awareness and practice of breast self-examination among rural women in Trichy, Tamil Nadu" and announced that there was a significant relationship between the age of women and their knowledge. The researcher suggests that this may be due to the increasing age of women, who are increasingly burdened with their work and domestic responsibilities [65].

The study's findings showed that, when it came to the relationship between the female employees' age, education, and overall understanding of breast cancer, only a small percentage of those with intermediate education had good knowledge. The total knowledge score of the female employees under study and their educational attainment were significantly correlated. This result is comparable to that of El-Kest *et al.*, (2021), who demonstrated a substantial positive correlation between the study group's overall knowledge scores and their educational attainment [66].

Conclusion and Recommendation

Based on the findings of the present study, it can be concluded that educational level affected female workers' knowledge regarding general information about breast cancer. Create an educational program to raise women's knowledge of breast cancer and prevention strategies.

Ethics Approval

Ethical approval for the study was obtained from the Research Ethics Committee at the Faculty of Medicine, Beni-Suef University.

Ethical Concern and Informed Consent

Consents were obtained from all females participating in the study after a brief explanation of the study's aim, and they were reassured

that the information obtained was private and used only for the study, with the right to withdraw at any time without any consequence. The subject of this study did not address religious, ethical, moral, or cultural issues among women.

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