# Effectiveness of an Educational Program on Nursing Women Attitudes Towards Breast Cancer

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**Abstract**
Background: One of the main causes of death for women and a global health concern is breast cancer. It is therefore essential to promote early detection through enhanced breast cancer awareness and attitudes. The study aimed to determine the effectiveness of an education intervention program on nursing women attitudes towards breast cancer. Methods: This experimental study was carried out in Diwaniyah Province. The study population consisted of the nursing women adopted pre and post-test I and II approach. The validity of study instruments achieved through arbitrators and reliability achieved through pilot study. Data were collected and analyzed by descriptive and inferential approach. Results: According to the study's findings, there were substantial differences in the experimental group's mean attitude scores before and after the educational intervention, which were 23.3 (7.91) and 39.3 (8.64), respectively. Women's opinions toward breast cancer were more favorable and improved after a month has been passed 39.1 (7.85).Conclusions: The study findings show that the population had low baseline levels of attitudes, which considerably increased as a result of educational intervention. adoption of breast cancer preventive initiatives, substantial attempts to raise community women's understanding and alter their attitudes through education and information campaigns, and specific attention paid to health education.
Keywords: Education Program, Awareness, Breast Cancer, Nursing Women.

## 1. Introduction

One of the leading causes of death among women and a global health concern is breast cancer [1]. The most common cancer in women, with 2 million new instances of breast cancer reported in 2018, or around 23% of all cancer cases [2]. After skin cancer, breast cancer is the second most common malignancy among women. Additionally, it is the second most common type of cancer overall and the main reason for death for women in both industrialized and developing nations [3]. According to data, 519000 women worldwide die of breast cancer each year, with more than 70% of these deaths occurring in low-income countries. The disease affects 80,000 people out of every 100,000 people worldwide [4]. The most recent figures indicate that in 2010, 1383500 people had breast cancer diagnoses, with 458400 of those people passing away as a result of the disease. Therefore, breast cancer was the second leading cause of mortality and the most common malignancy among women in the past. However, cancer currently tops the list of cancers that kill women worldwide, with 458400 fatalities per year, followed by lung cancer with 427400 [5].

The disease's prevalence has been increasing in Iraq over the past few years, and among Iraqi women, it has been the most common malignancy since 1998, with an annual rate increase of 2% between 2002 and 2007 [6]. Iran's projected average age for developing breast cancer is 48.8, with the age group of 40 to 49 years seeing the highest incidence of the disease [7]. Even while breast cancer mortality has decreased, particularly in wealthy nations, the disease continues to provide a significant issue for those in charge of emerging nations' health policies, such as Iraq [8]. Therefore, it is crucial to find cancer early. Breast cancer is one of the few diseases that can be detected early, and it is estimated that more than a third of malignancies are avoidable [9]. Early diagnosis of breast cancer may result in quicker treatment and a lower mortality rate. Due to this fact, screening programs have been developed to find breast cancer early, when treatment can have the biggest positive effects on clinical results [10].

Under the current Iraqi health system, women with health records in medical facilities are eligible for free examinations. However, this program has run into problems due to the women's irregular attendance, ignorance of breast cancer, and negative attitudes. The present study, titled the effect of educational program on attitudes toward breast cancer for nursing women, found that despite the fact that breast cancer is the most common cancer in women and a significant issue in health priorities at the national and regional levels, there is no organized program in the country to inform and teach breast cancer screening procedures.

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## 2. Methods

This experimental study was carried out in 2022 in Diwaniyah Province, Iraq. The study population consisted of the nursing women was used with adopted pre and post-test I and II approach. A non-probability "purposive" sample had been consisted of (60) women have been selected to obtained represent and accurate data.

The researchers employed a questionnaire to collect data for this study and to learn more about the women's demographics (such as their age, marital status, residents, monthly income, education level, occupation, as well as previous source of information about BC). On the attitudes level, there were 15 questions related to breast cancer. This question measured on 3-level of Likert scale (1× Disagree, 2× Neutral and 3× Agree). The lowest and highest scores obtained were 15 and 45, respectively. A total of 15 Likert scale questions were used to measure the attitudes of respondents regarding BC and the mean score was 35.1-45 as a greater level, 25.1-35 as moderate level and 15-25 as a lower level.

Using the criteria of language appropriateness, correlation with the dimension of study variables to which it was assigned, and suitability for the study population, a panel of 11 arbitrators made a determination of the validity of each component of the study questionnaire. The test-retest method was used by the researcher to apply it to a random exploratory sample of 5 women. Each women from the sample was given a number from 1 to 5, and the questionnaire was distributed to them without their knowledge that they were being used as a sample to determine the tool's stability. After an interval of approximately 2 weeks, 5 questionnaires were redistributed to the same exploratory sample, and the participants from this sample were later excluded from the study. Cronbach's α of the current scale was 0.89, indicating acceptable degree of reliability.

Statistical Analysis The IBM SPSS 20.0 program was used for all the analyses that follow. Numbers and percentages (No. and %) were used to categorize the variables, while the mean and standard deviation were used to characterize the continuous variables (mean and SD). ANOVA test was used to compare continuous variables. Statistical significance was defined as a two-tailed p .05.

Results of testing significant with reference to the items on the questionnaire are generally reported as highly significant differences at p0.05, which assigned effectiveness of the studied educational program through increasing knowledge in the study group, and that be able to confirm importance or success of implementing the suggested program. Conversely, if no differences are significant at p>0.05 and using the suggested procedure is not practicable.

## 3. Results

In table (1), the age of participants women involved in this study, the mean age is 31, with the highest percentage (46.7%) being recorded for those between the ages of 20 and 29. Married women had the greatest marital status percentage (48.1%) compared to unmarried women (45.0%) and widowers (6.7%). According to data relating to the residents, urban residents predominated (78.3%), as opposed to rural residents (21.7%). In terms of monthly income, women reported having enough up to a certain point (50%) compared to having enough (36.7%) and not enough (13.3%). Education associated findings, one-third of participants were read and write (36.7%). In terms of occupation, most of participants were unemployment and students (21.7%) for each them, followed by those who are free work and government employee (16.7%) for each them and those who are retired (23.3%).

Table (1):Socio-Demographic Characteristics

| SDVs | Classification | no. | % |
|---|---|---|---|
| Age /years (*M± SD= 31±10.08*) | <20 | 4 | 6.7 |
| | 20-29 | 28 | 46.7 |
| | 30-39 | 17 | 28.3 |
| | 40-49 | 6 | 10.0 |
| | ≥50 | 5 | 8.3 |
| Marital status | Single | 27 | 45.0 |
| | Married | 29 | 48.3 |
| | Widower | 4 | 6.7 |
| Residents | Urban | 47 | 78.3 |
| | Rural | 13 | 21.7 |
| Monthly income | Sufficient | 22 | 36.7 |
| | Sufficient to certain limit | 30 | 50.0 |
| | Insufficient | 8 | 13.3 |
| Education Level | Read and write | 22 | 36.7 |
| | Primary graduated | 10 | 16.7 |
| | Intermediate graduated | 9 | 15.0 |
| | Preparatory graduated | 8 | 13.3 |
| | Bachelor graduated | 6 | 10.0 |
| | Post-graduated | 5 | 8.3 |
| Occupation | Unemployed | 13 | 21.7 |
| | Free work | 10 | 16.7 |
| | Students | 13 | 21.7 |
| | Government Employee | 10 | 16.7 |
| | Retired | 14 | 23.3 |
| Previous source of information about BC | Family / relative/ friends | 28 | 46.7 |
| | Mass media | 26 | 43.33 |
| | Health personnel | 5 | 8.3 |
| | Library social media | 1 | 1.7 |

Findings in table (2) illustrated that the (50%) of women expressed a negative attitudes at the pre-test period of measurement M (±SD)=23.3 ± (±7.91) (before intervention program) with regard breast

cancer. While, at the post-test I (after application of intervention program), findings demonstrated that the (66.7%) of women expressed a positive attitudes M (±SD)= 39.3 (±8.64). After a month has been passed, women expressed a positive and improved attitudes towards breast cancer M (±SD)= 39.1 (±7.85).

| Table (2): Overall Nursing Women Attitudes | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Women Attitudes | Pre-test | | | Post-test I | | | Post-test II | | |
| | No. | % | M ± SD | No. | % | M ± SD | No. | % | M ± SD |
| Negative | 30 | 50.0 | 23.3±7.91 | 5 | 8.3 | 39.3±8.64 | 3 | 5.0 | 39.1±7.85 |
| Neutral | 28 | 46.7 | | 15 | 25.0 | | 16 | 26.7 | |
| Positive | 2 | 3.3 | | 40 | 66.7 | | 41 | 68.3 | |
| Total | 60 | 100 | | 60 | 100 | | 60 | 100 | |
| (Negative= 15-25; Neutral= 25.1-35; Positive= 35.1-45) | | | | | | | | | |

Table (3) there are statistically significant differences in the awareness of women between the pre-test in comparison to the post-test I and II ($p< 0.05$), while there are no significant statistically significant differences between the post-test I and II ($p>0.05$).

| Table (3): Multiple Comparison between Pre and Post Test I and II by their Overall Responses to the Attitudes Scores | | | | |
|---|---|---|---|---|
| Period (I) | Period (J) | Mean Differences (I vs. J) | Std. Error | *p-value* |
| Pretest | Posttest I | -1.06111-* | .09838 | .000* |
| | Posttest II | -1.09222-* | .09838 | .000* |
| Posttest I | Pretest | 1.06111* | .09838 | .000* |
| | Posttest II | -.03111- | .09838 | .752 |
| Posttest II | Pretest | 1.09222* | .09838 | .000* |
| | Posttest I | .03111 | .09838 | .752 |

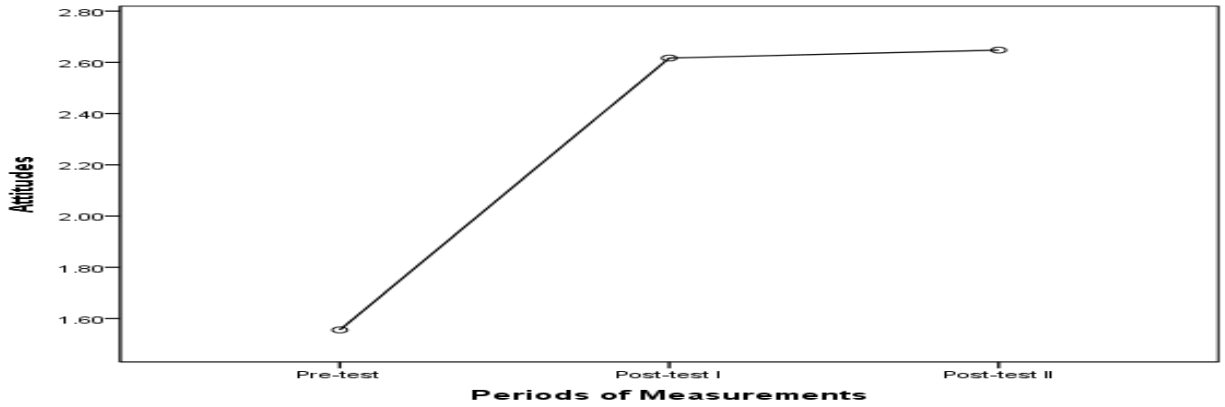


*Figure (1): Women Awareness in Three Periods of Measurement*

## 4. Discussion

This study was done to test the hypothesis that women's attitudes toward breast cancer and breast self-examination will improve if an educational program is implemented. The study's findings support this claim because the experimental group's mean attitudes at posttest I and posttest II were higher for women than for males, respectively, following an educational intervention. In other words, there was a significant difference in the attitudes of women between the pre-test before the intervention program and the post-test after it had been put into place ($p=0.000$). The study's findings demonstrate that women's views improved in terms of their scores between the pre- and post-tests, as indicated by the statistical mean.

Although participants' knowledge of disease biology and risk factors was lacking, attitudes about breast cancer were low at the outset across all breast cancer themes in our study. These results, which showed that there were no structured educational initiatives aimed at raising awareness among women in this region, highlight the significance of our education intervention on these subpopulations.

This outcome is in line with those of research by Awwad et al. and Dadsetan et al. on using longitudinal mammography data to develop knowledge to improve breast cancer risk prediction [11–12]. It is consistent with a different study by Mohsenipouya et al. [13] that looked into the use of educational intervention in breast cancer screening. Additionally, it agreed with research by Heidari et al., and Sadeghi et al. [14–15].

The educational program could have contributed to the increase, since it was required to expand knowledge, foster healthy attitudes and beliefs, and carry out breast self-examination accurately and appropriately. However, learning the required abilities was also crucial. On the other hand, the high mean knowledge score in our study could be explained by the fact that women in Iran and other developing nations generally have more information and a greater desire to learn, which has resulted in some practice for early diagnosis of breast cancer

and increased awareness of this disease.

The educational intervention in the current study increased the experimental group's mean attitude, as measured by post test scores as compared to pre test scores. The training program that produced the desired outcome may have contributed to the change in attitude since the knowledge that was gained had a direct impact on how women formed positive attitudes. According to the findings of studies by Sadoh et al. and Maheri et al. [16-17] as well as another study by Alsaraireh and Darawad on the effect of breast cancer educational intervention on the women's knowledge, attitude, and performance in Jordan [18], the high levels of awareness among the women in the present study changed their attitudes, which in turn had a positive impact on breast self-examination. Our study's results, however, do not match those of the study by Khani Jeihooni et al., which looked at how educational intervention affected breast cancer screening in Iranian women [19]. They discovered that the experimental group's mean attitude score went up after the intervention, although this gain was not statistically significant. Because it is based on a person's beliefs and understanding, attitude is one of the things that takes a long time to alter. The individual's underlying ideas must be located and rectified in order to change attitudes [20].

According to the study's findings, the experimental group's attitude mean scores increased significantly after the educational intervention from 23.3 (7.91) to 39.3 (8.64), a significant difference. In other words, treatments that focus on attitudes may change people's attitudes toward breast cancer screening. This conclusion is consistent with those of the Ghasemi and Kheivani study. They conducted a random examination of 50 university employees and discovered that the mean attitude score had increased from 74.5 to 14.7 to 82.2 to 10.2 [21].

In conclusion, it can be said that breast cancer is one of the illnesses for which the majority of prevention is left to the individual. People's knowledge, attitude, and ability to prevent and control the illness, particularly through screening, attending educational sessions, and performing breast self-examinations, are crucial. Therefore, research on various age groups with the goal of enhancing understanding of cancer screening is crucial for preventing and controlling the disease.

## 5. Conclusion

The study findings show that the population had low baseline levels of attitudes, which considerably increased as a result of educational intervention. adoption of breast cancer preventive initiatives, substantial attempts to raise community women's understanding and alter their attitudes through education and information campaigns, and specific attention paid to health education.

### Ethical Approval

This study was approved by the ethics committee of College of Nursing/ Babylon University

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Nil.

### Conflicts of interest

There are no conflicts of interest.

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