



Effectiveness of information booklet on early detection of breast cancer in terms of knowledge among women

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Abstract

Breast cancer is the second leading cause of cancer deaths among women. The development of breast cancer is a multi-step process involving multiple cell types, and its prevention remains challenging in the world. Early diagnosis of breast cancer is one of the best approaches to prevent this disease. In some developed countries, the 5-year relative survival rate of breast cancer patients is above 80% due to early prevention. In the recent decade, great progress has been made in the understanding of breast cancer as well as in the development of preventative methods. A study to assess the effectiveness of information booklet on early detection of breast cancer in terms of knowledge among women attending out-patient department in a selected hospital at erode.

Methodology: Research Approach: Quantitative evaluative approach

Research Design: Quasi experimental Non-equivalent control group pre-test and post-test design.

Independent variables: Information Booklet on early detection of breast cancer.

Dependent variables: Level of knowledge on early detection of breast cancer.

Sampling Technique: In this study, the researcher selected the samples using non-probability, purposive sampling technique.

Sample Size: In this study the sample size was 60 among which 30 samples in control group and 30 samples in the experimental group.

Validity: The tool was modified according to the suggestion and recommendations of Nursing Experts and Medical Experts.

Reliability: In this study the test retest method was adopted to check the reliability of structure questionnaire to assess the knowledge on foreign body aspiration. The 'r' value of the tool was 0.9 and it was found to be reliable for the study.

Conclusion: Information booklet on early detection of breast cancer among women in a selected hospital is found effective in promoting the knowledge and create awareness of early detection of breast cancer. These findings represent a small step in the long fight against breast cancer.

Keywords: Breast cancer, information booklet, early detection of breast cancer, knowledge among women, out patient department

Introduction

Breast cancer is one of the most common cancers in women worldwide, accounting for approximately 570,000 deaths in 2015. Over 1.5 million women (25% of all women with cancer) are diagnosed with breast cancer every year throughout the world. In America, it is estimated that 30% of all new cancer cases (252,710) among women are breast cancer in 2017³. Breast cancer is a metastatic cancer and can commonly transfer to distant organs such as the bone, liver, lung and brain, which mainly accounts for its incurability. Early diagnosis of the disease can lead to a good prognosis and a high survival rate. In North American, the 5-year relative survival rate of breast cancer patients is above 80% due to the timely detection of this disease. Mammography is a widely used screening approach in the detecting of breast cancer and proved to help reduce the mortality effectively. Other screening methods, such as Magnetic Resonance Imaging (MRI), which is more sensitive than mammography, have also been implemented and studied during the last decade. There're numerous risk factors such as sex, aging, estrogen, family history, gene

mutations and unhealthy lifestyle, which can increase the possibility of developing breast cancer. Most breast cancer occur in women and the number of cases is 100 times higher in women than that in men. Although the incidence rate of breast cancer in America increases year after year, the mortality rate decreases due to the widespread early screenings and advanced medical therapies. Biological therapies have been developed in recent years and proved to be beneficial for breast cancer. Many studies focus on studies the pathogenesis, related genes, risk factors and preventions of breast cancer over the past years.

Breast cancer is a malignant cell growth in the breast. If left untreated, the cancer spreads to other areas of the body. Breast cancer is the most common type of cancer in women. Among all types of cancer breast cancer stated top in women both in the developed and developing countries. The incidence of breast cancer is increasing in the developing world due to increased life expectancy, increase urbanization. Breast cancer typically produces no symptoms when the tumor is small and most easily treated.

Need for the study

Cancer is a leading cause of death globally. Breast cancer is the most frequently diagnosed cancer in women across 140 countries. Approximately 1 in 8 women worldwide have a lifetime risk of developing breast cancer. Every year, millions of cancer patients could be saved from premature death and suffering in they had timely access to early detection and treatment. In India, high incidence rates were reported for breast cancer, cervix and ovary; which together accounted for 59% of all cancers in women. Breast cancer accounts for 19-34% of all cancer cases among women in India.

In 2020, an estimated 276,480 new cases of invasive breast cancer will be diagnosed in women in the US as well as 48,530 new cases of non-invasive (in situ) breast cancer. In 2020, there were 2.3 million women diagnosed with breast cancer and 685 000 deaths globally. As of the end of 2020, there were 7.8 million women alive who were diagnosed with breast cancer in the past 5 years, making it the world's most prevalent cancer.

Statement of problem

Effectiveness of Information booklet on early detection of breast cancer in terms of knowledge among women attending out-patient department in selected hospital at Erode.

Objectives

1. Assess and compare the pre-test and post-test score of knowledge on early detection of breast cancer among women in control group and experimental group.
2. Compare the post-test score of knowledge on early detection of breast cancer between samples in control group and experimental group.
3. Find the association between pre-test level of knowledge on early detection of breast cancer and their selected demographic variables.

Research Hypotheses (Level of significance at $p < 0.05$)

H1: There is a significant difference in the mean post-test knowledge score on early detection of breast cancer among women between control and experimental group.

H2: There is a significant association between the pre-test level of knowledge on early detection of breast cancer among samples in experimental group, with their selected demographic variables (age, age in years at menarche, marital status, education status, types of occupation, number of children, age in years during the time of first pregnancy, use of any contraceptive pills, any family history of breast cancer, previous exposure regarding breast cancer).

H2(a): Between samples and their age

H2(b): Between samples and their age in years at menarche

H2 (c): Between samples and their marital status

H2 (d): Between samples and their education status

H2 (e): Between samples and their types of occupation

H2 (f): Between samples and their number of children

H2 (g): Between samples and their age in years during the time of first pregnancy.

H2 (h): Between samples and their use of any contraceptive pills

H2 (i): Between samples and there any family history of breast cancer

H2 (j): Between samples and their previous knowledge regarding breast cancer

Review of literature

1. Studies related to prevalence of breast cancer.
2. Studies related to risk /etiological factors of breast cancer.
3. Studies Literature related to knowledge regarding awareness of early detection of breast cancer.
4. Studies related to Information booklet regarding awareness of early detection of breast cancer.
5. Studies related to other teaching methods regarding awareness of early detection of breast cancer.

Methodology

Research Approach

Quantitative evaluative approach.

Research Design

Quasi experimental Non-equivalent control group pre-test and post-test design.

Independent variables

Information Booklet on early detection of breast cancer.

Dependent variables

Level of knowledge on early detection of breast cancer.

Sampling Technique: In this study, the researcher selected the samples using non-probability, purposive sampling technique.

Sample Size: In this study the sample size was 60 among which 30 samples in control group and 30 samples in the experimental group.

Validity

The tool was modified according to the suggestion and recommendations of Nursing Experts and Medical Experts.

Reliability

In this study the test retest method was adopted to check the reliability of structure questionnaire to assess the knowledge on foreign body aspiration. The 'r' value of the tool was 0.9 and it was found to be reliable for the study.

Section A: Demographic variables.

Section B: Structured questionnaire to assess the knowledge on early detection of breast cancer. Score and Percentage 1 to 10 = <33%, 11 to 20 = 34- 63% and 21- 30 = 64-100%.

Analysis and discussion

Research Hypotheses

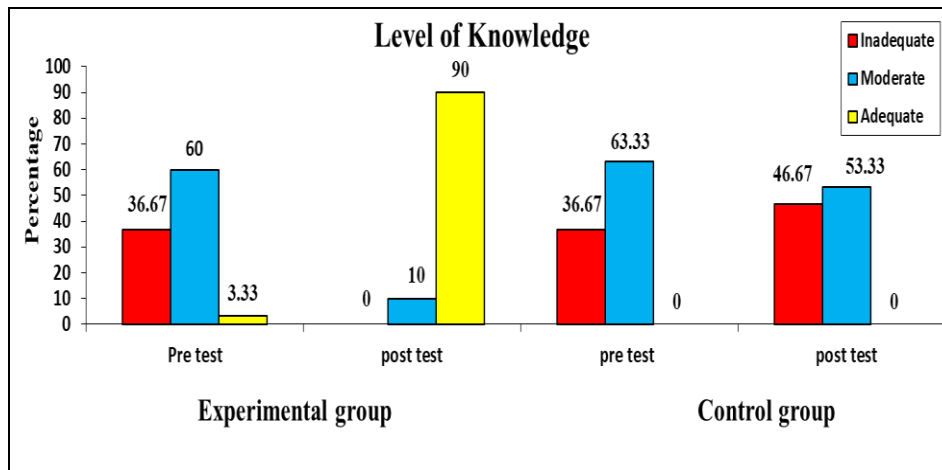
Level of significance $P < 0.05$

H1: There is a significant difference in the mean post-test knowledge score on early detection of breast cancer among women between control and experimental group.

H2: There is a significant association between the pre-test level of knowledge on early detection of breast cancer among samples in experimental group, with their selected demographic variables.

(age, age in years at menarche, marital status, education status, types of occupation, number of children, age in years during the time of first pregnancy, use of any contraceptive pills, any family history of breast cancer, previous exposure regarding breast cancer).

Frequency and percentage distribution based on Pre-test and Post-Test knowledge score on early DETECTION of breast cancer among women within experimental and control group.



Mean, SD, mean difference and paired t value of pre-test and post-test knowledge score on early detection of breast cancer among women within control group n1=30

Level of knowledge	Pre test		Post test		t value
	Mean	SD	Mean	SD	
	14.23	2.23	13.77	2.47	1.07 NS

S*- significant at p<0.05 level; NS-not significant; paired t29 =2.05

The table-4.2 depicts that in the control group mean pre-test score was 14.23 with standard deviation 2.23 and mean post-test score was 13.77 with standard deviation 2.47. The paired “t” value of pre-test and post-test was 1.07. It shows that there is no different in pre-test and post-test value. This indicated that informational booklet was effective to improving the level of knowledge on early detection of breast cancer among women.

Mean, SD, mean difference and paired t value of pre-test and post-test knowledge score on early detection of breast cancer among women within experimental group n2=30

Level of knowledge	Pre test		Post test		t value
	Mean	SD	Mean	SD	
	14.5	3.09	21.7	4.78	13.57 S

S*- significant at p<0.05 level; S- significant; paired t29 =2.05

The table-4.3 depicts that in the experimental group mean pre-test score was 14.5 with standard deviation 3.09 and mean post-test score was 21.7 with standard deviation 4.78. The paired “t” value of pre-test and post-test was 13.57. This indicated that informational booklet was effective to improving the level of knowledge on early detection of breast cancer among women.

Comparison of mean Post-test knowledge score on early detection of breast cancer among women between experimental and control group.

This section deals with mean, SD unpaired ‘t’ value scores of knowledge on early detection of breast cancer between experimental and control group. Hypothesis H1 is tested to find out the effectiveness of Informational booklet about

early detection of breast cancer among women at significance p<0.05 level.

Mean, SD, mean difference and unpaired ‘t’ value of post-test knowledge score on early detection of breast cancer among women between experimental and control group.

Level of Knowledge	Control group posttest		Experimental group post test		t value
	Mean	SD	Mean	SD	
	13.77	2.47	21.7	4.78	14.24 *S

S*- significant at p<0.05 level; NS-not significant; unpaired t58 =2.00

Table shows that between the control and experimental group, the mean post-test score was 13.77 with standard deviation 2.47 and mean 21.7 with standard deviation 4.78. The calculated unpaired ‘t’ value 14.24 is greater than the table value 2.00 at 0.05 level of significance. Hence research hypothesis H1 is accepted. This means the Informational booklet on early detection of breast cancer was found to effective to improving the level of knowledge on early detection of breast cancer among women.

Association of selected demographic variables With Pre-Test level O Knowledge score on early detection OF Breast cancer among samples IN experimental group

This section deals with the association between the levels of pre-test knowledge with their selected demographic variables. It was associated by using chi-square test. The cross tabulation analysis was employed effectively and results of chi-square analysis were observed. Data presented in the table 4.5 reveals that calculated chi-square value 2.81 is lesser than table value 5.99, which indicates that there was no significant association between the mean pre-test level of knowledge score on early detection of breast cancer and age of the women. Hence hypothesis H2 (a) was rejected. Hence hypothesis H2 (a) was not accepted. Regarding to age at menarche calculated chi-square value 2.27 is lesser than table value 5.99, which indicates that there was no significant association between the mean pre-test level of knowledge score on early detection of breast cancer. Hence hypothesis H2 (b) was not accepted.

Regarding to marital status calculated chi-square value 1.43 is lesser than table value 3.84, which indicates that there was no significant association between the mean pre-test level of knowledge score on early detection of breast cancer. Hence hypothesis H2 (c) was not accepted.

Regarding to education status of women calculated chi-square value 8.07 is greater than table value 7.82, which indicates that there was significant association between the mean pre-test level of knowledge score on early detection of breast cancer. Hence hypothesis H2(d) was accepted.

Regarding to types of occupation of women calculated chi-square value 13.84 is greater than table value 9.49, which indicates that there was significant association between the mean pre-test level of knowledge score on foreign body aspiration. Hence hypothesis H2 (e) was accepted.

Regarding to number of children calculated chi-square value 1.43 is lesser than table value 5.99, which indicates that there was no significant association between the mean pre-test level of knowledge score on early detection of breast cancer. Hence hypothesis H2 (f) was not accepted.

Regarding to age at the time of first pregnancy calculated chi-square value 2.27 is lesser than table value 5.99, which indicates that there was no significant association between the mean pre-test level of knowledge score on early detection of breast cancer. Hence hypothesis H2 (g) was not accepted.

Regarding to use of any contraceptive pills calculated chi-square value 0.14 is lesser than table value 3.84, which indicates that there was no significant association between the mean pre-test level of knowledge score on early detection of breast cancer. Hence hypothesis H2 (h) was not accepted.

Regarding to any family history of breast cancer calculated chi-square value 0.14 is lesser than table value 3.84, which indicates that there was no significant association between the mean pre-test level of knowledge score on early detection of breast cancer. Hence hypothesis H2 (i) was not accepted.

Regarding to previous knowledge regarding breast cancer calculated chi-square value 6.45 is greater than table value 5.99, which indicates that there was significant association between the mean pre-test level of knowledge score on early detection of breast cancer. Hence hypothesis H2(j) was accepted.

Present study revealed that calculated chi-square value 2.81 is lesser than table value 5.99, which indicates that there was no significant association between the mean pre-test level of knowledge score on early detection of breast cancer and age of the women.

Conclusion

The present study indicated that Information booklet on early detection of breast cancer among women in a selected hospital is found effective in promoting the knowledge and create awareness of early detection of breast cancer.

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