Research Article

Effectiveness of a structured teaching programme on knowledge of breast cancer and skill of breast self-examination: a quasi-experimental study in rural women

John Molly*^{1,2}, P. J. Mercy³

¹Research Scholar, Saveetha University, Chennai, Tamilnadu, India

²Department of Community Health Nursing, Amala College of Nursing, Amala Nagar, Thrissur, Kerala, India

³Department of Community Health Nursing, St. James College Of Nursing, Chalakkudy, Kerala, India

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*Correspondence:

Sr. John Molly,

E-mail: srmerlyjohn@gmail.com

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ABSTRACT

Background: The women in rural area lacked knowledge regarding breast cancer and breast self-examination (BSE). The study was designed to investigate the effectiveness of structured teaching programme to enhance knowledge and assess the skill of BSE among mahila mandal women.

Methods: Quasi experimental one group pre-test and post-test design with the aid of a questionnaire and interview schedule was conducted among 42 mahila mandal women from three villages under Mugalur Community health and training centre, Karnataka. The pre-test knowledge was assessed using structured interview schedule and BSE skill was assessed by an observation check list.

Results: Out of 42 women, most of the participants gained knowledge about breast cancer and developed skill in doing BSE. The mean pre-test knowledge score (7.6 ± 3.0) was less than the post-test knowledge score (24.9 ± 2.7). The mean pre-test skill score (0.7 ± 1.0) was also less than the post-test skill score (12.4 ± 2.0). The paired t value between the pre-test and post-test knowledge and skill score was statistically significant at 0.001 level. No significant association was existed between the selected baseline variables age, education, income, marital status and years of experience in mahila mandal with pre-test knowledge and skill score of breast cancer and BSE.

Conclusions: The study concluded that structured teaching programme was an effective strategy in improving the knowledge and skill of women regarding breast cancer and BSE.

Keywords: Breast cancer, Breast self-examination, Quasi experiment

INTRODUCTION

Breast cancer is the most common female malignancy and commonly associated with high levels of morbidity and mortality. It has become one of the more curable chronic diseases. Progress is evidenced by people's knowledge about the disease and the means to prevent it.¹ In 2012, 1.7 million women were diagnosed with breast cancer and there were 6.3 million women alive who had been diagnosed with breast cancer in the previous five years. Most of the total deaths from the disease are

accounted for in the developing world. The low survival rates in less developed countries may be explained mainly by lack of early detection programmes, lack of adequate diagnosis and treatment facilities which results in a high proportion of women presenting with late stage disease it.² According to the American Cancer Society report every three minutes, a woman in the United States is diagnosed with breast cancer.³

The breast cancer cases in rural women were 15%. The poor availability and accessibility of health care services

to rural area coupled with non-affordability are some of the major factors which interfere with the early detection and treatment of breast cancer. Besides this, the women have to bear the triple burden of home, work and children, so they tend to neglect their health and postpone meeting the doctor till symptoms start troubling them.⁴

The psychological impact of breast cancer extends beyond the threat of death and includes an altered body image and self-image, role changes and disruption of family relationships. The vast range of implications contributes to the fear associated with the diagnosis of breast cancer.⁵ Breast cancer prevention involves reaching the total population to increase the knowledge about risk factors and promoting change in them.

Health care providers have a vital role to educate the public regarding breast cancer and breast self-examination (BSE). A study found that rural women who practiced BSE six or more times a year had higher perceived Susceptibility scores than women who practiced BSE less than six times per year.⁶ For women to present early, they need to be 'breast aware' and must be able to recognize symptoms of breast cancer through routine practice.

Late presentation of patients at advanced stages in thus the cause of breast cancer death in Nigerian women, as so percent of breast cancer patients in Nigeria are said to die because of the late detection.⁷ Soyer et al, in their study found that education programme improved the knowledge about breast cancer and practice of BSE in primary health nurses.⁸

A quasi-experimental study was conducted in Turkey on women over 30 years in a rural area revealed BSE was an effective method in early detection of breast cancer.⁹ This study was conducted to assess the effectiveness of structured teaching programme on breast cancer and BSE.

METHODS

This study was conducted at Mugalur, a rural community in Bangalore. A pre-experimental one group pre- test post-test design was used for the study. The target population of the study was mahila mandal women in the age group of 18–45 years. A sample size of 45 women was selected from 3 villages by random sampling technique. The pre-test knowledge was assessed using a structured interview schedule. An observation check list was prepared by the investigator to assess the skill of women to perform BSE on a breast model. The observation check list consisted of the following content areas.

- Inspection of the breast model
- Palpation of breast model
- Identification of abnormalities

There were 18 steps for the procedure of breast examination on the model. 18th steps were there to evaluate the women's skill to detect breast changes through palpation, as there were 3 lumps to be detected in the model. The total 18 steps carried on maximum score of 20 which was followed by a planned teaching programme. After 7 days, post-test was conducted using same questionnaire and observation check list.

Statistical analysis

To find the effectiveness of structured teaching programme paired 't' was used. Pearson's product moment correlation was used to find out the association between pre-test knowledge and skill scores and demographic variables.

RESULTS

In the study about the demographic variables, most of the mahila mandal women (71.4%) were between the age of 30-45 years, 31% of the women were illiterate and 33.3% of them had primary education, 90.5% were married and 47.5% had 1-2 children. Regarding the occupation 95.5% were semi-skilled workers and majority (42.2%) had monthly income Rs. 7000- 9000 and 92.9% were belonged to Hindu religion. In the pre-test knowledge, only 7 had score between 11-15, most of the women were 35 (83.3%) had the score below 10 as shown Figure 1. The total score was 37.

Table 1: Effectiveness of structured teaching programme in terms of gain in knowledge and skill score.

Variable	Mean (SD)	Mean difference	Paired 't'
Knowledge			
Pre-test	7.6 (3.0)	17.3	t = 29.72, df =41
Post test	24.9 (2.7)		
Skill			
Pre-test	0.7 (1.0)	11.7	T=38.73, df =41
Post test	12.4 (2.0)		

N =42, $t_{(41)}=3.460$ $P<0.05$; Significant at 0.001 level.

Figure 1: Pre-test and post-test knowledge score of the samples.

The pre-test skill in doing BSE 25 (59.5%) women had score <1 out of 20 total score. The skill of the women in doing breast self-examination was conducted on breast model.

In the pre-test and post-test knowledge and skill in doing BSE was evaluated to find the effectiveness of structured teaching programme. The findings revealed that a significant gain in knowledge ($p=0.001$) and skill ($p=0.001$) regarding the knowledge of breast cancer and BSE as given in Table 1.

DISCUSSION

The present study showed that the mean pre-test knowledge score of the women were 7.6 ± 3.0 , and the mean post-test knowledge was 24.9 ± 2.7 . The mean difference in knowledge score was 17.3. Soyer et al in their study found that education programme improved the knowledge about breast cancer and practice of BSE in primary health nurses.⁸

Practice of skill in women regarding BSE revealed that the pre-test mean skill score 0.7 ± 1.0 , and the post-test skill score was 12.4 ± 2.0 and the mean difference was 11.7. Similar study conducted in Australia to compare the effects of three alternative methods of BSE instruction (films, booklets, individual teaching and discussion) on 166 nurses from various hospitals demonstrated that each method of BSE instruction produced a significant improvement in the technique of BSE.¹⁰

The findings of the pre-test scores of the study were of great concern because there was a significant difference in pre-test and post-test knowledge score and skill score. This showed that the mean gain score of women exposed to structured teaching programme was statistically significant.

Another study conducted in Punjab to assess the effectiveness of planned teaching program on knowledge regarding BSE among the nursing students showed the mean post-test knowledge score of the students (30.98) was higher than mean pre-test knowledge score (15.66). Also mean scores were higher in all the areas in post-test. There was a significant difference between the mean post-test and pre-test knowledge scores.¹¹

Findings related to association between knowledge and selected baseline variables like age, education, income, marital status and number of years experience in mahila mandal group was computed by using Pearson's product moment correlation test and found there was no significant relationship between the pre-test knowledge score and skill score of mahila mandal women.

Another study showed there was no significant relationship between the practice of BSE and the level of education, duration of marriage and number of siblings.¹²

CONCLUSION

The present study showed that the knowledge and practice of breast self-examination among women were very less. The planned teaching programme on breast cancer and BSE carried out in the study was found to be effective in improving the knowledge and skill of mahila mandal women as evidenced by the significant difference between pre-test and post-test knowledge score. So the health personnel should intensify health education on knowledge of breast cancer and should be initiated to improve women's practice of BSE.

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