

# Effectiveness of Feasibility and Utilization of Breast Self-Examination Model and Early Detection Measures to Evaluate Axillary Lymph Nodes and Breast Carcinoma among Women

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## ABSTRACT

The vast increase in health sector related to major deaths occurring globally, among which Cancer is the deadly disease. Among the various types of cancer, the breast cancer is said to be the most prevalent but if diagnosed early can be treated and thus reduce the death rates due to cancer.

**Objectives:** 1. Assess the knowledge of women regarding Breast carcinoma and Breast Self-Examination. 2. Assess the effectiveness of feasibility and utilization of Breast Self-Examination Model. 3. Raise Public Awareness about Breast Carcinoma, the importance of early screening, causes of breast carcinoma, and ways of its prevention. 4. Boost awareness on the importance of early screening procedures to detect abnormal changes in women breast and breast self-examination.

**Method:** Pre-experimental; one group pre- test-post test design was adopted for this study. the sample consisted of 30 subjects, data was collected using structured knowledge questionnaire, then using the breast self examination model the BSE was taught and after a period of 7 days post test was conducted along which even a modified 5 point Likert scale was used to evaluate the feasibility and utilization of the BSE.

**Results:** In pre-test on Breast self-examination Majority of the subjects 13.33% had good knowledge, 76.66% had average knowledge and 10% had poor knowledge, where as in post-test 26.66% had good knowledge, 70% had average knowledge and 3.33% had poor knowledge.

**Conclusion:** The study concludes that the feasibility and utilization of Breast self-examination model was effective in increasing the knowledge, raising the awareness, early screening regarding Breast carcinoma and BSE among women's of post 35 years.

**Key words:** Breast Self-Examination (BSE), Breast carcinoma (BC).

## INTRODUCTION

A woman's reproductive system is a delicate and complex system in the body. The reproductive system includes the primary necessary organs for reproduction. They are ovaries, uterus, oviduct, vagina and breasts. In females, Breasts serves as the mammary gland, which produces and secretes milk and feeds infants. Both females and males develop breasts from the same embryological tissues. At puberty,

estrogens in conjunction with growth hormone cause breast development in females.

A number of diseases can involve the breasts. Mammary dysplasia is an umbrella term for breast diseases which involve benign changes to the breasts. Fibrocystic breast disease is an example of a condition which falls under this umbrella. Women with fibrocystic breast disease experience changes in their breasts which

tend to follow the menstrual cycle, including the development of lumps, soreness, and tenderness. Fibro adenomas are benign tumors which appear as lumps in the breast, and women can also develop breast hyperplasia, in which cells start to multiply more quickly than normal.

Cancer is major public health concern globally with estimated 9.6 million people die from cancer every year and 70 per cent of cancer deaths occur in low-to-middle income countries. it remains a significant public health challenge as incidence rates have been shown to increase yearly by as much as 5% with over 1 million projected new cases annually by 2020.

In India, it is the second commonest cancer among females. Though it can be detected early by self and clinical breast examination or mammography. This is due to lack of awareness and nonexistent breast cancer screening programs. Early detection and prompt treatment offer the greatest chance of long-term survival and breast self-examination (BSE) seems to be an important viable optional substitute screening method in order to attempt to detect early breast cancer.

A study concluded that 81% of women did not have any knowledge about BC and remaining 19% have some knowledge about BC. Another Study concluded that it is imperative to increase awareness about BC and its detection methods in the community through health education campaigns in order to improve knowledge and awareness of breast cancer and BSE.

Although breast cancer awareness is on a increasing toll, women are not breast aware, (in assessing and screening). Hence women have to be taught and made aware of Breast Self-Examination, which is an inexpensive measure to screen for breast cancer at the earliest. The practice of Breast Self-Examination helps to empower women, taking responsibility for their own health. Therefore, Breast Self-Examination is

recommended for raising awareness among women as a screening method.

## **OBJECTIVES**

1. Assess the knowledge of women regarding Breast carcinoma and Breast Self-Examination.
2. Assess the effectiveness of feasibility and utilization of Breast Self-Examination Model.
3. Raise Public Awareness about Breast Carcinoma, the importance of early screening, causes of breast carcinoma, and ways of its prevention.
4. Boost awareness on the importance of early screening procedures to detect abnormal changes in women breast and breast self-examination.

## **METHODOLOGY**

**Research design:** Pre-experimental; one group pre- test post- test design was adopted for this study. Setting: for this study was rural areas of Hubballi. Sample: Sample for the present study were 30 women of post 35 years of age. Sampling technique: The sample were selected by using Non Probability convenience sampling technique; Prior to data collection official permission was obtained, informed consent was taken from the participants. Pre-test was conducted to assess the knowledge among women regarding Breast carcinoma and Breast self-Examination by using structured knowledge questionnaire. Demonstration of Breast Self-Examination by using breast model was taught. Post-test was carried out after a period of one week (7 days) using the same structured knowledge questionnaire and also modified 5 point Likert scale was used to evaluate the feasibility and utilization of the BSE. Data was analyzed and interpreted using descriptive and inferential statistics. **TOOLS:** knowledge questionnaire on breast cancer and breast self-examination model and checklist for feasibility and utilization of the breast self-examination model

## RESULTS

### Section I: Level of knowledge of mother post 35 years regarding Breast self-examination

Table no. 1: Mean, Median, Mode, Standard deviation and range of knowledge score of pretest and posttest of mothers more than 35 years regarding Breast Self-Examination.

Area of Analysis	Mean	Median	Mode	Standard deviation	Range
Pre test	7.26	7	7	3.38	12
Post test	24.23	24	23	1.37	6
Difference	16.77	17	16	2.01	6

Table no 1 reveals that the mean of pretest was 7.26, median 7, mode 7, standard deviation 3.38, range was 12, in posttest mean was 24.23, median 24, mode 23, standard deviation 1.37, range was 6, the difference mean was 16.77, median 17, mode 16, standard deviation 2.01, range 6.

Table No:2 Pre-test, Posttest percentage distribution of knowledge scores regarding Breast Self-Examination

KNOWLEDGE SCORES	Pre test	Post test
Good (10.64 & above)	13.33%	26.66%
Average (3.88 to 10.64)	76.66%	70%
Poor (3.88 & below)	10%	3.33%

Table no 2 reveals that in the pre-test on Breast self-examination 04 (13.33)% of subjects had good knowledge, 23(76.66%) of subjects had average knowledge, 03(10%) of subjects had poor knowledge, where as in the post test (26.66%) of subjects had good knowledge, (70%) had average and (3.33%) had poor knowledge.

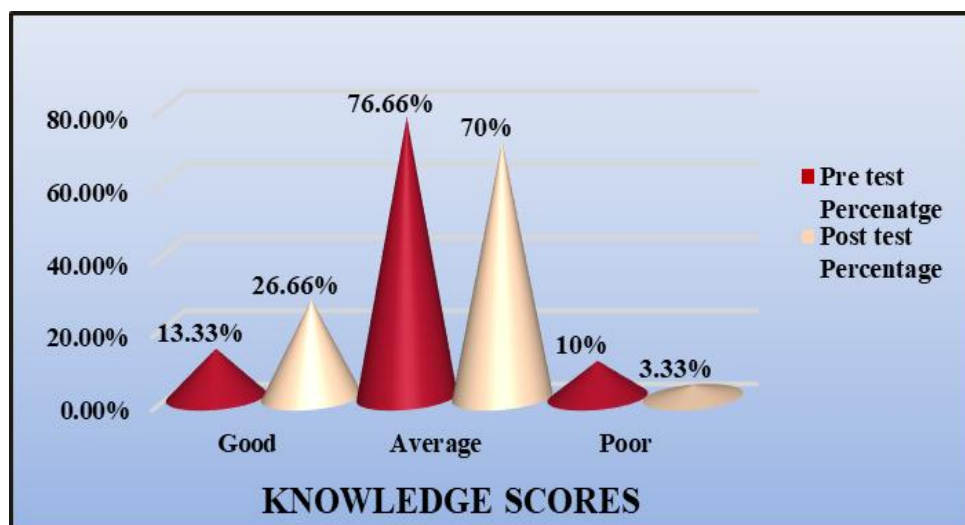


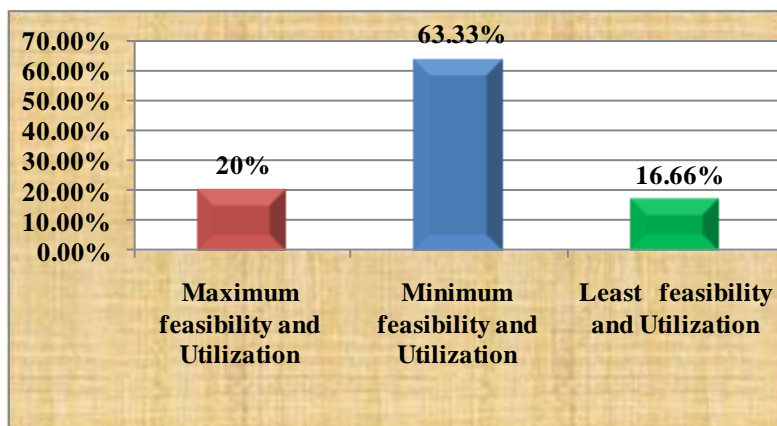
Figure 1: The cone graph represents the distribution of the subjects according to their level of knowledge scores.

### Section II: Frequency and percentage distribution of subjects regarding feasibility and utilization of breast self-examination model.

Table No 3: Frequency and percentage distribution of subjects regarding feasibility and utilization of breast self-examination model

Feasibility and utilization	Frequency	Percentage
Maximum feasibility and Utilization (62 & above)	6	20%
Minimum feasibility and Utilization (57 to 61)	19	63.33%
Least feasibility and Utilization (56 & below)	5	16.66%

Table no 3 revealed that, 6(20%) showed that Maximum feasibility and Utilization. 19 (63.33%) Minimum feasibility and Utilization, 5(16.66%) Least feasibility and Utilization of the breast self examination model.



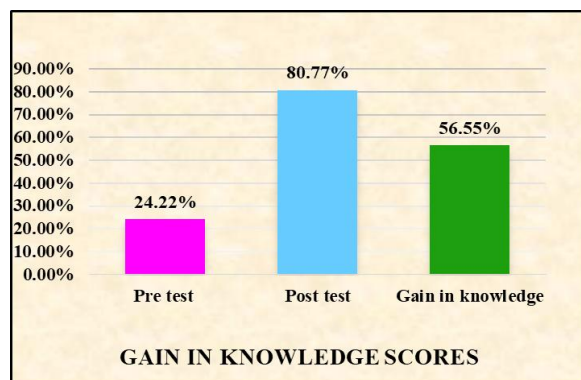
Graph 2: The Bar graph represents the distribution of participants according to their acceptance of feasibility and utilization of the breast self-examination model.

### Section III: Pre-test, Posttest gain in of knowledge scores after demonstration of Breast Self-Examination using BSE model.

Table no 4: pretest and posttest gain in knowledge scores after using the BSE MODEL

Items	Total score	Mean % age of knowledge score of subjects		
		Pretest (x)	Posttest (y)	Gain in knowledge(y-x)
Structured Knowledge questionnaire	900	24.22%	80.77%	56.55%

Table no. 4 reveals that the total scores of the knowledge items was 900 out of which in pretest the knowledge scores obtained was 24.22% and in posttest 80.77%, the gain in knowledge scores between pretest and posttest was 56.55%.



Graph 3: The bar diagram represents that there was significant gain the knowledge scores of the subjects after the demonstration breast self-examination using the breast self-examination model.

### Section IV: Mean Difference and Standard Error and paired values of knowledge scores.

Table no. 5: Mean Difference (d), Standard Error (SE, d) and paired 't' values of knowledge score of

Mean difference (d)	Standard error of difference(SE d)	Paired 't' values	
		Calculated	Tabulated
16.96	3.13	29.75*	2.756

\*Significant at 0.05 level of significance

Table No 5 reveals that calculated paired 't' value ( $t_{cal}=29.75$ )\* was greater than tabulated 't' value ( $t_{tab}=2.756$ ). Hence  $H_1$  was accepted. This indicates that gain in knowledge scores was statically significant at 0.05 levels. Therefore, the Breast Self-Examination (BSE) Module on Breast Self-Examination (BSE) was effective to improve knowledge of Subjects.

### Section V: Association between knowledge scores of women with their selected socio demographic variables

The computed chi-square test for knowledge scores of women post 35 years revealed that there was statistical association between the level of knowledge and the variables selected such as age, education qualification, marital status and income of a women but no association was found between the other demographic variables such as occupation, income of women, religion, family history of breast cancer and in relation to previously ever performed the BSE.

## DISCUSSION

The overall pre test level of knowledge on Breast self-examination

pretest and post-test. Most of the subjects 13.33% had good knowledge, 76.66% had average knowledge and 10% had poor knowledge, where as in post-test 26.66% had good knowledge, 70% had average knowledge and 3.33% had poor knowledge. The findings were supported through a study conducted by Adenike C. Onibokun who observed that the respondent's level of knowledge about the risk factors and symptoms of breast cancer. Less than fifty percent 43.3%, n=78 of the study population had poor knowledge of breast cancer and its risk factors.

In relation to the Effectiveness of Breast self-examination model on early detection measures to evaluate axillary lymph nodes and breast carcinoma.

The Present study showed that there was 56.66% gain in knowledge scores after administration of Breast self-examination model. These findings were supported by Fatemeh Nahidi, the study showed that the performance of women is low, and after the intervention there is a significant difference in the intervention group that showed a positive effect of training on women performance and improving breast self-examination behavior. A study in women showed that only 17% regularly performed breast self-examination, and the most important reason for neglecting breast self-examination is lack of knowledge and awareness to do breast self-examination.

## CONCLUSION

The findings of the study revealed that women's knowledge regarding the early detection measures for breast cancer is relatively very low and enhancement of using a breast self examination model is very feasible and best way in improve the knowledge on breast cancer and its early detection in the rural community settings.

## Implications:

The findings of the present study have implications in the area of nursing education, nursing practice, nursing administration and nursing research.

## Nursing Education:

The educational background of nursing personnel should equip him/her with the knowledge necessary to function as health educator. Findings of the study can be used by the nurse educator to highlight the importance of the breast self-examination model on knowledge regarding Breast Self-Examination (BSE) and can be used as reference materials by nurse educators regarding Breast Self-Examination (BSE). The nurse educator should periodically organize special training program for Mothers post 35 years on Breast Self-Examination (BSE) for mothers post 35 years and also for the community women.

## Nursing Practice:

Nursing supervisors and nurse educators can utilize the breast self-examination model as a reference material to teach the nurses in the hospitals and also when women come to Out Patient Department (OPD). The nurse must conduct mass awareness programmes regarding Breast Self-Examination (BSE) among people. Learning material like wall hangings, posters, charts and roleplays can be made available in community and hospital regarding Breast Self-Examination (BSE).

## Nursing Administration:

The nurse administrator should take interest in providing information on effectiveness of various methods of teaching regarding Breast Self-Examination (BSE). Nurse administrator should plan and organize panel discussion and workshop to evaluate the effectiveness various teaching methods which will help staff nurses to gain their knowledge and in improving their skills competency levels in the assessment.

## Nursing Research:

Nursing professional and post graduate student nurse can conduct research on the effectiveness of breast self-examination model on knowledge regarding Breast Self-Examination (BSE) among other subjects. It is necessary that the nursing personnel should have the knowledge regarding the



research. More evidenced based studies on identifying or detecting breast cancer by less cost effective measures need to be done.

### Recommendations

Keeping in view the findings of the present study, the following recommendations were made:

1. There can be training programme that emphasizes self-efficacy and address perceived barriers are recommended.
2. To instruct and encourage the breast self-examination specially among women from rural community and those with less education.
3. A similar study can be done on large and wider sample size and for longer period of time would be more pertinent in making broad generalization.
4. A descriptive study can be conducted to assess the knowledge, attitude regarding BSE.
5. An experimental study regarding BSE can be under taken among community women 35 post years.

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