

A Pre-Experimental Study to Evaluate the Effectiveness of Planned Teaching about Knowledge and Attitude regarding Self Breast Examination among Females in Selected Rural Area

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Abstract: ***Introduction:** Self breast examination BSE is a screening method which is used to detect early breast cancer. This method involves women looking breast for possible lumps or swelling and feeling for any abnormality. It is one of the important public health problems that studies reported that awareness and practice of breast examination is an important method for prevention of breast cancer. **Objectives:** The main objective of the study to assess the existing knowledge and attitude regarding self breast examination. **Research approach:** The quantitative research approach with pre-experimental one group pre-test post-test research design. The sample size was 105 females selected from rural area. Non probability convenient sampling techniques were used. The data were collected by using structured questionnaire and 5 points Likert scale and analysis were done by using SPSS 24 version 7. **Result:** The major finding of the study were, in pre-test knowledge score was, majority 38.10% of the subjects had good level of knowledge score, 34.29% had average, 17.14% had poor, 8.57% had very good and 1.90% of the subjects had excellent level of knowledge score. In pre-test level of attitude score was Majority 93.33% of the subjects had positive attitude towards self breast examination and 6.67% had negative attitude towards self breast examination. Post-test level of knowledge score was, majority 49.52% of the subjects had very good level of knowledge score, 46.67% were having excellent and 3.81% of the subjects had good level of knowledge score. Post-test level of attitude regarding self breast examination. All (100%) % of the subjects had positive attitude towards self breast examination. **Conclusion:** study shows that there is no any association in relation to their age group and educational status. Hence, based on the above finding, it was concluded undoubtedly that the knowledge and attitude of the target population was significantly improved after receiving information in the form of planned teaching regarding self breast examination.*

Keywords: HICs, high income countries, (LICs) and lower income countries. Self breast examination, Breast self examination, BSE, attitude, females

1. Introduction

“Self examination is the key to insight, which is the key to wisdom.”

-M Scott peck

The time immemorial breast has been a symbol of womanhood and ultimate fertility. It is beautifully depicted in our art and culture and even in modern times that women maintain the sanctity of this organ which symbolizes femininity. As a result any danger to the breast evokes fear of loss of femininity and hence fertility.¹

The major risk factors of breast cancer are family history of breast cancer, menarche before 12 years of age and menopause after 55 years of age, nulliparity or first child after 30 years of age, obesity, excessive exposure to the ionizing radiations between puberty and 30 years of age, personal history of breast cancer, hormonal dysfunction, stress, unhealthy lifestyle etc. Research propose that a relationship between oestrogens exposure and the development of breast cancer. In laboratory studies, tumours

grow much faster when exposed to oestrogen, and epidemiologic research suggests that women who have longer exposure to estragon have a higher risk for breast cancer.²

Self breast examination BSE is a screening method which is used to detect early breast cancer. This method involves women looking breast for possible lumps or swelling and feeling for any abnormality. It is one of the important public health problems that studies reported that awareness and practice of breast examination is an important method for prevention of breast cancer. Self breast examination is cost effective method for early detection of breast cancer which is recommended by American Cancer Society and the National Cancer Institute. Self breast examination is a procedure which is done by individual to examine physically and visually herself for any changes in the breast. BSE method is important component of health promotion and maintenance. While providing education and encouraging women to perform self breast examination is recommended to decrease the mortality rate from breast disorders. Self breast examination was first advocated by the Columbia University. The Cushman experts recommended

that women over 20 years of age should perform monthly self breast examination and it helps to know whether her breast is normal or is there any abnormality.⁴

2. Background of the Study

Nearly 1.7 million new cases has diagnosed as a breast cancer in year 2012. Breast cancer is the second most common cancer in both men and women worldwide. In year 2012, it represented about 12 % of all new cancer cases and 25 % of all cancers affects the women. Breast cancer is the commonly diagnosed cancer among all women in 140 of 184 countries worldwide. Worldwide, breast cancer has represents one in four of all cancers in women. Since 2008, more than 20% of breast cancer incidence has increased worldwide and mortality has increased by 14 %.⁵

Breast cancer is ranked as a number one cancer among Indian females with age adjusted rate as high as 25.8 per 100,000 women and mortality 12.7 per 100,000 women. Data reports from various latest national cancer registries are compared for incidence, mortality rates. The age adjusted incidence rate of carcinoma of the breast was found as high as 41 per 100,000 women for Delhi, followed by Chennai (37.9), Bangalore (34.4) and Thiruvananthapuram District (33.7). A statistically significant increase in age adjusted rate over time (1982-2014) in all the PBCRs namely Bangalore (annual percentage change: 2.84%), Barshi (1.87%), Bhopal (2.00%), Chennai (2.44%), Delhi (1.44%) and Mumbai (1.42%) was observed. Mortality-to- incidence ratio was found to be as high as 66 in rural registries and as low as 8 in urban registries. Besides the young age has been found as a major risk factor for breast cancer in Indian women. Breast cancer projection for India during time periods 2020 suggests the number to go as high as 1,79,7900. Better health awareness and availability of breast cancer screening programs and treatment facilities would cause a favourable and positive clinical picture in the country.⁶

3. Literature Survey

A literature review is a synthesis of literature that describes which known or has been studied regarding the particular research question.

A cross-sectional study was conducted at Mumbai, Maharashtra, India in year 2017 on Prevalence of risk factors for breast cancer in women aged 30 years and above. The objective of the study was to assess the prevalence of various risk factors for breast cancer in women. Sample size was 1158 subjects, Interview method was used. Data was collected by a pre-tested semi-structured interview tool. Data was analysed with the help of excel functions and is presented here as mean, median and percentages. Result showed that 15.5% of the women had at least one risk factor for breast cancer. The prevalence of individual risk factors was below 6%. Conclusion of the study was prevalence of the risk factors for breast cancer is not very high, but never the less, the increasing trend of breast cancer in the country makes it imperative to introduce population based screening for all women with or without risk factor.⁷

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A cross-sectional study was conducted at Trichy, Tamil Nadu in year 2017 on determinants of awareness and practice of breast self examination among rural women. The aim was to assess knowledge and practice of breast self examination (BSE). The sample size was 200. Non probability convenient sampling technique was used. The data was collected by using structured interviewer administered questionnaire and analysed by SPSS version 20.0. spearman correlation and Chi-square test were used to analysed the association between the variables. The result was the mean age of the study group was 36.9 ± 8.8 years. Eighty percent were literates. Most of the women 178 (89%) were aware of breast cancer. Only 26% of the women were aware of BSE. Only 18% of the females had ever checked their breast and 5% practiced it regularly. Awareness of BSE was found to be significantly associated with age and educational attainment. The conclusion was the level of knowledge and practice of BSE among females are unacceptably low. Efforts should be made to increase level of knowledge and practice of BSE through health education programs.⁹

A cross sectional study was conducted at Puducherry, India year in 2017. Objectives of the study were to assess the existing level of knowledge on self breast examination and to identify the factors associated with the knowledge. Sample size was 60. Multistage sampling technique was used. Data was collected by using pre tested self administered structure knowledge questionnaire. Data was analysed by using descriptive statistics and inferential statistics. Results of the study was majority 70% of women had inadequate knowledge on breast self- examination with the mean percentage of 45.75%, standard deviation +/- 3.2. Education, family history of breast cancer and marital status had significant association with the level of knowledge on breast self- examination. Conclusions of the study was Almost 70% of women had insufficient knowledge on breast -examination which in turn reflects that most of women do not engage in regular medical check up of BSE.¹⁰

A Non experimental exploratory study was conducted at Mohali, Punjab in year 2016 on assessing the knowledge regarding self breast examination among nursing students in rayatbahra university. Objectives of the study were to assess the level of knowledge of nursing students regarding breast self examination and find out the relationship of knowledge

with selected socio-demographic variables. The sample size was 95 students. Purposive sample technique was used. Data was collected by using structured multiple choice questionnaire. Data was analysed by using different statistical methods. The level of significance chosen was <0.05 . The result of the study was most of the students had inadequate knowledge and do not perform self breast examination as a routine. The conclusion of the study was therefore, there is need to encourage the students to practice it as a routine so that the breast cancer can be detected at an early stage.¹¹

A cross sectional descriptive study was conducted at Sewagram, Maharashtra, India in year 2016 on Knowledge, attitude and practice about breast cancer and breast self-examination among women seeking out-patient care in a teaching hospital in central. The aim was to evaluate the current status of knowledge, awareness and practices related to BC and breast self-examination in the female rural population attending a teaching hospital. The sample size was 360 women. Simple random sampling technique was used. The data was collected by using self administered knowledge questionnaire and analysed by using Stata software (version 11, Stata Corporation, Texas, USA). Result was study population included 360 women with a mean age of 45.81 (± 10.9) years. Only 5 (1.38%) females had a family history of BC. A whopping 81% of women did not have any knowledge about BC. All the women thought that CBE by doctors was the only way for screening breast cancer. Conclusion was it is imperative to increase awareness about BC and its detection methods in the community through health education campaigns. We should have major policy changes to increase future screening programs and health education programs which would have an overall positive impact on reducing the disease burden.¹²

Problem Definition

“A pre-experimental study to evaluate the effectiveness of planned teaching about knowledge and attitude regarding self breast examination among females in selected rural area.”

Objectives of Study-

A) Primary /General Objective

To study to evaluate the effectiveness of planned teaching about knowledge and attitude regarding self breast examination among females in selected rural area.

B) Secondary/ Other Objectives

- To assess the existing knowledge and attitude regarding self breast examination among females in selected rural area.
- To evaluate the effectiveness of planned teaching about knowledge and attitude regarding self breast examination among females in selected rural area
- To associate the post-test knowledge score regarding self breast examination among females with their selected demographic variables.
- To associate the post-test attitude score regarding self breast examination among females with their demographic variables.

4. Material and methods

A single group pretest and posttest (Pre-experimental) design was chosen for the study. In the present study a pretest was administered by means of structured questionnaire and likert scale depicted as P1 and then planned health teaching was given depicted as X, a post test was conducted using the same structured questionnaire and likert scale depicted P2. The study design is depicted as –

Pre Test	Planned health teaching	Post Test
P1	X	P2

A quantitative approach in pre experimental research design was found to be more appropriate to evaluate the effectiveness of planned teaching about knowledge and attitude regarding self breast examination. The proposed study was undertaken on females in selected rural area. The population and samples females of the selected rural area who were fulfilling the inclusion and exclusion criteria and the sample consisted of 105 females of the selected rural area. The sampling technique used in this study was non probability sampling technique. Tools used for data collection include three section namely demographic variable and structured knowledge questionnaires and likert scale

5. Results

A structured questionnaire and likert scale is used for data collection. The analysis was done with the help of descriptive and inferential statistics.

S. No.	Data Analysis	Method	Remarks
1	Descriptive statistics	Frequency and percentage	To describe the distribution of demographic variables
2	Inferential statistics	Mean, median, standard deviation	To determine the knowledge and attitude regarding self breast examination.
		Paired t- test	To determine the effectiveness of planned teaching in terms of gain in knowledge and attitude scores.

The data was analyzed and is presented in the following sections:-

The collected data is analyzed on the bases of objectives of the study in the following way:

- **Section A:** Distribution of subjects with regards to demographic variables.
- **Section B:** Assessment of level of pre-test and post-test knowledge regarding self breast examination among females working in rural area.
- **Section C:** Assessment of level of pre-test and post-test attitude regarding self breast examination among females working in rural area.
- **Section D:** Assessment of effectiveness of planned teaching programme on knowledge and attitude regarding self breast examination among females working in rural area.

Significance of difference between knowledge score in pre-test and post-test of subjects regarding self breast examination

Overall	Mean	SD	Mean Difference	t-value	p-value
Pre Test	12.45	5.66	11.47±5.84	20.12	0.0001 S,p<0.05
Post Test	23.93	1.67			

Significance of difference between attitude score in pre-test and post-test of subjects regarding self breast examination

Overall	Mean	SD	Mean Difference	t-value	p-value
Pre Test	86.45	7.95	36.69±8.92	42.13	0.0001 S,p<0.05
Post Test	123.15	7.31			

6. Discussion

The findings of the study were discussed with reference to the objective stated as below. The present study was undertaken as, "A pre-experimental study to evaluate the effectiveness of planned teaching about knowledge and attitude regarding self breast examination among females in selected rural area."

The major finding of the study showed that among all subjects, in pre-test knowledge score was, majority 38.10% of the subjects had good level of knowledge score, 34.29% had average, 17.14% had poor, 8.57% had very good and 1.90% of the subjects had excellent level of knowledge score. In pre-test level of attitude score was Majority 93.33% of the subjects had positive attitude towards self breast examination and 6.67% had negative attitude towards self breast examination Post-test level of knowledge score was, majority 49.52% of the subjects had very good level of knowledge score, 46.67% were having excellent and 3.81% of the subjects had good level of knowledge score. Post-test level of attitude regarding self breast examination. All (100%) % of the subjects had positive attitude towards self breast examination. Mean pre-test knowledge score of the subjects was 12.45±5.66 and mean post-test knowledge score of the subjects was 23.93±1.67. Mean pre-test attitude score of the subjects was 86.45 ± 7.95 and mean post-test attitude score of the subjects was 123.15 ± 7.31. The study reported that the result regarding level of knowledge and attitude regarding self breast examination the subjects in pre-test were poor and after the implementation of planned teaching post-test score was increased. With regard to second objective of the study result showed that in pre-test mean score of knowledge was 12.45 and standard deviation was 5.66. post-test mean score was 23.93 and standard deviation was 1.67. The calculated 't' value i.e. 20.12 are much higher than the tabulated value at 5% level of significance for overall knowledge score of females which is statistically acceptable level of significance. In pre-test attitude score was 86.45 and standard deviation was 7.95. post-test mean score was 123.15 and standard deviation was 7.31. The calculated 't' value i.e. 42.13 are much higher than the tabulated value at 5% level of significance for overall attitude score of females which is statistically acceptable level of significance. Hence, it was statistically interpreted that the planned teaching on knowledge and attitude regarding self breast examination among females in selected rural area was effective. With regard to third objective of the study result showed that there was no

association of knowledge and attitude score in relation to their demographic variable like age and educational status.

7. Conclusion

After the detailed analysis, this study leads to the following conclusion Planned teaching on self breast examination was found to be effective in improving the knowledge and attitude of subjects.

It did not show any association in relation to their age group and educational status. Hence, based on the above finding, it was concluded undoubtedly that the written prepared material by the investigator in the form of planned teaching helped the subject to improve their knowledge and attitude regarding self breast examination.

8. Future Scope

The findings of the study have implication in nursing service, nursing education, nursing administration, nursing research.

Nursing Practice

- Nurses are key person in the health team, who play a vital role in promotion and maintenance of health.
- Health education is one of the nurse's responsibilities; this study emphasizes nurse to impart health knowledge related to self breast examination while working.
- Nurses play a major role in promoting health of the people by various extended and expanded roles.
- Nurses can conduct community awareness campaigns and programmes on self breast examination.
- Community health nurse can impart health education to the people regarding self breast examination during their posting in urban and rural area.

Nursing Education

- This study will help the student nurse to understand the level and attitude among community people specially females about self breast examination.
- As a nurse educator, there are abundant opportunities for nursing professionals to educate students on self breast examination.
- This study adds to the nursing knowledge as it provides information regarding self breast examination.
- Nurse educator can teach subject by using various educational methods.

Nursing Administration

- Community health administration authorities or other health personnel should initiate for educating the nurses regarding self breast examination.
- Nursing administrators in hospital can conduct education programmes for the patient by using common and simple methods.
- Nursing administrators can bring awareness among the public in general and specific focus groups regarding self breast examination.
- Nursing administrators can organize staff development programmes, in-service education for nurses to update

their knowledge and attitude regarding self breast examination.

Nursing Research

- This study would help the nurse researcher to develop appropriate health education tools for educating the subject regarding self breast examination.

So far only a few studies have been conducted on knowledge and attitude regarding self breast examination. This study has revealed the knowledge and attitude regarding self breast examination which is less among the population, so they can conduct other methods of education to improve their knowledge and update their attitude.

References

- [1] Avachat S, Thipse V, Joshi S. Evaluation of impact of educational intervention on knowledge and practice regarding breast self-examination among paramedical workers in a teaching hospital Maharashtra, India. *International Journal of Community Medicine and Public Health*. 2016;:2217–21.
- [2] Breast cancer statistics [Internet]. World Cancer Research Fund. 2018 [cited 2019Feb28] .Available from: <https://www.wcrf.org/dietandcancer/cancer-trends/breast-cancer-statistics>
- [3] Breast cancer statistics [Internet]. World Cancer Research Fund. 2018 [cited 2019 Feb 28] .Available from:<https://www.wcrf.org/dietandcancer/cancer-trends/breast-cancer-statistics>.
- [4] Article Tools [Internet]. American Society of Clinical Oncology Journals. [cited 2019Feb28]. Available from:<http://ascopubs.org/doi/full/10.1200/JGO.17.00207>.
- [5] 10.Breast Cancer Worldwide [Internet]. ABC Global Alliance. [cited 2019Feb28]. Available from: <https://www.abcgloballiance.org/articles/breast-cancer-worldwide/>.
- [6] Malvia S, Bagadi SA, Dubey US, Saxena S. Epidemiology of breast cancer in Indian women. *Asia-Pacific Journal of Clinical Oncology*. 2017;13(4):289–95.
- [7] AG rose. *Oncology nursing secrets*. . New Delhi ,Jaypee Brothers; 1997.
- [8] Medindia - Trusted Information on Health & Wellness [Internet]. Medindia. Medindia.net; [cited 2019Feb28]. Available from:<https://www.medindia.net/>
- [9] Somdatta P, Baridalyne N. Awareness of breast cancer in women of an urban resettlement colony. *Indian Journal of Cancer*. 2008;45(4):149.
- [10] k park. *Text Book of Preventive and social medicine*. 21st ed.Jabalpur: Banarsidas Bhanot Publishers; 2009.
- [11] American Cancer Society cancer facts and Figures, 2005-2006.
- [12] Tiwari A, Naik M. Effectiveness of structured teaching program on knowledge and practice regarding breast self-examination among college girls in a selected college of Bhilai, Chhattisgarh, India. *International Journal Of Community Medicine And Public Health*. 2018;5(9):4028.
- [13] Doshi D, Kulkarni S, Reddy B, Karunakar P. Breast self-examination: Knowledge, attitude, and practice

among female dental students in Hyderabad city, India. *Indian Journal of Palliative Care*. 2012;18(1):68.

- [14] Chattu V, Kumary S, Bhagavathula A. Community-based study on the knowledge, awareness, and practices of females towards breast cancer in Buraimi, Oman. *South Asian Journal of Cancer*. 2018;7(4):215.

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