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### Effectiveness of Structured Teaching Program on Knowledge Regarding Breast Self Examination among Adolescent Girls at Selected College, Chengal Pattu District

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#### Abstract

**Background:** Women and men share many similar health problems, but women also have their own health issues, which deserve special consideration in developed and developing countries, breast cancer is shown as a major health problem. Breast cancer is the leading malignant tumour and it consists 30% of cancers among women. Breast cancer is the second leading cause of cancer deaths. In India, the incidence of breast cancer is increasing, with an estimated 80,000 new cases were diagnosed annually it is reported that one in 22 women in India is likely to suffer from breast cancer during her lifetime. At present a simple, inexpensive and early implant for the detection of breast cancer is breast self-examination. It is one of the simplest and most important health programmes no promote early detection.

**Materials and Methodology:** The researcher had used a quantitative research approach by employing quasi experimental pretest post test only group research design and Random sampling technique was adopted to selected 100 Adolescent girls with the age group of 17 to 23 years who met inclusion criteria at selected College, Chennai (2021).The investigator collected the demographic data such as age, marital status, type of family, residence, weight from the respondents by using the self-structured questionnaire after obtaining informed consent. Self structured multiple-choice questionnaire was used as a Research Tool to assess the Knowledge and practice on Self breast examination, knowledge on Breast cancer and use of Mammography. The

conceptual framework used for the study was based on “Becker’s health belief model.”

**Result:** The frequency and percentage of pre-test and post-test level knowledge regarding breast self-examination shows majority of female students in pre-test 65 of them(65%) had inadequate knowledge remaining 35 of them (35%) had moderate knowledge and none of them adequate knowledge regarding breast self-examination but in post-test majority 88 of them (88%) had adequate knowledge remaining 12 of them(12%) had moderately adequate knowledge and none of them inadequate knowledge regarding breast self-examination. Over all comparison of mean values between pre-test 11.32 and post-test 26.3 of knowledge regarding breast self-examination and ‘t’ value 17.57 obtained was found to be significant at 0.05 level. So that the structured teaching programme has a significant effect in increasing the knowledge regarding breast self examination among adolescent girls. It shows the effectiveness in improving awareness regarding breast self-examination.

**Conclusion:** Regular breast self-examination can identify any abnormal changes in breast to establish good prognosis it the young groups of women are targeted with accurate information and encouragement they will learn accurate information and encouragement they will learn to examine themselves and detect every Minute changes early in their later life.

**Keywords:** Effectiveness, Knowledge, BSE, Mammogram, Structured Teaching Program

#### Introduction

Women and men share many similar health problems, but women also have their own health issues, which deserve special consideration in developed and developing countries, breast cancer is shown as a major health problem. Breast cancer is the leading malignant tumour and it consists 30% of cancers among women. Breast cancer is the second leading cause of cancer deaths. In India, the incidence of breast cancer is increasing, with an estimated 80,000 new cases were diagnosed annually it is

reported that one in 22 women in India is likely to suffer from breast cancer during her lifetime. According to the American cancer society, about 1.3 million women will be diagnosed with breast cancer annually. Worldwide about 465,000 will die from the disease. Breast cancer incidence in women in the United States is 1 in 8 (about 13%). In 2012, an estimated 192,370 new cases of invasive breast cancer were expected to be diagnosed in women in the U.S along with 62,280 new cases of invasive (in site) breast cancer.

The World Health Organization (WHO) has predicted that by 2020 the number of breast cancer cases will jump to an alarming figure and one in every eight women would run the risk of developing the disease in her lifetime. The Indian Council of Medical Research (ICMR) too, conducted that over the last two decades there has been a steep rise in the statistics pertaining to women being diagnosed with breast cancer. In India by the year 2022 144,937 women were newly detected with breast cancer. 70,218 women died of breast cancer.  $144937/70218=2.06$ —round it off to 2. So roughly in India, for every 2 women newly diagnosed with breast cancer, one lady is dying of it.

Early diagnosis affords a better chance of survival and better prognosis in absence of an exact etiological agent for breast cancer, the most appropriate way of controlling it, will be early detection and treatment. Mammography is the method of choice but its use limited due to high cost and unavailability. At present a simple, inexpensive and early intervention for the detection of breast cancer is breast self-examination. It is one of the simplest and most important health assessment to promote early detection.

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. Breast cancer is a major public health problem in both developed and developing countries and a leading cause of morbidity and mortality among women. Worldwide, over 1.15 million cases of breast cancer are diagnosed every year.

Breast cancer is a preventable cancer if detected early enough. The early detection of breast cancer, not only increases the chances of successful treatment but also improves chances of survival. Globally, breast self-examination (BSE), clinical breast examination (CBE) and mammography is the recommended screening test for early detection of breast cancer. Clinical breast examination and mammography require hospital visit and specialized instrument/ technical expertise. Breast self-examination is an appropriate screening test for screening of breast cancer in developing countries where access to diagnostic and curative facilities may be a problem.

Although breast self-examination is an ideal, simple, safe, effective and cost free, non-invasive intervention which is carried out by women themselves, the practice of BSE was low in different countries. The main barrier for not practicing BSE was lack of knowledge.

### Need for the Study

Breast cancer is the second leading cause of cancer related death in women. When a breast change is detected in its early stages, chances of surviving the disease are greatly improved. Regularly examining her own breasts allows a woman to become familiar with how her breasts normally look and can help her more readily detect any changes that may occur. The screening guidance include early

mammograms starting at age 40 and timing for as long as a woman is in good health.

The efficacy of breast self-examination will decrease the cancer mortality. The nurse plays an important role in BSE education. BSE is a modality used for the early detection of breast cancer. Nurse should teach the public about abnormal breast changes and also early detection to correct misconceptions and reduce the risk of getting breast cancer. If women understand the importance of early detection and treatment, they are more likely to do breast self-examination, regular mammograms and less likely to delay seeking medical care when an abnormality is found.

Regular breast self-examination can identify any abnormal changes in breast to establish good prognosis. If the young groups of women are targeted with accurate information and encouragement they will learn accurate information and encouragement they will learn to examine themselves and detect every minute changes early in their later life. In recent years emphasis has been placed on teaching adolescent girls to palpate their own breast monthly. Early cancer of the breast is curable, and if every adolescent girl would take time to carefully examine her own breast at regular intervals, many benign and malignant tumour would be discovered easily and early nurses should become familiar with the procedure of breast self-examination so that they may teach adolescent girls, patients, friend or members of their families. A descriptive study on knowledge of BSE on 100 nursing students, conducted in a selected Nursing institution of Patiala, Punjab and the results indicated that majority of them (89) % had average level of knowledge and 11% of them had inadequate knowledge and no one have adequate knowledge. As nursing students are the future staff nurses, they should have thorough knowledge regarding BSE in order to extend the knowledge to women and to practice BSE themselves. A study on assessing the effectiveness of planned teaching programme on breast self-examination on 100 nursing students showed that the structured teaching programme was effective in improving the knowledge ( $t$  value 32.250,  $p < 0.05$ ).

Breast self-examination is most sensitive and cost-effective method and practicing BSE can reduce mortality by early detection of breast cancer. Therefore, it is important to educate the women and promote them to perform the BSE for early detection of breast cancer. Keeping in view the above points, the present study was aimed to assess the knowledge and practice regarding BSE among B.Sc. Nursing students and to assess the effectiveness of Structured Teaching Programme on the same.

### Materials and Methodology

The extensive review of literature, the investigators professional experience and the expert guidance received from the field of gynaecological department help the researcher to design the methodology, select appropriate and reliable tools for the data collection. The research approach was quantitative in nature, quasi experimental pretest post test only group research design was employed for the study. The objectives of the study are to assess the knowledge regarding breast self examination before and after structured teaching program, to determine the effectiveness of structured teaching program on knowledge regarding breast self examination. To find out the association between knowledge score among Adolescent girls selected demographic variables. The study was conducted among 100

Adolescent girls with the age group of 17 to 23 years who met inclusion criteria at selected College, Chennai (2021). The adolescent girls were given verbal explanations and description regarding the subject and therefore the aim of the study. The convenient sampling technique was used to select the samples. The adolescent girls who fulfilled the sample criteria were selected till the sample size was obtained for the present study. Samples were selected based on inclusion, exclusion criteria.

The study was conducted after obtaining approval from the ethics review committee (ERC) Formal letter permission obtained from Head of the Institution to conduct the study. Participation was Voluntary and no participant was enforced to answer the question. A Written consent was taken from the participants when the aim of the study was explained well to the girls and Confidentiality was maintained. A self structured multiple choice Questionnaire tool was developed and used by the researcher to obtain the sample profile. It consisted of 5 items to elicit the demographic data of the adolescent girls namely age, marital status, type of family, Residence and Weight. Multiple choice Questionnaire consists of 25 questions related to knowledge on Breast Cancer, Self Breast Examination, Knowledge and practice on Self Breast Examination, knowledge on use of mammogram. Each question had three options one correct answer and was given score of one mark, for wrong answer a score of zero mark was given, the total score allotted for the knowledge and practice questionnaire was 30 which was Categorized as Inadequate knowledge (1-15), moderately knowledge (16-20), adequate knowledge (21-25). By using split of method, the reliability of the tools was checked. Pilot study was done with 10% of the sample size (10 adolescent girls). Pre test was conducted among adolescents by issuing self structured questionnaire with proper verbal explanation. After the pre test Structured teaching programme was conducted among adolescents on breast cancer, statistics, anatomy & physiology of breast, importance of SBE, steps and methods, complications of self breast examination, use of mammography through video assisted technology, charts and pamphlets. Post test was conducted by providing the same questionnaire after one week. Data analysis was planned by using descriptive and inferential statistics. In descriptive statistics Frequency and percentage used for describing demographic variables. Mean and standard deviation was used to analyse the knowledge which determines the effectiveness of teaching program.

**Result**

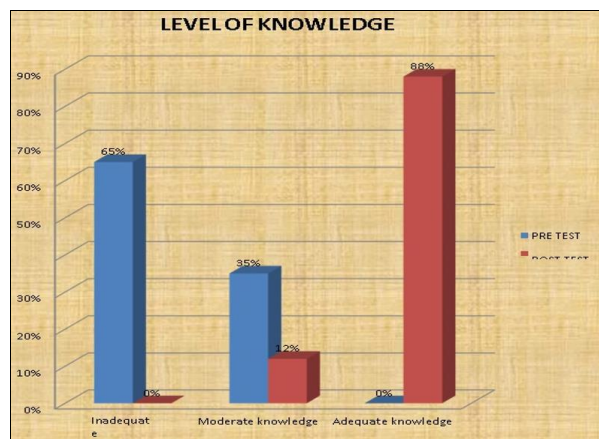
**Table 1:** Assessment of pre-test and post test level of knowledge regarding breast self examination (n = 100)

Level of knowledge	Pre-Test		Post Test	
	Freq	Percentage	Freq	Percentage
Inadequate knowledge	65	65	0	0
Moderate knowledge	35	35	12	12
Adequate knowledge	0	0	88	88

In pre-test majority of adolescent girls 65 of them (95%) had inadequate knowledge, remaining 35 of them (35%) had moderate knowledge and none of them had adequate knowledge regarding Breast self examination. In post test majority 88 of them (77%) had adequate knowledge remaining 23 of them (23%) had moderate knowledge and none of them had inadequate knowledge regarding Breast

self examination.

**H1:** The post-test knowledge of B.Sc. Nursing students regarding BSE will be significantly higher than their mean pretest knowledge is accepted.



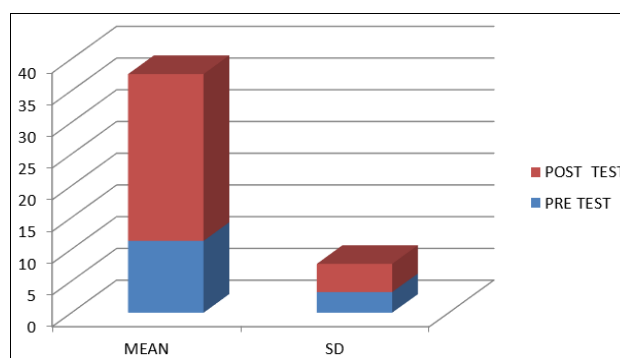
**Fig 1:** Comparison of pre test and post test knowledge score on bse comparison of pre test and post test knowledge score

**Table 2:** Comparison of Pre Test and Post Test Knowledge Score on BSE (n = 100)

Group	Test	Mean	Sd	Paired t test value
Experimental grup n = 100	Pre test	11.32	3.249	*17.5754
	Post Test	26.3	4.450	

**Significant at 0.05 level, df = 99 (t=1.660)**

The data presented in Table 3 shows the mean post test scores of knowledges regarding breast self examination 26.3 of the group were higher than mean pre-test scores of knowledges regarding breast self examination 11.32. The obtained standard deviation of knowledge regarding breast self examination during post test was 4.450 and the pre test standard deviation was 3.249. The obtained 't' value for the pre-test and post test scores of knowledge regarding breast self examination is \*17.5754 when compared to the table value (1.660) was found to be high found and significant at 0.05 level. Therefore, it can be concluded that the difference in mean observed was true difference and the structured teaching program was effective in improving the knowledge. So that the structured teaching programme has a significant effect in increasing the knowledge regarding breast self examination among the female students. So that the Resarcher concluded that structured teaching programme has a significant effect in increasing the knowledge regarding breast self examination.



**Fig 2:** Comparison of Pre-Test and Post Test Knowledge Score on BSE

**Table 3:** Association between Post-Test Scores of Knowledges Regarding Breast Self Examination with Selected Demographic Variables

Variable	Freq	Percentage	df	x <sup>2</sup> (Calculated)	x <sup>2</sup> (Table value)
<b>Age</b>					
a) 17-20 years	99	99%	2	0.137	5.99
b) 20-23 years	1	1%			
c) >23 years	0	0%			
<b>Marital Status</b>					
a) Married	0	0%	1	0	3.84
b) Unmarried	100	100%			
<b>Type of Family</b>					
a) Nuclear family	79	79%	1	0.15 28	3.84
b) Joint family	21	21%			
<b>Residence</b>					
a) Urban	63	63%	1	0.834	3.84
b) Rural	37	37%			
<b>Weight</b>					
a) 40-60kg	92	92%	2	1.1844	5.99
b) 60-80kg	7	7%			
c) >80kg	1	1%			

**NS=Not significant at 0.05 level**

According to age  $x^2 = 0.137$  were as the table value= 5.99. Regarding marital status  $x^2=0$  Were as the table value=3.84, related to type of family  $x^2= 0.1528$  were as the table value = 3.84, regarding residence  $x^2= 0.834$  were as the table value = 3.84, according to student weight  $x^2= 1.1844$  were as the table value= 5.99.

These demographic variables of  $x^2$  is **less than the tabulated value at  $p>0.05$  level it is evident that there is no significant association exist between posttest score of knowledge** regarding breast self examination and selected demographic variables such as age, marital status, type of family, residence, weight.

**Discussion**

Present study shows, in the PRE-TEST majority 65 Of them had inadequate knowledge, remaining 35 of them had moderate knowledge and none of them had adequate knowledge regarding breast self examination, where as in the POST-TEST majority 88% of them had adequate knowledge, remaining 12% of them had moderately adequate knowledge and none of them had inadequate knowledge regarding breast self examination.

Ganasironmani helan indrani (2018) study shows that majority of the women 93.0% had moderately adequate knowledge, 5.0% of the women at inadequate knowledge, 2% had adequate knowledge regarding temporary family planning methods. 73% of the mothers had agrees attitude, 19% of the mothers strongly agree attitude and 8% of mother had disagree, regarding temporary family planning method. The mean score of the POST-TEST score of knowledge 26.3 was higher than mean PRE-TEST scores of knowledge regarding breast self examination 11.32. The obtained standard deviation of knowledge regarding breast self examination during post test was 4.450 and the pretest standard deviation was 3.249.

The obtained ‘t’ value for the pre-test and post test scores of knowledge is 17.570 when compared to table value (1.660) was found to be significance at 0.05 level. So that the structured teaching program has a significant effect in increasing the knowledge regarding breast self examination. A descriptive study on knowledge of BSE on 100 nursing students, conducted in a selected Nursing institution of Patiala, Punjab and the results indicated that majority of

them (89) % had average level of knowledge and 11% of them had inadequate knowledge and no one have adequate knowledge<sup>9</sup>. As nursing students are the future staff nurses, they should have thorough knowledge regarding BSE in order to extend the knowledge to women and to practice BSE themselves. A study on assessing the effectiveness of planned teaching programme on breast self-examination on 100 nursing students showed that the structured teaching program was effective in improving the knowledge (‘t’ value 32.250,  $p < 0.05$ ).

**Conclusion**

Regular breast self-examination can identify any abnormal changes in breast to establish good prognosis. If the young groups of women are targeted with accurate information and encouragement they will learn accurate information and encouragement they will learn to examine themselves and detect every Minute changes early in their later life. The study emphasizes that females need to be aware about Breast Self- Examination. Hence, teaching and video presentation would enable the females to learn on BSE techniques to be followed which inturn aids in early detection of breast cancer.

**Conflict of Interests**

The authors declared that there is no conflicting interest regarding this investigation.



**References**

1. Adle Pilliteri. Maternal and Child Health Nursing. (5<sup>th</sup> Ed) Published by Lippincott Williams and Wilkins: London, 2007.
2. Berck, Noval's. Gynecology. (14<sup>th</sup> Ed) Published by Wolters Kluwer pvt Ltd: New Delhi, 2009.
3. Lakshmi seshadri. Essentials of Gynecology. (3<sup>rd</sup> Ed) Published by Wolters Kluwer pvt Ltd: New Delhi, 2012.
4. Dutta's DC. Textbook of Obstetrics. (6<sup>th</sup> Ed) Published by New Central Book Agency pvt Ltd: London, 2004.
5. Murray, Mc kinney. Foundations of Maternal - New Born and Women's Health Nursing. (5<sup>th</sup> Ed) Published by Saunders Elsevier: USA, 2006.
6. Lowdermilk K, Perry. Maternity and Womens Health Care. (8<sup>th</sup> Ed) Published by Mosby Elsevier: USA, 2004.
7. Kozier's. Fundamentals of Nursing. (8<sup>th</sup> Ed) Published by Dorling Kinders by: South Asia, 2008.
8. Myles. Textbook for Midwives. (14<sup>th</sup> Ed) Published by Livingstone Churchill: Toronto, 2005.
9. James, Steer, *et al.* High-Risk Pregnancy Management Options. (4<sup>th</sup> Ed) Published by Elsevier Saunders: USA, 2004.
10. Cunningham, Leveno, *et al.* Williams Obstetrics. (23<sup>rd</sup> Ed) Published by Medical Mc Graw Hill: New York, 2010.
11. Varney. Textbook of Midwifery (4<sup>th</sup> Ed) Published by All India Publishers and Distributors: New Delhi, 2005.
12. Singletary, Robb. Advanced Therapy of Breast Disease (1<sup>st</sup> Ed) Published by B.C Decker Inc: London, 2000.
13. Diane M, Fraser A Cooper. Text Book of Midwives (2<sup>nd</sup> Ed) Published by Churchill Living stone: New York, 2003.
14. Annamma Jacob. Comprehensive text book of Midwifery (2<sup>nd</sup> Ed) Published by R.M. Brothers: New Delhi, 2004.
15. Bobak Jensen. Maternity and Gynaecology care (5<sup>th</sup> Ed) Published by Mosby: New York, 1995.
16. Dawn DS. Text Book of Obstetrics and Neonatology (11<sup>th</sup> Ed) Published by Arti Dawn Publication: Calcutta, 1990.
17. David M Luseley. Obstetrics and Gynaecology (21 Ed) Published by British Library catalogue: New York, 2004.
18. Collette Clifford, Jenny Clark. Getting research into Practice (1<sup>st</sup> Ed) Published by Elsevier publications: USA, 2004.
19. Kasana HS, Kumar KD. Introductory Operations Research, Theory and Applications (2<sup>nd</sup> Ed) Published by Springers International Publications: Delhi, 2005.
20. Sanjeev B Sarmukkadam. Fundamentals of Biostatistics (1<sup>st</sup> Ed) Published by Jaypee Brothers medical publishers Pvt Ltd: NewDelhi, 2006.
21. Denise F Polit, Cheryl Tatano Beck. Essentials of Nursing Research Appraising Evidence of Nursing Practice (7<sup>th</sup> Ed) Published by Wolters Kluwer (India) Pvt Ltd, New Delhi, 2010.
22. Sundar Rao PSS, Richard J. Introduction to Biostatistics and Research methods (4<sup>th</sup> Ed) Published by PHI Learning Pvt Ltd: New Delhi, 2009.
23. Hooda RP. Introduction to Statistics (1<sup>st</sup> Ed) Published by Rajiv Beri for Macmillan India Ltd: New Delhi, 2005.
24. Basavanthappa BT. Nursing Research (2<sup>nd</sup> Ed) Published by Jaypee Brothers Medical Publishers: Nagpur, 2007.
25. Mahajan BK. Methods in Biostatistics (6<sup>th</sup>Ed) Published by Jaypee Brothers Medical Publishers: Nagpur, 2006.
26. Marilyn J Wood, Janet. Basic Steps in Planning Nursing Research (1<sup>st</sup>Ed) Published by Jones and Bartlett Learning India: New York, 2011.
27. VF, Moiseenko VM. Breast self-examination for early detection of breast cancer; AUSSR/WHO Controlled trial in Leningrad Bulletin of WHO.; R Deepa (feb2011). Breast self examination for early detection of breast cancer. Nightingale nursing times. 2011; 6(11):39-42.
28. Terasa C Jacob, Nolan E Pen. Journal of the National Medical Association: The need and Value of Breast Self Examination. 2010; 80(7):777-787.
29. Mary P, Brenda K. Breast Self Examination and experimental study. The regents of the University of Michigan. 2012; 4(1):10-12.
30. Yelland MJ, Rice DE, Ward AE, Bain C, Siskind V, Schofeild F. A profile of an Australian women practicing breast self examination. Department of special and preventive medicine, university of Queensland; Brisbane, Australia. Available from: URL:<http://www.pubmed.com/1844220>.
31. Jasmin J. Effect of STP on Breast cancer and BSE. Nightingale nursing times. 2010; 3(1):12.
32. Singh MM, Devi R, Wali J, Kumar R. BSE for Early detection of Breast cancer. Indian Journal of Medical Science. 2010; 27(6):108-115.
33. Chandrasekharan S. There is life after Breast Cancer: A breast cancer alert every women should read. Woman's Era. 2010; 37(867):118-120.
34. Simi A, Yadollahie M, Habibzadeh F. Knowledge and attitudes of breast self examination in a group of women in Shiraz, Southern Iran. Post grad Med J. 2009; 85(1004):283-287.
35. World health organization report 297, cancer, WHO, 2006.