EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON BREAST SELF-EXAMINATION

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Abstract:

Breast cancer is a global health issue and a leading cause of death among women internationally. In India, it accounts for the second most common cancer in women. Breast self-examination (BSE) is a technique which allows an individual to examine breast tissue for any physical changes by self. It is often used as an early detection method for breast cancer.One should perform a BSE at least once every month beginning at age 18. The present study aimed to assess the knowledge of B.Sc. Nursing students on BSE and to evaluate the effectiveness of the structured teaching programme(STP) on BSE.One group pre-test post-test design with pre-experimental approach was adopted. The STP was prepared by the investigator focusing on BSE. A structured knowledge questionnaire was prepared to assess the knowledge and later the same questionnaire was administered post-test. A sample of 50 B.Sc. Nursing students was selected by using non probability convenience sampling. The study findings showed that the level of knowledge of B.Sc. Nursing students considerably increased after the educational programme. In the pre-test, 74% of the subjects had average knowledge level and 26% subjects had poor knowledge level. Where as in the post-test, 18% had good knowledge and 82% of the subjects had average knowledge on BSE.From these findings,it was evident that there was significant increase in the knowledge on BSE among the B.Sc. Nursing students after STP. Therefore, the investigators concluded that educational intervention was effective in gaining the knowledge.

Key words: Effectiveness; structured teaching programme (STP); Knowledge, Breast Self -Examination (BSE), B.Sc. Nursing students

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. 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.[1]

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.[2] Clinical breast examination and mammography require hospital visit and specialized instrument/ technical expertise.[1,3] 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.[4,5] The main barrier for not practicing BSE was lack of knowledge.[6]

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[7].

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 [8].

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[9]. 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, $p < 0.05$) [10].

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.

Statement of the problem

"Effectiveness of Structured Teaching Programme on Breast Self-Examination among B.Sc. Nursing students in a selected college in Mangaluru"

Objectives of the study

1. Determine the level of knowledge regarding BSE among B.Sc. Nursing.
2. Evaluate the effectiveness of STP on BSE among B.Sc. Nursing students.
3. To find the association between the pre-test knowledge score and socio-demographic variables.

Hypotheses

The following hypothesis will be tested at 0.05 level of significance.

H_1: The post-test knowledge of the B.Sc. Nursing students regarding the Breast Self-Examination will be significantly higher than their mean pre-test knowledge.

H_2: There will be significant association between the pre-test knowledge and the selected demographic variables.

Independent variable:

Structured teaching programme regarding Breast Self-Examination.

Dependent variable:

Level of knowledge regarding BSE.

METHODOLOGY:

A quantitative evaluative research approach with one group pre-test post-test research design was used. After obtaining permission from the concerned authority, the main study was conducted in a college of nursing in Mangaluru. Non probability convenience sampling technique was used to select 50 1st year B.Sc. Nursing students. Content validity of the tool was done. The reliability was found to be 0.72 using split half technique. The research tool were structured knowledge questionnaire and Structured teaching programme on BSE. Administrative permission from the principal of college of nursing was obtained and informed consent was taken from the participants. On the first day pre-test was conducted using structured knowledge questionnaire. On the same day structured teaching programme on Breast Self-Examination was given using power point presentation and Video. On the 8th day post-test was conducted using the same structured knowledge questionnaire to determine the effectiveness of the programme. Both descriptive and inferential statistics was used in data analysis.

RESULTS:

Highest percentage (64%) were 19 years of age, majority (68%) were Christians, about 94% of subjects belongs to nuclear family ,66% of subjects were from rural area, most (92%) of subjects belongs to a family without a history of breast cancer, and 12% of subjects performed BSE, 26% had a previous knowledge on BSE.
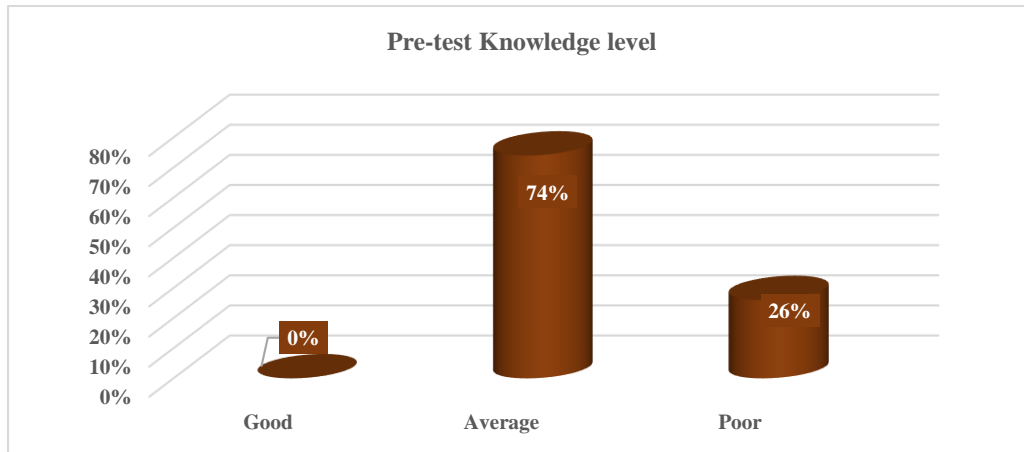
Figure 1: Cylindrical diagram showing distribution of subjects based on pretest knowledge level

Figure 1 shows the distribution of subjects with reference to the pretest knowledge, which indicates 74% of subjects had average knowledge and 13% of the subjects had poor knowledge and none of them had good knowledge. So, majority of the subjects had average knowledge on BSE.
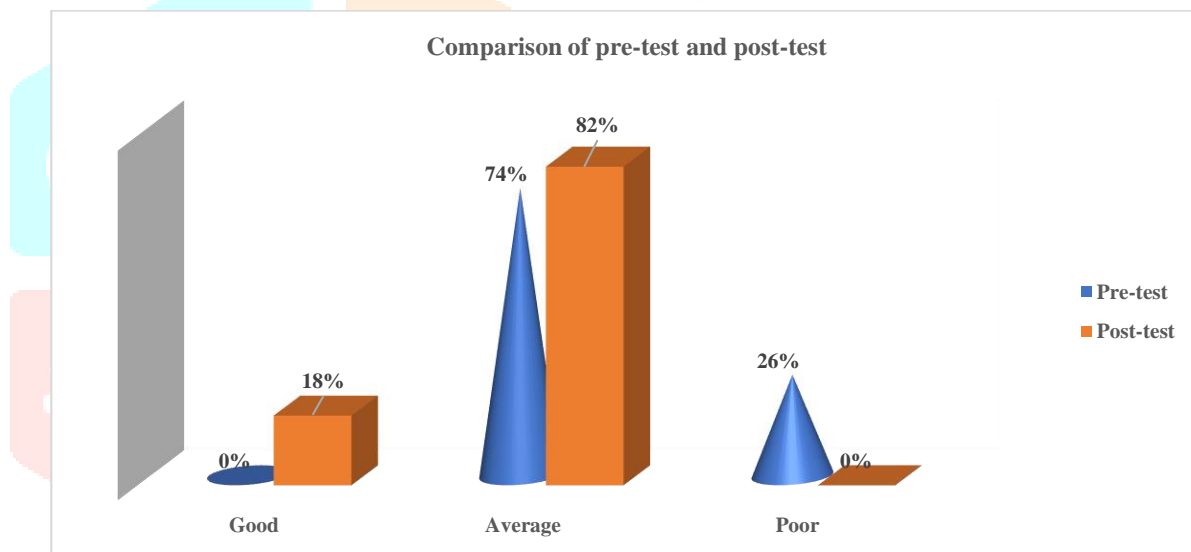
Figure 2: Diagram showing the comparison of pre-test and post-test knowledge in terms of gain in the level of knowledge

Data presented on the figure 2 shows the level of knowledge of the B.Sc. Nursing students has increased in post-test when compared to pretest knowledge. In the pretest 74% B.Sc. Nursing students had average knowledge level and 13% of the students had poor knowledge level. Whereas in the post-test 18% of the students had good knowledge level and 82% of the students are with average knowledge level. This indicates that the structured teaching program was effective in terms of gain in knowledge.

To find the significant difference between the pre-test and pos-test knowledge paired 't' value was calculated. The hypothesis was tested at 0.05 level of significance.

H_1: The post-test knowledge of B.Sc. Nursing students regarding BSE will be significantly higher than their mean pretest knowledge.

Table 1: Paired 't' test showing the effectiveness of structured teaching program on BSE among B.Sc. Nursing students

	Mean	Mean diff.	Median	SD	SE	't' value
Pre-test	12.42		13	2.47		
		5.16			0.51	10.39
Post-test	17.58		17	2.55		

The data presented in table 1 shows that mean difference between the pre-test and post-test knowledge. The paired 't' test was used to calculate the statistical significance between pretest mean and post-test mean. The obtained t value was 10.39. The calculated value is higher than the table value $t_{49} = 2.011$, $P<0.05$. Hence the null hypothesis is rejected. 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.

Table 2: Association of pre-test knowledge and socio-demographic variables

Sl No.	Demographic Variables	Median <13	Median ≥13	χ^2	P value	df	Inference
1	Age in years						
	18 years	4	2				
	19 years	18	14				
	20 years and above	2	10	6.418	5.991	2	**S***
2	Religion						
	Hindu	8	6				
	Christian	15	19				
	Muslim	1	1	0.6751	5.991	2	NS
3	Type of family						
	Nuclear family	21	26				
	Joint family	3	0	3.456	3.841	1	
4	Residence						
	Rural	16	17				
	Urban	8	9	0.0089	3.841	1	NS
5	Family history of breast cancer						
	Yes	2	2				
	No	22	24	0.0068	3.841	1	NS
6	Did you ever perform BSE?						
	Yes	0	5				
	No	24	21	5.127	3.841	1	**S***
7	Do you have any previous knowledge on BSE?						
	Yes	5	8				
	No	19	18	0.638	3.841	1	NS

$\chi^2 (1) = 3.84$ $\chi^2 (2) = 5.99$ P<0.05 S** = Significant   NS = Nothing Significant

Chi square values presented in the table 2 indicate that there is no significant association between the pr- test level of knowledge and selected demographic variables such as religion, type of family, residence, family history of breast cancer and previous knowledge on BSE. Significant association is found with age and pre-test knowledge (5.991 p<0.05), and whether they performed BSE and pretest knowledge (3.841 p<0.05). The knowledge level of B.Sc. nursing students with age group of 19 years are found to be more significant than others. Therefore, it is concluded that baseline factors are independent of their pre-test level knowledge on BSE among B.Sc. Nursing students with regard to religion, type of family, residence, family history of breast cancer and previous knowledge on BSE.

DISCUSSION:

A study on 356 women spanning from 18 to 55 years of age had 44 women (12.35%) who had family history of breast cancer[11]. In another study, 17.4% performed BSE, 55.9% had no previous knowledge on BSE[12]. 78.4% were orthodox Christians, 86.5% aged 18-23 years, 85.6% heard about BSE, 54.1% practiced BSE, Awareness level of BSE was quite high ie, 80.3%[13] 56.8% were urban residents, 5.2% had family history of breast cancer, 17.4% practiced BSE, 27.6% had good knowledge on BSE.[14] 84.5% were between 20-24 years old, only 3.5% had family history of breast cancer, 64% heard about BSE and 30.25% had good knowledge about BSE, 28.3% had performed BSE[15]. 73.5% had previously heard of BSE, only 9.0% knew how to perform BSE, 13.9% knew what to look for while performing BSE, 3% performed BSE[16].

The analysis of pre-test and post-test knowledge of B.Sc. nursing students on BSE shows that the level of knowledge of B.Sc. Nursing students on BSE is increased while comparing to the post test. In pre-test 37(74%) have average knowledge and 13 (26%) have poor knowledge level on BSE, while in post-test 5 (10%) have good knowledge and 45 (90%) have average knowledge on BSE. None of them have poor knowledge on post-test. This indicates that structured teaching program is effective in terms of gain in knowledge level. Analysis of paired t test shows that the mean difference between the pre-test and the post-test knowledge level was 10.37. The calculated t value is higher than the table value ($t_9 = 2.3$, p<0.05). Hence the null hypothesis is rejected. Therefore, it can be concluded that the mean difference which is observed is true and the teaching program on BSE is effective in increasing.

A quasi-experimental study on video assisted BSE showed that the mean difference in the overall knowledge score before and after intervention as 3.07 with p value <0.001.[17] The findings are comparable with the study by Padmapriya D, Jagadeeswari J, Resmy V where the pre-test data illustrated that 90 (90%) of them had inadequate knowledge, 10 (10%) of them had moderate knowledge and none of them had adequate knowledge in post-test of women 88 (88%) had adequate knowledge, 12 (12%) had moderate knowledge and none of them had inadequate knowledge. The study concluded that video assisted teaching program has an effect on improving the knowledge on breast self-examination among women[18, 19,20,21].

Chi square test was used to find the association between mean pre-test knowledge level and demographic variables such as age, religion, type of family, residence, family history of breast cancer, whether they performed BSE and previous knowledge on BSE. Result indicated that there was a significant association between pre-test knowledge levels and age and previous performance of BSE. There was no significant association observed between pre-test knowledge levels and religion, type of family, residence, family history of breast cancer and previous knowledge on BSE.

CONCLUSION:

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 INTEREST:

The authors have no conflicts of interest regarding this investigation.

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