

Effect of Structured Teaching Program on Breast Cancer and Breast Self-Examination among Students in Nursing Colleges of Assam

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Abstract

With a view to assess the effectiveness of structures teaching programme on breast cancer and breast self-examination, a quasi-experimental with pre-test post-test without control group design and an evaluative research approach was undertaken on 100 female nursing degree students. Proportionate stratified sampling technique was used in selecting nursing students. Prior to implementing structured teaching programme the nursing students had moderate knowledge, attitude and practice, whereas after implementation of structured teaching programme nursing students' knowledge and ability to perform breast self-examination was significantly improved with difference of mean percentage revealing effectiveness of structured teaching programme. A positive correlation of knowledge and attitude of nursing students was also found before the study, and there was not much change in attitude level of nursing students as it was moderately favorable prior to the study.

Indian women suffer from many diseases because of illiteracy, ignorance, poverty, orthodox cultural behaviour and belief in past deeds or karma. Cancer is widespread. It is the second leading cause of death and disability in the world, behind only heart disease. In the developing countries cancer ranks third as a cause of death and accounts for 9.5 percent (3.8 million) of all deaths (Park K, 2002). Breast cancer is the most common female malignancy in the world. Globally it accounts for 22 percent of all new cancers diagnosed in women. It represents 7 percent of more than 7.6 million cancer-related deaths worldwide (NCI, 2010). In India cancer prevalence is estimated around 2.5 million, with 0.8 million new cases and 0.5 million death occurring each year. Breast cancer accounts for 19 - 34 percent of all cancer cases among women in India (ICMR 2005). The diagnosis of breast cancer affects women, their family and the society at large. All the risk factors responsible for the occurrence of the disease cannot be avoided or solved. Women's knowledge about risk factors, reproductive variables like age at pregnancy and parity, diet, exer-

cise have some potential for primary prevention of breast cancer. It is estimated that 5-10 percent of breast cancers may have a genetic component, but majority of cancers are related to life style factors. There is no easy solution to curtail the gigantic cancer system. However some of the predisposing factors could be avoided through education, which will improve the life style of women and add greatly to curtail cancer (Mesagopu Wilson D Min, 2003). Study conducted in India and abroad show lack of knowledge of women about breast cancer and breast self examination and they have recommended planned teaching programme.

Objectives

The study sought to evaluate the effect of structured teaching program on breast cancer and breast self examination among female students in nursing colleges of Assam specifically: (1) To determine the knowledge, attitude of selected students on breast cancer and breast self examination before and after structured teaching programme; (2) To measure the ability of selected students to perform breast

Table 1: Frequency and percentage distribution of pre-test and post-test knowledge attitude and practice score of respondent on breast cancer and breast self examination.

Scores		Pre test		Post test	
		frequency	%	frequency	%
Knowledge score	Inadequate	10	10.0	4	4.00
	Moderate	74	74.0	7	7.00
	Adequate	16	16.0	89	89.00
Attitude score	Unfavourable	15	15.0	5	5.0
	Moderately favourable	73	73.0	63	63.0
	Favourable	12	12.0	32	32.0
Practice score	Inadequate	15	15.0	-	-
	Moderate	73	73.0	-	-
	Adequate	12	12.0	100	100.0
Total		100	100.0	100	100.0

Table 2: Mean percentage in pre-test and post-test knowledge, attitude and practice scores, actual gain and modified gain of respondents (n=100)

Attribute	Pretest mean %	Post-test mean %	Actual gain scores	Possible gain	Modified gain scores
knowledge	53.85	77.26	23.41	76.59	0.03
Attitude	57.25	58.08	0.83	99.17	0.008
Practice	11.78	86.81	75.03	88.22	0.85

Table 3: Comparison between pre-test and post-test knowledge, attitude and practice score of subjects

	Max Possible Score	Statistics	Pre test	Post test
Knowledge	52	Range	17-39	16-52
		Mean	28.54	40.95
		Median	28.50	42.50
		SD	4.27	7.71
Attitude	112	Range	49-91	53-97
		Mean	64.12	65.05
		Median	64	65
		SD	4.68	5.86
Practice	32	Range	0-6	12-32
		Mean	3.77	27.78
		Median	4	28
		SD	1.67	3.88

self examination before and after structured teaching programme; (3) To find relationship between knowledge and attitude of selected students on breast cancer and breast self examination; (4) To find the effectiveness of structured teaching programme on selected students as measured by gain in Knowledge, Positive change in attitude, Improve ability to perform breast self examination; and (5) To find the association between selected factors

(age, education, family history and exposure to mass media) and pre-test knowledge and attitude of selected students.

H₁: There is significant association between pre-test knowledge and attitude score of nursing students on breast cancer and breast self-examination.

H₂: The mean post-test knowledge score of nursing students is significantly higher than that of their pretest knowledge score.

H₃: There is significant association between the knowledge level of nursing students on breast cancer and breast self-examination and their age, education, exposure to mass media and family history of breast cancer before the structured teaching programme.

H₄: There is significant association between the attitude level of nursing students on breast cancer and breast self-examination and their age, education exposure to mass media and family history of breast cancer before the structured teaching programme.

Review of Literature

Rao et al (2003), after a study on effectiveness of teaching programme on knowledge of breast self-examination among the rural women by trained female health worker in Karnataka suggested that that following educational intervention, a significant increase in overall awareness regarding breast cancer as well as performance of self-examination of breast was observed. So the researcher concluded that breast self-examination could be used as a strategy for creating breast health awareness among rural women and female health workers.

According to Scalon (2004), "Breast Cancer Care" indicated that Indian and Arabic women have poor knowledge of life styles and environment food which affects breast cancer. The knowledge of breast cancer signs and symptoms was lacking among these women.

Peacy et al (2006) stated that young women have low level of awareness of breast cancer risks in Europe as one third research participants did not know

any of the risk factors of breast cancer.

In 2007, Onwere S et al after a study at antenatal clinic of Abia State University showed that breast self-examination practice was mostly ineffective. The vast majority (97%) of respondent had heard of cancer of breast. The researcher recommended public health programme to teach women to regularly examine their breast and to seek early treatment for any detected lesions.

Muhammad A. Hadi et al (2008), in a cross-sectional survey regarding breast cancer among female university students in Malaysia showed that vast majority of female university students had inadequate knowledge of breast cancer. The study highlighted the need of a breast cancer awareness campaign, which should stress the importance of early detection and reporting of breast cancer.

In their study Georgia Robins Sadler et al (2008) concluded that majority of women had inadequate knowledge. There is clear opportunity for public health nurse to provide Asian Indian women with a more comprehensive understanding of breast health and disease.

Methodology

A quasi-experimental with pre-test and post-test without control group design and evaluative research approach was selected to carry out the study. The study population comprised of female students studying in degree course in nursing colleges of Assam. The sample size for the study was 100; all nursing colleges of Assam were included. One third of the total population was selected by proportionate stratified sampling. Sample was selected from each class by stratified random sampling design.

The tool used for the study were (i) Structured questionnaire comprising of four sections.

Section - I Demographic data.

Section - II A structured knowledge questionnaire of breast cancer and breast self-examination (BSE.)

Section - III A rating scale on attitude of breast cancer and BSE

Section - IV Observation Checklist for assessing the ability to perform BSE.

Other tools were: a Structured Teaching Programme for improving the knowledge, attitude of students on breast cancer and BSE and the ability to perform BSE; a video recording of BSE for teaching the students; and a breast model.

Results

The frequency and percentage distribution of demographic variables of nursing students revealed that: (1) 57 percent of nursing students were in the age group of 18-20 years; (2) Only 4 percent had family history of breast cancer; and (3) 75 percent had exposure to mass media (Table 1).

The pre-test adequate knowledge was 16 percent and post-test was 89 percent. Pre-test favourable attitude was 12 percent and post-test was 32 percent and for practice adequate practice score in pre-test was 12 percent whereas post test score was 100 percent.

Overall pre-test mean score of knowledge was 53.85 percent whereas post-test mean score was 77.26 percent (Table 2). Pre-test attitude mean score was 57.25 percent and post-mean score was 58.08 percent and pre-test mean practice score was 11.78 percent and post mean score was 86.81 percent.

Actual gain and modified gain in mean percentage of pre-test and post-test knowledge, attitude and practice score was calculated to find the effectiveness of structured teaching programme. The findings revealed that there was significant actual gain in knowledge and practice scores indicative of effectiveness of structured teaching programme.

Chi-square test was used to find out association between pre-test knowledge scores, attitude scores and demographic variables of nursing students. There was no significant association of knowledge and attitude of nursing students and demographic variables except for education before the study. There was positive correlation ($r=0.163$) of knowledge and attitude of nursing students before the study.

The attitude level of nursing students was moderately favourable before the study ($SD=4.68$) so there was not much change post-study ($SD=5.86$) (Table 3). Therefore it may be concluded that there was significant gain in knowledge and ability to practice after structured teaching programme.

Table 4: Correlation of pre-test knowledge and attitude scores of respondent

	Pre-Knowledge	Pre-Attitude
Pre-Knowledge	1	0.163
Pre-Attitude	-	1

Discussion

As per the study done by Sanjeev K Gupta et al (2008) there was significant improvement in knowledge regarding all aspects of BSE after intervention. After intervention 59 percent women had good knowledge, among them 90.7 percent practice BSE compared to 0 percent pre-test. An overall increase in awareness (43%) and BSE practice (53%) was observed in the study group.

In the present study pre-test mean score of knowledge was 53.85 percent whereas in post-test mean score was 77.26 percent and pre-test mean practice score was 11.78 percent and post-mean score was 86.81 percent shows significant increase in knowledge and ability to perform BSE by nursing students which revealed the effectiveness of structured teaching programme.

Similar study by Shalini et al (2007) supports the present study. The findings of the study shows that 50 percent of respondents are aged between 18-19 years, 72 percent have average knowledge in pre-test. Out of 40 participants, only 1 student performed BSE occasionally. In the present study 57 percent respondents were aged between 18-20 years and 74 percent had moderate knowledge in pre-test.

Supporting this study, Soyer et al (2005) showed that mean breast cancer knowledge prior to programme was 58.51 and SD 15.63 whereas it increased to 75.96 and SD 9.53 in post-test. BSE knowledge score pre-test 71.09 and SD 19.31 rose evidently in post-test to 85.02 and SD 12.92.

In the present study knowledge on breast cancer and BSE in pre-test mean was 28.54 and SD 4.27 whereas it increased to 40.95 and 7.71 in post-test. BSE knowledge score pre-test mean 3.77 and SD 1.67 rose to 27.78 and 3.88 in post-test.

Recommendations

- ❑ Similar study can be conducted (a) with an experimental research approach having a control group and randomisation, (b) to assess the knowledge on risk factors of breast cancer, to assess the skill in breast self examination.
- ❑ A Self Instructional Module can be prepared and tested for its effectiveness.
- ❑ Similar type of study may be replicated in other setting.

Conclusion

The structured teaching programme was found to be effective method for improving the knowledge of nursing students on breast cancer and breast self examination.

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