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Impact of BSE Training on the BSE Knowledge of College Girls in a Selected College, Bhubaneswar, Odisha

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ABSTRACT

Each and every girl should have the knowledge regarding breast self-examination for early detection of any abnormalities in breast in home set up. BSE is a screening technique used to try and find breast cancer early on. In India, 19–34% of all instances of cancer among women are breast cancer. Breast cancer and a high death rate among college-bound girls are caused by lack of awareness and the absence of breast cancer screening programs. A study was conducted "Impact of ōreast BSE training on the BSE knowledge of college girls in a selected college, Bhubaneswar, Odisha". Objectives to assess the level of knowledge regarding BSE among engineering college girls' students and determine the association between pretest knowledge score with selected demographic factors. Research design was pre-experimental one group pre-test post-test design and purposive sampling techniques from selected colleges of Odisha. The study sample size consisted of total 100 engineering college girls of 18-24 years of age. The results of the data analysis, the majority of them (32%) were between the ages of 16 and 20, and 63% of them scored poorly on the pretest on their understanding about BSE. After introducing a designed teaching program and administering a knowledge questionnaire on BSE, data was gathered. Seven days later, after the post-test was completed, analysis of the data revealed that 97% of the participants had good knowledge of BSE. Findings concluded that the educational programmed was helpful in increasing knowledge and practice of BSE college girls.

Keywords: Knowledge; Self-examination; Breast cancer; Awareness; Education

INTRODUCTION

Prevalence and morbidity rate of breast cancer is at an alarming stage globally. Around 2.3 million women were diagnosed with breast cancer and approximately 7 lakh deaths globally due breast cancer, as per WHO data for the year 2020 [1]. In case of India, breast cancer in women tops the list of fatality rate. A study based on population registry data projects that breast cancer is the deadliest among all cancers in India and the affected and death rates are in increasing trend [2].

Abnormal growth and proliferation of cells in the breast is termed as breast cancer. In the earlier phases (stage 0/ "*in-situ*") the erratic growth of cells in limited to the ducts and lobules with generally no symptoms and minimal metastasis. However, with time the cancerous growth progresses and becomes more invasive in nature. This invasive breast cancer spreads like wild fire to nearby lymph nodes or to various

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parts of the body which is termed as regional metastasis and distant metastasis respectively [3].

Breast cancer is distinguished from any other type of prevalent cancers in that that it occurs in a visible organ and thus makes it easier to detect and prevent [4]. It not uncommon knowledge that early detection of cancer increases the chances of survival through reduced complications and thus, improves the quality of life of a cancer patient [5]. Breast Self-Examination (BSE) is one such essential technique that helps to know early detection and prevention of progression of breast cancer [6]. In comparison to other detection or screening methods such as mammography or Clinical Breast Examination (CBE), Breast Self-Examination (BSE) is a do-at-home zero cost approach. BSE requires the person herself to physically examine her breasts in front of a free standing or wall mount mirror to detect any kind of swelling, lumps or abnormality seen or felt on the breasts [7]. Regular practice of BSE helps women to familiarize with their breasts; to easily detect any kind of distortion on the breasts in future [8]. However, frequent BSE may lead to panic and misdiagnosis which puts BSE in a debatable slot in developed countries; where medical facilities are widely available [9]. However, in developing countries BSE remains a primary screening method where women do not prefer to visit the hospital unless severe symptoms are there, owing to taboos and socio-economic causes [10]. Hence, women should be aware of the correct procedure of BSE and make also others aware of it.

The varying cancer patterns across regions in India are documented by the National Cancer Registry Programme (NCRP) started by ICMR in 1981. However, Odisha has only been recently added to NCRP registry even though it has a large population of 41,947,358. A precise report on the status of cancer in Odisha is still lacking [11]. This can be tackled through educating BSE to educated young women who in turn can create awareness within their family, their community and subsequently within the society. The early screening of breast cancer will lead to patients themselves approaching hospitals for secondary screening like mammography; thus, first hand reports of cancer being registered in hospitals. Hence, keeping in mind the above said the objective of our study is to initially assess the level of knowledge of BSE among female engineering students in selected colleges and noting the impact education has on their knowledge of BSE.

Objectives

- To assess the level of knowledge of breast self-examination among engineering college girl students.
- To evaluate the effectiveness of breast self-examination PTP among engineering college girl students.
- To find out the association between pretest knowledge score with BSE across different demographic variables.

MATERIALS AND METHODS

Design

Pre post one group quasi experimental design was adopted in this study. In total 100 colleges going girls were selected as sample purposively. Their age ranged between 10-25 years and they were studying in various branches of engineering. Majority of the students (32%) in the age group of (15-20) years and (29%) students in the age group of (20-25) years and only (20%) students were (10-15) years. The education level of family members of the subjects ranged from graduate (82%), primary school passed (7%), and illiterate (5%). Majority of the subjects were from nuclear family (82%) and rest were from joint family (26%). A structured training program was given to the students on BSE which accounted for the treatment. The observations were collected through a structured questionnaire which consisted of two parts: Demographic information and 20 multiple choice questions on the knowledge of BSE. Each correct answer carried one mark.

Procedure

Administrative approval was obtained from the directors of selected engineering schools. Written informed consent was obtained from the study participants. The questionnaire was given to them in the classroom through the online mode. The time taken to complete the questionnaire was 30 minutes. For data collection, a questionnaire on knowledge about BSE was completed and planned teaching programmer was presented. On 7th day, a posttest was conducted using the same instrument. The data were analyzed.

RESULTS

This section presents the statistical analysis of the observations collected on the structured questionnaire. It is found out that majority of students have acquired knowledge about BSE from internet (34%), followed by newspaper (24%), TV (20%), family members (12%), others (5%), health personnel (3%), and radio (2%). However, scores on the authentic ways of BSE as measured by a 20 item MCQ in this study reveals that majority of the subjects had poor knowledge of BSE (**Table 1**).

Table 1: Pre-test scores of knowledges about BSE among college girls (N=100).

Sl. no.	Level of knowledge	Score range	Range	Frequency	Percentage
1	Poor	11	50%	63	63%
2	Average	(12-17)	(51-75)%	22	22%

3	Good	(18-22)	(76-100) %	15	15%

After the subjects were exposed to a structured training programs and reading materials on BSE, their knowledge about BSE increased as it is seen in **Table 2**. It is noticed that out of 100 samples 0% (0) got poor score, 3% (3) got average score, 97% (97) got good score. This implies that the training program was effective in promoting knowledge about BSE (**Figures 1,2 and Table 3**).

Table 2: Post-test scores of knowledge's about BSE among college girls (n=100).

Sl no	Level of knowledge	Score range	Range	Frequency	Percentage
1	Poor	11	50%	0	0%
2	Average	(16-17)	(51-75)%	3	3%
3	Good	(18-22)	(76-100) %	97	97%

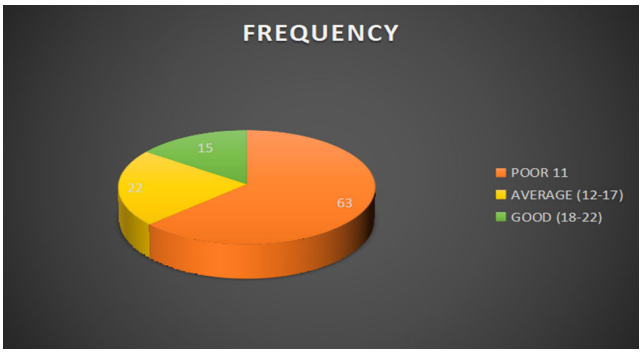

Figure 1: Provided data on level of knowledge of the study sample according to score range. Out of 100 samples 63% (63) got poor score, 22% (22) got average score, 15% (15) got good score.

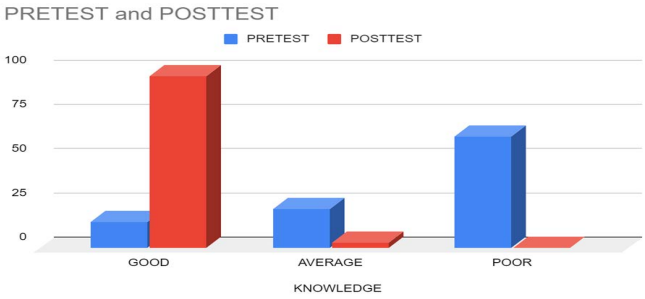

Figure 2: Comparison between pretest and post-test knowledge score

Table 3: Relationship between demographic variables and pretest knowledge on BSE (n=100).

Demographic variable	Group	Knowledge about BSE			P value
		Good	Average	Poor	
Age	10-15 (3)	0 (0%)	1 (1%)	2 (2%)	0.03
	16-20 (52)	8 (8%)	12 (12%)	32 (32%)	
	21-25 (45)	12 (12%)	15 (15%)	18 (18%)	
Education of family members	Graduate (55)	20 (20%)	12 (12%)	23 (23%)	0.12
	Illiterate (5)	0 (0%)	0 (0%)	5 (5%)	
	Post graduate (8)	1 (1%)	2 (2%)	5 (5%)	
	Primary School (32)	6 (6%)	12 (12%)	14 (14%)	
Types of family	Joint (35)	15 (15%)	10 (10%)	10 (10%)	0.15
	Nuclear (62)	8 (8%)	18 (18%)	36 (36%)	
Sources of information	Family members (2)	0 (0%)	0 (0%)	(2%)	0.03
	Health personnel (32)	12 (12%)	14 (14%)	6 (6%)	
	Internet (46)	16 (16%)	18 (18%)	12 (12%)	

	Newspaper (12)	2 (2%)	4 (4%)	6 (6%)	
	Radio (3)	0 (0%)	1 (1%)	2 (2%)	
	TV(5)	3 (3%)	1 (1%)	1 (2%)	
Previous knowledge	No (38)	15 (15%)	8 (8%)	15 (15%)	0.12
	Yes 62)	34 (34%)	6 (6%)	22 (22%)	

Major finding of the study:

- The study revealed the majority of the students (32%) in the age group of (15-20) years and (29%) students in the age group of (20-25) years and only (20%) students were (10-15) years.
- The study shows the majority of graduate members (82%) in family and (8%) primary school passed in the family, (7%) illiterate in the family and (5%) postgraduate in the family members.
- The study shows the majority of nuclear family (82%) in family and minority of joint type (26%) in the family.
- The study shows the majority of internet (34%), newspaper (24%), TV (20%), family members (12%), others (5%), health personnel (3%), radio (2%) in information BSE.
- The study shows the majority of previous knowledge (68%) and minority of previous knowledge (31%) among the students.
- The college going girls have poor knowledge on breast self-examination. This is reflected by the mean percentages of pre-test knowledge score (9.9%).
- The posttest knowledge score ranged between (22-14), which is higher than their pretest knowledge score (14-3). The mean post knowledge score (20.6%) is higher than the mean pretest knowledge score (7.9%).

DISCUSSION

The major finding of the study is that majority of the subjects were not aware of BSE. This finding corroborates with another study [12]. Although there has been various Govt. initiatives to build awareness about BSE among women, probably many do not pay attention to that. This study aimed to build awareness through a structured training programme among selected college girls. It was found that the knowledge of college students on BSE increased substantially after the training was provided. Previous study conducted on Turkish women also supports this finding [13].

The scope of the study was limited to the knowledge of BSE. Only knowledge may not lead to frequent BSE. As reported in other studies, several factors are responsible for BSE behavior. A study reports that self-efficacy and social support increases the BSE behavior. If a person feels that she has the chances of being affected by breast cancer, her BSE behavior also increases. However, if she is fearful about the consequences, her BSE behavior decreases. Hence, further research may aim at finding the factors leading to BSE among women.

Because as stated above BSE is one of the important steps towards the early detection and prevention of breast cancer.

The study adopted a pre-test and post-test one group method with purposive sampling. Hence, the inherent limitations of this method would remain in the finding. Possible impact of extraneous variables on the findings limits the generalizability of the study. Notwithstanding the above limitation, this study reports that subject's knowledge increased substantially through structured programmed in comparison to their previous knowledge obtained through newspaper, Internet, radio etc. Hence, more structured training programmers should be conducted by Govt. to increase BSE.

CONCLUSION

Findings concluded that the educational programmed was helpful in increasing knowledge and practice of BSE among engineering college girls.

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