Guidelines of Awareness on Breast Cancer - Breast Self-Examination

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Abstract: *Limited awareness among women on Breast cancer may impact, breast cancer stage at diagnosis, in all over the world reduces the survival rate and increases the mortality rate. The magnitude of breast cancer is increasing day by day. It is the commonest cause of the death in many developed countries among middle ages females and is becoming frequent incidence in developing countries too. Aim of the research: To assess women's knowledge, awareness on breast cancer and educate them on Breast self-examination. Design: Quantitative research approach with Quasi experimental one group pretest and posttest design was adopted for this study. Among the respondents, the highest percentage 76.67% of the respondents had poor knowledge and only 23.33% of them had average knowledge regarding Breast self-examination. The mean post test score was higher than the mean pretest scores with regard to the effectiveness of planned teaching programme. User focused educational sessions are recommended as an effective strategy of educational techniques.*

Keywords: Breast Cancer, Awareness of breast examination, Breast Self-Examination, Early detection, planned teaching programme

1. Background

Breast cancer is the most common cancer in women both in the developed and the less developed world. It is estimated that worldwide, over 508,000 women died in 2011, worldwide due to breast cancer. (Global Health Estimates, WHO, 2013). Cancer is one of the most fatal diseases worldwide without a cure. One third of all cancer cases are preventable. WHO, Geneva Report, (2013). Cancer cells thrive in an acidic and a high oxygen environment. The word cancer is still considered sinister and too often synonymous with death. It is a group of disease characterized by uncontrolled growth and spread of abnormal cells. Pushpamala (2013). Cancer is one of the leading causes of morbidity and mortality worldwide, and was responsible for 8.8 million deaths in 2015. The number of new cases is expected to rise by 70% over the next two decades. WHO (2017). Breast cancer has got a profound and lasting impact on people who survive because of significant role of breast in women's sexuality. Responses to any actual or suspected disease of breast include fear, anxiety, and depression. Specific responses include fear of disfigurement, loss of sexual attractiveness, abandonment by partner and death. (American Cancer Society, 2016) As prevention is usually not possible in cancer, early detection is the only option left. Early detection is the "corner-stone" of all treatment modalities for cancer breast.

2. Review of literature

Breast self-examination is the examination of one's own breast using her hands by inspection and palpation to detect any abnormalities. It is the ideal screening test which is client centered, simple, inexpensive and noninvasive. Most(90%) of breast cancer found by women themselves, so they should be aware of risk factors, signs and symptoms and techniques of doing the B.S.E, which helps to detect abnormalities at an early stage. If the lump is smaller, greater is the chance of cure, and it is the only feasible approach to wide population coverage. B.S.E is likely to be ineffective unless it is properly done or taught. BSE plays a major role as an effective preventive health behavior and an important component of any program for the early detection of breast cancer. Nursing students, being future health advisors, should be adequately informed and trained about early detection methods of BSE. Elamurugan S& Thirthar P (2015). Further studies need to explore what interventions could be best used to improve the uptake and practice of BSE. Mary AB et al (2012).

3. Need for the Study

Most breast cancers are curable, if detected earlier and key to success against breast cancer is to detect the lump by B.S.E monthly self-examination of breast is an important defense against cancerous breast. Breast cancer.Org, (2017). Patients with stage I breast cancer had 70% five year survival rate and the prognosis of cancerous breast in its early phase has a significant effect on therapy. Monthly B.S.E should be done by all women above twenty years of age. Hence all women should be aware of proper techniques to detect any change in breast at the earlier stage. (Web med, 2016)

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Scope of the Study

This study developed an insight into the importance of health education regarding B.S.E. The present study helped the health care professional, to understand the level of knowledge of women on B.S.E. This study also suggested that there is an increased need for awareness programme by health personnel for the women.

4. Conceptual Framework

This study is based on Orem's general theory of nursing. According to Orem's self-care deficit theory, nursing care is required when an adult is incapable of or limited in provision of continuous effective self-care. She identified guiding and directing as one of the methods though which nurse can help the individual.(Potter P.A, Perry AG, 1993).

Application of Orem's theory in to this study: Self-care: Women have to initiate and perform B.S.E. to detect breast cancer at its earlier stage, which helps them to maintain their health and wellbeing. Here self-care agency is the knowledge of the women regarding B.S.E. Self-care demand is, women who have to perform B.S.E. from the age of 20 years in order to detect breast cancer at its earlier stage. In Nursing system self-care deficit exists, women will not be able to perform B.S.E. in a proper way. So supportive educative system was used in this study, to bring awareness on Breast-self-examination.

5. Material & Methods

Ethical research clearance was secured from the appropriate authorities before initiation of this study. In this study all the steps of health care assessment was used. Assessment of knowledge regarding B.S.E. was performed through questionnaire. This helps to identify the self-care ability, self-care demand and self-care deficit of the women's under study. Later Supportive educative system was selected for this study and investigator prepared planned teaching programme, which includes implementation and evaluation. Here, the investigator administered PTP to the women and the effectiveness was evaluated by administering the same questionnaire.

Objectives

To assess the knowledge regarding B.S.E. and breast cancer, to develop and conduct a structured PTP on BSE and breast cancer for women, and to assess the effectiveness of PTP on BSE and breast cancer.

Hypothesis:

The mean post-test scores of women regarding BSE would be significantly higher than the mean pre-test knowledge scores.

Research design

A researcher overall plans for obtaining answers to the research questions for testing the research hypothesis was, One group pre-test design with pre-experimental approach.

In this design, the dependent variable was measured before this introduction of the treatment. The implementation was then introduced and the dependent variable was measured again after the treatment.

Phase 1:Pre-test was conducted among women who fulfill the inclusion criteria and knowledge on BSE was assessed by using structured interview schedule. Phase 2: Planned teaching programme on BSE was given on the same day by using charts, models and blackboard. Phase3:Post-test was conducted for women on the fifth day after data collection for every mother by using the same tool.

Research approach
Quantitative research with quasi experimental one group pretest post-test design was used for this study. Evaluative approach was used to test the effectives of planed technique program on BSE for women.

Sample and sampling technique:
In this study, the sample consisted of 30 women who were admitted in the gynecological unit and were selected by using stratified proportionate random sampling technique. Criteria for Selection Of Sample follows Inclusion Criteria; Women in the age group of 20-60 yrs., those who were able to understand regional language and English, those who were willing to practice in the study and those who were present in the unit during data collection..

Variable
The dependent variable of the study was knowledge gained by BSE as measured by structured interview schedule. Extraneous Variable: A controlled variable that greatly influences the result of the study. In this study extraneous variables refer to women age, religion, educational level, type of family, history of breast cancer, relationship with the affected member, personal history of breast abnormality, type of that abnormality, marital status and occupation.

Survey instrument and Procedure:
The survey instrument was prepared on the basis of the objectives of the study. The following steps were adopted prior to the development of the tool: Review of literature provided adequate content for the tool preparation and opinion from Experts in Obstetrics, Gynecological and Oncology Department. A structured interview schedule was developed to access the knowledge of women on BSE. The instrument to access the knowledge of women on BSE included thirty items, and was designed to take approximately 20 minutes to complete, allowing for data collection, while the women waited to be seen by clinic staff, in selected maternity clinic in southern region of India. Items on BSE were categorized under the following areas:
Section A: Cancer and its related aspects (4 items)
Section B: Cancer, breast and its related aspects (11 items)
Section C: Breast Self-Examination (15 items)

The beginning section of the instrument recorded respondent's socio demographic variables, which includes age, income, education level, religion, marital status and profession.

Data analysis

Data was planned to be analyzed on the basis of objectives and hypothesis; Demographic data was analyzed in terms of frequency and percentage; The knowledge scores of women before and after the planned teaching programme was analyzed in terms of frequency, percentage mean, median and standard deviation; The significant difference between the mean of pre and post-test knowledge scores was determined by paired "t" test.

6. Results

Age wise distribution of the subjects shows that (40%) were in the age group of 21-30 (30%) of the subjects were in the age group of 41-50, 20% of them are between 31 and 40,

and 10% of the subjects were in the age group of 51-60. Most of the subjects were (36.67%) had primary education, 26.67% of the subjects had education up to high school, 23.33% had no formal education, and 13.33% of them had education up to pre-university and above. Percentage distribution of the women according to their type of family shows that most (43.33%) of the women were from joint family, 33.33% were from nuclear families and only 23.33% from extended families. Percentage distribution of women according to their family history of breast cancer shows that majority 96.67% of the women did not have any family history of breast cancer, whereas only 3.33% of them had the family history. This study revealed that 96.67% of them were married and only 3.33% were unmarried.

Table 1: Socio-demographic characteristics of participants:

Variables	(%)	Variables	(%)
Age in years:		Educational status:	
21-30	**12(40)**	No formal education	**7(23.33)**
31-40	**6(20)**	Primary school	**11(36.67)**
41-50	**9(30)**	High school	**8(26.67)**
51-60	**3(10)**	+2 and above	**41(13.33)**
Type of family:		Family history of breast cancer:	
Nuclear	**10((33.33)**	Yes	
Joint	**13(43.33)**	No	**1(3.33)**
extended	**7(23.33)**		**29(96.67)**
If yes relation with the affected member			
Mother	**0**	Personal history (any):	
Sister	**1**	Yes	**0**
Aunt	**0**	No	**30**
Any other	**0**		
Marital status:		Occupation:	
Married	**29(96.67)**	Housewife	**25(83.33)**
Unmarried	**1(3.33)**	Daily wages	**2(6.67)**
		employee	**3(10)**
Total	**30**	Total	**30**

Table 2: Analysis of pre-test knowledge scores of women regarding BSE:

Level of knowledge	Percentage of scores	No of respondents	Percentage (%)
Poor	Below 40	23	76.67
Average	40-59	7	23.33
Good	60-79	-	-
Excellent	Above 80	-	-
Total		30	100

The findings revealed that the highest percentage 76.67% of the respondents had poor knowledge and only 23.33% of them had average knowledge regarding BSE.

Table 3: Area wise mean, SD, and mean percentage of knowledge scores of women regarding BSE

Knowledge	Maximum possible scores	Mean score	SD	Mean %
Cancer and its related aspects.	3	0.3	0.525	10%
Breast cancer and its related aspects	11	4.17	1.55	37.9%
Breast self-examination.	15	4.8	2.071	32%
Total	29	9.27	3.59	33.03

The mean percentage of total knowledge scores of the pre-test was 33.03%, with mean ±3.59. Area wise mean

percentage of knowledge scores was highest 37.9% in the area of "Breast cancer and its related aspects" with mean ± SD of 4.17± 1.55. In the area of "Breast self-examination" the mean percentage was 32%, with mean ± SD of 4.8 ±2.071 and in the area of "cancer related aspects the mean percentage" was 10% with mean ± SD of 0.3±0.525. This reveals that the women had inadequate knowledge regarding BSE in all areas.

Item-wise distribution of correct responses of women regarding "cancer and related aspects", Findings from the research revealed that the highest percentage (20%) of the respondents had knowledge on the item "Breast is a common site for cancer among women". Ten percentages of the subjects were aware that "Cancer is an abnormal growth". No one had knowledge to the items related to the question on warning signs of cancer. It was also revealed that the highest percentage (86.67%) of the women had knowledge towards the item "women who have not given birth to children are having high risk for developing breast cancer", 83.33% of the respondents had awareness to the item "Through BSE, women herself can detect growth in her breast", 50% of them knew that "All the growths in the breast will not become cancer".

Evaluation of the effectiveness of planned teaching programme regarding BSE: It was found that there is a

significant difference between the pre-test and post-test knowledge scores. The pre-test median score was 6, whereas post-test median score was 22.6. This indicates that there is a significant increase in the knowledge scores of women, regarding BSE after the PTP.

Table 4: Area wise mean, SD, mean percentage of pre-test and post-test knowledge scores of women in selected areas of BSE

Area	Maximum possible score	Pre-test Mean ±SD Mean		Post-test Mean ±SD Mean%		Effectiveness(y-x) Mean ± SD Mean%	
Cancer and its related aspects	3	0.3± 0.525	10	2.7± 0.59	90	2.4±.75	80
Breast cancer and its related aspects.	11	4.17± 1.55	37.9	9.43± 1.48	85.72	5.33±1.61	48.45
Breast self-examination.	15	4.8± 2.071	32	12.27±1.33	81.8	7.47±1.8	49.8
Total	29	9.27±3.59		24.14± 2.39		15.2±4.16	
		Mean:30.9%		Mean: 81.33%		50.67%	

The above table reveals an increase of 50.67% in the total mean percentage of knowledge scores of women regarding BSE. Comparison of area-wise mean and SD of knowledge scores shows that in the area of "cancer and its related aspects" the pre-test mean percentage of knowledge score was 10% with the mean and SD of 0.3±525; whereas the post-test mean percentage of knowledge score was 90% showing, 80% of effectiveness of planned teaching programme. With regard to "Breast cancer and its related aspects" the pre-test mean percentage of knowledge score was 37.9% with mean and SD of 4.17±1.55; whereas post-test mean percentage of knowledge score was 85.72% showing 48.45% of effectiveness of planned teaching programme. In the breast self-examination the mean percentage of knowledge score was 32%, with the mean and SD of 4.8±2.071, whereas the post-test percentage of knowledge score was 81.8%, showing 49.8% effectiveness of PTP. This shows that planned teaching programme was effective in enhancing the knowledge of women regarding BSE.

Testing of hypothesis:

Table 5: Significance of difference between the pre-test and post-test knowledge scores of women regarding BSE

Areas	Mean effectiveness	"t"value
Cancer and its related aspects	2.4	17.43*
Breast cancer and its related aspects	5.33	17.69*
Breast self-examination	7.47	22.7*
Total	15.2	19.99

- **VHS: Highly significant**
- **Table value t(29) at 0.5% level**

Findings revealed that the mean post-test score of women was significantly higher than mean pre-test score. The calculated "t" value as greater than the table value at 0.5% level. Hence the null hypothesis was rejected and research hypothesis was accepted indicating the gain in knowledge was not by chance, therefore it was concluded that the gain in knowledge of women through PTP on BSE was very highly significant. This result is supported by the research titled "Awareness regarding breast self-examination among young generations" which concluded the importance of Breast self-examination, as the most important viable tool for early detection. (Shalini et al, 2011)

7. Conclusion & Summary

The investigator used an evaluative approach to study the research problem. One group pre-test post-test design was adopted to determine the effectiveness of PTP in terms of gain in knowledge scores. Purposive sampling technique was used to select the participants. A very high increase in the post-test score was observed in women on overall knowledge as well as in all the areas regarding BSE. Hence the research hypothesis "The mean post-test knowledge scores of women regarding BSE was significantly higher than the mean pre-test knowledge scores" was accepted. It reveals that PTP was very effective in improving the knowledge regarding BSE. Social and cultural barriers should be considered when earlier detection programs are established and the evaluation of early detection program should include the use of well developed, methodologically sound process matrix to determine the effectiveness of program implementation.

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