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Impact of educational intervention on breast self examination among female students of Government College of Nursing, Nagpur.

Medical Science

KEYWORDS: Pre-Post test study, Breast Self Examination, intervention,

Dr. Seema P Yadav — Medical Officer ADHS Leprosy Gondia.Maharashtra.

Dr.Niwrutti N Jiwane — Assistant Professor,Department of Preventive and Social Medicine.Government Medical College, Chandrapur.Maharashtra.

ABSTRACT

The nurses have a major influence on the behavior of our women, they need to be knowledgeable themselves about breast cancer risk factors and the importance of early detection through screening , thereby improving a chance of longer life for the patient.The need of the hour is to create awareness and bring forth the importance of breast self examination for early management of this disease. The present Pre-Post test study was carried out among female students in a Government College of Nursing in Nagpur to assess the impact of educational intervention on awareness and practices of Breast Self Examination (BSE) using a predesigned self administered questionnaire. The overall knowledge of BSE significantly increased from 25.5% in Pretest to 82.83% in Post test. The impact of intervention shows significant increase in knowledge and practice of BSE.

INTRODUCTION

"Your doctor is the second most important person taking care of your health, You are the first."

Ben Johnson

Promotion of self care, an attitude if fostered early in life, may pay lifelong dividends. The early initiation of learning provides opportunities for shaping health behaviours in adulthood. For example, teaching breast self care may encourage positive behaviours such as performing breast self examination (BSE) and seeking regular professional breast examinations.[1] The **rationale** behind extending BSE practice as a screening test is the fact that breast cancer is frequently detected by women themselves without any other symptoms[2]. Performing monthly breast self examination was first advocated by the Colombia University surgeon Cushman Experts recommended the women over age of 20 perform a monthly breast self examination[3] The nurses can play an important role in educating women through specially designed educational programme in the clinical setting, as well as through community outreach strategies that suit our social & cultural settings. In addition they constitute an important source of information within their social networks[4].

Since the nurses have a major influence on the behavior of our women, they need to be knowledgeable themselves about breast cancer risk factors and the importance of early detection through screening[5], thereby improving a chance of longer life for the patient. The need of the hour is to create awareness and bring forth the importance of breast self examination for early management of this disease. To materialize this concept the present study focuses on improving the knowledge and practices of breast self examination of nursing students through an intervention which will enable them to detect breast lesion early and serve as a teaching tool for the community. The objective of this study was to assess the impact of educational intervention on awareness and practices of BSE among female students of Govt. College of Nursing, Nagpur.

METHODOLOGY

The present Pre and Post test study was carried out in Govt. College of Nursing in Nagpur on 33 BSc Final year nursing students to assess the impact of educational intervention on awareness and practices of Breast Self Examination (BSE) among them.Approval from the Institutional Ethics Committee was obtained. The study was carried out in three phases: Pre-intervention phase, Intervention phase, Post- intervention phase. In **pre-intervention phase** - A predesigned self administered questionnaire was distributed to all the participants at the same time to collect details regarding socio-demographic data and Baseline awareness and practice of BSE . **Intervention phase:** Interventional health education in the form of interactive sessions and audio-visual demonstration and back demonstration on the breast model for the method of BSE was given. **The post-test phase** - After the span of three months of educational intervention, socio-demographic data was verified and impact of education was assessed by administering post-test questionnaire and BSE skills were evaluated for each student. Based on the scores level of skill was rated as low, moderate and high. Pre and post test differences were analyzed by paired t-test for continuous variables and Z test for difference between proportions for categorical variables using STATA statistical software version 10.1, 2009.

Results: Thirty-three students comprised the study sample.Mean age of female students was 21+ 0.79 years (Range: 20-23 yrs).Majority i.e. 28(84.85%) students were from urban area. According to Kuppuswamy's scale of socio-economic status 15(53.57%) were from upper middle, 8(28.57%) from lower middle, 4(14.29%) from upper and only 1(3.57%) from upper lower class. None of the study subjects belonged to lower socioeconomic class.Only 5(15.15%) study subjects belonged to rural area. According to Prasad's scale of socio-economic status, 3(60%) and 2(40%) belonged to Class I and III respectively.Majority of students i.e. 24 (72.73%) were Hindus followed by 5(15.15%) Buddhists and 4(12.12%) Christians.All the 33 students were unmarried. All the study subjects had ever heard about Breast Self Examination (BSE). Most common source of information were books in 33(100%) study subjects followed by medical personnel in 24 (72.73%), internet in 23(69.70%), newspapers in 21(63.64%), friends in 20(60.61%), television in 15(45.45%), radio in 9(27.27%), family members and relatives in 8(24.24%) and health talk sessions in only 2 (6.06%) study subjects

Pretest and post test comparison:

Table 14 – Impact of intervention on level of skills of BSE.

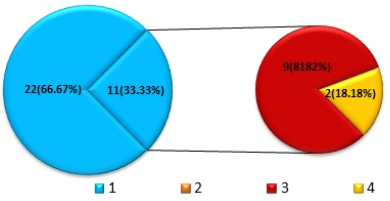
Level of skill	Study subjects (33)			
	Pretest		Post Test	
	No.	%	No.	%
Low (5 – 9)	11	33.33	0	0.00
Moderate (10 – 13)	0	0.00	11	33.33
High (14-15)	0	0.00	22	66.67

Pretest mean score+ SD: 2.96 + 3.5 Posttest mean score+ SD: 13.66 + 1.47 P value=0.0001

Table 15 - Impact of intervention on level of skills of those who knew BSE at pretest

Level of skill	Study subjects (n=11)			
	Pretest		Post Test	
	No.	Percentage	No.	Percentage
Low (5 – 9)	11	100.00	0	0.00
Moderate (10 – 13)	0	0.00	2	18.18
High (14-15)	0	0.00	9	81.82

Fig.3 Impact of intervention on level of skills of those who knew BSE at pretest



Knowledge of BSE which included 3 components i.e. recommended age for BSE, frequency of BSE and appropriate time for doing BSE : The overall knowledge of BSE significantly increased from 25.5% in Pretest to 82.83% in Post test with P value = 0.0271 .There were11(33.33%) of study subjects who knew the method of BSE in pretest while all of them knew it after intervention.Only 6(18.18%) of them stated in pretest that they practice BSE which increased to 28(84.85%) at three months after intervention.In present study, compliance to BSE, (performing BSE once in a month) was enquired at 3 months after the intervention. Only 5 (17.85%) out of 33 study subjects performed BSE regularly ie .once in one month. Whereas 11(39.28%) practiced two times in 3 months and 12(42.85%) practiced only once in 3 months. In pretest the most common reason stated by 66.67% (22 out of 33) of the study subjects for not practicing BSE was that, they did not know the method of BSE. The other reasons were lack of time by 16(48.48%) carelessness by 3(9.09%) and 2(6.06%) felt that it was not necessary to do BSE while no privacy, don't have breast problem and forgot to do was quoted by only 1(3.03%) study subject each. In post test the most common reason stated by 53.57% (20 out of 28) of the study subjects for not practicing BSE was lack of time. The other reasons stated were forget to do by 12(39.28%) and no privacy by 2(7.14%). Carelessness and not having breast problem was quoted by only 1(3.03%) study subject each.

• **Level of skill of BSE:** Regarding level of skill of study subjects for BSE on breast model 11 out of 33 were evaluated as they stated that they knew the method of doing BSE in pretest and all of them had low level of skill(5-9 score) with mean score 2.96 $\pm$ 3.5 S.D.In post test none of the study subjects had low score. 11(33.33%)showed moderate level of skill (10-13 score) and 22(66.67%) had high level of skill (14-15 score).The mean score in post test was 13.66$\pm$ 1.47 S.D which was significantly more than that in pretest with P value 0.0001. The sub group evaluation of level of skill in those 11 study subjects who had low score in pretest improved in the post test to moderate level of skill in 2(18.18%) and high level of skill was attained by 9(81.82%) study subjects. The mean score increased significantly from 7.27 $\pm$ 3.66 in pretest to 14.00 $\pm$ 1.52 in post test with P value = 0.0001.McNemar test was applied to 33 pairs of observations to analyze the changed difference from pre-intervention to post intervention with respect to BSE practices which was found to be statistically significant with p =0.0001.

DISCUSSION:

Television was the main source of information in 42% followed by Neighbours 41%, hospital staff 19%, print media 9% and radio 3% similar to findings of Salaudeen, Akanda and Musa[6] where 81.9% respondents had heard of breast self examination main source of information about BSE being television i.e. 23.6% followed by print media, health worker, radio and friends. In contrast Khadiga F. Dandash, and Abdurrahman Al- Mohaimeed[7] showed the main sources of knowledge was print media in 83.2%, television 68.2%, family and friends 28.6% and health professionals 14.1%.In a similar study conducted on nursing students at Shams university[8] peer group was most common source of information which differed from our study.

Our study included 3 components regarding knowledge of BSE i.e. recommended age for BSE, frequency of BSE and appropriate time for doing BSE. Overall knowledge of BSE significantly increased by 57.53% compared to 80% increase in the study of Nadia et.al[8].

The knowledge pertaining to BSE increased after the interactive session representing that the educational intervention plays a vital role to promote practices of BSE. Similar finding was reported whereby an overall 43% increase in the awareness and significant increase in the awareness and practices of BSE by 43% and 53% respectively were observed after the interventional health education among women in a semi-urban area of India by Gupta et al., 2009[9].

Practice of BSE increased by 66.67% after intervention in our study which increased by 45% in Hanan et.al[10] compared to 80% in study by Nadia et.al[8]

Hanan et.al[10] observed that 74% of women did not know about BSE, but 96.9% knew about it after the intervention. The knowledge about the frequency and the appropriate time for BSE increased significantly and these findings were consistent to our study.

Compliance to BSE (performing BSE once in a month) after 3 months of the intervention was enquired about in our study. Only 17.85% of study subjects performed BSE regularly i.e. once in one month, 39.28% practiced two times in 3 months and 42.85% practiced only once in 3 months amongst those who practiced BSE. However menstrual history of participants was not enquired about in the post intervention phase so as to correlate it with the regular practice of BSE. So if in past 3 months any subject had irregular menstrual cycles she may be regular in practicing BSE according to the recommended guidelines but may have been missed in our analysis.

In pretest the most common reason perceived by 66.67% of our study subjects for not practicing BSE was that they did not know the method of BSE and which changed to lack of time in post test. These findings were consistent with the findings of study by Nadia et.al.[8] Lack of knowledge being the commonest reason in pre test i.e. 91.8% and fear to find lump in the post test.

Fifty four percent carried out the procedure of BSE at least once every month in study by Fotedar et.al[11].

A 6 months follow-up post-test was carried out by Shadia[12]. About 41% performed it on a regular basis (monthly) and 41% every two months. Only 6% performed BSE every 6 months. The reason for not performing BSE regularly was forgetfulness. The findings were also similar in Budden (1999)[13] and Abdel-Fattah M et al.(2000)[14] that 1/3 of student nurses performed BSE.

Twenty one percent of the participants in Shadiya[12] study never performed BSE even though they claimed that BSE is a simple and quick procedure and does not consume time. It is disturbing to find that 45% of these highly educated nursing students did not perform BSE regularly. This may be explained on the background that the participants were young (with mean age of 22) and single (97%). In addition, it may relate to their attitude of embarrassment to perform BSE (55%). There were only 5(15.15%) nursing students not practicing BSE in our study even after intervention which were comparable to findings of Khadiga et al[7] where BSE was done during the last month by only 15.4% study subjects.

The actual practice of following the screening guidelines amongst the nursing staff was poor in study by Khokhar[15], only 10.03% had ever done a BSE, none performed it monthly.

Though the practice of BSE varied in different studies there was significant increase in the regular practice of BSE from nil in pretest to 17.85% in post test in those who performed BSE suggesting the impact of intervention.

Sheraz et.al.[16] found that knowledge regarding BSE was fair except for a very poor score for knowing the exact time for carrying out a BSE. Practice of BSE was poor with a total of only 66.4% doing it monthly compared to good BSE knowledge and practice of BSE 66% of Shiyam et.al.[17] than 59% of practice in a study by Pervez et.al[18] while practice in

Jordan (59%)[19], than in Singapore (94%)[20].

The reasons for not performing BSE in study by Siew[21] were not aware of proper technique, forgetful with a lack of encouragement to prioritize the regular BSE as a lifestyle habits for women. The most common reasons for not doing BSE were lack of knowledge (34%) and not believing its necessity (36%) (Jarvandi et.al.2002)[22]. The Canadian National Breast Screening Study reported laziness, forgetfulness and a lack of confidence in skills as the key barriers to BSE[23].

In SK Gupta study[24] however, 55 respondents (9.3 % of those who acquired knowledge after intervention) had not started practicing BSE. The main reason was forgetfulness (32.72%) followed by lack of time (25.45%)

In post test of our study none of the study subjects had low score. 33.33%showed moderate level of skill (10-13 score) and 66.67% had high level of skill (14-15 score) which is high compared to that in descriptive research by Wasana[25] 24% participants had low levels of BSE skills (0-9score), 69.80%had moderate levels of BSE skills (10-13score) and only 6.20% had high levels of BSE skills (14-15 score).

Jan Sorensen[26] in an evaluation of a Danish Teaching Program found that the intervention group was significantly more likely to perform BSE regularly (66% compared to 52% in control group) and to use a more correct technique (44% compared to 20% in control group).

Zakeeya Mayet[27] assessed skills of final-year undergraduate nursing students by stepwise palpation of the breast model which showed that only19% of the students carried out all of the five critical points of palpation for a clinical breast examination which included correct part of the hand, correct pressure, palpated all the regions of the breast, axilla and axillary tail.

In a country like India the relevance of this study where the socio-cultural milieu plays an important role in seeking health care services from a gender specific doctor is that in such a scenario, nurses can create awareness and guide the women for BSE and eventually help in early diagnosis of breast cancer.

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