Impact of Health Education on Breast Self-Examination Among Nursing Students.

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Abstract
Backgruound: Breast cancer is the most common cancer among women worldwide and it accounts for 19-34% of all cancer cases among women in India. Through clinical examination and health education in self examination of breast can have a crucial impact on early identification of breast cancer. In many developing countries, especially like India, breast self examination will most likely be the only feasible approach to wide population coverage as it is cheap and easy method for screening and early detection of breast cancer. The present study was undertaken to know the awareness of breast self examination and impact of health education among female nursing students.

Objectives: To assess the level of knowledge of breast self examination among female nursing students. To know the impact of health education on breast self examination

Methodology: A total of 122 Female B.Sc nursing students were included in the study, pre test was carried out using structured questionnaire and after giving health education on breast self examination, same questionnaire was used in post test to assess the awareness and impact of health education on breast self examination . Statisticaltest like Percentage, Chi-square test and Wilcoxon was applied to know the association.

Results: In pre test 55% of them had knowledge that breast cancer can be detected early and in post test the response was 81%,the highly significant association was observed between pre and post test at p=0.0001.

Conclusion: In the present study the intervention programme of health education was helpful in creating awareness about breast self examination.

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Introduction
Breast cancer is most common cancer among women worldwide and it accounts for 19-34% of all cancer cases among women in India. In 2008, India reported roughly 1, 00,000 new cases annually. In 2012, worldwide 1.7 million women diagnosed with breast carcinoma and 6.3 million women alive with carcinoma. A study conducted by the international association of cancer research based in Lyon, France, projected that there would be 2, 50,000 cases of breast cancer in India by 2015, 3% increase per year.[1]

There is high mortality due to late stage of diagnosis as patient usually present at an advanced stage because of lack of awareness and nonexistent breast cancer screening programmes. Breast self examination is an important, cheap & easy method of early detection of breast cancer and has been defined as a preventive health behavior. Through clinical examination and health education in self examination of breast can have a crucial impact on early identification of breast cancer.

Carcinoma of breast is an important public health problem in India, early detection of breast cancer executed by nurse, who play active role in improving public health may be effective in increasing awareness among community. The present study is undertaken to know the awareness of breast self examination and impact of health education among nursing student because they are health professionals, who can increase public health knowledge of breast cancer and correct practice of breast self examination to the community.

Objectives
1. To assess the level of knowledge of breast self examination among female nursing students
2. To know the impact of health education on breast self examination.

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Methodology

The present study was Pre and Post test design. A total of 122, all female nursing students from first year to final year were included in the study those were present on that particular day. The ethical clearance was obtained from the institute before the start of the study. The study was carried after obtaining permission from the concerned authority and verbal inform consent from the participant.

Pre-test was carried using structured questionnaire to assess their knowledge about breast self examination. The health education regarding steps and importance of breastself examination, screening, signs and symptoms of breast cancer were given using power point presentation by health professional. Post test was conducted using same questionnaire to assess the impact of health education on breast self examination except the practice questionnaires were not asked in the post test. Scoring was given to number of responses (correct=1, wrong=0) they had given and according to that Mean±SD was used to present the scores. Wilcoxon signed rank test and Chi-square test were

		Frequency	PERCENTAGE
Type Of Family	Nuclear Joint	94 19	83.2 16.8
Marital Status	Unmarried Married	106 7	93.8 6.2
Religion	Hindu Muslim Christian Others	80 01 31 1	70.8 0.9 27.4 0.9
Mother's Education	Illiterate Primary School High School PUC College	22 19 31 28 13	19.5 16.8 27.4 24.8 11.5
Father's Education	Illliterate Primary School High School PUC Degree	15 22 28 26 21 01	13.3 19.5 24.8 23.0 18.6 9.0

Table 1: Socio-demographic profile of the respondents

applied to find the difference between pre and post test after health education.

Results

Majority of subjects live in nuclear family (83%), and only 6.2% of them were married. Many of them belongs to Hindu religion (71%) followed by Christian (27%). 20 % of mothers and 13% of fathers were illiterate in the present study.(Table-1)

Present study found that 4% of respondents have family history of breast cancer. 80% of them heard about breast cancer and source of information was Television (43%) ,Newspaper(36%), Internet (24%),Peer group(16%) and family(5%). Similarly, 70% of the study subjects were heard about breast self examination through internet (37%) followed by Television (23%).

(Table-2) In pre test 55% of them had knowledge that breast cancer can be detected early and in post test the response was 81%, highly significant association was observed between pre and post test at p=0.0001. Present study observed that knowledge about chances of survival of early detection of breast cancer was 65% in pre test and 79% was in post test .significant association was found between pre and post test at p=0.040.

The responses given by them regarding meaning of breast self examination in pre test was palpation of breast (50%), feeling of breast self by oneself (42%), and visual inspection of breast (8%). Highly significant association was observed at p= 0.001.

In pre test 15 % of the participant said that breast self examination should be done by both male and female and in post test the responses was 35%. Significant association was observed at p=0.003 .38% of the participants said that practice of breast self examination should be started at the age >19yrs in pre test and 62% in post test. Highly statistical significant was found between pre and post test at p= 0.0001.

The participant were asked regarding Knowledge

		Pre test N(%)	Post test N(%)	Statistical test	P value	Significant
Can Be Detected Early	Yes No Don't Know **Total**	62(54.9) 19(16.8) 32(28.3) **113(100)**	92(81.4) 05(4.4) 16(14.2) **113(100)**	X^2=19.22	P=0.0001	HS
Chance Of Survival	Yes No Don't Know **Total**	73(64.6) 14(12.4) 26(23) **113(100)**	90(79.6) 09(8) 14(12.4) **113(100)**	X^2=69.460	P=0.040	Significant
Meaning Of BSE	-Feeling Of Breast By Oneself - Palpation Of Breast - Visual Inspection **Total**	47(41.6) 57(50.4) 9(8) **113(100)**	73(64.6) 31(27.4) 12(10.6) **113(100)**	X^2=13.707	P=0.001	HS
Who Should Perform BSE	Male Only Female Only Both Male & Female **Total**	4(3.5) 92(81.4) 17(15) **113(100)**	2(1.8) 72(63.7) 39(34.5) **113(100)**	X^2=11.749	P=0.003	HS
At What Age BSE Is Done	<19 Years >19years Don't Know **Total**	32(28.3) 43(38.05) 38(33.6) **113(100)**	32(28.3) 69(61.06) 12(10.6) **113(100)**	X^2=19.556	P=0.0001	HS
How Often BSE Is Done	Daily Weekly Monthly Yearly Don't Know **Total**	14(12.4) 20(17.7) 41(36.3) 2(1.8) 36(31.9) **113(100)**	04(3.5) 04(3.5) 92(81.4) 04(3.5) 09(7.9) **113(100)**	X^2=52.64	P=0.0001	HS
Part Of Hand Used In BSE	Nail Wrist Finger Pad Palm **Total**	07(61.9) 03(2.7) 84(74.3) 19(16.8) **113(100)**	01(0.9) 01(0.9) 110(97.3) 01(0.9) **113(100)**	X^2=25.185	P=0.0001	HS
Is BSE Necessary	Yes No **Total**	91(80.5) 22(19.5) **113(100)**	104(92) 09(7.9) **113(100)**	X^2=6.318	P=0.018	HS
Want To Know More About BSE	Yes No **Total**	90(79.6) 23(20.3) **113(100)**	100(88.4) 13(11.5) **113(100)**	X^2=3.404	P=0.069	NS
Steps In BSE	3 5 7 9 Don't Know **Total**	3(2.7) 24(21.2) 15(13.3) 6(5.3) 65(57.5) **113(100)**	7(6.2) 94(83.2) 1(0.9) 1(0.9) 10(8.8) **113(100)**	X^2=19.22	P=0.0001	HS
Appropriate time for BSE	- 5-7 days after menstruation. -During menstruation. - 5-7 days before menstruation. - At any time **Total**	32(28.3) 10(8.8) 14(12.4) 57(50.4) **113(100)**	84(74.3) 5(4.4) 6(5.3) 18(15.9) **113(100)**	X^2=19.22	P=0.0001	HS
After menopause how often BSE is done	Weekly Monthly Quarterly Yearly Don't know **Total**	20(17.7) 22(19.5) 4(3.5) 8(7.07) 59(52.2) **113(100)**	15(13.3) 70(61.9) 06(5.3) 13(11.5) 09(8) **113(100)**	X^2=19.22	P=0.0001	HS

Table 2: Comparison of knowledge between pre & post test

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about practice of how often breast self examination should be done, the responses was 36 % in the pre test regarding monthly breast self examination, and 81% in post test. Highly statistical significant was found between pre and post test at p= 0.0001.

The part of hand used to palpate the breast during breast self examination was finger pad (74%) in pre test and in post test it was 97%. Highly statistical significant was found between pre and post test at p= 0.0001. In the pre test 81% of the respondents said that breast self examination was important and in post test the response was 92%. Statistical significant was found at p= 0.018.

Non significant association was observed between pre and post test regarding knowledge about to know more about BSE. In the pre-test 21% of them had correct knowledge about steps of breast self examination and the response been 83% in post test. Highly statistical significant was found between pre and post test at p= 0.0001.

Highly statistical significant (p=0.0001) was found between pre and post test regarding appropriate time for breast self examination among pre-menopause women's. Similarly   the participants were asked about time of breast self examination among menopause women, Highly statistical

significant was found between pre and post test at p= 0.0001. (Table-2)

In the present study 20% of the participants has practiced breast self examination, the reason given by them was to examine the breast regularly (73%), and family history of breast cancer (18%). Among them 63% of them had practiced it monthly and 73% of them had started breast self examination at age of > 19 yrs. Multiple answers were given by the respondents regarding where they performed like, 68% of them had performed it in bathroom followed by in front of mirror (28%) and Lying in bed (9%).

The participants were asked regarding the main purpose of breast self examination in pre test. Multiple answers were given by them like early detection of breast cancer, to detect any change in the breast and provide normal texture of breast. But non significant association was found between pre and post test at p= 0.066.

Respondents were aware about different route of spread of breast cancer, non significant association was observed between pre and post test at p= 0.4499. they were also asked about easiest and economical way to detect breast cancer, Highly statistical significant was found between pre and

		Mean± SD pre test	Mean±SD post test	Wilcoxon signed Rank test P value	Signifi-cant
Main purpose of BSE	-To detect any change in breast -Early detection of breast cancer -Provide awareness of normal texture of breast	1.43±0.778	1.646±0.87	0.066	NS
Meaning of BSE	Feeling of Breast by oneself Palpation of breast Visual inspection	2.699 ±11.44	2.707 ±11.61	0.1047	NS
How breast cancer spreads	Arteries Nerves Lymphatics Muscles	0.673±0.741	0.717± 0.453	0.449	HS
Economical way to detect breast cancer	BSE X-Ray Mammography Blood test Don't know	0,230± 0.423	0.416 ±0.495	0.0028	HS
Early sign of breast cancer	Bloody nipple discharge Hard nodule Pain Nipple retraction Don't know	1.292± 1.193	2.133± 1.243	0.0001	NS
Treatment options	Medical line Surgical line Both Don't know	0.345± 0.477	0.389± 0.489	0.448	NS

Table 3: The number of responses given by the respondents in pre and post test

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post test at p= 0.0028.

Early sign of breast cancer is one of the important factors for detection of breast cancer; multiple answers were given by the study subjects. but non - significant association was observed between pre and post test at p= 0.448. Present study found that 22% of the respondents were unaware of treatment options for breast cancer in the pre test, but in post the response was only 6%. (Table-3) Overall the impact of health education of breast self examination was useful for all the nursing students.

Discussion
Breast self examination is cost effective method of early detection of carcinoma of breast. The present study highlight the knowledge , attitude and practice of breast self examinations among nursing students as they are more in contact with patient as they are easily approachable to them. Present study observed that 79% of respondents heard about Breast Self Examination in pre test .Similar study conducted by Shalini et al.,[2] found that 73% of had knowledge in the pre test. This slight difference could be due to both group are science related participants.

Our study observed significant impact of health education on knowledge about correct steps of breast self examination (28% to 74%) and monthly practice of breast self examination (36% to 81%). As reported by A R Isara et al.,[3] most of them had no idea of the correct timing of breast self examination as only 12.5% knew it was a few days after menstruation, only 18.8% of them knew that breast self examination should be performed once a month. Study conducted by Hanan.M et al[4] observed impact of health education intervention, in respect to correct procedure (26% to 96.9%) an increase in appropriate time (15.6% to 77%) and monthly practice (16.7% to 75%) of breast self examination. Similar study done by Sultan et al[5]also found significant improvement of health intervention. This shows that health education has definitely played an important role to increase their KAP about breast self examination among the study subjects.

In the pre test respondents were not aware of ideal age of practicing breast self examination (38%), how

often it is done (36%) and steps of it (21%).Study done by Sanjeev .K.Gupta et al[6] observed only 2% of the respondents had knowledge of correct fact about breast self examination, which is lower than our study, it could be due to the respondents were general population of semi urban area in his study. The significant difference was observed after health education in both studies.

Among those who practiced BSE, majority of them performed it in bathroom (68%) followed by in front of mirror. Jayadevan Sreedharan et al.,[7] also reported almost similar findings in his study (63%). This could be due to fact that both groups were nursing branch.

Regarding the sign and symptoms of breast cancer among the study respondents, definitely there was significant improvement after health education. Similar study done by Sultan et al[5] highlighted the impact of health education was helpful in increasing the level of knowledge on breast cancer.

Highly statistical association was found between pre and post test regarding importance of breast self examinations. Finding of present study shows that majority of the study subjects wants to know more about breast self examination both in the pre and post test. Andrej et al,[8] in his study found that majority of the midwifery students were willing to receive the additional education in relation to breast self examination. This shows that participants were interested to gain the knowledge regarding BSE.

A significant increase in knowledge was observed among the study subjects after the health education regarding screening and signs and symptoms of breast cancer. Intervention programmed will definitely help to create awareness of breast cancer and breast self examination and screening of breast cancer. Many studies show the impact of intervention related to this. Buying HQ et al[9] & Gucuck et al[10] highlighted the importance of intervention of training programmed among nurses and direct health education on breast self examination among women in their study on breast cancer, screening and breast self examination. This highlights that there is a scope for health education regarding breastself examination amongst community.

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Conclusion and Recommendations

The result of this study shows that, the intervention program me of health education was helpful in creating awareness about breast self examination. Significant impact of health education on BSE was observed in the present study related to increasing knowledge level of BSE & Breast cancer, thereby improving early diagnosis and treatment rate. In the present study practice of BSE was only 20%, this shows that there is need of

1. Intervention programmed in the form of training or health education.
2. Continued nursing education programmed.
3. More emphasis should be given regarding BSE in framing the curriculum.
4. All kinds of mass media activities should be planned to practice BSE.

Because nurse has to play important role in health promotion as they are mostly involved in patient care.

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