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Knowledge, Attitude And Practice Of Breast Self-Examination Among Female Nurses Of A Medical College.

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ABSTRACT

Breast cancer is the most commonly diagnosed cancer and the leading cause of cancer death in women worldwide. Breast self-exam (BSE) is an important way to find breast cancer early. As a health care professional staff nurse has a duty to educate other women about breast cancer and breast self-examination. Aims: To assess the knowledge, attitude and practice of breast self-examination among female nurses. A cross sectional study was conducted among 225 female nurses from September 2022 to February 2023 of Dr Shankarrao Chavan Government medical college in Maharashtra using predesigned questionnaire. Only 12.9% knew BSE should be performed from day seven to ten after menstrual cycle, 25.8% of the study subjects knew BSE should be performed both in front of the mirror and lying down position, however 53.3% knew BSE should be performed monthly. The practice of BSE was 69.3%. However only 20.9% practiced it monthly. Nursing staff as a health care worker plays an important part in educating the society. So, creating awareness among them through special workshops, health education etc can be conducted and they can be trained.

Keywords: Breast self-examination, Nurses, Breast cancer, Attitude.

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INTRODUCTION

Breast cancer is the most commonly diagnosed cancer type and the leading cause of cancer death in women worldwide [1]. As of the end of 2020, there were 7.8 million women alive who were diagnosed with breast cancer in the past 5 years, making it the world's most prevalent cancer [1]. More than half of breast cancer cases are now diagnosed in low and middle-income countries, where a greater proportion of are diagnosed at later stages, which are linked to poorer survival [2]. There are more lost disability-adjusted life years (DALYs) by women to breast cancer globally than any other type of cancer [1].

As per GLOBOCON data 2020, in India, breast cancer accounted for 13.5% of all cancer cases and 10.6% of all deaths. For every 2 women newly diagnosed with breast cancer, one woman dies of it in India.^{[3],[4]}

Breast cancer treatment can be highly effective, especially when the disease is identified early. Treatment of breast cancer often consists of a combination of surgical removal, radiation therapy and medication (hormonal therapy, chemotherapy and/or targeted biological therapy) to treat the microscopic cancer that has spread from the breast tumor through the blood [1].

Breast cancer most commonly presents as a painless lump or thickening in the breast. The most common symptom of breast cancer is a painless mass. In older women, a new breast lump is likely to represent a malignancy. Breast pain, skin thickening, breast swelling, or nipple discharge or retraction should be vigorously pursued with biopsy in older women [5]. It is important that women finding an abnormal lump in the breast consult a health practitioner without a delay of more than one to two months even when there is no pain associated with it [1].

The American Cancer Society recommends monthly breast self-examination, annual clinical breast examination and annual mammography beginning at age 40, with no upper age limit as long as a woman remains in good health [5]. It is best to examine the breasts seven to ten days after the first day of the menstrual period (This is the time when the breasts are less likely to be swollen and tender). Breast should be examined every month, even after menstrual period has stopped forever. If not menstruating, pick the same day each month to examine the breasts. Although BSE alone is not sufficient for early detection of breast cancer, it allows women to be responsible for their own health, to recognize breast tissue, and to adopt preventive health behavior [6].

But when combined with regular medical care and appropriate guideline-recommended mammography, breast self-exams can help women know what is normal for them so they can report any changes to their healthcare provider [7].

Despite the benefits associated with it, few women regularly perform BSE and many do not even know how to perform it. There is also evidence that women are more likely to perform BSE effectively when taught by physicians or a nurse [8, 9].

Prompt diagnosis of breast cancer in the early stage is very important. This is possible by increasing the level of awareness among women and health care professionals. As a health care professional Staff nurse has also a duty to educate other women about breast cancer and breast self-examination. Hence this study is being conducted to know the awareness, attitude and practice of Breast self-examination among Nurses of a Medical College of Maharashtra.

SUBJECTS AND METHODS

A cross sectional study was conducted among female nurses of Dr Shankarrao Chavan Government, Nanded medical college hospital from September 2022 to February 2023 in Maharashtra. The sample size was calculated by taking the prevalence of practice of breast self-examination as 33.3% according to a study conducted among nursing staff in Bangalore [10]. Considering confidence limit 95.0%, the sample size was worked out by following formula $n = Z^2PQ / L^2$ with 20% as allowable error. Sample size came to be 200. 10% were added to 200 as non-response and in-complete answers. Hence final study was conducted among 225 participants who were selected by simple random sampling method from the list of female nurses obtained from the hospital.

Ethical clearance was taken from the institutional ethical committee of Dr Shankar Rao Chavan Government medical college hospital, Nanded.

Inclusion criteria

All female nurses who were willing to participate in the study.

Exclusion criteria

Female nurses who were on leave during the study period and those who were not willing to participate in the study.

A pre-designed pretested questionnaire was used to record information. After obtaining written informed consent Study subjects were questioned to assess the knowledge about breast cancer and breast self-examination. The questionnaire consisted of 4 parts. The first part was sociodemographic data on age, profession, marital status and qualification of each study participant. Second part consisted of questions relating to knowledge of breast cancer risk factors, knowledge regarding breast self-examination using closed end questions and yes/no questions. Third part included questions regarding attitude towards breast self-examination of the study subject. The final part consisted of questions on practice of breast self-examination among study subjects.

The data collected was entered in MS Excel 2019 and analyzed using SPSS version 25 for Windows. Descriptive statistical methods for each question were carried out according to the different demographic data on the collection of respondents. Statistical evaluation was accomplished using the Pearson chi-square test, to test the association of sample characteristics and categorical variables. A p value of less than 0.05 was regarded as significant.

RESULTS

The mean age of the study participants was 35.48 ± 7.48 years. As shown in Table 1 In the present study, more than half (56.4) of the study participants belonged to the age group between 31 to 40 years and least (7.6%) belonged to age group 51 to 60 years. 76.4% of the study participants belonged to Hindu religion and least (5.3%) belonged to Muslim religion. Majority (90.2%) of the study subjects were married. Most of them (86.2%) belonged to upper socio-economic class according to modified B.G Prasad socio economic scale. Maximum (68.8%) study subjects belonged to nuclear family. Maximum of the study subjects were staff nurses (90.7%). Majority (69.8%) had GNM degree. It was observed that 9(4%) study subjects had a positive family history of breast cancer.

As shown in Fig 1, regarding knowledge about risk factors of breast cancer, most of the participants 140 (62.2%) said chest radiation and smoking is a risk factor for breast cancer whereas 135 (60%) subjects said obesity is a risk factor for breast cancer and only 17 subjects said advanced age of pregnancy is a risk factor for breast cancer. 10 subjects said they were not aware about the risk factors of breast cancer. Only 6 (2.6%) subjects knew about all the risk factors.

Source of information about BSE(Table 2) were mostly (21.8%) from books and magazine and least from television (1.8%). Majority (65.4%) of the study subjects said they have not received any health education other than that received during their course training period about breast self examination.

Regarding knowledge about when to perform BSE (Table 3), most of them (30.2%) said it can be performed anytime and there is no relation with menstrual cycle and only 12.9% knew it should be performed from day 7 to day 10 after menstrual cycle. 9.8% said they did not know when BSE should be performed. Only 25.8% of the study subjects knew BSE should be performed both in front of the mirror and lying down position. However more than half (53.3%) of the study subjects knew BSE should be performed monthly. Majority (83.1%) of the study subjects knew that breast should be palpated using palm and 3 fingers. Majority of the study subjects said lump is an abnormality one should look out for and only 25.3% of the study subjects felt all of the following i.e., lump, nipple discharge, retraction on nipple and unusual shape and size of the breast could be an abnormality to look out for.

Regarding attitude of the study subjects towards BSE (Table 4), 84% said they think BSE is necessary and 80% of the study subject’s advice BSE to others. This shows that attitude of the majority of the study subjects is towards positive side.

In our study we found that 69.3% of the study subjects practice breast self-examination. Out of the 69 study subjects who do not practice BSE, most of the study subjects (42.1%) gave the reason that they keep forgetting to do it whereas 17.4% of the female nurses said they are not sure about its ability to detect breast cancer and only 4.3% said they do not know how to do BSE. 30.1% of the study subjects said they practice BSE once a month followed by 26.3% said they practice BSE when they feel like and 1.9% said they practice BSE once a year (Table 5).

10.3% of the study subjects who practice BSE have discovered abnormality in their breast of which most of them (81.3%) have visited a doctor.

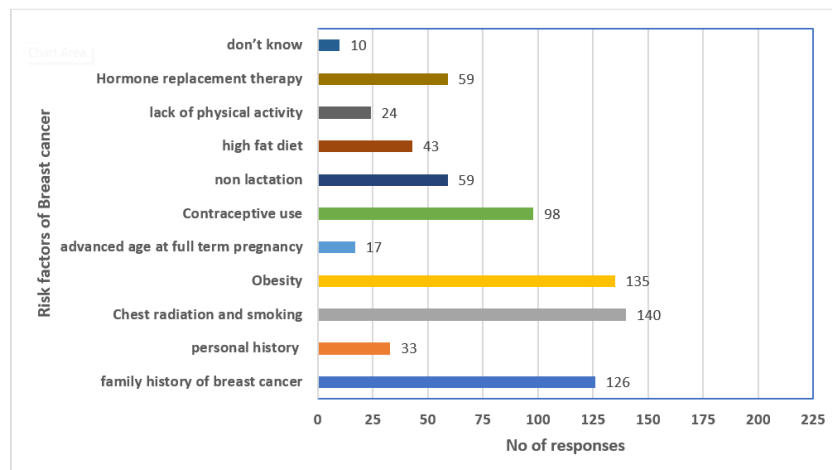
As in Table 6, in this study we found that there was significant association between age more than 40 years, parity, health education regarding breast self-examination and practice of BSE.

Table 1: Sociodemographic characteristics of respondents#

Parameter	Frequency (%)	Parameter	Frequency (%)
Age group (in years)		Religion	
21-30	58(25.8)	Hindu	172(76.5)
31-40	127(56.4)	Muslim	12(5.3)
41-50	23(10.2)	Buddhist	23(10.2)
51-60	17(7.6)	Christian	18(8.0)
Education		Designation	
ANM	1(0.4)	Incharge sister	19(8.4)
Bsc Nursing	56(24.9)	Public health nurse	2(0.9)
General Nursing	157(69.8)	Staff nurse	204(90.7)
Masters in Nursing	11(4.9)		
Socio economic status		Marital status	
I	194(86.2)	Married	203(90.2)
II	22(9.8)	Unmarried	16(7.1)
III	9(4)	Widowed	6(2.7)
Type of family		Family history of breast cancer	
Nuclear	155(68.8)	Yes	9(4)
Joint	62(27.6)	No	216(96)
Three generation	8(3.6)		
Total	225(100)	Total	225(100)

Source: Original

Figure 1: Knowledge about risk factors of Breast Cancer among study subjects**



**Multiple responses, # Source: Original

Table 2: Source of knowledge of Breast self examination among the study subjects#

Source of information of BSE*		
Family and peers	5	2.2%
Television	4	1.8%
Doctors	84	37.3%
Social media	38	16.9%
Books and magazines	184	81.8%
Have you received any health education (other than the course) for the same?		
Yes	78	34.6
No	147	65.4

*multiple responses
#Source: original

Table 3: Knowledge of Breast self examination among the study subjects#

When should BSE be performed?		
Before menstruation	33	14.6
Middle of menstruation (day 3-5)	13	5.8
Any day during menstruation	15	6.7
After menstruation	45	20.0
Between day 7 to day 10 after menses	29	12.9
Anytime (no relation to menstrual cycle)	68	30.2
Don't know	22	9.8
Where to perform BSE?		
In front of the mirror	152	67.6
Lying on bed	13	5.8
Both	58	25.8
Don't know	2	0.8
How often should BSE be done?		
Daily	21	9.3
Weekly	55	24.5
Monthly	120	53.3
Yearly	8	3.6
Don't know	19	8.4
Anytime	2	0.9
What are the abnormalities to look for? *		
Lump	118	52.4
Nipple discharge	36	16.0
Retraction of nipple	32	14.2
Unusual shape or size of breast	44	19.6
All	57	25.3
Don't know	53	23.6

*multiple responses #source: original

Table 4: Attitude of study participants towards BSE#

Parameter	Frequency	%
Do you think BSE is necessary?		
Yes	189	84
No	36	16
As a health care worker, do you advice BSE to others?		
Yes	180	80
No	45	20

#source: Original

Table 5: Practice of BSE among study subjects#

Parameter	Frequency	Percentage (%)
Do you practice BSE?		
Yes	156	69.3
No	69	30.7
Reasons for not practicing BSE (n=69)		
Fear of positive finding	12	17.4
Embarrassing	2	2.9
Forgetting	29	42.1
Not sure of its ability to detect breast cancer	11	15.9
Don't know how	3	4.3
Not interested	12	17.4
How often do you practice BSE?		
Once in a year	3	1.9
At least once every 6 months	47	30.1
At least once a month	47	30.1
At least once a week	18	11.6
When I feel like	41	26.3
While practicing BSE, have you ever discovered any abnormality in your breast?		
Yes	16	10.3
No	140	89.7
If yes, what did you do?		
Did not do anything	3	18.7
Visited a doctor	13	81.3

source: Original

Table 6: Association of age, parity and health education with practice of BSE among study subjects#

Parameter	Practice of BSE		Chi-square value with p value
	No	Yes	
Age<40	62(33.5%)	123(66.5%)	$\chi^2 = 3.967$ df =1 p = 0.046
Age≥40	7(17.5%)	33(82.5%)	
Parity			
≥1	52(27.8%)	135(72.2%)	$\chi^2 = 4.257$ df =1 p=0.039
Nulliparous	17(44.7%)	21(55.3%)	
Received any health education regarding BSE? (Other than during the nursing course)			
Yes	13(16.7%)	65(83.3%)	$\chi^2 = 11.005$ df =1 P=0.001
No	56(38.1%)	91(61.9%)	

source: Original

DISCUSSION

Breast cancer being one of the leading causes of cancer in India, needs timely attention and preventive measures. Primary preventive measures like health education and early screening methods can help tackle the disease. The women should be taught to undertake Breast Self-Examination (BSE). BSE is conducted by the woman herself to detect any abnormality or changes in her breasts. The practice of BSE empowers women to take responsibility for their health. Health professionals play an important role in educating the society and being a good role model. For this their knowledge and attitude level are an important factor. They should also be aware about risk factors of breast cancer so that they can guide the patients and other women for necessary measures. In this study majority (95.5%) of the study subjects were aware about some of the risk factors, however only 2.3% of the study subjects knew about all the risk factors. Fotedar V et al in their study among nurses of Shimla found that the 10.5% of nurses had

poor knowledge [11]. Kale K et al in their study among nursing students of Maharashtra found that 87.4% of the study participants knew about various risk factors of breast cancer [12].

In the present study, source of information about BSE were mostly (21.8%) from books and magazines and least from television(1.8%). Majority(65.4%) of the study subjects said they have not received any health education other than that received during their course training period about breast self examination. Ansari et al in their study among female nurses in Bangalore observed that the first sources of information about BSE for the nurses were as follows: 38.9% (35) of the nurses heard first about BSE from BSE educational programme, and 30% (27) of the nurses heard about BSE examination from the nurses and 11.1% (10) of the nurses said they heard about breast cancer from doctor [10].

Chandani K U et al in their educational interventional study among 150 nursing students found that the most common source of information was books (86%). This was followed by the factor of friends and newspapers, which constituted 36% and 28.7% respectively. This information was taken before the interventional programme [13].

In our study, regarding knowledge about when to perform BSE, only 12.9% knew it should be performed from day 7 to day 10 after menstrual cycle. This shows that knowledge regarding the ideal time for performing among the study subjects was poor. Only 25.8% of the study subjects knew BSE should be performed in both in front of the mirror and lying down position. However more than half (53.3%) of the study subjects knew BSE should be performed monthly. The knowledge regarding where to perform BSE was inadequate however more than half of the study subjects knew the ideal frequency of performing BSE. Ansari et al in their study revealed that the knowledge about BSE in terms of its frequency, timing, position and methods were inadequate. 42% of the nurses said that BSE has no relation to menstrual cycle and only 18.9% of nurses said that it should be done monthly. 86.7% of nurses in their study opined that BSE should be performed in standing position and 13.3% said it should be performed in lying down posture [10]. Jayadevan S et al in their study among nurses in United Arab found that 87.7% of the nurses said BSE should be performed monthly preferably on 5th or seventh day after menstruation. They found that 42.6% of nurses opined that BSE can be performed in standing posture and 47% of nurses said that the ideal position to perform BSE is either standing or lying down position.^[14] Similar study conducted by Mekonnen M et al in Gondor among undergraduate nurses revealed that 61.7%, 57.7% and 41% of female nurse students know the correct position, techniques and pattern of BSE respectively. 35.3% of nurses said BSE should be performed monthly and only 24.3% knew when should a woman with regular menstruation do BSE correctly.^[15] Sujindra E et al in their study found that 50.4% and 56.3% knew that BSE has to be done monthly and with palm and minimum three fingers respectively.^[16] Yakubu et al in their study among nurses of Nigeria found that the source of their knowledge about BSE was mainly from colleagues (26.5). Only 14 (13.7%) of the respondents knew that BSE should be conducted around the 5th day after menstrual cycle.^[17] Rachna R et al in their study revealed that majority of nursing students (48.3 %) had good knowledge regarding breast self-examination and among them 41.7 % had average knowledge and only 10% had below average knowledge regarding breast self-examination [18].

Regarding attitude of the study subjects towards BSE, 84% said they think BSE is necessary and 80% of the study subjects advice BSE to others. This shows that attitude of the majority of the study subjects is towards positive side. Sujindra et al in their study found that 93.3% subjects felt it was necessary to do BSE. Yakubu et al in their study found all the 102 respondents (100%) unanimously agreed that BSE is useful, and 84.3% of the respondents said that they encourage others to do BSE [16].

In our study we found that 69.3% of the study subjects practiced breast self-examination out of which only 20.9% were practicing it regularly however, whether they were practicing it efficiently or not could not be commented from our study. Out of the 69 study subjects who do not practice BSE, most of the study subjects (42%) gave the reason that they keep forgetting to do it and 17.4% said they have the fear of finding something positive while 17% said they were not interested to do it. Jayadevan et al found that 84.4% of the respondents reported performing BSE. Among those who were not performing BSE, the potential reasons for non-practice were: 45.8% felt that breast diseases are not a serious problem, lack of time to perform BSE was mentioned by 16.7% of the participants and 4.2% felt that since they did not have any family history of breast cancer there was no need to perform BSE. Their study reported that 61.5% of study subjects perform BSE regularly [14]. Fotekar V et al in their study 54% percent carried out the procedure of BSE at least once every month [11]. Ansari et al in their study found that 24.4% nurses

did not practice BSE and 75.6% nurses practiced BSE but only 33.3% were effectively performing BSE. They found that major reasons for not practicing BSE were: 54.5% were afraid that they will find something positive and 50% said that they don't have the time to practice BSE [10]. In contrast to our study finding, Srivastava K et al in their study among female nurses in a tertiary care center Pune, Maharashtra found that the percentage of those that perform regular BSE was rather low (15.6%) [19].

Katende Godfrey et al in their study among female university students found that majority of the participants (76.5%) had heard about BSE, but less than half (43.6%) had ever performed it [20].

In this study we found that there was significant association between age more than 40 years, parity, health education regarding breast self-examination and practice of BSE. Age was found to have a significant association with breast self-examination practice in a study conducted by Redhwan et al among young Malaysian women [21]. However, there was no significant association found between variables such as marital status, religion, socio-economic status, family history of breast cancer and BSE practices.

CONCLUSION

This study concludes that there is good level of knowledge and awareness about risk factors of breast cancer, average knowledge about frequency, inadequate knowledge about timing, position and good knowledge about methods of performing BSE among female nurses in our study area. The practice of BSE among female nurses was 69.3%. However, the effective practice of BSE is questionable as only 20.9% practice it monthly. Nursing staff as a health care worker plays an important part in educating the society. So creating awareness among them is important. For this purpose, special workshops regarding breast cancer and breast self-examination can be conducted and they can be trained. This can increase the knowledge and also practice among them and indirectly influence other women.

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