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Original Research Article

Knowledge, attitude, practice and awareness of students on breast self-examination: a cross-sectional study

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ABSTRACT

Background: Breast cancer is the leading cause of cancer related deaths globally. it is the common malignancy in women. Lack of early detection leads to low survival rates. Breast self-examination (BSE) is a screening technique that involves examining the breasts for lumps. The aim of the study was to assess the knowledge, attitude and practice of breast self-examination, among the students.
Methods: A cross sectional study was carried out in Noida International University, Greater Noida, Uttar Pradesh, India. Quantitative data was collected using a structured questionnaire, filled by 100 female university students that were selected by convenient sampling method. Descriptive analysis of data was done using SPSS version 17.0 (Chicago USA).
Results: Out of the 100 participants 83% were in the age group of 15-25 years, 25% of them had family history of breast cancer, and it was revealed that majority of them (94%) have heard of breast cancer and 85% of them heard of breast examination. Despite the high knowledge that was cited among the participants, only 43% of them were having good attitudes towards BSE and only 51% among them have ever practiced BSE.
Conclusions: The study revealed good knowledge, negative attitude and low practice towards BSE among the students of Noida International University, Greater Noida, UP State, India. Therefore, there is need to plan and prepare materials for educating the students on BSE to improve primary prevention of breast cancer.

Keywords: Attitude, Breast cancer, Breast self-examination, Knowledge, Practice

INTRODUCTION

Cancer is a group of disease that causes cells in the body to change and spread out of control. Most types of cancer cells form a lump or mass called a tumor, and are named after the part of the body where they originate. Most breast cancers begin either in the breast tissue (lobules), or in the ducts that connect the lobules to the nipple.[1]

Globally, the most common cancer in women is breast cancer, with approximately 1.7 million new cases diagnosed in 2012 (second most common cancer). About 12% of all new cancer cases and 25% of all cancers in women are breast cancer. It is the fifth most common cause of death from cancer in women, according to the American Cancer Society (ACS).[2] The number of cases out of 100,000 women, is still low in developing countries overall than in the West, but death rates from the disease are high. This may be attributed to late diagnosis and lack of treatment facilities.[1]

In India 27 per cent of all cancers are breast cancers, with the incidence rising in the early thirties and peaks at ages 50-64 years. It is estimated that 1 in 28 women is likely to develop breast cancer in her lifetime.

It accounts for almost 20 per cent of all cancer related deaths. It generally affects the age group of 21 to 67 years.[1]

WHO promotes breast cancer control within the context of national cancer control programs and integrated to non-communicable disease prevention and control. It was suggested that early detection of breast cancer remains the cornerstone of breast cancer control.[1]

BSE is a checkup that a woman does by herself at home to look for changes or problems affecting the breast tissue. BSE is recommended as a general approach to increase breast health awareness and thus potentially allow for early detection of any anomalies because it is free, painless and easy to practice. The American cancer society recommends that women starting from age of 20 years should be educated on the pros and cons of performing BSE monthly.[1]

Evidence shows that BSE is effective in reducing mortality from the disease and it has advantages in terms of human economic cost. BSE can detect 40% of breast lesions.[1]

With this background, the present study was designed to assess the knowledge, attitude and practice regarding BSE among the students of Noida International University, Greater Noida, Uttar Pradesh, India.

METHODS

A cross-sectional study was conducted on female students of Noida International University, Greater Noida, Uttar Pradesh, India regarding their knowledge, attitude and practice of BSE. Study period was from December 2017-May 2018.

Participation was on voluntary basis. Anonymity and confidentiality of responses was assured to the participants. Ethical committee approval from the institution was obtained.

The sample size was 100 which were selected based on convenient sampling technique. Inclusion (female students of Noida International University, women that were at least 15 years and not above 59 years, women who were willing to participate) and exclusion criteria (those who were ill during the data collection time, those who were not willing to participate in the study).

Data were collected by using a structured questionnaire. The questionnaire comprised of 27 items (7 items on demographic profile, 10 items on knowledge,4 items on attitude and 6 items on practice).

All the questions were close ended except one that was open ended, correct responses were scored 1 while wrong responses were scored 0.

Data were analyzed using SPSS software (version 17.0 Chicago, USA). Variables were described using frequency distribution and percentages. Correlations were analyzed using Chi square test and Pearson's correlation coefficient.

RESULTS

The study involved 100 female students, response rate was 100%. The age range of the study group was 15-45 years. The demographic characteristic of the students is presented in Table 1.

The response of the students regarding knowledge questions is presented in Table 2. 94% of the participants have heard of breast cancer, 56% answered it was common in the environment. 52% answered it can be detected early. 87% accepted early detection can improve chances of survival. 85% have heard of BSE. The most common source of information was peer group 31%. 62% answered that BSE has to be done by females only. 58% and 35% knew that BSE has to be done monthly and with the palm and minimum of three fingers, respectively. 71% answered that BSE should begin within the age of 15-25 years.

Regarding the response to the attitude questions are shown in Table 3. The result showed that 76% felt it was necessary to do BSE and 51% have done BSE before. The main reason behind doing BSE was to examine the breast regularly (33%). The students who were not practicing BSE reported the following as their reasons of not practicing; absence of family history of breast cancer (13%), 15% mentioned lack of adequate knowledge, absence of symptoms of breast cancer (9%), scared of being diagnosed with breast cancer (8%) and 4% did not think BSE is important.

The response of the study population to practice question is presented in Table 4. Only 14% performed BSE regularly (monthly). 47% started doing BSE in the age of 15-25 years. Majority of them who performed BSE were doing it in the morning (29%). 33% of the participants were doing it in front of the mirror.

Overall, the total knowledge score was 10. The knowledge score was divided into 2 equal divisions; not knowledgeable (0-5 range of score) and knowledgeable (6-10 range of score). The study showed majority of students were knowledgeable regarding BSE (82%), and 18% were not knowledgeable.

Regarding the attitude towards BSE, the participants were categorized into 2 categories: negative attitude (0-2 range of score), positive attitude (3-4 range of score). The overall attitude score was 4. The study revealed negative attitude among 52% of the study population while only 48% showed positive attitude towards BSE.

For the practice score, the participants were categorized into 2 categories; bad practice (0-3 range of score), good practice (4-6 range of score). The overall practice score was 6.the study showed that only 43% of the students were adapting good practice while 57% were adapting bad practices in relation to BSE. The correlation between knowledge score, attitude score and practice score is presented in Table 5. KAP scores upon correlation

revealed a significant positive correlation between total knowledge score and total attitude score only (R value=0.662**). The correlation between knowledge level, attitude level and practice level is presented in Table 6. KAP level upon correlation revealed a significant positive correlation between knowledge level and attitude level only (R value=0.488**).

Table 1: Demographic characteristics of BSE.

Demographic characteristics	Options	Frequency	Percentage
Age (years)	15-25	83	83.0
	26-35	15	15.0
	36-45	2	2.0
	46 and above	0	0.0
Course studying	Medical course	81	81.0
	Non-medical	19	19.0
Education level	Undergraduate	81	81.0
	Post graduate	19	19.0
Marital status	Single	84	84.0
	Married	16	16.0
Religion	Christianity	12	12.0
	Islam	46	46.0
	Hinduism	42	42.0
	Others	0	0.00
Do you have family history of breast cancer?	Yes	25	25.0
	No	75	75.0
If yes, what is the relationship with the person?	Mother	3	3.0
	Aunty	4	4.0
	Grandmother	12	12.0
	Cousin	6	6.0
	Others	0	0.0

Table 2: Findings related to answers of respondents regarding knowledge questions.

Questions	Options	Frequency	Percentage
Have you heard of breast cancer	Yes	94	94.0
	No	6	6.0
Is it common in this environment?	Yes	56	56.0
	No	44	44.0
Can it be detected early?	Yes	52	52.0
	No	48	18.0
Can early detection improve the chance of survival?	Yes	87	87.0
	No	13	13.0
Have you heard of breast self-examination?	Yes	85	85.0
	No	15	15.0
How did you hear about it?	Home	16	16.0
	Peer group	31	31.0
	Media (television, radio, newspaper)	27	27.0
	Others (please specify)	11	11.0
Who should perform BSE?	Male only	6	6.0
	Female only	62	62.0
	Both male and female	17	17.0
At what age should BSE begin?	15-25	71	71
	26-35	10	10
	36-45	4	4
	46 and above	0	0
How often should BSE be performed?	Daily	10	10.00
	Weekly	16	16.0
	Monthly	58	58.0
	Yearly	1	1.00

Continued.

Questions	Options	Frequency	Percentage
How is BSE performed?	Palpate with one finger	11	11.0
	Palpate with palm and minimum of three fingers	35	35.0
	Either by a or b	19	19.0
	Both	20	20

Table 3: Findings related to answers of respondents regarding attitude questions.

Questions	Options	Frequency	Percentage
Do you think BSE is necessary	Yes	76	76.0
	No	24	24.0
Have you done BSE before?	Yes	51	51.0
	No	49	49.0
If yes why?	To examine my breasts regularly	33	33.0
	Breast cancer in my family	16	16.0
	Others	2	2.0

Table 4: Findings related to answers of respondents regarding practice questions.

Questions	Options	Frequency	Percentage
How often do you perform BSE?	Once	3	3.0
	Twice	0	0.0
	When it comes to my mind	34	34.0
	Regularly (monthly)	14	14.0
At what age (years) did you start BSE?	15-25	47	47.0
	26-35	4	4.0
	36-45	0	0.0
	46 and above	0	0.0
When was the last time you performed BSE?	Less than a week ago	28	28.0
	Less than three to six months ago	11	11.0
	Less than one year	12	12.0
What time do you normally perform BSE?	Morning	29	29.0
	Afternoon	7	7.0
	Evening	15	15.0
Where do you usually perform BSE?	In front of the mirror	33	33.0
	Lying in bed	5	5.0
	In the bathroom	18	18.0
Would you want to know more about BSE?	Yes	92	92.0
	No	8	8.0

Table 5: Correlation between knowledge score, attitude score and practice score.

KAP	Correlation coefficient	Total knowledge score	Total attitude score	Total practice score
Total knowledge score	R	1	0.662	-0.109
	P		0.000	0.280
Total attitude score	R	0.662	1	-0.154
	P	0.000		0.126
Total practice score	R	-0.109	-0.154	1
	P	0.280	0.126	

Table 6: Correlation between knowledge level, attitude level and practice level.

KAP	Correlation coefficient	Knowledge level	Attitude level	Practice level
Knowledge level	R	1	0.448	-0.119
	P		0.000	0.239
Attitude level	R	0.448	1	-0.257

Continued.

KAP	Correlation coefficient	Knowledge level	Attitude level	Practice level
	P	0.000		0.010
Practice level	R	-0.119	-0.257	1
	P	0.239	0.010	

DISCUSSION

With the incidence of breast cancer rising, it becomes important to assess the knowledge, attitude and practice of BSE in various age groups. The present study involved female students of NIU (aged 15-59 years) as it can motivate them and instill in them preventive health behavior of practicing BSE regularly. They can disseminate the information to friends as well as family members. Due to the lack of an international standardized questionnaire on Knowledge, attitude and Practice of BSE, a structured questionnaire was formed, it was pretested on group of students for reliability and validity.

The present study findings showed that knowledge does not always translate into practice, as the majority of the students are having good knowledge but approximately half of them were having negative attitude towards BSE and only half of them had ever practiced breast self-examination. These findings were consistent with the findings of the study conducted by Kayode et al 2005, to assess the knowledge, attitude and practice of breast self-examination among female secondary school teachers, where more than half of the respondents have were knowledgeable regarding breast self-examination but were not practicing it.[1] This poor practice reflects on the fact that adequate public education is essential to facilitate early detection of breast cancer.

When the attitude toward BSE was analyzed, it was noted that the majority of the participants (52%) were having negative attitudes towards BSE. These findings were consistent with the findings of study conducted by Erdem et al who assessed the knowledge, attitudes and behaviors about breast self-examination and mammography among female primary healthcare workers in Diyarbakir turkey, where the participants in the study had adequate knowledge of BSE, but it is not reflected in their attitudes.[1] This indicates that there is an urge among the participants to inculcate positive health behavior. Moreover, the findings of this study revealed that the present study population is more enthusiastic to gain information regarding BSE as 92% of them showed interest in wanting to know more about BSE.

The present study revealed that out of the 100 participants that were included in the study, only 51 among them had ever practiced BSE and 49 among them had never practiced it in their lives. Out of the 51 that had ever practiced BSE, 33 of them revealed that they practice BSE in other to examine their breasts for any anomaly, 16 of them mentioned having family history of breast cancer as their reason of practicing BSE and 2 of them said they practice BSE because they want to be familiar with their breast.

Some of the reasons given for not practicing BSE by the 49 students who had never practiced it were: absence of family history of breast cancer as mentioned by 13 of the students, 15 students mentioned lack of adequate knowledge as their reason of not practice, absence of symptoms of breast cancer was mentioned by 9 students, scared of being diagnosed with breast cancer was mentioned by 8 students and 4 students did not think BSE is important and that is why they have never practiced it.

For breast self-examination to be effective screening technique for breast cancer, it needs to be practice regularly, i.e.; every month. The present study findings revealed that among 51% of the participants that practiced BSE, only 14% of them were practicing it monthly. These findings were consistent with the findings of a study that was conducted by Gwarzo 2009, which revealed that even though 57% of the respondents had ever practiced BSE, only 19% of them were practicing it on regular basis (monthly).[3]

In another study that was conducted in Arab American University Jenin, to assess the knowledge, attitude and practice of breast self-examination among Nursing students, it was found out that 75.3% of participants had positive attitude towards BSE, but only 4.1% practice BSE always every month.[4]

The present study revealed a significant positive correlation between knowledge score and attitude score (R value=0.662**), the findings also revealed a negative correlation between knowledge and practice score (R value=-0.109), and a significant negative correlation between attitude and practice score (R value=-0.154**). This findings were consistent to the findings of study conducted by Dolardoshi et al to assess the knowledge, attitude and practice of BSE among female dental students in Hyderabad, where the Knowledge, attitude and practice score upon correlation showed a significant positive correlation between knowledge and attitude scores only (R value=02129*).[5] In another study conducted in Nemenqani et al to assess the knowledge, attitude and practice of breast self-examination among female students, it was found out that a significant positive correlation is seen between knowledge score and attitude score only (R= 0.449).[5] This finding brings to light that if awareness and health education programs are conducted, it might result in negative behavior changing to positive healthy practices. Creation of awareness among the participants regarding breast self-examination was done after filling out of the

questionnaire by the participants, an information pamphlet on breast self-examination was distributed to them by the researcher.

The information pamphlet provided information on the following aspects: (a) why should BSE be performed; (b) when should BSE be performed; and (c) the methods of performing BSE.

Limitations

The study also had several limitations. The sample size of the study was relatively small and may pose restriction for broader generalization. Even though the questionnaire utilized in the study was pretested, it may limit the comparability of the results with other studies. Furthermore, the data were collected by self-report, which may be a source of bias.

CONCLUSION

The present study revealed good knowledge, negative attitude and low practice towards breast self-examination among the students. Therefore, there is a need to plan and prepare materials for education regarding breast self-examination that will improve the attitudes and practice of the students towards BSE.

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