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Original Research Article

Assessment of knowledge and attitude on breast self-examination among female college students at Adichuchanagiri University

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ABSTRACT

Background: Breast self-examination (BSE) is a preventive and easy way for people to keep an eye on the health of their breasts. People who routinely examine their breasts may be able to identify changes or abnormalities at an early stage, which may help in the early diagnosis of breast cancer. This self-care routine encourages an active approach to breast health and actively participate in their own well-being. Objectives of the study were assessment of the knowledge and attitude on breast self-examination among female college students, to assess the major barrier to perform breast self-examination, and to assess the impact of pharmacist mediated education program on breast cancer.
Methods: This study is an interventional cross-sectional community based-survey. 1007 students' female college students at Adichuchanagiri University in B. G. Nagar belonging to 18-33 years were chosen at random using stratified sampling. Knowledge, attitude on breast cancer. Data was analyzed using statistical package for the social science (SPSS) version 25.
Results: In pre-test out of 1007 students 251 students had good knowledge about breast self-examination. In post-test 1006 members had good knowledge about breast self-examination. In our study statistical relation found between pre and post questionnaires (p=0.001).
Conclusions: The study emphasizes how important it is to launch educational programs to increase awareness of breast self-examination. Additionally, awareness needs to be raised by removing known barriers. It is important to encourage women in the community to self-examine their breasts and to report any changes to a doctor as soon as possible.

Keywords: Breast cancer, Breast self-examination, Clinical breast examination

INTRODUCTION

Breast cancer (BC) is a disease that results from uncontrolled growth and changes in breast tissue, typically resulting in a lump or mass. It is the most common cancer and also the primary cause of mortality in female patients around the world.[1] Age-adjusted cancer rate rates were reported to be as high as 41 per 100,000 women in Delhi, with Chennai (37.9), Bangalore (34.4), and Thiruvananthapuram district (33.7) following closely after.[2]

Mammography, clinical breast examinations (CBEs), and breast self-examinations (BSEs) are advised preventive measures to lower the morbidity and mortality of breast cancer.[2,3] One simple, low-cost, non-invasive preventive screening strategy for earlier breast cancer diagnosis is breast self-examination.[4-6] Basically BSE entails the woman from touching her breast for lumps, size, shape, texture, and redness of the skin surrounding the breast or nipple, as well as for discharge, erosion, and painless lumps in the breast.[5,7,8]

The examination can be done in private and has no financial expense other than the initial educating sessions, which makes BSE an attractive option for routine screening. Even though BSE is a short, easy, and reasonably inexpensive procedure, it seems that many

women either do it inconsistently or not at all.[9,10] If detected early, breast cancer can be treated in the early stages of the disease, meaning BSE is something all women should prioritize.[11] BSE alone is believed to be appropriate and effective method of ensuring early detection for breast cancer. It could detect 40% of breast lesion among women.[12]

In the early phases of growth, when there is little chance of spread, BSE can be performed every month between the seventh and tenth day of the menstrual cycle, improving the chances of survival if treated.[5,13,14] Using the tips of your fingers instead of your palm, feel for lumps in your breasts while using the BSE technique in an erect posture, the woman would be lying, sitting, or standing. 95% of breast cancers and 65% of early minimum breast cancers can be detected by women using BSE, according to observations.[5,15,16] BSE can help screen for tumors, cysts, and other abnormalities in the breast.[11]

The young female university students aged from 18 to 26 are already passing their reproductive age and are the future mothers. Also, they are considered to be the most educated segment of the population. they can help in spreading the knowledge and awareness among their own family, friends and community in large.[17] If female universities student has sufficient knowledge about breast cancer awareness about BSE is expected to help remove misconceptions and empower women regarding their health.[9] They can help prevent cancer in themselves and contribute to reducing the incidence of breast cancer in their community.[18] Therefore, our goal was to assess female university students' knowledge of BSE with the goal of educating them about BSE.

METHODS

Sample size calculation

The minimum of 939 sample size was calculated using formula given, where p is prevalence equal to 63.08, q (100-p) which is 36.92, and d^2 is precision which is equal to 3.15.

$$n = 4pq/d^2$$

Study procedure

Ethical consideration

The approval of institution ethical committee of Adichunchanagiri hospital and research was obtained.

Validation

Validation done to a closed-ended questionnaire measuring knowledge about BSE. And the content validation of the questionnaires by 5 experts was found to be 100%, and the valve of Cronbach's coefficient alpha test was 0.923, which indicated excellent reliability.[19]

Method

This interventional cross-sectional study conducted on female students studying in Adichunchanagiri University in B. G. Nagar. The research was conducted from 20 December 2022 to 31 May 2023. After considering inclusion (all female college students of Adichunchanagiri University studying at pharmacy, medical, paramedical, nursing, BSC and MSC students with age of above 18 years, the participants oral consenting and be willing to fill self-administrative questionnaire) and exclusion criteria (the participants below the age of 18 years, the participants not willing to fill the self -administrative questionnaire), the students was enrolled in the study by using a suitable data collection form with the prepared questionnaire forms. At first, we conducted pre-test by using validated BSE questionaries form, and after that we provided educational leaflet, oral presentation and BSE demonstration. And after 2 weeks we conducted post-test with the same validated BSE questionnaires form with the same female students.

Statistical analysis

Data were transformed to statistical package for the social sciences (SPSS) statistics version 25 for further statistical analysis. The mean, median and standard deviation (SD) used to describe quantitative variables. The Wilcoxon signed rank test was done to conduct a paired difference test of repeated measurements on a single sample to assess whether their population mean ranks differ.

RESULTS

Demographic details

The demographic details are given in Table 1.

Distribution of the knowledge regarding BSE in pre-test and post-test

Among the 1007 students, 465 (46.1%) answered that they knew about breast self-examination, and the remaining were unaware of BSE in the pre-test. In the post-test, after providing a demonstration about BSE. All the students in study 1007 (100%) answered yes; they had heard about breast self-examination after providing a demonstration about breast self-examination. A significant relation was found between the pre and post-tests (p=0.001). Regarding the question of whether the BSE test is advised every month, 394 (37.33%) were answered as yes, BSE is advised to do every month, 77 (7.6%) were answered as no, BSE is advised to do every month, and the remaining respondents were not aware of the BSE in the pre-test. In post-test, all the students in study 1007 (100%) answered that yes, BSE test is advised every month. A significant relation was found between pre and post-test (p=0.001).

And to the question of whether BSE should be performed on 7th day after menstruation begins, majority students 679 (67.4%) were responded as don't know, 80 (7.9%) were answered as no, 236 (23.4%) answered that yes, regarding BSE should be performed on 7th day after menstruation begins. After giving education to them all were answered correctly. And to the question BSE is done in front of the mirror, 544 (59.8%) were answered as don't know, 364 (31.7%) were answered as yes to BSE is done in front of the mirror, and 90 (8.5%) were answered as no to it in pre-test. And in post-test all were answered correctly. A significant relation was found between pre and post-test (p=0.001) (Table 2).

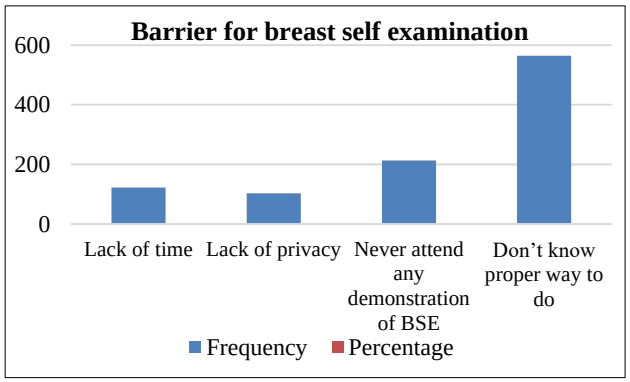

Figure 1: Assessment of barriers for BSE.

Barriers for BSE

Figure 1 shows the barriers to breast self-examination in female students, and answers were taken before conducting the session. The majority of respondents answered that 564 (56%) 'don't know the proper way to do the BSE', 213 (21.1%) were answered that 'never attend any demonstration of BSE', 122 (12.11%) were answered that 'lack of time to do BSE', and 103 (10.2%) were answered that 'lack of privacy to do BSE'.

Table 1: Demographic details of participants.

Variables	Frequency	Percentage (%)
Age (in years)		
18-21	801	79.5
22-25	202	20.0
26-29	4	0.4
30-33	0	0
Study course		
Pharmacy	357	35.41
Medical	367	36.4
Nursing	207	20.53
MSc and BSc	76	7.53
Academic year		
1st	389	38.59
2nd	326	32.34
3rd	220	21.82
4th	32	3.14
5th	25	2.40
6th	15	1.48
Marital status		
Single	987	98.01
Married	20	1.98

Table 2: Assessment of knowledge regarding BSE in pre-test and post-test.

Questions and parameters	Frequency		Percentage		Z value	P value
	Pre-test	Post-test	Pre-test	Post-test		
Do you know what is BSE?						
Yes	465	1007	46.1	100	10.672	<0.001**
No	146	0	14.49	0		
Don't know	394	0	39.1	0		
Do you think every month BSE testing is advised?						
Yes	376	1007	37.35	100	18.690	<0.001**
No	77	0	7.6	0		
Don't know	542	0	53.8	0		
Do you think BSE should be performed on 7th day after menstruation begins?						
Yes	236	1007	23.4	100	21.742	<0.001**
No	80	0	7.9	0		
Don't know	679	0	67.4	0		
Do you think BSE is done in front of the mirror?						
Yes	364	1007	59.8	100	20.197	<0.001**
No	90	0	8.5	0		
Don't know	544	0	31.7	0		
Do you think while performing BSE, the pad of the fingers should be used?						
Yes	329	1006	33.0	99.99	18.031	<0.001**
No	73	1	7.3	0.099		
Don't know	595	0	59.7	0		

*Statistically significant.

DISCUSSION

This study performed among female college students, in the age category most of participants were belong to 18-21 aged group, in academic year category most of participants were 1st year, study suggests a statistically significant difference between female college students before and after educational session regarding BSE.

In pre-test and post-test level of knowledge regarding BSE

Out of 1007 participants, 251 (24.9%) had good knowledge regarding BSE, 208 (20.6%) had moderate knowledge about BSE, 548 (54.4%) were had poor knowledge.

After the educational session including leaflets distribution, demonstration on breast cancer and BSE by oral presentation and video presentation of BSE. Study done by Ranganath et al shows that students did not have sufficient knowledge and skills to correctly perform the steps of BSE before the intervention. The reasons for this could be a lack of awareness, training, and motivation.[20] Only 30.1% of the students in this survey knew about BSE, according to the study.[21] A similarly low prevalence of practicing BSE was reported in a study from Ajman in the United Arab Emirates.[22] According to the study by Paulsamy et al 77% of the females had insufficient understanding of BSE, and 61% of them exhibited poor BSE practices.[23] According to the amount of knowledge demonstrated by the study by Nandimath et al 55.6% of the nurses felt that BSE should be done once every six months, whereas 18.9% thought it should be done every month.[24]

In our present study, 1006 (99.9%) were had good knowledge about BSE after educational session, rest of participant had moderate knowledge about BSE. The post-test of the present study demonstrated significant improvements in students' performance of BSE, which can be clearly attributed to the skills activity, which involved a demonstration of all the steps of a BSE using breast model, a video and live demonstration of BSE.

In pre-test out of 1007 students 251 students had good knowledge about BSE. In post-test 1006 members had good knowledge about BSE. In our study statistical relation found between pre and post questionnaires (p=0.001).

According to our survey, 251 students knew about BSE 756 female students lacked the knowledge and awareness of BSE that is essential for identifying breast cancer in its earlier stages and reducing mortality. After conducting session 1006 members had good knowledge in practice and were aware of BSE.

The World Health Organization (WHO) promotes raising public awareness of breast cancer and encouraging early detection in both students and women, encouraging them to begin BSE habits on the same day of every month. Also, women must be aware of the risk factors and symptoms of breast cancer in order to take the proper preventative measures.

The study was conducted over a fixed period of time and was limited to students with a science-oriented background and this study done excluded who were not willing to participate.

CONCLUSION

The study highlights the necessity of educational initiatives to acquire more knowledge of breast cancer and BSE. And by removing known barriers, awareness needs to be increased. Women in the community should be encouraged to self-examine their breasts and to notice any changes as soon as possible so they're able to visit a doctor.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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