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Knowledge attitude practice on breast self-examination in a rural area in North Kerala

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ABSTRACT

Background: Breast cancer is the most common cancer in women. It is estimated that 5,08,000 women died due to breast cancer in 2011 globally. Late detection of breast cancer decreased the survival rate to 56% and the 5-year survival rate reached 85% with early detection of breast cancer. Breast self-examination (BSE) is an inexpensive tool which helps women to detect any early changes in their breasts and thus helps to reduce the breast cancer mortality and morbidity. The present study was designed to determine the knowledge, attitude and practice regarding BSE among women aged 25 years and above.

Methods: A community-based, cross-sectional study was conducted in rural North Kerala, among 206 women aged ≥25 years selected by cluster sampling. Data was collected using a semi-structured questionnaire.

Results: The participants were aged between 25-94 years (mean age 40.15±13.17). 62.6% have heard about BSE. Among the 206 participants, 12% had good knowledge while 10.6% knew the correct technique of doing BSE and only 0.06% knew that BSE must be performed once a month. Though 80.5% have good attitude regarding BSE, only 36% practised BSE and only 0.04% performed it every month. Educational status (high school and below vs higher secondary and above) was found to be significantly associated with knowledge (p<0.001) and practice (p=0.003). Knowledge regarding BSE was significantly associated with practice (p<0.001) while family history of breast cancer was not (p=0.072).

Conclusions: The respondents had good attitude regarding BSE but knowledge and practice on BSE were very poor. Educational status has an influence on the knowledge and practice while family history did not have any influence.

Keywords: BSE, Kerala, Knowledge, Practice, Women

INTRODUCTION

Breast cancer is the most common cancer in women. As per global health estimates, over 508 000 women died in 2011 due to breast cancer. Almost 50% of the breast cancer cases and 58% of deaths due to the disease occur in less developed countries. Breast cancer is the most common female malignancy linked with high levels of morbidity and mortality in the developing countries due to delayed diagnosis. Breast cancer is the second most common cancer among women in India. The age-

standardized incidence rate of breast cancer is 22.9 and the mortality rate is 11.19.²

Breast cancer occurs in a visible organ and can be detected and treated at an early stage. The 5-year survival rate is 85% if detected early and is 56% if detected late. The lack of early detection, inadequate diagnostic and treatment facilities in the less developed countries contribute to the low survival rates. Lack of public awareness of breast cancer, absence of organized screening programs, lack of accessible and effective

treatment options, and also the cultural beliefs have resulted in the late detection of cases.²

WHO recommended preventive techniques to reduce breast cancer mortality and morbidity include early detection through breast self examination (BSE), clinical breast examination (CBE), and mammography. DEE and mammography require hospital visits and specialized equipments and expertise whereas BSE is an inexpensive tool that can be carried out by a woman on herself to detect any changes in her breasts as early as possible. Delta reduced by the reduced b

In a study conducted by Kumarasamy et al among rural women in Trichy, Tamil Nadu, most of the women (89%) were aware of breast cancer while only 26% of the women were aware of BSE. Only 18% have ever checked their breasts and only 5% practiced BSE regularly. Awareness of BSE was found to be significantly associated with age and educational status.³

Aims and objective

 To assess the knowledge, attitude and practice regarding breast self examination (BSE) among women aged 25 years and above in a rural area in North Kerala.

METHODS

A cross sectional study was conducted in Vettathoor panchayath, the rural field practice area of our teaching hospital between 1st June 2017 - 30th August 2017. List of households with women more than 25 years were obtained from five subcentres of Vettathoor Primary Health Centre.

The minimum sample size calculated was 122, considering prevalence of knowledge of right technique of BSE as 43%, absolute error of 9% and using the formula [Sample size=4pq/d²]. To minimize the design effect, the obtained sample size was multiplied with 1.5. Our final minimum sample size was 183. Cluster sampling method was adopted and the 5 subcentres of Vettathoor PHC were identified as 5 clusters. Women aged 25 years and above were selected from each of these 5 clusters based on probability proportionate to size. The first house in each cluster was chosen randomly and subsequently houses with women ≥25 years were selected till the required sample size was attained. Similar process was repeated in other clusters. In houses where there were more than one woman ≥25 years, one woman was selected randomly. Interview was conducted using a predesigned semi-structured questionnaire after getting the informed consent. The questionnaire had a total of 14 questions of which 8 questions were pertaining to knowledge, 3 questions each were to assess the attitude and practice.

After interviewing, BSE was demonstrated to each of the respondent and they were given educational materials on the same.

Working definition

BSE is a screening method used for early detection of breast cancer. The method involves women looking at and feeling each breast and axilla for possible lumps or swelling.

Each of the 8 questions pertaining to knowledge was scored 2 if correct, 1 if partially correct and 0 if wrong. When the participant had full knowledge on visual inspection and palpation of both breasts and axilla, she was considered to have the correct knowledge of BSE technique (score of 2). If she didn't have the complete knowledge on BSE technique, her score is 1. If the score is 0, it was considered that she had no knowledge on BSE technique. The scores ranged from 0-16. A score of 1-5 (≤30%) was considered as 'poor', a score of 5.1-10 (30.1-60%) was considered as 'average' and a score of 10.1-16 (60.1-100%) was considered to be 'good'.

Attitude was recorded as correct or wrong. Practice was recorded as good, average and poor based on the scores awarded to each of the 3 questions. If they practised both inspection and palpation of both breasts and axilla on the 10th day after onset of menstruation/ on a fixed day of each month, the scoring was 2 (good). Any variation in this practice was considered as partially correct and the scoring was 1(average). Not practising BSE scored 0 (poor).

Data was entered and analysed using SPSS software version 22. Descriptive analysis was used to describe the study group. Knowledge, attitude and practices regarding BSE were expressed in proportions. Pearsons Chi square test was used to identify the significance of association between predictor and outcome variables. Fischer exact test was done when the expected cell count was less than 5. A p value of <0.05 was considered significant.

RESULTS

A total of 206 females in the age group of 25-94 years were included in the study. Their mean age was 40.15 ± 13.17 years. 80.1% of them were home-makers. More than a third of them (38.3%) belonged to the Class 3 according to modified B G Prasad classification (Table 1).

Of the 206 participants, 6.8% were nulliparous, 14.1% had only one child and majority (64.1%) had 2 to 3 children. Majority (87.5%) breast fed their children for 2 and more years. Three of the participants have a family history of breast cancer.

Table 1: Baseline characteristics of study participants (n=206).

	N (%)			
Education qualification				
Lower primary	28 (13.6)			
Upper primary	32 (15.5)			
High school	89 (43.2)			
Higher secondary	19 (9.2)			
Degree	30 (14.6)			
Post graduate	8 (3.9)			
Occupational status				
Home makers	165 (80.1)			
Unskilled	10 (4.9)			
Semiskilled	16 (7.6)			
Skilled	15 (7.4)			
Socioeconomic classification (Modified B.G Prasad				
classification)				
Class 1	20 (9.7)			
Class 2	52 (25.2)			
Class 3	79 (38.3)			
Class 4	53 (25.7)			
Class 5	2 (1.0)			

Knowledge

More than half of the women responded that breast cancer can be detected early. Three fourths of them opined that early detection improved the chances of survival (Table 2). More than half (55.4%) did not know how to detect breast cancer in early stages. 36.8% of the respondents knew that breast cancer can be detected early by BSE, while 7.8% believed that breast cancer can be detected early using ultrasonography/mammography.

Table 2: Knowledge on breast cancer detection and BSE.

Question	Yes (%)	No (%)	Don't know (%)
Can breast cancer be detected early?	116 (56.3)	77 (37.4)	13 (6.3)
Can early detection improve the chance of survival?	154 (74.8)	24 (11.7)	28 (13.6)
Heard about BSE?	129 (62.6)	77 (37.4)	0 (0.0)

Three fourths of the respondents had poor knowledge on causes of breast cancer. Those who had good knowledge (8.3%) cited family history of breast cancer, decreased physical activity and high fat diet as common causes (Figure 1).

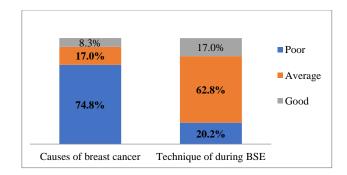


Figure 1: Knowledge on causes of breast cancer and technique of doing BSE.

Table 3: Correct time to do BSE for a women with normal menstruation (n=206).

	(%)
Don't know	82.5
Fixed day of each month	2.4
10 days after onset of menstruation	7.8
At any time	7.3

Based on the score obtained, it is seen that majority of women had poor knowledge (47.1%), 40.3% had an average knowledge on BSE. Only 12.6% of the study subjects had good knowledge.

Attitude

Majority of the women in the study group (80.6%) had a positive attitude towards BSE. 96.1% respondents wanted to know more about breast cancer and its prevention.

Table 4: Reason for their attitude toward BSE.

BSE needed	(n=166)	BSE not needed	(n=40)
Early detection and treatment	136 (81.9)	Don't know how to do it	28 (70)
Doctors'advice	13 (7.8)	Don't think it's important	8 (20)
Breast pain	6 (3.6)	Don't have any symptoms	3 (7.5)
Family history	5 (3.1)	Not having time	1 (2.5)
To examine my breast regularly	4 (2.4)		
Feeling of mass	2 (1.2)		

Practice

It was found that 63.6% of women in the study group did not perform BSE. Of the 75 who practised BSE, 56 (74.7%) perform only once in a while and 10 (13.3%)

perform on a monthly basis (Figure 2). Among them, only 26.6% used the correct technique.

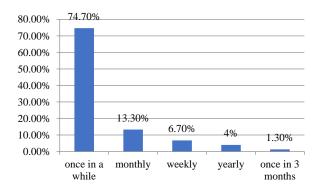


Figure 2: Practice of performing BSE (n=75).

Table 5: Association between selected variables (n=206).

Variable	Fisher exact value	P value
Education and knowledge	36.02	< 0.001
Education and practice	11.79	0.003
Knowledge and practice	79.16	< 0.001
Family history and practice	5.75	0.07
Knowledge and attitude	28.97	< 0.001
Practice and attitude	16.69	< 0.001

Educational status (high school and below v/s higher secondary and above) was found to be significantly associated with knowledge (p<0.001) and practice (p=0.003). Knowledge regarding BSE was significantly associated with practice (p<0.001). Attitude was significantly associated with knowledge and practice (p<0.001) while family history of breast cancer was not significantly associated with practice (p=0.072) (Table 5).

DISCUSSION

As more and more breast cancer cases are being reported, it is important to assess the knowledge, attitude and practice of BSE in the community. In this study, the participants were aged between 25-94 years. 62.6% of them have heard about BSE. 12.6% had good knowledge while 17% knew the correct technique of doing BSE. Though 80.6% have good attitude regarding BSE, only 36% practised BSE and among those who practised, only 13.36% (0.04% in the study population) performed BSE every month.

More than half (56.3%) responded that breast cancer can be detected early and nearly three fourths (74.8%) said that early detection improved the chances of survival. This is less when compared to the study done among female medical students of University of Lagos and the study among the market women in Abakaliki in Southeast

Nigeria. ^{13,17} More than half of the participants (55.4%) did not know about the methods of early detection of breast cancer. In our study, 36.8% of the respondents said that breast cancer can be detected early by BSE. This is high as compared to the rural women in Trichy and less when compared to undergraduate students in University of Buea study and market women in Abakaliki. ^{4,14,17} In our study, 7.8% said that USG/mammography are the methods for early detection of breast cancer which is less compared to study done in Trichy ⁴ and Abakaliki. ¹⁷

In our study, 74.8% had poor knowledge about causes of breast cancer. The commonly cited causes of breast cancer in our study were family history of breast cancer and decreased physical activity. In contrast, a study in Turkey cited the common causes of breast cancer as personal history of breast cancer, family history and recent oral contraceptive use. ¹¹

Knowledge on techniques of doing BSE was good in 17% and majority of them (62.8%) had average knowledge on the technique of BSE. This is high when compared to studies done in University of Buea and Abakaliki and less compared to another study in Buea and screening study among rural women in North Kerala. 7,14,19,16 In our study, only 12.6% responded that BSE should be performed monthly which is similar to study done in Trichy and is less when compared to studies in Lagos, Ethiopia and Cameroon. 4,13,18,19 That BSE must be done 10 days after onset of menstruation by women with regular menstruation was known only to 7.8% of the respondents. This is less when compared to study done in Trichy, Nigeria and Ethiopia. 4,11,18 As per the scores obtained, only 12.6% had good knowledge on BSE which is more when compared to rural women in Trichy and female health science students in Ethiopia. 4,18

80.6% of our study population think that BSE has to be done. This is high compared to study among the female medical students of University of Lagos. Similar to the rural women in Trichy, 96.1% of the respondents have a positive attitude toward BSE. This is high in comparison to the studies in the University of Buea and Adama Science and Technology University Ethiopia.

In our study, 36.4% of respondents perform BSE. This is more when compared to the rural women in Trichy and market women in Abakaliki. ¹⁷ In our study only 0.04% perform monthly which is similar to study in market women in Abakalki and less compared to the rural women in Trichy. ^{4,17}

Educational status (high school and below v/s higher secondary and above) was found to be significantly associated with knowledge (p<0.001) and practice (p<0.003) similar to study done in Turkey. ¹¹ Knowledge regarding BSE was significantly associated with its practice (p<0.001) which is similar to study among undergraduate students in the University of Buea. ¹⁴ The attitude towards BSE was significantly associated with

knowledge and practice (p<0.001) which is similar to Buea study.¹⁴ In our study family history of breast cancer and practice of BSE were not significantly associated (p=0.072).

CONCLUSION

In this study, it was found that 3 women with a positive family history for breast cancer were not aware of BSE. It is quite alarming that doctors do not educate the relatives on the importance of BSE in early detection & treatment of breast cancer. Similar studies if done on a large scale will bring out more gaps in the knowledge, attitude & practice regarding BSE and also provide opportunities for educating the women during the conduct of the studies.

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Institutional Ethics Committee

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