

Original Research Article

Breast cancer awareness and breast self-examination practice among women in the rural field practice area of a medical college, Karnataka

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ABSTRACT

Background: Breast cancer is an important cause of morbidity and mortality among women in the developing world, which is also highly amenable for prevention and treatment, with regular screening methods.

Methods: A cross sectional study was conducted among rural women. A total of 516 women above 18 years, from rural field practice area, participated in the study. A predesigned semi-structured study instrument was used to collect the data through interview method.

Results: Among the 516 participants, 285 (55%) have never heard of breast cancer, media (56%) was the commonest source of information about breast cancer, 444 (86%) of them never knew what breast self examination, and only 43 (8.3%) were ever taught on how to do BSE and 37 (7%) practiced BSE.

Conclusions: There was a low level of awareness on breast cancer and BSE as well as low practice of BSE among women in rural area of Karnataka, hence there is a need to increase the level of awareness on breast cancer and practice of BSE through health education programme by integrating with primary health care facilities for appropriate care, treatment and referral.

Keywords: Awareness, Breast cancer, Breast Self Examination, KAP

INTRODUCTION

Worldwide, breast cancer is the most commonly diagnosed cancer among females, impacting 2.1 million women each year, or contributing to, one in four of all new cancer; it is also the leading cause of cancer death in women accounting for 627,000 (15%) deaths.¹ Although the incidence rates of Breast cancer are high in the developed countries, the mortality rates in the developing countries are higher because of the delay in the diagnosis and treatment. In India, breast cancers is the commonest cancer in women accounting for about 27.7% of all cancers, with 1, 62,468 new cases and 87,090 deaths were reported in the year 2018.¹⁻⁴

There is evidence that screening reduces mortality from breast cancer. The 5-year survival rate with early detection is 85%, whereas later detection is about 56%.³

Basic techniques for screening for breast cancer includes breast self examination (BSE), clinical breast examination (CBE) and mammography. Several studies show that BSE is a simple, feasible way for early detection of breast cancer in low-middle income countries. The World Health Organization have determined that only BSE can provide early diagnosis of breast cancer in many parts of the world.⁵ There is evidence that women who correctly practice BSE monthly are likely to detect lump in early stages of its development, resulting in early treatment and better survival rate.⁶

Even though BSE is a simple, quick, and cost-free procedure, the practice of BSE is low and varies in different countries; in India, it varied from 0 to 52%.^{7,8} Lack of time, lack of self-confidence in their ability to perform the technique correctly, fear of possible discovery of a lump, and embarrassment associated with

manipulation of the breast have been cited as reasons for not practicing BSE.⁹

With the importance of BSE in the early detection of breast cancer and the fact that it is cost effective and easy to perform, this study was conducted to assess the level of awareness on breast cancer, BSE and practice of BSE among the rural women of Chunchunguppe, Karnataka.

METHODS

This community based cross-sectional study was conducted at Chunchunguppe and surrounding villages which is situated 28 km from Bangalore, it is a rural field practice area, attached to the Department of Community Medicine, Raja Rajeswari Medical College and Hospital. Chunchunguppe caters to a population of 8225 people living in 25 surrounding villages, among which 9 villages were selected randomly for the study.

Ethical clearance was obtained from the institution ethical committee. The details of all the villages were taken from the rural health training centre. The study was conducted for a period of one month from April to May, 2019.

Inclusion criteria

All women above 18 years of age who were available at home during the time of interview and willing to participate were included for the study. Informed written consent was taken.

The enumerators included interns and MBBS student, data was collected and entered in Google forms. The students were trained thoroughly on how to administer the questionnaire, fill and submit the Google forms. Houses in the village were approached randomly, and after obtaining consent from the select women who met study criteria, close ended question with multiple choices was administered by the enumerators. For quality control the enumerators were supervised by the department postgraduate. This process continued until all the houses were covered in each village. Followed by the interview, knowledge about how to perform breast self examination was imparted using a video.

Data collected was analyzed using Epi info version 3.5.3 of the CDC Atlanta, USA. Descriptive statistics such as mean, standard deviation were employed to summarize the qualitative data such as age. Frequency and percentage were computed for qualitative parameters such as awareness and practice on Breast Self Examination. The association between variables was tested using Chi square statistics. Significance was set at $p < 0.05$.

RESULTS

Total of 527 women were contacted for the study of which 516 women participated in the study with the response

rate of 98%. The participants were between 18 to 60 years, with mean age of 33.5 ± 8.5 years. Women in the 25 to 34 years of age constituted the highest age group (34.5%). Majority were Hindus (96.3%), married (87.9%), and housewives (66.2%). More than half of the participants' education status was up to high school (84.8%) and below poverty line card holder (83%). Table 1 shows the socio demographic details of the study participants.

Table 1: Socio demographic characteristics of study participants.

Variables	Frequency	Percentage
Age (in years)		
Less than 40	272	52.7
More than 40	244	47.3
Marital status		
Married	454	87.9
Single/widowed/separated	62	12.1
Occupation		
Employed	174	33.8
House wife	342	66.2
Education		
Above high school	78	15.2
High school and below	438	84.8
Income		
Above poverty line	88	17
Below poverty line	428	83

Table 2: Knowledge of breast cancer and breast cancer prevention.*

Variables	Frequency	Percentage
1) Have you heard of breast cancer		
Yes	231	44.7
No	285	55.3
Total	516	100
2) Is breast cancer preventable?		
Yes	124	24.0
No	392	76.0
Total	516	100
3) What are the sources of information*		
Hospital	56	24
Friends and relatives	70	31
Others (media, books, magazine)	130	56
4) Family members diagnosed with breast cancer?		
Yes	30	6.0
No	486	94.0
Total	516	100
*Multiple responses		

Table 2 shows only 231 (44.7%) had ever heard of breast cancer, 124 (24 %) knew breast cancer can be prevented, 130 (56%) got the information from media, hospital and friends and 30 (6%) of the participants had a family member diagnosed with breast cancer.

Table 3: Knowledge and practice of breast self examination (BSE).

Question	Response	
	Yes/ Correct	No/ Other
Have you heard of BSE?	72/516 (13.95%)	444/516 (86.05%)
Have you been taught how to do BSE?	43/516 (8.3%)	29/516 (91.7%)
Do you know that BSE is a useful tool for early detection of breast cancer?	67/72 (93.05%)	5/72 (6.95%)
At what age should BSE be started?	8/72 (11.11%)	64/72 (88.89%)
How often should BSE be done?	22/72 (30.56%)	50/72 (69.44%)
What is the best time to do BSE?	20/72 (27.78%)	52/72 (72.22%)
If you discover any abnormality, what should you do?	70/72 (97.22%)	2/72 (2.78%)
Do you practice BSE?	37/72 (51.39%)	35/72 (48.61%)
How often do you practice BSE?	12/72 (32.43%)	60/72 (67.57%)
Have you ever discovered any abnormality in your breast?	2/37 (5.40%)	35/37 (94.6%)
Do you think BSE is good practice? (Out of 72)	63/72 (87.50%)	9/72 (12.5%)

BSE, Guidelines for early detection and screening of Breast Cancer, WHO⁶

Among the study participants 72 (14%) had ever heard of BSE of which 67 felt it is a tool for early detection of breast cancer (Table 3). Only 43 (8.3%) study subjects have been taught on how to do a BSE. Among those who knew of BSE, 63 (87.5%) considered it is good to practice to do BSE regularly, but only 37 (51%) of the women who had knowledge on BSE practiced BSE. Out of the total study participants only 37 (7%) of the study participants practiced BSE on regular basis.

Table 4: Association of education, occupation and income and ever hear heard of breast cancer.

Variables	Heard of breast cancer		
	Yes	No	Total
Education			
Above High school	69	9	78
High school and below	162	276	438
Chi square= 70.95 p<0.001*			
Occupation			
Employed	108	66	174
Housewife	123	219	342
Chi square= 31.78 p<0.001*			
Income			
APL	46	42	88
BPL	185	243	428
Chi square= 2.41 p=0.06			

Table 4 shows there is significant association between high school education, employed subject and having heard about breast cancer which was statistically significant

Table 5 shows association of education, occupation and income with practice of self breast examination. There is an association with education and practice of breast self examination it is statistically significant and also association was found with income and practice of breast self examination.

Table 5: Association of education, occupation, income and practice of breast self examination.

Variable	Practice of breast self examination		
	Yes	No	Total
Education			
Above high school	29	49	78
High school and below	8	430	438
Chi square=124 p<0.001*			
Occupation			
Employed	10	164	174
Housewife	27	315	438
Chi square= 0.79 p<0.37			
Income			
APL	12	76	88
BPL	25	403	428
Chi square= 6.66 p=0.009*			

DISCUSSION

Lack of awareness on breast cancer leads to late diagnosis and increased mortality. American cancer society, no more recommends BSE as a screening tool for early diagnosis of breast cancer but mammography has been advocated as a screening tool in US. In low resource setting where access to mammography is highly limited, in such scenario breast self examination (BSE) is one of the screening methods suitable in low resource setting. It can be done at ease with proper training and would create awareness on breast anatomy and hence help detect any abnormality in the breast which facilitates early health seeking behavior. Only 231 (44.7%) of the study subjects have heard of breast cancer, in spite of breast cancer being the number one cancer among women. Similar results have been found by Sideeq et al and Somdatta et al where 26% and 44% of the study subject had heard about breast cancer respectively, study conducted in a teaching hospital in Maharashtra by Rao et al a higher proportion

of women (81%) never heard of breast cancer.^{11,14,18} In contrast study by Kumarasamy et al among rural women, 89% of women had heard about breast cancer, study in Delhi by Dahiya et al 82% knew that breast cancer was most commonest cancer in women and study by Kalliguddi et al among IT professional in Bangalore, all participants had knowledge on breast cancer, this shows that there is regional difference with respect to awareness on breast cancer, the reason could be the urban women are educated and better informed than the rural counterparts.^{12,16,17}

Awareness of breast self examination (BSE) was low, only 14% of the study subject had heard of BSE as a screening tool for breast cancer and 6% of them practiced BSE. Similar results were found by Sideeq et al where 8% women knew about BSE and 4% practiced BSE, study by Somdatta et al showed that 11% were aware about BSE and only 2 practiced, study by Rao et al showed that none of the subjects had heard nor practiced BSE, study by Yerpude et al showed 30% of the subjects were aware about BSE and 23% practiced it, study by Paunekar showed 25% knew BSE and only few practiced BSE.^{11-15,18} It is the same status in most studies, the reason could be low awareness about BSE or women don't consider their health as priority

The most common source of information about breast cancer was from media (56%) followed by friends and family (31%) similar finding was seen in most of the studies but in a study by Rao et al major source of information was family and friends and study by Dahiya et al major source of information was doctors.^{11,12,14,17,18} Health centers can play a major role in creating awareness and motivating women to do BSE

This study reported family history of breast cancer among 6% of study subject, other studies also reported similar finding by Kalliguddi et al, study by Kumarasamy et al had family history of 8.5%, Dahiya et al family history of breast cancer in 4.5%, Rao et al family history of breast cancer in 1.38%.^{12,14,16,17}

This study showed association between education and awareness about breast cancer and breast self examination similar results are shown in most studies.^{11-13,15,16}

Though there has been difference in the awareness about breast cancer and BSE the only thing consistent with most of the study is that higher education status is associated with better awareness about breast cancer and breast self examination. In some studies even with good knowledge on breast cancer and BSE the practice of BSE is poor.^{12,16}

CONCLUSION

The awareness regarding breast cancer as well as knowledge and practice on breast self examination is low among the study subject, hence efforts must be taken by the health sector to disseminate awareness and health

education on breast cancer risk factors, prevention and how to perform breast self examination among women in the reproductive age group, during their visit to health centers or anganwadi centers. Opportunity to educate females regarding the same must be taken up in colleges.

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