



## Original Research Article

## Breast cancer! – Is there enough knowledge and practice?

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## ARTICLE INFO

## Article history:

Received 04-07-2020

Accepted 08-07-2020

Available online 29-10-2020

## Keywords:

Breast self-examination (BSE)

Breast cancer

## ABSTRACT

**Background:** Breast cancer is the most frequent cancer among women worldwide, impacting 2.1 million women each year. In India, it accounts for the second most common cancer in women. Around 80,000 cases are estimated to occur annually and it accounts for 14% of all cancers in women. In 2018- 627,000 women died of breast cancer globally - greatest number of cancer related deaths. The increasing incidence of breast cancer in economically developing countries is influenced likely by lifestyle changes and growing urbanization. Breast cancer is distinguished from other types of cancer by the fact that it occurs in a visible organ and can be detected and treated at an early stage. But the awareness and practice of breast self-examination (BSE) is low which this study tries to explore.

**Materials and Methods:** It is a cross sectional study done in a teaching medical college among the paramedical female students. 200 participants were included using simple random sampling. The questionnaire was administered after getting informed consent and the results were analyzed using IBM-SPSS software version 21.

**Results:** In our study among the 200 participants 174 (87%) of them are aware of the disease breast cancer. Among the 174 participants for 72 participants internet was the major source of information about breast cancer. There was a strong association between the education of the mothers and awareness of breast cancer among students ( $p=0.026$ ). Among 112 participants who are aware of Breast self-examination (BSE) only 17 had performed.

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## 1. Introduction

Breast cancer is the most frequent cancer among women worldwide, impacting 2.1 million women each year.<sup>1</sup> Breast cancer has the highest incidence in women in low and middle-income countries, especially in the highly populated areas of south Asian developing countries.<sup>2,3</sup> In India, it accounts for the second most common cancer in women. Around 80,000 cases are estimated to occur annually. Incidence of breast cancer is predicted to increase to 85 per 100,000 women by 2021.<sup>4</sup> In India it accounts for 14% of all cancers in women.<sup>5</sup> The age-standardized incidence rate of breast cancer among Indian women is 22.9 and the mortality rate is 11.19.<sup>6</sup> In 2018- 627,000 women died of

breast cancer globally - greatest number of cancer related deaths.<sup>1</sup>

The increasing incidence of breast cancer in economically developing countries is influenced likely by lifestyle changes and growing urbanization. Breast cancer is distinguished from other types of cancer by the fact that it occurs in a visible organ and can be detected and treated at an early stage.<sup>7</sup> The 5-year survival rate reached to 85% with early detection whereas later detection decreased the survival rate to 56%.<sup>8</sup> The low survival rates in less developed countries can be attributed to the lack of early detection as well as inadequate diagnosis and treatment facilities. “Key detection is the key to prevention” – but most of the women with breast cancer are diagnosed in late stages mainly due to lack of awareness. Need of the hour is awareness about breast examination, beginning

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from 20 years of age.<sup>2</sup> It is important to understand overall levels of risk awareness and socioeconomic differences in awareness to reduce the risk factors for breast cancer among young women. With the rising breast cancer incidence in India<sup>9</sup> and disproportionately higher mortality,<sup>10</sup> it is essential to understand the level of cancer literacy mainly, because the average age at diagnosis is 10 years younger than women in Western countries.<sup>11</sup> Despite long-standing national programmes, such as the National Cancer Control Programme launched in 1975, under the National Programme for Cardiovascular disease, Diabetes, Cancer and Stroke [(NPCDCS) launched under the 12th five year Plan from 2012 to 2017],<sup>12</sup> to increase awareness and early detection behaviours, the mortality rates for breast cancer continue to rank the highest in the country.<sup>10</sup>

There is a huge difference in breast cancer survival rates worldwide, with an estimated 5-year survival of 80% in developed countries to below 40% for developing countries.<sup>13</sup> According to the World Health Organization (WHO), enhancing breast cancer outcome and survival by early detection remains the foundation of breast cancer regulations. The significant decline in mortality due to breast cancer in the United States from 1975 to 2000 is attributed to constant enhancement in both screening mammography and management.<sup>14</sup>

Recommended preventive techniques to reduce breast cancer mortality and morbidity include breast self-examination (BSE), clinical breast examination (CBE), and mammography.<sup>15</sup> CBE and mammography require hospital visit and specialized equipment and expertise whereas BSE is an inexpensive tool that can be carried out by women themselves.<sup>16</sup> BSE benefits women in two ways: women become familiar with both the appearance and the feel of their breast and detect any changes in their breasts as early as possible.<sup>17</sup> In the literature, it is stated that 90% of the times breast cancer is first noticed by the person herself.<sup>18</sup> Also, several studies have shown that barriers to diagnosis and treatment can be addressed by increasing women's awareness of breast cancer.<sup>19,20</sup> Women can find abnormalities in size and shape of breast on self-examination<sup>21–23</sup> which may be a game changing act in their life.

Therefore, the awareness about the disease, its risk factors, the ways to pick it up earlier by breast self-examination is of much concern which this study tries to assess.

## 2. Materials and Methods

### 2.1. Study type

Cross sectional study.

### 2.2. Study setting

Teaching medical college, Kancheepuram district.

### 2.3. Study participants

The female students pursuing paramedical course.

### 2.4. Sample size calculation

Using  $4pq/l^2$  with the prevalence rate of 81%, the margin of error as 6% and 10% non-responsive rate the total sample size was calculated to be 200.

### 2.5. Sampling technique

Simple random sampling.

### 2.6. Study stool

A self-administered validated and pretested questionnaire was used to collect the details. The questionnaire included four sections: (i) The demographic background of the respondent; (ii) The respondent's knowledge of breast cancer and BSE; (iii) Their attitude towards risk factors for breast cancer; and (iv) Their current practice of Breast self-examination (BSE).

### 2.7. Statistical analysis

The data were analysed using IBM SPSS software version 21.

### 2.8. Ethical consideration

Informed consent was obtained from the study participants in their local language before initiating the study. The benefits and outcome of the study was clearly explained to them.

## 3. Results

In our study among the 200 participants 174 (87%) of them are aware of the disease breast cancer. 96 participants (48%) belong to class III socio economic status according to modified B.G. Prasad's classification and 16 (8%) belong to class V. Among the 174 participants for 72 participants internet was the major source of information about breast cancer, 42 of them heard from the health workers, 36 from family and friends and 24 from television. There was a strong association between the education of the mothers and awareness of breast cancer among students ( $p=0.026$ ) (Table 1). 55% of the participants believe that breast cancer affects only women more than 60 years of age, 21% of them believe that women in reproductive age group only will acquire this disease, 14% of them believe women at any age can acquire this disease. Among 112 participants who are aware of Breast self-examination (BSE) only 17 had performed. The reasons being, 54 out of 112 participants doesn't have complete knowledge to perform, 38 of them claimed that they were busy and no time to perform and 3

**Table 1:** Association between mother's education and awareness in students (n=200)

Education of the mothers	Awareness among the students		P= 0.026
	Aware	Not Aware	
Illiterate	10	14	
Primary	28	08	
Higher secondary	74	04	
Degree	62	-	

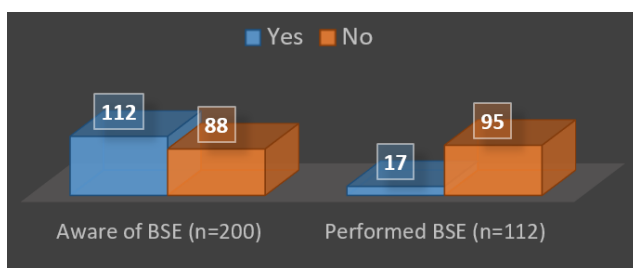
**Table 2:** Perceived risk factors for Breast CA (n=174)

Risk factors	N (%)
Unknown cause	68 (39%)
Inherited/familial	121 (69%)
No breast feeding	33 (18%)
Excessive breastfeeding	12 (6%)
Radiation exposure	148 (85%)
Old age pregnancy	64 (37%)
Smoking/alcohol	82 (47%)
Diet	123 (70%)
Use of Brassieres	41 (23%)
Old age	143 (82%)

**Table 3:** Attitude towards Breast cancer (n=174)

	Agree (%)	Disagree (%)	Not sure (%)
Breast cancer patients should be isolated	26 (14.9%)	94 (54%)	54 (31.03%)
Breast cancer is curable	40 (22.98%)	80 (45.97%)	54 (31.03%)
Breast cancer patients should be allowed to live freely in the community	128 (73.56%)	-	46 (26.43%)
Breast cancer is a punishment from God	42 (24.13%)	64 (36.78%)	68 (39.08%)
Breast cancer patients should be provided with support and home care by the community	162 (93.10%)	-	12 (6.89%)
Breast cancer patients should not be allowed to breast feed	50 (28.73%)	22 (12.64%)	102 (58.62%)
Women should be afraid of breast cancer	148 (85.05%)	22 (12.64%)	04 (2.29%)

said that they are not interested in performing the BSE.

**Fig. 1:** Breast self-examination (BSE)

#### 4. Discussion

The evaluation of awareness about the breast cancer reveals that 87% of them are aware of the disease and mother's education is significantly associated with the child's knowledge about the disease. The attitude towards the disease among the students can be changed if there is

more awareness from the young age. Though 112(56%) participants were aware about the breast self-examination only 17(15%) out of 112 performed it before, this shows the lacunae in inculcating the importance of BSE from the young age. This is consistent with the study done by Ozkan et al.<sup>24</sup> who investigated the level of knowledge regarding self-examination of the breast cancer among 113 midwifery and nursing students. These researches have shown that continuous education program about breast cancer can raise the awareness among the population.

There are few other studies done in various places on the same context like the one by Siddharth et al.<sup>25</sup> who found that 81% of the participants were not aware of the disease breast cancer and education was significantly associated with the knowledge of the disease and the other by Doshi et al.<sup>26</sup> who studied the same and concluded that, the overall total mean knowledge score was  $14.22 \pm 8.04$  with the fourth year students having the maximum mean score ( $19.98 \pm 3.68$ ). And the score reduced in both the knowledge and practice when it came to the third year, second year students.

Madhu Kumar et al.<sup>27</sup> did a study and only 18% of the study population were aware of breast self-examination and very minimal number of participants practiced it regularly. Ceber et al.<sup>28</sup> conducted studies on breast self-examination and health beliefs of Turkish women and stated that physical illnesses and early death can be prevented by early diagnosis of breast cancer. He further stated that one out of seven patients with breast cancer is diagnosed in time.

Even though BSE is a simple, quick, and cost-free procedure, the practice of BSE is low and varies in different countries. In India studies say that it varied from 0 to 52%,<sup>29,30</sup> Philip et al. from England in a study reported that only 54% of the study population practiced BSE. There are several reasons like 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 that have been cited for not practicing BSE.<sup>31,32</sup>

## 5. Conclusion

The awareness about breast cancer is comparatively better but the percentage of practice of breast self-examination is very low. The youngsters who are the future pillars of the society should be braced with all possible knowledge about the risk factors and early detection of any disease as such, and breast cancer being a disease with constant increase in its number it is very important to create awareness about it from their youngest age, as early detection can be a game changer in their life.

## 6. Recommendations

More awareness programs should be conducted at various levels for both the youngsters and their parents about the importance of early detection and to seek medical help as early as possible in case of breast cancer. The BSE should be taught to every girl child and should be incorporated in the health education curriculum from their schooling period.

## 7. Source of Funding

None.

## 8. Conflict of Interest

None.

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**Cite this article:** Ravivarman G, Sharath U. Breast cancer! – Is there enough knowledge and practice?. *Indian J Forensic Community Med* 2020;7(3):144-148.