

Awareness of breast cancer and breast self-examination among female students in South Chennai

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ABSTRACT

Aim: This study aims to evaluate the awareness among women in Southern Chennai about breast cancer and breast self-examination (BSE). **Materials and Methods:** The study was conducted among 384 female students studying in the southern regions of Chennai. A pre-evaluated questionnaire consisting of questions related to demographic data, awareness, assessing, and knowledge of breast cancer and BSE was determined. **Results:** Breast cancer being the most common cancer among women, the questionnaire was collected from a total of 384 female students with age ranging from 18 to 27 years. The general knowledge of breast cancer was very varied among the students with the highest of 75%. The students knew about the symptoms of breast cancer with percentages higher than 30%, responses to questions regarding risk factors were also varied with the highest of 40.5% with late menopause as a risk factor. Among the total students, 57% do not know about the BSE and 43% knew about BSE before the intervention. **Conclusion:** Diagnosis of breast cancer and attention at an early stage by giving appropriate awareness and knowledge of breast cancer and BSE and could mean for better treatment outcomes and complete cure with early reporting of signs and symptoms. This could prove to lower the burden on the symptoms and also the economy on the treatment plan. This study proved that the majority of the female students were not aware of the disease and BSE. Awareness and knowledge were spread among the female students to prevent and lower the chances of breast cancer.

KEY WORDS: Awareness, Breast cancer, Breast self-examination, Knowledge, Questionnaire

INTRODUCTION

Cancer is the uncontrolled growth of the cells which usually forms a tumor which may be benign or malignant. These tumors can invade the surrounding tissues and can metastasize to distant organs or tissues.^[1,2] Breast cancers can start from different parts of the breast. Mostly, the breast cancer begins in the ducts (ductal cancers) and glands (lobular cancers) that carry and produce milk. A small number of cancers (sarcomas and lymphomas) start in other tissues in the breast.^[3,4]

Breast cancer is ranks one among the cancers in the women which accounts for 27% of all cancers and is the leading type of cancers which have a high mortality rate.^[5] The incidence rates in India begin to rise in the early thirties and peak at ages 50–64 years.^[6]

Although many types of breast cancer can cause a lump in the breast.^[7] Many breast cancers are found on screening mammograms which can detect cancers at an earlier stage, often before they can be felt, and before symptoms develop.^[8] Most of the breast lumps in breast cancer are benign. Non-cancerous breast tumors are abnormal growths, but they do not spread outside the breast and they are not life threatening. However, some benign breast lumps can increase a woman's risk of getting breast cancer.^[9,10] Breast cancer spreads easily when the tumor cells enter the blood or lymphatic system. These cells are carried to the various parts of the body and the cancer cells start growing.^[11]

The cause of breast cancer is not fully understood, but there are known risk factors which can cause breast cancer includes age, family history, personal history (having a breast cancer diagnosis in one breast increases the risk of cancer in the other breast), early menstrual cycle or menopausal women, race (White women have a higher risk of developing breast cancer), having no children or the first child

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after age 30, being overweight or obese, use of oral contraceptives, and using combined hormone therapy and alcohol consumption.^[1,4] People with mutations in these genes (BRCA 1 and BRCA 2) are at high risk of developing breast cancer.^[12,13]

Breast Self-examination (BSE)

- It is the method of self-assessing any abnormality in the breast. This is the examination which is done by our own and takes several minutes for examination.
- The first step involves checking for any lumps or any discharge from the breasts. This is not the most accurate form of diagnosis but can also help to assess any change in size, shape, and looking for puckering and dimpling in the breast.
- Check to see if your nipples are turned in (inverted).
- Inspect your breasts with your hands pressed down on your hips, arms raised overhead, and the palms of your hands pressed together.
- Lift your breasts to see if ridges along the bottom are symmetrical.
- Assessing for any painful masses in breasts or in the armpits.
- Looking for any changes in the skin of the breast.^[14,15]

MATERIALS AND METHODS

A prospective cross-sectional study was carried out for about 6 months from July to December 2018. The study included 384 female students studying in colleges in the southern region of Chennai. Informed consent was obtained before giving the questionnaire to the female students. The study was conducted by distributing one set of a questionnaire (42 questions) to each student who was selected based on non-probability convenience sampling technique and they were asked to answer them based on their knowledge and ideologies.

Inclusion Criteria

Female students who are studying in South Chennai were included in the study.

Exclusion Criteria

Women who are not currently studying and who do not study in colleges of South Chennai were excluded from the study.

The questionnaire was developed after an extensive literature search in the related databases. A first draft was built and validated by physicians from oncology and general medicine department. Then, the final draft of the questionnaire was prepared after further reviews.

Questionnaire

It was divided into six sections. The first part includes the respondent's demographics. The second part includes the respondent's general knowledge of breast cancer.

The third and fourth sections include the respondent's knowledge of breast cancer symptoms and risk factors, respectively. The fifth and sixth part includes questions about their knowledge of breast cancer (disease) and BSE, respectively. Answers were designed to be in multiple choices (Yes/No/Do not know). Awareness has been created about self-breast examination and breast cancer among these students. Statistical analysis has been done using statistical analysis system software.

RESULTS

A total of 384 sets of questionnaires were collected. Majority of respondents were above 20 years old (66.2%), unmarried (95.4%), living in urban areas (92.1%), with the regular menstrual cycle (75.6%), and without a family history of breast cancer (96.6%).

Figure 1 is a graph showing students general knowledge of breast cancer.

Of 384 students, 288 students (75%) answered that breast cancer is one of the most common cancers in women. Among 384 students, 197 students (51.2%) ended the section by answering that they have heard about breast self-examination (BSE). The data are established in Figure 1.

Figure 2 shows students' knowledge of symptoms of breast cancer.

About 188 students (48.84%) of 384 students said that "painless lump in breast or axilla" is a symptom and about 204 students (53.2%) among 384 students have answered yes to "changes in the skin of the breast" is a symptom of breast cancer. The student knowledge regarding symptoms of breast cancer is shown in Figure 2.

Figure 3 shows students' knowledge of risk factors of breast cancer development.

Of 384 students, 184 students (38.5%) have said that "old age" is a risk factor and 114 students (29.8%) have said yes to "low-fat diet" being a risk factor. The other risk factors of breast cancer are shown in Figure 3.

Among 384 students, 149 students (38.9%) have answered that they knew someone who has/had breast cancer and about 164 students (42.9%) have answered that they knew about BSE before the session. The responses of the students to the last section of the questionnaire (evaluation of breast cancer) are concise in Table 1.

DISCUSSION

Breast cancer occurs a decade earlier in Indian women when compared with the women of developed countries and is a leading cause of mortality in

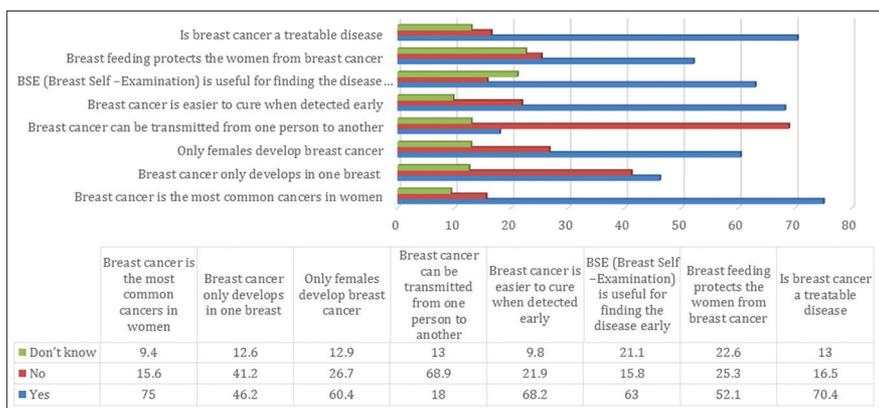


Figure 1: Students general knowledge of breast cancer

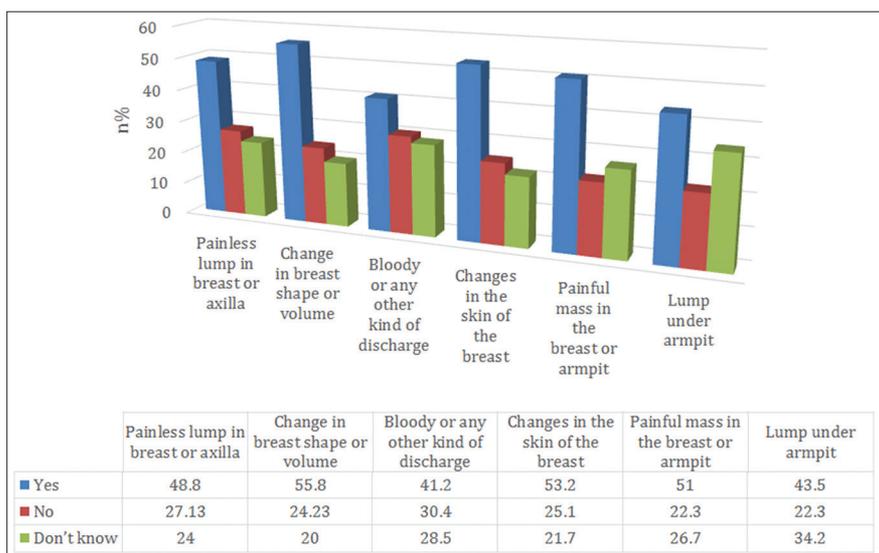


Figure 2: Symptoms of breast cancer

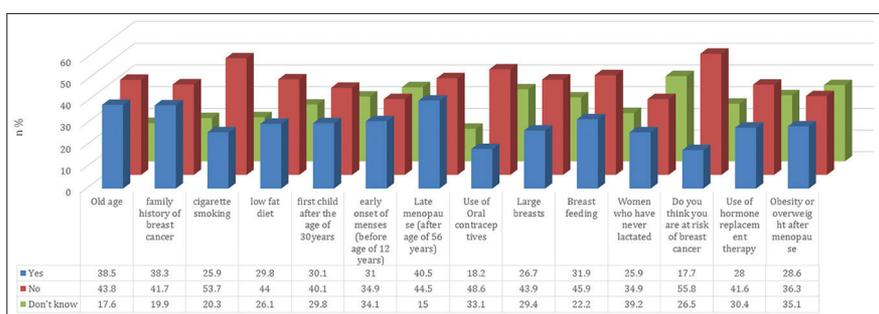


Figure 3: Risk factors of breast cancer development

developing countries like India. This is mainly due to the lack of awareness among women. This study is a direct insight into the level of awareness among the female students who are in the southern parts of Chennai. This study proved to be worth of the energy expense as most of the students (40%) who were studied did not know about risk factors of breast cancer or the techniques to evaluate the lump by BSE. These results are very much consistent with the studies that were performed among students in Sicily and in Abu-Dhabi in study conducted by Shaima K *et al* (2011).^[11]

Contradicting the general belief, the study showed no relation between demographic variables and general awareness. Similar findings were observed in the study conducted by Shalini *et al*.^[16] The knowledge score and awareness levels were not significantly different among the female students and also, the marital status of the women did not affect the results significantly.

Ramirez *et al*.^[17] investigated risk factors for late detection and diagnosis of breast cancer shows that the unawareness and seriousness of the symptoms of

Table 1: Student's response to the evaluation of breast cancer

Evaluation of breast cancer	Total number of students (n %)		
	Yes	No	Do not know
Do you know anyone who has breast cancer	38.9	49.3	11.8
Do you know about the symptoms and risk factors of breast cancer before	45.5	38.3	16.1
Did you know about breast self-examination before	42.9	39.8	17.3

breast cancer and lack of knowledge, chances of late presentation are high in symptoms that are atypical for cancer. Thus, understanding the symptoms and its seriousness is important in the diagnosis of breast cancer. In this study, change in breast shape, skin color, and volume were found to be the symptom with the highest response.^[18] Most of the women who underwent the study did not know about the risk factors. Late menopause was the most recognized risk factor among the students with 40.5% responses. The study showed that 42.9% of the women did not know about BSE at all before the intervention.

Vasishta *et al.* (2018)^[19] study involving a pre-intervention and post-intervention questionnaire proved to be effective in creating awareness of breast cancer and BSE among women of all demographic background which means that a government-initiated or financed awareness program could help in enhancing knowledge of breast cancer among women. From this study, it was believed that a higher response rate can be obtained using a closed-ended type of questions due to the ease of answering them.

CONCLUSION

Diagnosis of breast cancer and attention at an early stage by giving appropriate awareness and knowledge of breast cancer and BSE and could mean for better treatment outcomes and complete cure with early reporting of signs and symptoms. This could prove to lower the burden on the symptoms and also the economy on the treatment plan. This study proved that the majority of the female students were not aware of the disease and BSE. Awareness and knowledge were spread among the female students to prevent and lower the chances of breast cancer.

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