

Breast tumors and college students: a study of their knowledge, attitude and practice

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Abstract

Introduction: Breast cancer is a public health problem worldwide. Breast cancer can be prevented through inexpensive behavioral change. At the same time, not all breast lumps are cancerous and benign breast tumors can be a major source of confusion among young women. This study aimed to assess the level of awareness and risk reduction knowledge about breast tumors and whether the participants are aware about breast self examination (BSE).

Materials and Method: A community-based cross-sectional descriptive study involving data from 400 female college students aged above 18 years. The data was collected using a structured and validated questionnaire. The data entry was done in Microsoft excel spreadsheet and SPSS version 17 and descriptive (frequency and percentage) statistics was used for analysis.

Results: The self-reported data from 400 college women was obtained with median age of 19. The knowledge about the risk factors among college going female population was low. 42.5% participants knew that breast lump is the most common presentation. 65.75% of participants were aware of breast self examination. Only 11% of 65.75% practiced self breast examination regularly. Remaining 89% didn't know how to practice BSE.

Conclusion: This study included college population, yet showed a tremendous lack of knowledge about breast cancer, which shows the ineffectiveness of the breast cancer awareness initiatives in this region. This study highlights the need to formulate awareness programmes and health education to provide breast cancer prevention education targeting college women.

Keyword: Breast tumor, Breast self examination, Awareness.

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Introduction

Breast cancer is the second most common cancer worldwide, with nearly 1.7 million cases in 2012. It ranks as the most prevalent cancer among women and represents about one in four of all cancers in women. It is also the most common cause of cancer death among women. Since the worldwide 2008 estimates, breast cancer incidence has increased by more than 20%, while mortality has increased by 14%.⁽¹⁾

In Indian scenario, the GLOBOCAN (WHO) statistics for the year 2012 showed that the incidence of breast cancer was about 27% and mortality was about 21.5%.⁽²⁾ Over 70% of Indian women present with advanced stages of breast cancer, at which time only palliative care can be given. This is primarily related to the inadequate awareness about breast cancer.^(3,4)

Regular breast screening is the best way to detect early breast cancer as they are most often successfully treated thus helps in saving, and it makes breast conservation surgery possible. Knowledge and literacy are greatly linked to breast cancer prevention behavior and in order to improve women's health and breast cancer outcomes, one should provide equal educational opportunities for women.⁽⁶⁾

Benign breast tumors can also be sources of worry, especially among young women. So targeting this study on college population is a better option as it covers the process of sensitizing them about both benign and

malignant breast tumors. Most of the early breast tumors are self-discovered and majority of the early self-discoveries are by BSE performers.⁽⁷⁾

In a developing country like India, where procedures like mammography are not easily available, BSE acts as a convenient and a cost-effective screening procedure for breast cancers and for benign breast tumors too.^(8,9)

The purpose of this study was to evaluate the knowledge, attitude and practice of BSE among female college students which may be useful in designing interventions aimed at creating awareness of BSE as a screening method for the early detection of breast cancer.

Materials and Method

This is a community-based cross-sectional descriptive study involving data from 400 female college students aged above 18 years. The study was conducted in three colleges in the urban setting of Puducherry. It was conducted after obtaining permission from the respective head of the institutions. It included two Arts colleges and one Engineering college, due to the want of time, permission from the head of the institutions and the availability of students. Self-administered questionnaire was used. It was prepared by the investigator, with the help of co-investigator and with the aid of structured and validated

questionnaire along with Demographic proforma consisting of age, stream of study, education and planned teaching program. The sample size was calculated using the formula: $n = Z^2pq / e$.

Considering a refusal rate of 10%, a target of 440 was assumed. About 423 questionnaires were collected. The refusal rate was found to be 5%. At the end, about 400 questionnaires were used for analysis. The study was conducted after obtaining permission from the Institute Ethics Committee (IEC) and the respective head of the institutions. A participant information sheet containing details about the study was given to the participants and informed consent was obtained from them. Following that, a self-administered questionnaire containing thirty questions about breast tumors was distributed to the participants. Instructions to fill the questionnaire were given by the investigator. The questionnaire did not contain any columns for names or other personal identification data to maintain the participants' anonymity. After the collection of the questionnaire, a brief Microsoft Power point presentation about breast tumors, the symptoms, risk factors and screening methods of breast cancer was given. Data entry was done in Microsoft excel spreadsheet and SPSS version 17 and descriptive (frequency and percentage) statistics was used for analysis was used for analysis.

Results

Four hundred college going students were included in the study. This study included only female college students above and equal to the age of 18years, studying non-basic sciences courses. This study predominantly included students studying courses in Arts colleges (65%, 260). A majority belonged to the age group 18-19 years (59%, 236). The least belonged to the age group 22-25 (2.25%, 9). Median of the age was 19. The questionnaire was designed to elicit participant's source of information and knowledge about breast tumor, awareness about the common symptoms and risk factors of breast cancer. Whether study participant have concept of benign and malignant tumors, screening and diagnostic methods, and their attitude and practices of self-breast examination.

Television and Radio were the commonest source of information (32.5%, 130) followed by health education (31.25%, 125) as Shown in **Table 1**.

Table 1: Sources of information

Source of information	Percentage(%)
Friends, relatives	26%
Television, Radio	32.5%
Internet	24%
Books	7.75%
Newspapers, Magazines	24.75%
Health Education	31.25%
Others	0.5%
Unanswered	6.5%

A majority of the participants (45.5%, 182) thought pain to be a common symptom of breast cancer. It was found that knowledge about various risk factors in breast tumors was low. The majority of the response of the participants about the various risk factors of breast cancer which included inheritance, trauma, OCP usage, exposure to radiation, late pregnancy, smoking and sedentary life style was "I don't know". Majority of the participants did not know the relationship between breast feeding and breast cancer (52%, 208). About 23.25% (93) had a notion that breast feeding increases the risk and only 24.75% (99) of the participants knew that breast feeding reduces the risk. In case of risk of alcoholism, about 32%, (128) did not know the relationship. About 23.5% (94) responded that alcoholism increases the risk of breast cancer. (**Table 2**).

Table 2: Participants' response to risk factors of breast cancer

Risk Factor	Response (%)		
	Don't Know	No	Yes
Inheritance	49.75	30.75	19.5
Age	31.5	34.5	34
Alcoholism	32	44.5	23.5
Breast feeding	52	24.75	23.25
Oral Contraceptive Pill	67.75	20.25	12
Exposure to radiation	35.25	29	35.25
Late Pregnancy	43.75	31.25	25
Smoking	27.5	25.25	47.25
Sedentary lifestyle	46.75	21	32.25

Majority of the participants (70%, 280) had no idea about the definition of the benign and malignant tumors, their characteristics and differences. A majority of participant (65.75%, 263) have heard about the term "Breast Self Examination" and 17.5% (70) knew about the term Mammography. But 82.5% (330) had no idea about mammography. Out of 263 (65.75%) participants who knew BSE only 29(11%) practised regularly. 234 participants inspite of knowing about BSE didn't practice, the reason being they didn't know how to do it.

The participants, at the end of the questionnaire, were asked a hypothetical question "Suppose, you find that you are having a lump in your breast. What will you do after that?" This question was included to know their attitude at the end of completing the questionnaire. About 50.25% (201) of the participants left this question unanswered. (**Table 3**)

Table 3: Level of practices of Breast self examination(BSE)

Questions	Participants (%)
Do you know?	
Yes	65.75
No	34.25
Do you practice BSE?	
Yes	11
No	89
If no, why?	
Don't know to practice	52
Feel uncomfortable to do it	22.3
Unnecessary	9.4
Lack of time	8.6
Unanswered	7.7
If yes, How frequently do you practice?	
Weekly	14
Monthly	86
If you find a lump, what will you do?	
Consult a doctor	42.5
Don't know	7.25
Unanswered	50.25

Discussion

Our study revealed, a wide gap in the participant’s knowledge on breast tumors. This is actually the scenario in most parts of India which was discovered after the review of literature. This explains that the breast cancer awareness programmes conducted are not enough, more thrust is required. Mass media stands as the top source of information among participants of this study, consistent with few studies previously done.^(10,11) Few other studies also emphasized the use of mass media for public education and awareness, which is a simple and a cost effective way too. Despite lack of knowledge, the participants had several misconceptions about breast cancer which may be due to spread of wrong information, probably by the friends and relatives who stood as the third highest in the sources of information. Therefore, mass media should be used as an effective means, not only for public education but steps should be taken to remove the misconceptions by targeting the more common things and not the rarer ones.^(12,13) As mentioned earlier, late stage presentation is common among Indian women, simply because of lack of knowledge about the symptoms and the warning signs of breast cancer.^(10,14) According to present study, knowledge about the various aspects of breast cancer (risk factors, signs and symptoms and the screening methods) among college going female population in a part of Puducherry is low. This is similar to the previous studies conducted in South India as well as in many states of our country.^(15,16,11,17) Only few studies have shown the importance of literacy, where educated women were aware about the various of breast cancer.^(10,18)

About 42.5% of the participants responded that breast lump is a common symptom. The knowledge about other symptoms was very less. Less than 20% of the participants identified skin changes and nipple changes as symptoms of breast cancer. This is more or less similar to the results obtained in the study done in Rajasthan among college students, where, about 50% of the participants were able to identify breast lump as the common symptom. They also had less knowledge about the other symptoms.⁽¹⁵⁾

Most of the participants replied “I don’t know” for almost all the risk factors and only very few had the right knowledge about the risk factors of breast cancer. Ignorance related to false assumptions were also observed. A majority of 45.5% had a false idea that pain was the common symptom, which was similar to a study conducted in an urban colony of Delhi, where 41% had the same idea.⁽¹¹⁾ The overall evaluation of students showed widespread lack of awareness among students about the risk factors already reported to be associated with the breast cancer only 16.5% of the participants acknowledged old age as a risk factor. About 19.5% agreed that breast cancers can be inherited. About 12% had the knowledge that taking OCPs is a risk factor and 24.75% of the participants had the knowledge that breast feeding reduces the risk similar to the other studies.^(19,20,11) Based on the option chosen by majority (excluding the option “I don’t know”), the participants were found to have misconceptions like all tumors are breast cancer and is not inherited.⁽²⁰⁾

Awareness about mammography as a screening method was very low compared to study done among higher secondary students in Nepal, only about 17.5% were aware probably due to lack of awareness programmes.⁽²¹⁾ The study showed that, despite knowing about breast self examination, most of the participants did not practice it, simply because they did not know how to do it. This was also seen in previous studies.^(22,23) So the awareness programmes should emphasize more on the methods of doing BSE and should also take steps to clarify all the doubts of the participants about BSE. So trained personnel like health workers, doctors are more appropriate and the participation of these medically trained personnel in the awareness programmes should be increased.⁽²³⁾ This study also showed that their understanding about the benign and malignant tumors was low. So, the awareness programmes targeting the college and school going female population regarding benign and malignant tumors should be made mandatory, this not only educates them, but also reduces the confusion caused by benign breast diseases, which are more commoner in this age group. Chapters regarding breast diseases can be included in the school curriculum to sensitize them at an early age which was also suggested by previous study.⁽²⁴⁾

We want to conclude that this study, by estimating the level of awareness and knowledge about breast

cancer will throw light on the current status of breast cancer awareness among young women in a part of Puducherry, which may help in strategizing the breast cancer awareness programmes in this region. This study also estimates the level of knowledge and the practice of BSE by the participants, so that education about BSE can be given accordingly.

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