

Knowledge, Attitude & Practice Towards Breast Cancer and Breast Self-Examination Among Indian Women: A Prospective Observation Study

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Abstract

Background: Breast cancer is by far the most common cancer diagnosed in women in the world. Breast cancer ranked second worldwide. Its commonest cancer of urban Indian women and the second commonest in the rural women. Due lack of knowledge of breast cancer and breast self-examination (BSE) and lack of screening program as well as delay in seeking advice due to financial and social reasons leads to advance disease at presentation, and poor prognosis. Less than 50 percent of women are aware of BSE.

Method:

Cross sectional study conducted to find out knowledge, attitude and practice (KAP) towards breast cancer and BSE among Indian women, subject were selected by nonprobability convenient sampling method, women above 18 years of age, as a patient or patients relative. Data was collected by administering structured knowledge questionnaire. Data was presented as descriptive statistics with mean, SD range and in tables.

Result : The mean age of participants were 30.97 with range from 18-67 years and majority 88(58.67%) were married. Out of 150 participants 94(62.67%) were from urban area. Knowledge of breast cancer among Indian women is (89/150) 59.33%, and about BSE is 61.2%. The knowledge is more in urban women and those are educated than primarily educated rural women. These data imply that Indian women need more education about breast cancer and its early detection by BSE. More awareness programmed should be focused on rural women and those who are primarily educated.

Conclusion: Our study concludes that Indian women need to be educated about breast cancer and BSE, for early detection improving overall survival. We need to plan an educational intervention to increase awareness, to develop attitude to practice BSE regularly for early detection and better survival.

Keywords: breast cancer; knowledge; attitude; practise; indian women

Introduction

Cancer in all forms are responsible for about 12 percent of deaths throughout the world. [1] Breast cancer is the most common cancer among women in developed and developing countries [2], it's the second most common cause of cancer related death among women. [3,4] As per the ICMR-PBCR data, breast cancer is the commonest cancer among women in urban registries of Delhi, Mumbai, Ahmedabad, Calcutta, and Trivandrum where it constitutes > 30% of all cancers in females [5]. Five year overall survival rate of breast cancer in India ranged from 40-62% [6]. Chopra [7] from New Delhi reported a 5-year overall survival rate of 55%, with 80% early breast cancer (EBC), 45-60% locally advanced, and 20% (metastatic breast cancer MBC) patients estimated to be alive at 5 years. Most of Indian patients are deprived of adequate timely management of breast cancer by specialist, 75% of patients which get referred for operable early stage cancer had an incisional or excisional biopsy done without planned cancer management in north Indian teaching hospital. [8] A cohort study in Chennai stated that risk of unilateral breast cancers is 0.3 as compared to women receiving hormonal therapy and 7 times risk of contralateral cancer in treated case of unilateral breast cancer



in general population. [9] The practice of BSE is especially important when compare to annual physician examination of the breast or to other means of early detection is precluded for economic or other reasons. Despite the apparent advantages of BSE, there is lack of awareness and positive attitude towards BSE among Indian population. This lack of knowledge is leading to more than 50% case presented in locally advanced stage. Hence we need to study knowledge, attitude and practice towards BSE & breast cancer in Indian population.

National or regional breast cancer screening program was launched in India in 2015^[10], but it is in its preliminary stage. At present, a dedicated breast cancer screening by clinical breast examination or mammography is neither available nor affordable for general population and especially for women residing in rural areas. In developing countries it's an "Opportunistic Screening." As per World Health Organization (WHO) mammography is recommended every 1–2 years for women aged 50–69 years.^[11]

Material and Methods:

Study was carried out in in tertiary care center in Maharashtra, it is a descriptive cross-sectional prospective study on with 100 sample size. Patients and relative admitted in our hospital. All women above 18 years willing to participate and given written consent was included in our study. Women who had undergone breast surgery, pregnant or breast-feeding women were exclude. Participant was given a pre-piloted about knowledge, & attitude of women towards breast cancer and BSE in English and vernacular language, questionnaire was comprising of demographic details, Knowledge of BSE and breast cancer, Attitude towards BSE, practice. Statistical Analysis was done by presentation of data as descriptive statistics in table, and charts. Inter group analysis using student t test for continuous variable and pearson chi-square test and categorical variation. Informed consent was taken from each patient. Study was within the framework of Helsinki declaration. Study was approved by institutional ethics committee.

Since this study was granted an exception by the local IRB and did not require consent from patients thus it was within the framework of Helsinki declaration.

| Demographic details | Frequency | Percentage |
|---------------------|-----------|------------|
| Age distribution | | |
| 18-27 | 43 | 43.0 |
| 28-37 | 17 | 17.0 |
| 38-47 | 18 | 18.0 |
| 48-57 | 14 | 14.0 |
| 58-67 | 8 | 8.0 |
| Rural | 31 | 31.0 |
| Urban | 69 | 69.0 |
| Hindu | 66 | 66.0 |
| Muslims | 34 | 34.0 |
| Married | 60 | 60.0 |
| Unmarried | 34 | 34.0 |

| | | |
|-------------------------|----|------|
| Widow | 6 | 6.0 |
| None | 1 | 1.0 |
| Primary | 23 | 23.0 |
| SSC | 16 | 16.0 |
| HSC | 11 | 11.0 |
| Degree | 49 | 49.0 |
| Positive family history | 13 | 13.0 |
| Negative family history | 87 | 87.0 |

Table 1: Demographic data

| Knowledge | Frequency | % |
|---|-----------|--------|
| Heard of breast cancer | 67 | 67% |
| How its present | 67/67 | 100% |
| a-lump | | |
| b-pain | 23/67 | 34.3% |
| How it detected -self | 27/67 | 40.29% |
| Doctor | 39/67 | 59.1% |
| Is there cure for it | 66/67 | 98.5% |
| Can early detection improve survival | 66/67 | 98.5% |
| Method of treatment | 67/67 | 100 |
| a- surgery | | |
| radiotherapy | 41/67 | 61.2% |
| Chemotherapy | 51/67 | 51% |
| What will you do if you have breast lump | 11/67 | 16.4% |
| a-tell to relative | | |
| b-go to docter | 11/67 | 16.4% |

Table 2: Knowledge about breast cancer

| B | Frequency | % |
|----------------------------------|-----------|-------|
| heard of BSE | 41/67 | 61.2% |
| How do you heard about it. | 10/41 | 24.4% |
| a-home | | |
| b-peer group | 6/41 | 14.6% |
| c-television | 9/41 | 22.0% |
| d-news paper | 4/41 | 9.8% |
| Age to start BSE | 10/41 | 24.4% |
| a-less than 19year | | |
| b-more than 19year | 31/41 | 75.6% |
| How often should you perform BSE | 3/41 | 7.3% |
| a-daily | | |
| b-weekly | 13/41 | 31.7% |
| c-montly | 23/41 | 56.1% |
| d-yearly | 2/41 | 4.9% |
| How BSE done | 1/41 | 2.4% |
| a-palpatte with one finger | | |
| b-palpatte wit min 3 finger | 40/41 | 97.6% |

Table 3 :Knowledge of breast self-examination

| C | Frequency | % |
|----------------------------------|-----------|-------|
| think BSE necessary. | 39/41 | 95.1% |
| Done BSE before | 25/41 | 61.0% |
| If yes,why | 21/27 | 77.8% |
| a-to examine my breast regularly | | |



| | | |
|---------------------------|------|-------|
| b-breast cancer in family | 3/27 | 11.1% |
|---------------------------|------|-------|

Table 4: Attitude towards breast self-examination

| D | Frequency | % |
|------------------------------|-----------|-------|
| How often do you perform BSE | 7/25 | 28.0% |
| a-every week | | |
| b-every month | 17/25 | 68.0% |
| c-every 6 month | 1/25 | 4.0% |
| Want to know more about BSE | 25/25 | 100% |

Table 5: Practice of breast self-examination

| Knowledge of Breast cancer | Yes | No | P value |
|----------------------------|-----|----|---------|
| Residence | | | |
| Rural | 12 | 19 | 0.0001 |
| Urban | 55 | 14 | |
| Religion | | | |
| Hindu | 39 | 27 | 0.019 |
| Muslim | 28 | 6 | |
| Education | | | |
| Primary | 9 | 14 | 0.001 |
| SSC | 10 | 6 | |
| HSC | 5 | 6 | |
| Degree | 42 | 7 | |
| None | 1 | 0 | |

Table 6 : Comparison of knowledge of breast cancer with residence, religion , education.

| Knowledge of BSE | YES | No | P value |
|------------------|-----|----|---------|
| Residence | | | |
| Rural | 3 | 9 | 0.279 |
| Urban | 23 | 32 | |
| Religion | | | |
| Hindu | 8 | 31 | 0.001 |
| Muslim | 18 | 10 | |
| None | 0 | 1 | |
| Education | | | |
| Primary | 8 | 1 | 0.001 |
| SSC | 8 | 2 | |
| HSC | 3 | 2 | |
| Degree | 7 | 35 | |

Table 7: Comparison of knowledge of breast self-examination with residence, religion , education.

Results:

In this study, knowledge of breast cancer among Indian women is 67%, urban women knowledge is 79.7% as compare to 38.7% in rural participants. Women with higher education have 85.7%. Those who know about breast cancer knows that, it presents as lump in breast. Only 40% women think that it can be detected by self-examination. 98.5% women's think that complete cure is possible and long survival with early detection is possible. Knowledge of BSE among Indian women is 61.2%, among urban

women is 78% then rural women only 22%. Women with higher education have more knowledge of 85.4%. 75% women know that it should be started after 19 years of age, 56% knows that BSE should be done monthly. It seems from result of this study that the knowledge of breast cancer is more in higher educated women then primarily educated women (P value 0.001). Women of urban area have more knowledge about breast cancer and BSE then rural women (P value 0.0001). Most of urban women get this knowledge from television or radio etc. There is 100% positive attitude of women towards BSE.

Discussion:

India being a developing country has many myths and unrealistic fears and ignorance regarding diagnosis of disease. [12] Many of them doesn't seek any medical help due to illiteracy, unawareness, and financial constraints and present with locally advance or metastatic stage. [13-15] Most of the Indian women seek medical help when its palpable lump or has some changes associated with it as ulceration, change in skin or retraction of nipples, or nipple discharge ,or either chest wall changes or symptoms of distant metastasis. [13] Due to lack of organized breast cancer screening program, paucity of diagnostic aids, and general indifference towards the health of females in the predominantly patriarchal Indian society lead to delay in diagnosis of breast cancer and poor prognosis. Breast self-examination (BSE) is one of the means for early detection of breast cancer recommended by the American Cancer Society and the National Cancer Institute. [16-19] There is also evidence that most of the early breast tumors are self-discovered, [12] and that the majority of early self-discoveries are by BSE performer. KAP study on BSE published in 2012 by Doshi et al [20] among 203 female dental students, showed that knowledge, attitude and practice was significantly higher in final year dental students as compared to other dental student. This study implies significant correlation between knowledge and attitude of the dental students. Another study done on 365 IT professional women in Silicon Valley of India [21] analyzed KAP of BSE, between 18 to 55 years of age, The mean scores in knowledge, attitude, and practice fields showed Spearman's rank correlation coefficient revealed that knowledge and attitude were not correlated, attitude and practice were not correlated; but knowledge and practice were extremely correlated. with 12.35% of positive breast cancer history, scores in knowledge, attitude, and practice fields. There was significant correlation between the knowledge and practice.

Our study confirmed the observation that knowledge about BSE is necessary tool to practice BSE even in non-medical population visiting hospital on daily basis. In 2017, Rakesh Singh [22] concluded in his study after assessment of KAP of breast cancer and BSE among 100 urban women showed that little more than half of the patient included in the study had knowledge about the prevalence of breast cancer , about the same had knowledge about the BSE and only one fourth knew the method of examination. However, in our study knowledge about the disease was significantly higher, along with the required attitude and practice. This could be attributed to higher urban population in the study center. Also the participants were patients and their relative thus increasing their frequency of hospital visit leading to higher knowledge and better attitude as compared to other studies. On the contrary, In central teaching institute of India Rao et al [23] did a KAP study on 360 women with a mean age of 45.81 (\pm 10.9)



years. Only 5 (1.38%) females had a family history of breast cancer. A whopping 81% of women did not have any knowledge about breast cancer. All the women thought that BSE by doctors was the only way for screening breast cancer.

As also found in our study that only 67% women has knowledge about breast cancer, and knowledge and practice is more in urban educated women. 75% women know the correct age to start BSE, only 56% knows that it should be done monthly, those who had knowledge of BSE, 97.6% knows the correct method of performing BSE, all the women had positive attitude towards BSE and in learning more about breast cancer management and treatment. In contrast, there is good evidence of harm from BSE instruction, including significant increases in the number of physician visits for the evaluation of benign breast lesions and significantly higher rates of benign biopsy results. ^[24] A multivariate analysis using the Cox proportional hazards model showed that the risk of death for patients detected by BSE was smaller by 0.570 times than that for patients detected by chance, which shows statistical significance (P less than 0.05). These results suggest that BSE may contribute to the reduction of the risk of death through early detection of breast cancer. However, they suggested further examination by other methods to obtain conclusive evidence. ^[25] Compared with clinical breast examination and mammography, the estimated sensitivity of BSE is low (20% to 30%) and is lower among older women. ^[26]

Implications

Data imply that Indian women need more education on breast cancer and early detection by BSE. It is possible, that by knowing how to do thorough BSE, women in general will be able to identify breast cancer at the initial stages. This in turn may help to eventually decrease the number of premature breast cancer deaths in developing countries such as India. A health education program targeted at younger women is necessary to improve breast cancer prevention in Indian women. In addition, an effective public screening need to be initiated in primary health care settings making it easily available to all women. Health education programs should be targeted at women through various media including leaflets, television, and radio.

Conclusion:

Our study can conclude that Indian women needs to be educated about breast cancer and BSE, for early detection and overall survival. We need to plan an educational intervention to increase awareness, to develop attitude to practice BSE regularly for early detection and better survival.

Conflict of interest: None

Clinical Implications:

Our study concluded that Indian women need to be educated about the breast cancer and self-examination for early detection improving overall survival.

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