Original Research Article

Breast cancer! – Is there enough knowledge and practice?

G Ravivarman¹, U Sharath¹,*

¹Dept. of Community Medicine, Chettinad Hospital & Research Institute, Chettinad Academy of Research and Education, Kancheepuram, Tamil Nadu, India

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.

1. Introduction

Breast cancer is the most frequent cancer among women worldwide, impacting 2.1 million women each year.¹ 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.²,³ 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 2021.⁴ In India it accounts for 14% of all cancers in women.⁵ The age-standardized incidence rate of breast cancer among Indian women is 22.9 and the mortality rate is 11.19.⁶ In 2018-627,000 women died of breast cancer globally - greatest number of cancer related deaths.¹

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.⁷ The 5-year survival rate reached to 85% with early detection whereas later detection decreased the survival rate to 56%.⁸ 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
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 and disproportionately higher mortality, 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. 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), to increase awareness and early detection behaviours, the mortality rates for breast cancer continue to rank the highest in the country. 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. 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.

Recommended preventive techniques to reduce breast cancer mortality and morbidity include breast self-examination (BSE), clinical breast examination (CBE), and mammography. 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. 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. In the literature, it is stated that 90% of the times breast cancer is first noticed by the person herself. Also, several studies have shown that barriers to diagnosis and treatment can be addressed by increasing women’s awareness of breast cancer. Women can find abnormalities in size and shape of breast on self-examination 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/l² 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 don’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 mothers | Aware | Not Aware | P= 0.026 |
|----------------------|-------|-----------|----------|
| 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.24 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.25 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.26 who studied the same and concluded that, the overall total mean knowledge score was 14.22 ± 8.04 with the fourth year students having the maximum mean score (19.98 ± 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.27 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.28 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%.29,30 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.31,32

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.

References

1. Breast cancer [cited 30 January 2020]. Available from: https://www.who.int/breastcancer/prevention/diagnosis-screening.

2. Badar F, Faruqui Z, Uddin N. Management of breast lesions by breast physicians in a heavily populated south Asian developing country. Asian Pac J Cancer Prev. 2011;12:827–32.

3. Moore M, Ariraybte Y, Badar F. Cancer epidemiology in South Asia past, present and future. Asian Pac J Cancer Prev. 2009;10:49–67.

4. Han S, Guo Q, Wang T. Prognostic significance of interactions between ER alpha and ER beta and lymph node status in breast cancer cases. Asian Pac J Cancer Prev. 2013;14:6081–4.

5. Breast cancer awareness month 2019 [cited 30 January 2020]. Available from: https://www.nhp.gov.in/breastcancer/awareness-month-2019.

6. GLOBOCAN 2008 (IARC) Section of Cancer Information. [Last accessed on 2011 Oct 06]. Available from: http://globocan.iarc.fr/factsheets/populations/factsheet.asp.

7. Tasci A, Usta YY. Comparison of Knowledge and Practices of Breast Self Examination (BSE): A Pilot Study in Turkey. Asian Pac J Cancer Prev. 2010;11:1417–20.

8. Hallal JC. The Relationship of Health Beliefs, Health Locus of Control, and Self Concept to the Practice of Breast Self-Examination in Adult Women. Nurs Res. 1982;31(3):137–42.

9. National Cancer Registry Programme. National Centre for Disease Informatics and Research, and Indian Council of Medical Research,. Three year report of population based cancer registries 2009–2011 national cancer registry programme. National Cancer Registry, 2013.

10. Dikshit R, Gupta PC, Ramasundarahettige C, Gajalakshmi V, Aleksandrowicz L, Badwe R, et al. Cancer mortality in India: a nationally representative survey. Lancet. 2012;379(9828):1807–16.

11. Leong S, Shen ZZ, Liu TJ. Is breast cancer the same disease in Asian and western countries? World journal of surgery. World J Surg. 2010;34(10):2308–24.

12. Chalkidou K, Marquez P, Dhillon PK, Teerawattananon Y, Anothaisintawee T, Gadelha CAG, et al. Evidence-informed frameworks for cost-effective cancer care and prevention in low, middle, and high-income countries. Lancet Oncol. 2014;15(3):e119–31.

13. Coleman M, Quaresma M, Berrino F, Lutz JM, Angelis R, Capoccia R. Cancer survival in five continents: a worldwide population-based study (CONCORD). Lancet Oncol. 2008;9:730–56.

14. Berry DA, Cronin KA, Plevritis SK, Fryback DG, Clarke L, Zelen M, et al. Effect of Screening and Adjuvant Therapy on Mortality from Breast Cancer. New Engl J Med. 2005;353(17):1784–92.

15. Humphrey LL, Helfand M, Chan BK, Woolf SH. Breast cancer screening: A summary of the evidence for the U.S. Preventive Services Task Force. Ann Intern Med. 2002;137:347–60.

16. Okobia MN, Bunker CH, Okonofua FE, Osime U. Knowledge, attitude and practice of Nigerian women towards breast cancer: A cross-sectional study. World J Surg Oncol. 2006;4:11.

17. Karayurt O, Ozmene D, Cetinkaya AC. Awareness of breast cancer risk factors and practice of breast self examination among high school students in Turkey. BMC Public Health. 2008;8:359.

18. Simsek S, Tug T. Benign tumors of the breast. Natl Cancer Inst Monogr. 2011;102–7.

19. Lagerlund M, Hedin A, Sparén P, Thurfjell E, Lambe M. Attitudes, Beliefs, and Knowledge as Predictors of Nonattendance in a Swedish Population-Based Mammography Screening Program. Prev Med. 2000;31(4):417–28.

20. McMichael C, Kirk M, Manderson L, Hoban E, Potts H. Indigenous women’s perceptions of breast cancer diagnosis and treatment in Queensland. Aust New Zealand J Public Health. 2000;24(5):515–9.

21. Gunsoy A, Hindstan S, Nurall A. A comparison of three educational interventions on breast self examination knowledge and health belief. Asian Pac J Cancer Prev. 2009;10:765–72.

22. Redhwan A, Al-Naggar D, Bobryshev Y, Chen R, Assadri A. Practice and barriers toward breast self-examination among young Malaysian women. Asian Pac J Cancer Prev. 2011;12:1173–8.

23. Taha H, Halabi Y, Berggren V. Educational intervention to improve breast health knowledge among women in Jordan. Asian Pac J Cancer Prev. 2010;11:1167–73.

24. Ozkan A, Malik A, Guirk A, Turgay A. Do Turkish nursing and midwifery students teach breast self examination to their relatives. Asian Pac J Cancer Prev. 2010;11:1569–73.

25. Siddharth R, Gupta D, Narang R, Singh P. Knowledge, attitude and practice about breast cancer and breast self-examination among women seeking out-patient care in a teaching hospital in central India. Indian Journal of Cancer. 2016;53(2):226.
26. Doshi D, Kulkarni S, Reddy B, Karunakar P. Breast self-examination: Knowledge, attitude, and practice among female dental students in Hyderabad city, India. *Indian J Palliat Care*. 2012;18(1):68.

27. Madhukumar S, Thambiran UR, Basavaraju B, Bedadala MR. A study on awareness about breast carcinoma and practice of breast self-examination among basic sciences’ college students, Bengaluru. *J Fam Med Prim Care*. 2017;6(3):487–90.

28. Ceber E, Mermer G, Okcin F, Sari D, Demireloz M, Eksioglu A. Breast Cancer Risk and Early Diagnosis Applications in Turkish Women Aged 50 and Over. *Asian Pac J Cancer Prev*. 2013;14(10):5877–82.

29. Gupta SK. Impact of a health education intervention program regarding breast self examination by women in a semi-urban area of Madhya Pradesh, India. *Asian Pac J Cancer Prev*. 2009;10:1113–7.

30. Yadav P, Jaroli DP. Breast cancer: Awareness and risk factors in college-going younger age group women in Rajasthan. *Asian Pac J Cancer Prev*. 2010;11:319–22.

31. Stillman MJ. Women’s Health Beliefs about Breast Cancer and Breast Self-Examination. *Nurs Res*. 1977;26(2):121–7.

32. Lierman LM, Young HM, Powell-Cope G, Georgiadou F, Benoliel JQ. Effects of Education and Support on Breast Self-Examination in Older Women. *Nurs Res*. 1994;43(3):158–63.

Author biography

G Ravivarman Professor and HOD

U Sharath Post Graduate

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.