

Awareness regarding breast self-examination among rural women - A community-based cross-sectional study

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ABSTRACT

Background: Breast cancer is the leading cause of cancer mortality in women worldwide and is a major health concern. **Objectives:** This study was designed to assess the knowledge, attitude, and practice of breast self-examination (BSE) and the factors associated with the practice of BSE among rural women. **Materials and Methods:** A community-based cross-sectional study was carried out in the field practice area of Government Medical College in rural area in Haryana, India. Women aged 20–50 years' residents of the rural study area were included in the study. The required information was collected by the investigators on a pretested, semi-structured schedule from randomly selected study subjects by house-to-house visits. **Results:** The highest number of women was in the age group of 20–25 years (38.67%), and more than three-fourth women were currently married. Only one-third study subjects had heard of breast cancer. Of them, only 17 (5.7%) were aware about early detection of breast cancer. Only 4 (1.3%) women were aware of something about BSE and no one was aware of about all steps of proper BSE. **Conclusion:** The study highlights that awareness about breast cancer was low, and for proper BSE, it was almost negligible among rural women. Only one-third study subjects had heard of breast cancer, whereas only 4 (1.3%) were aware of something about BSE and no one was aware of proper steps of BSE.

KEY WORDS: Breast Cancer; Breast Self-examination; Awareness


INTRODUCTION

Breast cancer is one of the most common female cancers and is a major health concern in both developing and developed countries^[1] with a widely variable incidence between countries and regions. Breast cancer affects more than 1 million women worldwide annually. However, it can be distinguished from other cancers by the fact that it occurs at a site which can be easily noticed and thus likely for early detection and treatment.^[2]

It is estimated that worldwide over 5,08,000 women died in 2011 due to breast cancer (Global Health Estimates, WHO (2013). Although breast cancer is thought to be a disease of the developed world, almost 50% of breast cancer cases and 58% of deaths occur in less developed countries (GLOBOCAN 2008).^[3]

In India, breast cancer accounts for the second most common cancer in women. Around 80,000 cases are estimated to occur annually. The age-standardized incidence rate of breast cancer among Indian women is 22.9 per 100,000 women and the mortality rate is 11.19 per 100,000 women.^[3] In the present scenario, roughly 1 in 26 women are expected to be diagnosed with breast cancer in their lifetime.^[4]

Reproductive factors associated with prolonged exposure to endogenous estrogens such as early menarche, late menopause, and late age at first childbirth are among the

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most important risk factors for breast cancer. Exogenous hormones also exert a higher risk for breast cancer, and thus, oral contraceptive and hormone replacement therapy users are at higher risk than non-users. Breastfeeding has a protective effect.^[3,5]

The other important risk factors for the development of breast cancer are gender, age, and genetics. As women can do nothing about these risks, regular screening is recommended to allow early detection and thus prevent death from breast cancer. Regular screening includes breast self-examination (BSE), clinical breast examination, and mammography. Therefore, early detection to improve breast cancer outcome and survival remains the cornerstone of breast cancer control.^[6] There is evidence that strategy of early detection can produce “down staging” (increasing in the proportion of breast cancers detected at an early stage) of breast cancer to stages that are more amenable to curative treatment.^[7]

Early detection and prompt treatment offer the greatest chance of long-term survival. In fact, in a study done in India, 5-year survival rate was 56% among patients diagnosed with breast cancer at a later stage in comparison to 85% for cases diagnosed early.^[8] According to the American Cancer Society recommendations, women should know how their breasts normally feel and report any breast changes promptly to their healthcare providers. BSE is an important option for this for women starting from the early 20s.^[9]

BSE is a routine examination that seems to be an important viable option available to women in rural areas where access to Clinical Breast Examination and Mammograms is limited and they can still detect breast cancer through BSE. Hence, women’s knowledge regarding BSE as well as factors affecting attitude and practice of BSE plays a crucial role in ensuring the same to safeguard their health from breast cancer in rural areas having constraints of facilities and resources. There are very little data available related to the practice of BSE among women, especially from rural areas in Haryana and none from the study area.

With this background, the present study was planned to determine the knowledge and practice of BSE and associated factors among rural women so that appropriate interventions can be undertaken accordingly for the promotion of the practice of BSE.

Aims and Objectives

The study was carried out among rural women to achieve the following objectives:

1. To assess the knowledge, attitude, and practice regarding BSE.
2. To know the factors associated with the practice of BSE.
3. To assess the knowledge about breast cancer.

MATERIALS AND METHODS

Study Design

This was a community-based cross-sectional study.

Study Area

The study was carried out at Primary Health Center, Khanpur Kalan, a rural field practice area for BPS Government Medical College for Women, Khanpur Kalan, Sonapat, Haryana. The PHC comprises of four health subcenters. The selection of study area was made on the basis of operational feasibility. The population served by PHC was 35,683.

Subjects

Women aged between 20 and 50 years and women who were residents of the study area were included.

Sample Size

The calculation of sample size was based on the prevalence of BSE as observed in studies from other areas ranging from 15% to 30%. Assuming an average of 25% prevalence (p) of BSE and allowable error of 20% at 95% level of significance, using the standard formula for calculating sample size (N) = $4pq/L^2$ (where q = 1-p and L = allowable error of p). The required sample size came out to 300.

Methodology

There are 44 Anganwadi Centers under Primary Health Center, Khanpur Kalan. Anganwadi Centers are the most peripheral service units of Integrated Child Development Services Scheme providing non-formal pre-school education, supplementary nutrition, health and nutrition education, immunization services, etc. Ten Anganwadi Centers were selected randomly. All the eligible women as per inclusion criteria in each Anganwadi center were enlisted as sampling frame from recently updated household records. A total of 30 women were selected randomly (using random number table) from the sampling frame for the study purpose. Required information from study subjects was collected after taking informed consent on a pre-tested semi-structured schedule by house-to-house visits by the investigators. In case of refusal or non-availability of respondent even after three visits, next in sampling frame was selected in her place. The questionnaire consisted of sociodemographic characteristics; family history of breast cancer, reproductive history, section to assess knowledge about BSE, section that assessed practice and correct methods of BSE, and sources of information about BSE, knowledge of the study participants about the warning clinical presentation of breast cancer, and risk factors of breast cancer and its screening methods.

Inclusion Criteria

The following criteria were included in the study:

1. Women aged between 20 and 50 years without any chronic medical problem.
2. Women who were willing to participate in the study and were resident of the study area.

Exclusion Criteria

The following criteria were excluded from the study:

1. If the subject could not be contacted even after three consecutive visits.
2. Women who had undergone mastectomy or having any chronic medical problem.
3. Women who were not resident of the study area or were not in the age group of 20–50 years.

Data Entry and Statistical Analysis

The data were entered in a master sheet of Microsoft office Excel 2016. Statistical Package for the Social Sciences Software (SPSS) Version 20.0 was used for analysis.

RESULTS

The present study was carried out in the field practice area of the Department of Community Medicine, BPS GMC for Women, Khanpur Kalan, Sonapat, Haryana. A total of 300 women were interviewed. The highest number of women were in the age group of 20–25 years (38.67%) followed by 26–30 years (25.67%). 11% were in the age group of 46–50 years. Mean age of study subjects was 29.26 + 8.184 standard deviation. More than three-fourth of women were currently married and only 13.7% were widows or divorcee or unmarried. More than 71% of study subjects belonged to joint families, whereas only 28.3% belonged to nuclear family, indicating that in rural area, there is still preference for joint families. More than half (51.4%) of the women were illiterate or literate up to primary level and 29.4% were literate up to secondary level. Only 21.3% were having literacy level higher secondary or more. More than 80% of study subjects were housewives. Only 3.3% were in service and 12% were doing agricultural work [Table 1].

Table 2 presents the awareness of breast cancer and BSE of the respondents. Of 300, only 101 (33.7%) study subjects had heard of breast cancer. Of them, only 17 (5.7%) were aware about early detection of breast cancer. In this study, only 4 (1.3%) were aware of BSE and no one was aware of about proper steps of BSE. 26 (8.7%) women were practising BSE* without any knowledge about BSE (off and on by touching their breast during bath).

Table 1: Distribution of study women according to demographic variables (n=300)

| Demographic variables | n (%) |
|---|-------------|
| Age (years) | |
| 20–25 | 116 (38.67) |
| 26–30 | 77 (25.67) |
| 31–35 | 32 (10.67) |
| 36–40 | 26 (8.67) |
| 41–45 | 26 (8.67) |
| 46–50 | 33 (11.0) |
| Mean age of study subjects was 29.26+8.184 SD | |
| Marital status | |
| Married | 259 (86.3) |
| Unmarried/divorcee/separated/widow | 41 (13.7) |
| Literacy level | |
| Illiterate | 81 (27.0) |
| Primary | 73 (24.3) |
| Secondary | 88 (29.4) |
| Higher secondary and above | 64 (21.3) |
| Occupation | |
| House wife | 247 (82.3) |
| Service | 10 (3.3) |
| Agriculture | 36 (12.0) |
| Other | 7 (2.4) |
| Type of family | |
| Joint | 214 (71.3) |
| Nuclear | 86 (28.7) |

SD: Standard deviation

Table 2: Respondent's knowledge of breast cancer and BSE

| Variables | n (%) |
|---|------------|
| Aware of breast cancer | 101 (33.7) |
| Aware of early breast cancer detection | 17 (5.7) |
| Aware about BSE | 4 (1.3) |
| Aware about all steps of BSE | 0 (0) |
| Practicing BSE without knowledge of BSE | 26 (8.7) |
| Practicing using correct method | 0 (0) |

BSE: Breast self-examination

Source of Information about BSE

Only 4 women were aware of BSE. Main source of information was printed material and friends. The association of awareness of BSE with various sociodemographic variables was not analyzed as the positive sample for it was only 4 women.

Common barriers for practising BSE were lack of knowledge (86.7%) and no breast complaint (27.7%), followed by no proper place for examination (5.7%) [Table 3].

Table 3: Barriers for practising BSE (multiple responses)

| Reasons | n (%) |
|-----------------------------------|------------|
| Lack of knowledge | 260 (86.7) |
| No breast problem | 83 (27.7) |
| No proper place available for BSE | 17 (5.7) |
| Others | 13 (4.3) |

BSE: Breast self-examination

DISCUSSION

This cross-sectional survey was conducted among rural women of Sonapat District, Haryana, with the aim of assessing awareness about BSE and their reproductive characteristics. Age wise and other variable wise distribution of respondents revealed that highest number of women were in the age group of 20–25 years (38.67%) followed by 26–30 years (25.67%). 11% were in age group of 46–50 years. Similar findings were observed in a study conducted by Soumya Thomas in Mangalore among rural women.^[12] More than three-fourth of women were currently married and only 13.7% were widows or divorcee or unmarried. It was slightly more than other studies.^[11,12] More than 71% of study subjects belonged to joint families, whereas only 28.3% belonged to nuclear family, indicating that in rural area, there is still preference for joint families. More than one fourth (27.0%) women were illiterate and 29.4% were literate up to secondary level. Only 21.3% were having literacy level higher secondary or more.

Knowledge of Breast Cancer and BSE

Of 300, only 101 (33.7%) study subjects had heard of breast cancer and only 17 among them were aware about early detection of breast cancer. It was much less than the most of studies as conducted by Kommula *et al.*^[13] (96.1%, in urban area). This difference can be due to urban and rural difference. In this study, only 4 (1.3%) was aware of something about BSE and no one was aware of about all steps of BSE as compared to 4.4% in a study by Kommula *et al.*^[13] and 28.1% had god knowledge about BSE in study carried by Nemenqani *et al.*^[19] Awareness about BSE was negligible and it was almost similar to a study conducted by Gupta.^[8] In India, in different studies, it varied from 0% to 52%.^[8,18]

Practice of BSE

8.7% of women were practising BSE without any knowledge about proper BSE (off and on by touching their breast during bath, etc.). No one practising BSE regularly and using the correct method. It was 2.4% in a study conducted by Kommula *et al.*^[13] and 22.61% in a study by Yerpude and Jogdand.^[11]

Barriers for Practising BSE

86.7% told that lack of knowledge was the most common barrier for practising BSE and 27.7% said no breast problem. In a study done by Nemenqani *et al.*,^[19] the observed reasons

among medical students were absence of symptoms (45.7%), lack of knowledge (20.8%), and carelessness (23.3). This difference among rural women and medical students is fully justified. The association of various factors with practice of BSE could not be analyzed as the practice of BSE was negligible, i.e., only four individuals were practising BSE.

Recommendations

The study has indicated that a major proportion of the women are not aware of what they need to do to protect themselves from breast cancer or even how to check themselves. Efforts are needed to educate these women to make them aware about various signs and symptoms of breast cancer and methods of screening, i.e., BSE. This will enable them to recognize these symptoms at the earliest, seek timely medical intervention for the same, and improve their quality of life. Appropriate media of mass awareness should be used for creating awareness regarding importance of BSE. Health staff should utilize every opportunity to promote the practice of BSE. They should intensify health education on the importance of BSE whenever they come in contact with women during home visits or during sessions on antenatal and immunization clinics, etc.

CONCLUSION

This study highlights that awareness about breast cancer was low, and for BSE, it was almost negligible among rural women. Only one-third of study subjects had heard of breast cancer, whereas only 4 (1.3%) were aware of something about BSE and no one was aware of proper steps of BSE. 8.7% of women were doing some kind of BSE without any knowledge about proper BSE. They examine their breast off and on during bathing. No one practising BSE regularly and using correct method. Most common reason for not doing this was lack of knowledge and no breast problem. This showed that the level of awareness about screening for breast cancer is low among rural women. Hence, the mass media should be used to disseminate information on BSE. Health workers should intensify health education on the importance of BSE whenever they come in contact with women during home visits or at antenatal and immunization clinic sessions. The group discussion and demonstration approach for training the peers would also foster regular practice of BSE as some of the trained peer women can educate and motivate other women in rural areas to practice proper BSE on regular basis. Adequate facility for proper diagnosis and treatment of the referred screened cases of breast problems should also be ensured to promote and sustain the practice of BSE and to make it effectively beneficial in real terms for the rural community.

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