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Original Research Article

Breast Self-Examination: Knowledge, Attitude, and Practice among Women in an Urban Slum of Kolkata

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Abstract

Introduction: Breast cancer is a leading cause of death among women internationally. In India, it accounts for the second most common cancer after cancer of the cervix in women. Although BSE (Breast Self-Examination) is a simple, quick, and cost-free procedure for screening of breast cancer, review of literature shows that the practice of BSE is low and often unknown in India, ranging from 0% to 52%. The present study was designed to determine the knowledge, attitude, and practice regarding BSE among women in two slums in Kolkata.

Method: A community-based cross-sectional study was conducted among women of reproductive age group (i.e. 15-49yrs) in two slums in Chetla. The minimum sample size calculated was 300. Two slums were selected by simple random sampling and all the women of the reproductive age group were listed out of which 300 women were selected by simple random sampling. Data were collected through an interview method with the help of a pre-tested, semi-structured schedule in the local language. For knowledge items, categorical responses were applied, for attitude items, a 5-point Likert scale was used, and for practice, similar scale items were applied. A p-value of <0.05 was considered statistically significant. Data was analysed using SPSS (version 20).

Results: Total mean knowledge score,mean attitude score and mean practice score were 18.54 ± 4.274 (poor),24.29 ± 2.046(good) and 3.98 ± 1.146(poor), respectively. KAP score was highest in age group of 30-39 years, in women with higher education, and in the higher socio-economic class.

Conclusion: All steps must be taken to increase the public awareness regarding regular breast self-examination as a breast cancer screening method.

Keywords: Breast self-examination, Knowledge, Attitude, Practice.

Introduction

One of the main causes of death for women worldwide is breast cancer. It is the second most frequent cancer among women in India, after cervical cancer. [1] The most common risk factors for breast cancer include being over 50, having a family history of the disease, menstruating early and late menopausal onset, becoming pregnant late, using birth control, having atypical hyperplasia of the breast, and having previously received radiation therapy. Women who already have breast cancer are more likely to develop it again, as are those who have a first-degree relative with a family history of the disease [2].

Breast Self-Examination (BSE) is a screening tool that enables women to examine their breasts regularly for the detection of any abnormal changes, lumps, or swelling. Thus, BSE can help in the early detection of breast cancer and facilitate prompt medical attention [3]. According to the American Cancer Society guidelines, women should undergo a mammogram every year starting from age 40, and a clinical breast examination every three years for women in their twenties and thirties, and a yearly examination in their forties. It is recommended that a woman should practice BSE from their twenties [2].

Unfortunately, Breast self-examination is still not widely practiced, despite the process being simple, quick, and cost-free. The low adoption of BSE can be attributed to several reasons, like ignorance and misconceptions about the procedure, lack of time, cultural and social beliefs, low self-confidence in

performing the technique correctly, fear of possible discovery of abnormalities, and uneasiness associated with manipulation of the breast, among others [4].

The number of community-based studies carried out regarding the practice of BSE among various groups of population is so far very low. With this backdrop, the current study was undertaken to determine the knowledge, attitude, and practice of BSE among women in a slum of Kolkata.

Objectives:

1. To study the socio-economic and demographic characteristics of women of reproductive age group in a slum of Kolkata.
2. To study the knowledge, attitude, and practice of Breast Self-Examination among the study population.
3. To elicit the determinants of knowledge, attitude, and practice of Breast Self-Examination among the study population

Methodology

Type of Study: A community-based cross-sectional study.

Study Period: 5 months. From September 2021 to February 2022.

Study Area: The study was conducted in a slum in Chetla, Kolkata.

Study Tool: Predesigned, pretested interview schedule.

Study Population: All women of reproductive age group (i.e., 15-49 years) in that slum were taken as the study population.

Inclusion and Exclusion Criteria

Inclusion Criteria: Women who were in the reproductive age group (15-49 years) and were willing to participate.

Exclusion Criteria: Women with any serious illness and women who were unwilling to participate

Sampling Design: A study done by Kumarasamy et al at Tamil Nadu elicited that only 18% of females in the reproductive age group have ever checked their breasts. [5] Now, considering this prevalence, with 5% absolute error and 25% nonresponse rate, the required sample size was 295 by applying the formula ($n=4pq/L^2$). A total of 300 women were interviewed in the present study.

All the women of reproductive age in the slum were listed, of which 300 women were selected by simple random sampling.

Method of Data Collection

After obtaining informed consent, respondents were interviewed using a predesigned and pretested schedule. The schedule consisted of two parts:

A) Demographic and Socio-economic characteristics
B) Knowledge, Attitude, and Practice regarding BSE

For knowledge items, categorical responses were applied. For attitude items, a 5-point Likert scale (strongly agree/agree/neutral/not agree/strongly disagree) was used. For eliciting the practice, a similar scale (never/seldom/neutral, frequent/ always) was chosen. For knowledge, score "2" was assigned for correct responses, "1" for don't know, and "0" for incorrect responses. A score of "4," "3," "2," "1," and "0" was used for strongly agree, agree, neutral, disagree, and strongly disagree, respectively, for the attitude domain. Similarly, for practice, scores of "0," "1," "2," "3," and "4" were given for never, seldom, neutral, frequently, and always, respectively.

Statistical Analysis: Data were analysed using SPSS (VERSION 20). Knowledge, attitude, and practice were the dependent variables, which were categorised as satisfactory and unsatisfactory. More than the median was considered a satisfactory score in the knowledge, attitude, and practice domains. Bivariate logistic regression (OR, 95%CI) was used. Significant variables in bivariate analysis were entered into a multivariate logistic regression model. A p-value of <0.05 was considered to be significant.

Results:

Table 1. Distribution of Study Population according to Demographic & Socioeconomic characteristics (n=300):

Variable		Frequency (Percentage)
Age (In completed years)	15-19	33 (11%)
	20-29	117 (39%)
	30-39	51 (17%)
	40-49	99 (33%)
Religion	Hindu	222 (74%)
	Muslim	78 (26%)
Education	Below primary and primary	30 (10%)
	Class VI-X	186 (62%)

	Class XI-XII	57 (19%)
	Graduation and above	27 (9%)
Occupation	Homemaker	237 (79%)
	Student	42 (14%)
	Unskilled labour	12 (4%)
	Shopkeeper	6 (2%)
	Professional	3 (1%)
Family Type	Nuclear	147 (49%)
	Joint	153 (51%)
Marital Status	Married	228 (76%)
	Unmarried	60 (20%)
	Widow	12 (4%)
Socioeconomic status (Modified BG Prasad SES Scale)	I	6 (2%)
	II	72 (24%)
	III	105 (35%)
	IV	84 (28%)
	V	33 (11%)

Table 1: The majority of the respondents were aged between 20 and 29 years. The majority were Hindu by religion (74%). Most of the respondents were married (76%). The majority of the study subjects belonged to socioeconomic class III as per the modified BG Prasad socioeconomic scale.

Table 2: Grading and frequency distribution of Knowledge and Attitude according to scores attained (n=300)

variables	Minimum Attainable Score	Maximum Attainable Score	Mean of Attained score	Median Of Attained Score	More than Median n (%)	Less than or equal to Median n (%)
Knowledge	0	30	18.37 ± 4.63	19	Satisfactory 135 (45)	Unsatisfactory 165 (55)
Attitude	0	32	24.40 ± 2.54	24	Satisfactory 150 (50)	Unsatisfactory 150 (50)
Practice	0	20	3.97 ± 1.67	4	Satisfactory 87 (29)	Unsatisfactory 213 (71)

Table 2 shows that the majority of the study subjects had unsatisfactory knowledge (55%) and unsatisfactory practice (71%). However, half of the respondents had a satisfactory attitude regarding BSE.

Table 3: Covariates of satisfactory knowledge regarding BSE (n=300)

Variables		knowledge: Satisfactory No (%)	OR (CI)	AOR (CI)
Age (completed years)	15-29	78 (52.0)	1.76 (0.79-3.92)	_
	30-49	57 (38.0)	1	
Religion	Hindu	105 (47.3)	1.44 (0.57-3.58)	_
	Muslim	30 (38.5)	1	
Educational status	Above Secondary	114 (63.3)	8.14 (3.08-21.48)	7.41 (2.15-27.8)
	Below Secondary	21 (17.5)	1	1
Marital status	Unmarried	30 (50.0)	1.28 (0.48-3.43)	_
	Married	105 (43.8)	1	_
Family type	Nuclear	114 (77.6)	21.71 (7.65-61.58)	20.9 (6.2- 70.30)
	Joint	21 (13.7)	1	1
Occupation	Earning	18 (85.7)	8.30 (0.96-71.8)	_
	Non-earning	117 (41.9)	1	_
Per Capita Income (PCI)	>4000	84 (63.6)	4.01 (1.73-9.27)	2.63 (0.78-8.90)
	≤4000	51 (30.4)	1	1

Table 3:

Footnote: For the multivariate model, the Hosmer-Lemeshow test gave a p-value of 0.57 (not significant), indicating a good model fit. Nagelkerke's R2 was 0.276, showing that the variables included in the model predicted 27.6 % of satisfactory knowledge. The variables that remained significant in multivariate regression analysis included educational status, family type, and per capita income.

Table 4: Covariates of satisfactory attitude regarding BSE (n=300)

Variables		Attitude: Satisfactory No (%)	OR (CI)	AOR (CI)
Age (completed years)	15-29	69 (46.0)	1	_
	30-49	81 (54.0)	1.38 (0.63-3.03)	
Religion	Hindu	132 (59.5)	5 (1.81-14.29)	5.8 (1.5-22.43)
	Muslim	18 (23.1)	1	1
Educational status	Above Secondary	114 (63.3)	4.03 (1.71-9.49)	3.90 (1.16-13.17)
	Below Secondary	36 (30.0)	1	1
Marital status	Unmarried	15 (25.0)	1	1
	Married	135 (56.2)	3.86 (1.28-11.64)	16.33 (3.05-87.5)
Family type	Nuclear	96 (65.3)	3.45 (1.51-7.69)	0.68 (0.17-2.76)
	Joint	54 (35.3)	1	1
Occupation	Earning	9 (42.9)	1	_
	Non-earning	141 (50.5)	1.37 (0.29-6.67)	
Per Capita Income (PCI)	>4000	81 (61.4)	2.28 (1.02-5.11)	1.57 (0.46-5.39)
	≤4000	69 (41.1)	1	1
Knowledge regarding BSE	Satisfactory	105 (77.8)	9.33 (3.72-23.42)	12.08 (2.5-58.39)
	Unsatisfactory	45 (27.3)	1	1

Table 4:

Footnote: For the multivariate model, the Hosmer-Lemeshow test gave a p-value of 0.59 (not significant), indicating a good model fit. Nagelkerke's R2 was 0.349, showing that the variables included in the model predicted 34.9 % of satisfactory attitude. The variables that were found to be significant predictors of a positive attitude were religion, education, marital status, and knowledge regarding BSE.

Table 5: Covariates of satisfactory practice regarding BSE (n=300)

Socio-demographic Variables		Practice: Satisfactory No (%)	OR (CI)	AOR (CI)
Age (completed years)	15-29	39 (26.0)	1	_
	30-49	48 (32.0)	1.34 (0.56-3.19)	
Religion	Hindu	75 (33.8)	2.77 (0.87-9.09)	
	Muslim	12 (15.4)	1	_
Educational status	Above Secondary	69 (38.3)	3.52 (1.28-9.69)	0.75 (0.17-3.19)
	BelowSecondary	18 (15.0)	1	1
Marital status	Unmarried	6 (10.0)	1	_
	Married	81 (33.8)	4.58 (0.99-21.23)	_
Family type	Nuclear	72 (49.0)	8.85 (3.03-25)	4.09 (0.91-18.39)
	Joint	15 (9.8)	1	1
Occupation	Earning	6 (28.6)	1	_
	Non-earning	81 (29.0)	1.03 (0.18-5.55)	
Per Capita Income (PCI)	>4000	81 (61.4)	2.28 (1.02-5.11)	1.57 (0.46-5.39)
	≤4000	69 (41.1)	1	1
Knowledge	Satisfactory	72 (53.3)	11.43 (3.84-33.99)	2.3 (0.44-12.13)
	Unsatisfactory	15 (9.1)	1	
Attitude	Satisfactory	75 (50.0)	11.5 (3.59-36.77)	6.64 (1.7-25.85)
	Unsatisfactory	12 (8.0)	1	1

Table 5: For the multivariate model, the Hosmer-Lemeshow test gave a p-value of 0.62 (not significant), indicating a good model fit. Nagelkerke's R2 was 0.375, showing that the

variables included in the model predicted 37.5 % of satisfactory practice.

In multivariate regression analysis, the education status of the respondents, family type, per capita income, knowledge, and attitude were found to be significant predictors of satisfactory practice.

Discussion

The present study assessed the knowledge, attitude, and practice of BSE among women of reproductive age in an urban slum. BSE is a simple and non-invasive method that facilitates early detection of breast cancer. Proper knowledge and regular practice of BSE are essential to prevent morbidity and mortality due to breast cancer.

In our study, women of reproductive age were chosen as the study population. The majority were from the age group 20-29 years. The majority were homemakers and belonged to the socioeconomic class III (35%) as per the modified BG Prasad scale.

Similarly, in a study done by Kumarasamy et al, the majority (94.5%) of the study subjects belonged to the reproductive age group and were homemakers. 50% of the respondents were from socioeconomic class IV as per the modified BG Prasad scale. [5] The age range was 21–27 years, with a mean age of 23 ± 1.56 years in a study conducted at Puducherry by Sujindra et al. [4]

The present study elicited that the majority of the respondents had unsatisfactory knowledge (55%) and practice (71%) regarding BSE. 75.3% of participants showed satisfactory attitude towards BSE, and 4.1% practiced BSE consistently. [6] In a study done by Getu et al., 49.9% of the undergraduate students showed good knowledge of BSE. [7] This is in line with the response provided by the nursing students in Puducherry, where their knowledge of BSE was found to be good. [4]

Educational status, family type, and per capita income were found to be the significant predictors of satisfactory knowledge regarding BSE in the present study, whereas last place of residence, attitude towards BSE, and knowing someone who had breast cancer were significantly associated with knowledge of BSE in another study undertaken at Ethiopia. [7] 50% of the respondents had a satisfactory attitude in the present study. The variables that were found to be significantly associated with a satisfactory attitude were religion, education, marital status, and knowledge regarding BSE. Similar finding has been elicited in the study undertaken in Ethiopia. However, 17.9% of the study subjects felt that it is embarrassing to perform BSE. [7]

In the present study, the proportion of women showing unsatisfactory practice of BSE was 71%. Education status of the respondents, family type, per capita income, knowledge, and attitude were found to be significant predictors of satisfactory practice. This is consistent with the findings of another study where practice of BSE was found to be low and the relation between knowledge and practice of BSE has been elicited. [5] In another study in Saudi Arabia, it was found that even though the respondents were highly educated, their knowledge regarding BSE was poor. Only 6% of the participants performed BSE. [2]

In contrast, 93.3% felt the importance of doing BSE, and 87.5% have done BSE before in a study done among nursing students at Puducherry. A different study population with a different educational and socioeconomic background may be the reason for the inconsistent results compared to the present study. However, the study showed that only 33% had performed BSE consistently throughout the year. [4]

Limitations: The study having cross sectional design, cannot establish the cause-and-effect relationship between the exposure and the outcome. Moreover, potential response biases in the form of acquiescence, central tendency, and social desirability are observed with likert scale.

Conclusion

This study revealed that the respondents lacked knowledge regarding Breast Self-Examination (BSE), and the practice of BSE was also inadequate, although the attitude towards BSE was satisfactory. Therefore, spreading awareness among the general population regarding regular breast cancer screening behaviour is the need of the hour and should be advocated by means of effective educational programmes.

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