

ORIGINAL ARTICLE

Predictors of Practice of breast self-examination among women in District Ambala (Haryana)

Shilpi Gupta¹, Anu Bhardwaj², Anuradha Nadda³, Anshu Mittal⁴, Khajan Singh⁵

¹Assistant Professor, Department of Community Medicine, Maharishi Markandeshwar Institute of Medical Sciences and Research, Mullana (Ambala), Haryana, India; ²Associate Professor, Department of Community Medicine, Dr B. R Ambedkar State Institute of Medical Sciences, Mohali, Punjab, India; ³Assistant Professor, Department of Community Medicine, Dr B. R Ambedkar State Institute of Medical Sciences, Mohali, Punjab, India; ⁴Professor and Head, Department of Community Medicine, Maharishi Markandeshwar Institute of Medical Sciences and Research, Haryana, India; ⁵Associate Professor, Department of Community Medicine, NC Medical College, Panipat

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Corresponding Author

Dr Anu Bhardwaj, Associate Professor, Department of Community Medicine, Dr B.R Ambedkar State Institute of Medical Sciences, Mohali, Punjab 160055
E Mail ID: dranubhardwaj78@gmail.com



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Abstract

Background: Breast cancer is the most common cancer among women and its early detection is critical to improve survival. Breast self-examination is a cheap, basic and non-intellectual method to detect breast cancer. **Aims and objectives:** 1To determine the knowledge, attitude and practices regarding breast self-examination 2. To explain the various factors which affect the practice of BSE **Material and Methods:** The present study was carried out among 300 women residing in rural and urban areas of district Ambala using a self-designed pretested semi-structured questionnaire. **Results:** In this study 127 (42.3%) of the participants had heard of BSE and 107 (35.7%) of the participants knew how to perform BSE. Overall, 47.7%, 30.3%, and 22% of the study participants had poor (<50%), medium (50–75%), and good knowledge (>75) on BSE, respectively. Educational qualification, knowing the three positions to perform BSE, knowing how often should BSE be done, taught how to do BSE, BSE is a useful tool to detect breast cancer were seen to be significantly associated with practice of BSE. **Conclusion:** This study elucidates that the knowledge as well as practice of BSE was significantly low in the population. This study provides insights into the various factors which affect the practice of BSE.

Keywords

Breast Self-Examination; Health Knowledge; Attitude & Practice

Introduction

Breast cancer has been reported to be the most common cancer in women in India, accounting for 26.3% of all newly diagnosed cancer cases, as reported by GLOBOCAN. Further, Breast cancer is also the single largest cause of mortality.(1), Breast cancer rates are increasing in almost every region of the world(2).The five and ten year breast cancer specific survival rates have been reported to be 79% and 70%. (3)

Breast Self-Examination (BSE) helps in downgrading the disease.(4) Breast self-examination is a very basic, cheap non-intellectual early detection method used to downstage disease. BSE allows the women to detect for

any change in their breast as soon as possible, which yields a better survival rate. BSE should be practiced by all women who are older than 20 years every month (5). BSE should be performed every month after 5-7 days of their menstrual period, prior to menopause and same day on every month after menopause(6).Most cases of breast cancer are detected by women themselves(7). Various factors may affect women's tendency to practice breast self-examination. There is a relative paucity of studies regarding breast self-examination in this area.

Aims & Objectives

1. To determine the knowledge, attitude and practices regarding breast self-examination

2. To explain the various factors which affect the practice of BSE

Material & Methods

Study Type: Community based cross-sectional study

Study Area: The present study was carried out in rural and urban areas of District Ambala, Haryana.

Study population: The study population was women aged between 20–60 years, residing in the study area.

Study Duration: The study was conducted during the period for 06 Months.

Sample size and sampling technique: The sample size was calculated using the formula $n = \frac{z^2 pq}{e^2}$ on the following assumptions 36% of students know how to perform BSE (8) and 95% confidence interval. Where n is minimum sample required, $p=0.36$, e is the absolute error = 17%.

The sample size was calculated to be 273, which was, rounded off to 300.

District Ambala has total of 5 Community health centres, out of this one PHC was randomly chosen (CHC Mullana). CHC Mullana has three PHC out of this one was randomly chosen (PHC Barara). From the list of villages available at sub-centre a village (Village Adhoya) was selected. In the selected village every 5th house was interviewed. In the selected house women in the house were interviewed by using the predesigned questionnaire. In urban areas there are 31 municipal wards. a municipal ward was randomly selected and house to house survey was done until the sample size was achieved.

Inclusion Criteria: All women between the age of 20–60 years in the study area and who gave consent to participate were included in the study.

Exclusion criteria: Women who were too sick to respond were excluded from the study.

Study tools and strategy: A self-designed, pre-tested, semi-structured questionnaire was used to collect the data. Firstly, the questionnaire was prepared by the primary investigators in English after literature review. (9,10,14,18). The prepared questionnaire was translated to Hindi and checked by back translation to English. Pilot testing was done on 20 participants. The interns in the department of Community Medicine were trained to collect the data. The questionnaire was distributed to all respondents, the same were interpreted to those being illiterate, and all questionnaires were retrieved from the respondents. The questionnaire was divided into four sections: Socio-demographic information of the respondents, knowledge, attitude and practice of BSE related questions. All the study participants underwent clinical breast examination.

Data analysis: The collected data was entered in MS Excel-2010 and then analyzed using statistical package for social sciences (SPSS) version 20. Knowledge of the subjects towards BSE was assessed by calculating Knowledge score. The knowledge section consisted of 9 questions. A score of “1” was assigned to every correct answer and a

score of “0” to incorrect responses. The maximum score possible was 9. The overall knowledge score of the participants were categorized into three: poor, medium, and good knowledge. Participants who answer less than 50% of the knowledge questions were considered as having poor knowledge. Similarly, participants who answer 50–75% and greater than 75% were also classified as having medium and good knowledge about BSE, respectively. Knowledge and Attitude were expressed as percentages and analyzed using Chi-square test. The factors associated with the practice of BSE were analyzed using multivariate logistic regression. Participants' practice of BSE was considered as the dependent variable, whereas the various factors associated with practice were considered as independent variables. Adjusted odds ratios with 95% class interval were calculated. A p value of <0.05 was considered significant.

Ethics considerations: Ethical approval to conduct this study was obtained from the Institutional Ethics Committee. Participation in this study was voluntary and informed written consent was obtained from all participants. Participants were provided an information sheet, as well as a verbal explanation of the purpose of the study. They were assured of complete confidentiality and identifying information was not collected. All the collected data kept confidential and used only for research purposes. Ref N: MIMSR/PSM/22/80 dated 27/07/2022.

Results

With regard to the socio-demographic characteristics of the study group, 29.7% of the study population belonged to age group 31–40 years. More than half that is 55.7% of the population was rural. It was seen that only few (6.3%) of the study participants were having past or family history of breast cancer (Table 1).

Knowledge about Breast Self-Examination in the study subjects: In this study 127 (42.3%) of the participants had heard of BSE and 107 (35.7%) of the participants knew how to perform BSE. Furthermore, 2 in 10 (20%) participants were aware of the best time to perform BSE. More than one-fourth (31.7%) knew the benefits of BSE. Overall, 47.7%, 30.3%, and 22% of the study participants had poor (<50%), medium (50–75%), and good knowledge (>75) on BSE, respectively (Table 2). In this study the main source of information about BSE were friends (25.3%) followed by media (21.3%). (Figure-1)

Attitude towards breast Self-Examination in the study participants: More than half of the study population (64.3%) believed that BSE is a useful and important tool for early detection of breast cancer and 72% participants also believed that early detection will increase the chance of long term survival. (Table 3)

Practices of Breast Self-Examination in the study subjects: Only 60 (20%) of the women had ever performed BSE. Among the participants who practiced BSE, half of the women (51.7%) were practicing monthly. However,

majority of the participants (80%) were not practicing BSE. Main reasons for not performing BSE, were inadequate knowledge about how to perform BSE. Other reasons included not wanting to touch the breast etc. (Table 4)

Factors Associated with practice of BSE: In order to determine the various predictors for the practice of BSE firstly the crude odds ratio was calculated. Variables found significant in the first step were entered in the Binary Logistic Model. Educational qualification, knowing the three positions to perform BSE, knowing how often should BSE be done, taught how to do BSE, BSE is a useful tool to detect breast cancer were seen to be significantly associated with practice of BSE. (Table 5)

Discussion

Breast Cancer is the leading cancer of women in India. BSE is a non-expensive, simple and non-invasive method for early detection of breast cancer, though its utility is controversial. Adequate knowledge as well as consistent practice could encourage women to seek further medical care and in turn help in early detection of breast cancer. The present study was conducted to determine the practice of BSE and associated factors among women in North India. Mean age of the study group was 36.04 ± 10.65 years. In this study only 6% were illiterate, and 6.3% have a family history or past history of breast cancer which is consistent with reported literature.(9)

In this study 42.3% of the women had ever heard of BSE which is lesser than the reported literature with findings of 52% from a study reported from Mumbai(10). In the present study 36.7% women were aware of how to perform BSE. There is a wide variation in the percentage of women aware of the technique of performing BSE in various studies: 18%(11), 66%(12), 35.8%(8), 85.5%(13) and 5.6%(3).

Only 2 in 10 women knew when and how to perform BSE. A proportion which is lower than that reported from Ghana (36.8%)(14). Furthermore, 1 in 5 of the women had overall good knowledge on BSE, a proportion higher than that reported in literature (0.5%(15) and 1.4%(16)).

In the present study, the main sources of information about BSE were friends (25.3%), followed by media (21.3%), unlike other studies where media was the main source of information - 50.14%(9) and 39.8%(8). Only 23.3% participants were aware of all the three positions to perform BSE, a proportion lower than that reported by literature-41.3%(8). Our study revealed that 20% women had ever performed BSE. This is in concordance with another reported study 18%(11) (and discordant with another study 45.8%(12). The main reasons for not practicing BSE were lack of knowledge (75.8%) and the absence any symptoms (7.5%).

In our study 64.3% of women believed that BSE is a useful and important tool for early detection of breast cancer. This is slightly higher than the findings from another study 52%(9). Further, 72% of the study population believed

that early detection would increase the chance of long-term survival. 81% of the women would visit a health facility, if they had any symptoms of breast cancer which is lower than that the literature reports of 96.8%(8)

The socio-demographic, knowledge, attitude questions were analyzed by bi-variate and multiple logistic regression for their association with the practice of BSE. The result of multivariate logistic regression shows that there was no significant relation between practice of BSE and socio-demographic variables, except education. Additionally, knowing the three positions to perform BSE, knowing how often BSE should be done and taught how to do BSE were significantly associated with the practice of BSE. This is concordance with a study from Ethiopia where women who knew how, when to perform BSE, who knew the three positions of BSE and perceived BSE as an important and useful tool were more likely (11 times, 3.3 times, 2.3 times and 6.8 times respectively) to practice BSE as compared to those who do not know.(8) The positive attitude that BSE is a useful tool to detect breast cancer was also seen to be significantly associated with practice of BSE.

Even though, breast self-examination is a key element for breast cancer detection, it is not without limitations. There may be anxiety caused by finding a lump which in most cases is not cancerous. Additional tests may be required to investigate the lump which may lead to financial loss. Further, BSE is not a substitute to clinical examination and mammography, only a supplement.

Conclusion

To conclude this study elucidates that the knowledge as well as practice of BSE was significantly low in the population. This study provides insights into the various factors which affect the practice of BSE.

Recommendation

It is crucial to impart knowledge especially to the less educated group in order to increase the health beneficial behavior of BSE. Health interventions need to be planned by the various stakeholders like the government as well as the NGO's in order to enhance knowledge and translate such knowledge to practice. ASHA workers as well as the newly appointed Mid-level service providers (Community Health Officers) can be efficiently utilized for this purpose.

Limitation of the study

The present study should be interpreted with the following limitations. Being a cross-sectional study, casual inferences cannot be drawn. Further, this study was done in women in Haryana and may not be representative of the knowledge and practice of BSE in other parts of the country.

Relevance of the study

This study provides information on the various factors affecting the practice of breast self examination.

Authors Contribution

SG, AB: Conception, design & acquisition of data, drafting manuscript. AN, AM & KS: conception, design, revising manuscript.

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Tables

TABLE 1 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE STUDY POPULATION

Variable	Frequency N=300	Percentage (%)	
Age	20 to 30	99	33
	31 to 40	89	29.7
	41 to 50	75	25
	51 to 60	37	12.3
Area	Rural	167	55.7
	Urban	133	44.3
Marital Status	Unmarried	87	29
	Married	190	63.3
	Divorced/Widowed	23	7.7
Occupation	Working	85	28.3
	Housewife	146	48.7
	Student	69	23
Education	Illiterate	18	6
	Primary	33	11
	Secondary	73	24.3
	Graduate	109	36.4
	Post graduate and above	67	22.3
Religion	Hindu	248	82.7
	Muslim	13	4.3

Variable	Frequency N=300	Percentage (%)	
Family history of breast cancer	Sikh	39	13
	Yes	19	6.3
	No	281	93.7

TABLE 2 KNOWLEDGE ABOUT BREAST SELF-EXAMINATION IN THE STUDY SUBJECTS

Knowledge	Frequency (N=300)	Percent
Ever heard of BSE	127	42.3
Know how to perform BSE	110	36.7
Know the three positions to perform BSE	70	23.3
Know best time to perform BSE	60	20
Know how often should BSE be done	61	20.3
Taught how to do BSE	43	14.3
At what age should BSE be done	49	16.3
Know benefits of BSE	95	31.7
Overall knowledge of BSE		
Good	66	22
Medium	92	30.3
Poor	142	47.7

TABLE 3 ATTITUDE ABOUT BREAST SELF-EXAMINATION AMONG THE STUDY PARTICIPANTS.

Attitude about BSE	Frequency N=300	%
Know performing BSE if there is any risk factor	96	32
BSE is a useful tool for early detection of breast cancer	193	64.3
Early detection will increase the chance of long-term survival	216	72
What will you do, if there is any symptom of breast cancer?		
Pray	31	10.3
Do some lab tests	5	1.7
See a doctor	243	81
Do Nothing	21	7

TABLE 4 PRACTICES OF BREAST SELF-EXAMINATION IN THE STUDY SUBJECTS

Practices	Responses	Frequency	%
Do you ever perform BSE (N=300)	Yes	60	20
	No	240	80
If yes, how often(N=60)	Monthly	31	51.7
	Occasionally	9	15
	Rarely	20	33.3
If not, why(N=240)	I don't know how to do BSE	182	75.8
	I don't have any symptoms	18	7.5
	Laziness	8	3.3
	Don't feel any problem	10	4.2
	Others	22	9.2

TABLE 5 LOGISTIC REGRESSION ANALYSIS OF FACTORS AFFECTING PRACTICE OF BREAST-SELF EXAMINATION

Variables	Category YES/NO	Practice of BSE		Crude OR (95%C.I.)	Adjusted OR (95%CI)	P value
		YES	NO			
Education	Secondary education and above	11(8.9)	113(91.1)	.252(.125-.509)	2.736(1.005-7.448)	0.04
	Below secondary	49(27.8)	127(72.2)	Reference	Reference	
Knowing the three positions to perform BSE	Yes	28(40)	42(60)	4.125(2.249-7.567)	0.161(.065-.397)	0.001
	No	32(13.9)	198(86.1)	Reference	Reference	
Knowing how often should BSE be done	Yes	38(26.3)	23(37.7)	16.296(8.268-32.120)	0.236(.097-.574)	.001
	No	22(9.2)	217(90.8)	Reference	Reference	
Taught how to do BSE	Yes	25(58.1)	18(41.9)	8.810(4.362-17.793)	0.043(.013-.138)	0.001
	No	35(13.6)	222(86.4)	Reference	Reference	
BSE is a useful tool	Yes	56(41.2)	80(58.8)	28.124(9.805-79.957)	0.032(.008-.129)	0.001
	No	4(2.4)	160(97.6)	Reference	Reference	

Figures

FIGURE 1 SOURCES OF INFORMATION ABOUT BREAST SELF-EXAMINATION AMONG STUDY SUBJECTS.

