

# Reasons and Barriers of Breast Self-examination among Affluent Women: A Cross-sectional Study

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## ABSTRACT

**Introduction:** Breast Self-examination (BSE) is the simplest and easiest way to look for abnormalities. It's an inexpensive and easy procedure that needs to be implemented from a young age. BSE will help in early diagnosis and treatment of benign and malignant tumours. Inadequate knowledge about BSE was seen usually in non affluent women. Though, affluent individuals have access to good and better healthcare, still there seems to be a lack.

**Aim:** To understand the reasons and barriers among affluent women concerning BSE.

**Materials and Methods:** This descriptive cross-sectional study was conducted in the field area of Ayaan Institute of Medical Sciences, Hyderabad, Telangana, India, from March 2021 to February 2022. A total of 250 women were included in the study between the ages of 21-49 years. Data was collected using a predesigned pretested questionnaire to evaluate socio-

demographic, reasons and barriers to BSE. Data were presented in numbers and percentages.

**Results:** The mean age of the study population was 34.60±8.31 years. All 250 women were educated and with the majority being graduates 176 (70.4%), only 140 (56%) had a working occupation and 205 (82%) were married. The feeling of mass in either of the breast 123 (49.2%), followed by family history of breast cancer 99 (39.6%) and breast pain 92 (36.8%) were the common reasons for performing SBE. The barriers to self-examination were majorly due to lack of knowledge 164 (65.6%), lack of breast complaints 164 (65.6%), absence of lump 130 (52%), followed by 115 (46%) who did not like to touch their breast. Forgetfulness was seen in 93 (37.2%) subjects.

**Conclusion:** Poor awareness of the BSE practice exists even among affluent women. There is an urgent need for awareness about screening techniques, including BSE, in media and health facilities.

**Keywords:** Breast cancer, Breast lump, Knowledge, Screening

## INTRODUCTION

The chief intention of Breast Self-examination (BSE) is for early detection, intervention, and reduction in mortality. Over the years, women were educated about BSE methods, which need to be done once a month [1]. Breast self-examination is no cost and a simple method that can be done in private and primarily be implemented as a screening program. The International agency for research on cancer suggested BSE women have increased survival time [2]. Breast cancer is the most frequently occurring cancer and the leading cancer death, which amounts to 23% of all cancers in women globally [3]. In lesser developed and developing countries, breast cancer is a leading cause of death among cancers [4]. In the age group between 15-49 years in developing countries, breast cancer diagnosis is twice as high as in developed countries [5]. Breast self-examination is recommended as the woman is familiar with their breast (feel and look) so as to seek help when needed. Usually, the best time for BSE is between the 7<sup>th</sup> and 10<sup>th</sup> day of their menstrual cycle once in every month to detect early and reduce the spread [6].

Early detection/diagnosis of breast cancer has a pragmatic effect on prognosis and complication development and increases the quality of life and survival [7]. Many researchers noted that a lack of knowledge of BSE is usually seen in non affluent women from less developed countries. Still, women belonging to affluent families were less explored. The present study aimed to understand the reasons and barriers among affluent women with regard to breast self-examination.

## MATERIALS AND METHODS

This descriptive cross-sectional study was conducted in the field area of Ayaan Institute of Medical Sciences, Hyderabad, Telangana, India,

from March 2021 to February 2022. Institutional Ethical Committee approval (IEC NO.012/AIMS/Research/2021) was obtained prior to the study. Informed consent was obtained from all study participants in the regional language and English (whichever was applicable) from all study populations.

**Sample size calculation:** Considering the prevalence of breast cancer in India as 28.6% [8]. The sample size was calculated for the study using the formula:

$$N=4pq/L^2.$$

The sample size calculated was 239, rounded-off to 250 subjects. The sampling method used was simple stratified sampling method.

**Inclusion criteria:** According to B.G Prasad's socio-economic classification [9], women belonging to the upper class, aged between 21-49 years, and willing to participate in the study were included in the study.

**Exclusion criteria:** Women who did not belong to the upper class according to BG Prasad's socio-economic classification, below 21 and above 49 years of age, women with breast cancer, women not willing to participate in the study were excluded from the study.

## Questionnaire

A total of 250 study participants met the inclusion criteria and 33 were excluded. A modified predesigned pretested questionnaire [10-14] was self-administered (Annexure 1) and explained to the study participants whenever necessary. The questionnaire was used to gather the data, and interviews were conducted to fill it out. The questionnaire was divided into three sections:

**Section 1 - Demographic factors:** Such as age, education, occupation and marital status.

**Section 2- Reasons for performing BSE:** This include- fear of breast cancer, media, doctors advise, breast pain, advised by a health worker, nipple discharge, the feeling of mass, breast cancer in the family, encouraged by family/friend and other reasons;

**Section 3-Barriers of BSE:** Include- lack of knowledge, dislike to touch, fear/worry if found a lump, lack of time to self-examine, forgetfulness, no breast complaints, culture and belief, unavailability of specialised centre, absence of lump on previous examination and underestimation of the problem.

Section 2 and 3 allowed multiple answers for each question. This tool was created after literature research [10-14], and evaluating existing papers. It had 20 items as well as response choices (i.e., yes and no). Experts assessed the content validity, and the reliability was backed by a 1-week test-retest evaluation with a pilot sample (n=22) taken from the study population {reliability coefficient (alpha) 0.75 for all items}. Pilot study results were not included in present study. Eleven tutors (MBBS graduates) were considered as interviewers. The interviewers were trained how to fill out the questionnaire. A supervisor was chosen to arrange the interviews, oversee the data collection process, and evaluate and deliver questionnaires to the principal investigator in order to coordinate and manage the data gathering process.

## STATISTICAL ANALYSIS

Data was entered into Microsoft Office Excel 2007 and analysed by Statistical Package for Social Sciences (SPSS) trial version 22.0. The results were depicted in the form of numbers and percentages. No statistical test was applied as the study was descriptive.

## RESULTS

As shown in [Table/Fig-1], the majority of patients were between 21 and 30 years 101 (40.4%), with a mean age of 34.60±8.31 years. All of them were educated and with the majority being graduates 176 (70.4%), only 140 (56%) had a working occupation, and 205 (82%) were married.

Section 1 Demographic factors	Frequency	Percentage
<b>Age (years)</b>		
21-30	101	40.4
31-40	77	30.8
41-49	72	28.8
<b>Education</b>		
Graduate	176	70.4
Postgraduate	74	29.6
<b>Occupation</b>		
Working	140	56
House wife	110	44
<b>Marital status</b>		
Married	205	82
Unmarried	45	18

**[Table/Fig-1]:** Distribution of Section 1 (socio-demographic characters) of study population.

[Table/Fig-2] showed the various reasons for performing breast self-examination. Out of 250 subjects, feeling of mass in either of the breast 123 (49.2%), followed by family history of breast cancer 99 (39.6%) and breast pain 92 (36.8%) were the common reasons for performing SBE. On the advice of doctors and healthcare workers, 78 (31.2%) and 56 (22.4%) subjects self-examined, respectively. With the family/friends encouragement, 28 (11.2%) subjects underwent self-examination. The media influence was quite low, and only 21 (8.4%) examined themselves. The disheartening part was that 11 (4.4%) of subjects did not self-examine themselves because of fear.

Section 2 Reasons for performing self-breast examination*	Yes*	No
Fear of breast cancer	11 (4.4%)	239 (95.6%)
Media	21 (8.4%)	229 (91.6%)
Doctor's advice	78 (31.2%)	172 (68.8%)
Breast pain	92 (36.8%)	158 (63.2%)
Advice by a healthcare worker	56 (22.4%)	194 (77.6%)
Nipple discharge	18 (7.2%)	232 (92.8%)
Feeling of mass	123 (49.2%)	127 (50.8%)
Breast cancer in the family	99 (39.6%)	151 (60.4%)
Encouraged by family/friends	28 (11.2%)	222 (88.8%)
Other reasons (books/magazine's)	27 (10.8%)	223 (89.2%)

**[Table/Fig-2]:** Reasons for performing SBE among study population. \*Multiple responses were allowed

As shown in [Table/Fig-3], the barriers to self-examination were majorly due to lack of knowledge 164 (65.6%), lack of breast complaints 164 (65.6%), absence of lump (130, 52%), followed by 115 (46%) who did not like to touch their breast. Forgetfulness was seen in 93 (37.2%) subjects and fear among 72 (28.8%) subjects. Due to the unavailability of specialised centres, 79 (31.6%) refrained from self-examining, and 59 (23.6%) of subjects said they did not have time to examine themselves. The other barriers were culture and belief (17, 6.8%), and 6 (2.4%) women underestimated the problem.

Section 3 Barriers of SBE	Yes*	No
Lack of knowledge	164 (65.6%)	86 (34.4%)
Dislike to touch	115 (46%)	135 (54%)
Fear/worry if find a lump	72 (28.8%)	178 (71.2%)
No time to self-examine	59 (23.6%)	191 (76.4%)
Forgetfulness	93 (37.2%)	157 (62.8%)
No breast complaints	164 (65.6%)	86 (34.4%)
Culture and belief	17 (6.8%)	233 (93.2%)
Unavailability of specialised centre	79 (31.6%)	171 (68.4%)
Absence of lump on previous examination	130 (52%)	120 (48%)
Underestimate the problem	6 (2.4%)	244 (97.6%)

**[Table/Fig-3]:** Barriers of self-examination among study population. \*Multiple responses were allowed

## DISCUSSION

The BSE is a practical, cost-free method that may help in breast cancer prevention [15]. In developing and low-resourced countries, women getting access to advanced diagnostic procedures is a barrier [16]. In these conditions, self-examination can be a reliable method for early detection of breast mass/tumours [17].

The mean age of the study was 34.60±8.31 years. All the subjects were educated, above half of the subjects were working, and most were married. A study by Dadzi R and Adam A, showed the mean age as 24.54±7.19 years, 67% (N=258) were educated (4.8% studied up to high school and 182% studied up to degree and above), 43.4% were employed, and 39.5% were married [18]. In the present study, 8.4% of subjects self-examined with media being a source, 53.6% did so, on doctors (31.2%) and healthcare worker's advice (22.4%), and 10.8% via other sources. Media (48.6%, n=105) was the major source of information about breast cancer and BSE, followed by healthcare professional's advice 44.4 (96%) and sources like journals and books 84 (38.9%) in a study done by Karayurt O et al., [12].

A study by Ahmed A et al., suggested that 16.2% (n=105) looked for information from books, and 25.4% (n=165) discussed it among friends and self-performed. In contrast, the present study showed that 10.8% (n=27) looked for information from books and magazines, and only 11.2% (n=28) of subjects were encouraged by friends. It was also pointed out that among 301 subjects, 251 (83.4%) examined

themselves reasoning nipple discharge, whereas the present study reported only 7.2% (n=18) for the same [19]. In the present study, lack of SBE knowledge was reported in 65.6% (n=164) of subjects, forgetfulness in 37.2% (n=93), lack of time in 23.6% (n=59), and fear in 28.8% (n=72) whereas a study by Taleghani F et al., suggested 25.65% (n=387), 35.98% (n=543), 25.58% (n=386) and 18.75% (n=283), respectively [10]. Many barriers have been identified in the present study, like lack of knowledge, discernment of disease threat, dislike to touch, fear of detection, and lack of time. However, some of the subjects practiced with the purpose of early detection. Studies done by Al-Dubai SAR et al., (n=222) and Al-Naggar RA et al., (n=251) observed almost similar barriers among Malaysian women [13,20]. In the present study, social culture and belief were the barriers which were also reported by Naghibi SA et al., [21].

Breast screening education strategies have been proven to be effective by many studies [22,23]. Therefore, there is an urgent need to develop and implement an awareness program to improve knowledge of SBE with a final target output of early detection, thereby curbing the increasing trend of disability and mortality due to breast carcinoma.

### Limitation(s)

Since, the study sample included only a few people from the field practicing area of the Institution and only among affluent families, the results cannot be generalised to the larger population. Further studies with affluent and non affluent women from other areas can be conducted in future.

### CONCLUSION(S)

Breast self-examination should be widely practiced right from a younger age, with training starting from the school level to reduce the lack of knowledge and fear, even in women of affluent families.

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**Questionnaire for Breast Self Examination**  
**Ayaan Institute of Medical Sciences**

**Annexure 1**

Name of the Tutor:- \_\_\_\_\_

Date:- \_\_\_\_\_

**Section 1:- Socio demographic data (multiple responses not allowed)**

1. Age: \_\_\_\_\_
2. Education:      A. Primary            B. Secondary
- C. Graduate            D. Postgraduate            E. Illiterate
3. Occupation:      A. Working            B. House Wife
4. Marital Status:      A. Married            B. Unmarried            C. Widow

**Section 2:- Reasons for performing self-breast examination (can fill multiple responses)**

5. Fear of Breast Cancer:      A. Yes            B. No
6. Media:      A. Yes            B. No
7. Doctors' Advice:      A. Yes            B. No
8. Breast Pain:      A. Yes            B. No
9. Advice by a Health Worker:      A. Yes            B. No
10. Nipple Discharge:      A. Yes            B. No
11. The feeling of Mass:      A. Yes            B. No
12. Breast Cancer in the Family:      A. Yes            B. No
13. Encouraged by Family/Friend:      A. Yes            B. No
14. Other reasons (Specify):- \_\_\_\_\_

**Section:- 3 Barriers of BSE (Can Fill Multiple Responses)**

15. Lack of knowledge:      A. Yes            B. No
16. Dislike to Touch:      A. Yes            B. No
17. Fear/Worry if Find a Lump:      A. Yes            B. No
18. No Time to Self-Examine:      A. Yes            B. No
19. Forgetfulness:      A. Yes            B. No
20. No Breast Complaints:      A. Yes            B. No
21. Culture and Belief:      A. Yes            B. No
22. Unavailability of Specialised Centre:      A. Yes            B. No
23. Absence of Lump on Previous Examination:      A. Yes            B. No
24. Underestimate the Problem:      A. Yes            B. No