

**EVALUATION OF KNOWLEDGE, ATTITUDE AND AWARENESS OF BREAST
CANCER AMONG SOUTH INDIAN WOMEN POPULATION****Allamsetty Santoshini*, Ramireddy Prathyusha and Sajja Ravindra Babu**Department of Pharmacy Practice & Pharm. D. Malla Reddy Institute of Pharmaceutical Sciences Maisammaguda,
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ABSTRACT

Background: Breast cancer is the most prevailing cancer of women (23% of all cancers), ranking second overall when both sexes are considered together. **Objectives:** The aim of the study is to assess the breast cancer knowledge, attitude, and awareness and factors associated with that of breast self examination (BSE) and mammography among south Indian women population. **Methods:** This study is a cross sectional survey of household women, college students and working female faculty. Data was collected from 350 females with 96.4% response rate. All the participants were asked to fill a simple questionnaire to investigate their knowledge about breast cancer, Breast self examination and mammography. **Results:** The results of the study showed that 48.2% of the participants declared that they had information about breast cancer and was mainly through health professionals (79.2%), friends/neighbours (60%), media and others (55%). Of the participants, 7.71% reported positive family history of breast cancer, 59.7% did not know how to practice Breast self examination, and 22% knew the procedure but never applied it. Moreover, 64.2% has no breast examination by health professionals and 48.2% did not know what the mammography technique is. The factors that may have an satisfactory level of knowledge were, women older than 35 years, married, with a history of child death and use of contraceptive pills. **Conclusion:** The study survey states that insufficient knowledge of females about breast cancer, mammography and deficit knowledge on the practice of Breast self examination.

KEYWORDS: Breast Cancer, Breast Self Examination, Mammography.**1. INTRODUCTION**

Breast cancer is the most common female cancer worldwide representing nearly a quarter (23%) of all cancers in women.^[1-3] It has overtaken cervical cancer to become the leading site of cancer in metro cities and is expected to double by 2015 in Delhi, Bangalore, Mumbai, Chennai, Bhopal, Ahmadabad and Kolkata with the relative proportion ranging from 21.7 % to 28.7 % as reported by PK Julka, professor of Oncology, All India institute of Medical Sciences (AIIMS), New Delhi. The incidence of breast cancer in India per 100,000 population is significantly less compared to US, France, Denmark, Sweden, Britain, Canada, Australia, Switzerland, Italy, Singapore, and Japan but the mortality is almost 50 % of the rate.^[4,5] The lifetime probability of developing breast cancer in India is one in every 22 women compared to one in eight in US and other developed countries. Each year 10.9 million people suffer from breast cancer worldwide that result in 6.7 million deaths from the disease. The breast cancer is prevalent in almost all regions of the world and there is no country in which cancer is a rare occurrence.^[6-8]

Women's knowledge and views about Breast cancer and its treatment may contribute to healthy behavioural living.^[9] Knowledge deficiency may lead to delayed presentation with advanced stages of breast cancer. For presentation at an early stage, women must be "Aware of breast cancer" and must be capable of identifying symptoms of Breast cancer through routine practice of screening techniques.^[2,11] As the prognosis of this disease in advanced stages is very bad, it is alarming note of high attention because women as wife or mother have a great role and her death causes great loss and negative impact on family. In order to reduce the vulnerability of women to cancer, a culture of prevention must be promoted and comprehensive health programs for women must be strengthened.^[12-14]

Breast cancers to some extent are found by physical examination rather than by mammography. Breast self examination (BSE) has been known as a Public Health Intervention (Gehrke, 2000).^[5,13] It is an option for women starting in their 20s and can be an important way to find a breast cancer early, when it is treated successfully. It is a simple, noninvasive procedure that can be performed by common individuals non-medically.

Not every cancer can be found this way, but it is a critical step you can take and report any breast changes to a doctor immediately.^[5,14] It is recommended that all women should routinely perform breast self-exams as part of their overall breast cancer screening strategy.^[15]

This paper aimed to determine knowledge, Attitude and Awareness about Breast cancer and Breast self examination in south Indian women population.

2. METHODOLOGY

2.1 The study settings and study population

The study was a prospective, cross-sectional questionnaire based study. The study population consisted of students at graduate and post-graduate level, lecturers and household women. This study was conducted from March 2015 to September 2015 at Narayana Hrudayalaya Multispeciality Hospital, Suraram, Hyderabad. Data was collected from 350 female populations with a response rate of 96.4%. All the participants were requested to fill the questionnaire. Informed consent of each participant was sought and obtained, and they were assured of the confidentiality of their responses.

2.2 Study design

This study was a cross-sectional survey that included face-to-face interviews. Data were collected through in-person interviews based on a self-designed structured questionnaire. The questionnaire covered six areas gathered from participant interviews: (1) demographic characteristics such as age, marital status, education, occupation, etc., (2) menstrual cycle history, childbearing history, etc., (3) medical and family history, including other-related diseases and family history of breast cancer, (4) lifestyle habits including smoking, alcohol intake, (5) knowledge of risk factors for breast cancer, early signs and symptoms of disease. Except for the basic demographic information, all questions had multiple-choice responses and the answer choices were categorized and quantified when possible. For all variables covered by the questionnaire, the answers were defined by strict criteria.

2.3 Study Questionnaire

The self-administered written questionnaire required approximately 15mins to complete for an participant individually. Prior to the study, the questionnaire was reviewed by physicians, pretested among practicing physicians and revised accordingly.

Each participant was given a self administered questionnaire, which was designed in five parts to evaluate information: the first part included socio-demographic data, the second part included symptoms and signs of breast cancer, the third part included factors affecting probability of breast cancer, the fourth part included knowledge and frequency of Breast self examination among the participants, the fifth part included reasons for starting Breast self examination and

barriers for practicing Breast self examination. components were divided based on suitable and unsuitable, so that if simple ticked "correct" it was code 1 and if she selected "incorrect" it was scored 0.

The knowledge of women about the common screening methods (mammography, clinical diagnosis and Breast self examination) was assessed. The source of knowledge was detected by asking the participant to define a source of her knowledge about breast cancer, provided to give more than one source.

2.4 Ethical considerations

The study protocol was prepared and approved by human ethics committee of Malla Reddy Institute of Pharmaceutical Sciences (MRIPS). Informed consent was collected from all the study subject which was written in local language for better understanding of the study participants.

2.5 Data management and analysis

The data was collected in a pre designed data collection form and reviewed systematically. All the data were subjected to descriptive and differential statistics by using latest version of GRAPHPAD PRISM software VI.

3. RESULTS

We conducted a cross sectional prospective observational study to assess the knowledge, awareness attitude practice towards predicting breast cancer among south Indian female college students, faculty members and house hold women by submitting a self administered questionnaire comprising a list of open ended questions.

3.1 Age

In our study a total of N=350 volunteers were participated. Out of them, less than 30 yrs representing highest no of volunteers, n=298(85%) and the age group between 50-59 yrs representing a least no of subjects, n=4 (1.1%) were participated. The average group participated in this study was 30-39 yrs, n=33 (9.4%) and between the age group of 40-49 yrs contributing a very less, n=15 (4.2%). The trends indicating that adolescent females have shown more interest to participate in the present study.

3.2 Marital history

The survey concludes that married subjects are 142 (40.57%), unmarried subjects are 206 (58.85%) and divorced subjects are 2 (0.57%). In our study duration of marriage between less than 5yrs to greater than 15 yrs womens were included, in that less than 5yrs representing volunteers of 62(17.7%) and between 5-10yrs no of volunteers included are 160 (45.7%), in greater than 15 yrs the no of subjects involved are 128 (36.5%).

In this no of children for a women has been taken into consideration i.e., no of children's are 0 for 202 (57.7%).

1-2 children's for volunteers of 131 (37.4%) and women's with 3-4 children's are less i.e., 17 (4.8%).

3.3 Occupational and educational status

In our study various occupational women were participated actively like student, govt or private working women and housewife. Students of 221 (63.14%) were participated in this study, and govt or private women's are 80 (22.8%) were included and housewife or household women's are 49 (14%) were participated in survey.

Illiterates, intermediates and higher educated womens or girls were involved in this study i.e., illiterates of 92 (26.28%) were included. Intermediate students of 48 (13.71%) and higher educated women's participated in this study are 210 (60%).

3.4 Onset of menstruation cycle

In our study, we have collected data on menstruation cycle (Table-1) and observed that women with regularity of menstruation are n=286 (81.7%), with irregular menstruation are n=64 (18.2%) and with post menopause are n=21 (6 %) (Fig. 1).

3.5 Family history of breast cancer and other diseases

In our study, we have collected data on family history of breast cancer (Table-1) and observed that women with negative history are more i.e. n=323 (92.2%) and very few with positive history of n=27 (7.71%) and with a positive family history of other diseases are n=199 (56.8%), with no history of other diseases are n=151 (43.1%) (Fig. 1)

3.6 Family history of abortion, child death and contraception methods

In this study, we have collected data on history of abortion (Table-1) n=59 (16.8%) and without abortion history n=29 (83.1%). History of child death n=321 (91.7%) and without history of child death n=321 (91.7%). women using methods of contraception use are n=106 (30.2%) and without using contraception use are n=244 (69.7%) (Fig. 1)

3.7 Knowledge of breast self examination and mammography

In this research work, we evaluated the knowledge about breast cancer self examination (Table-2). For the question "I do not know how"? n=209 (59.7%), for the second question "Yes I Know But Never Applied "? n=77 (22%). For the third question "Yes I Apply Whenever Comes In My Mind"? n=25 (7.14%). For the fourth question "Once a Month" n=17 (4.85%) and for the last question "Once a Year" n=22 (6.28%).

The feedback for breast examination by health care professionals are with high members as "No" including n= 225 (64.2%).For the question "Yes I Had A Breast Problem" n=36 (10.2%). For the question "Yes Yearly" n=89 (25.4%) (Fig.4).

The knowledge about mammography was evaluated including questions "I Have No Knowledge" n=169 (48.2%). For the question "I Have Knowledge But Never did" n=82 (23.4%). For the question "Yes Yearly" n=99 (28.2%) (Fig.5).

3.8 Reasons for starting to perform breast self examination monthly and barriers for participating breast self examination monthly

In the study, we have evaluated data for reasons starting to perform BSE monthly (Table-3) including a list of 7 questions such as "Fear of Breast Cancer" n=96 (27.4%). For "Media" n=71 (20.2%). For "Doctors Advice" n=47 (13.4%). For "Breast Pain" n=41 (11.7%).For "Feeling of Mass" n=36 (10.2%). For "Breast Cancer in the Family" n=28 (8%).For "Encouraged by a friend" n=31 (8.85%) (Fig. 2)

We also evaluated data for the barriers of participating BSE monthly including a list of 7 questions such as "Lack Of Knowledge" n=126 (36%).For "Dislike To Touch Breast" n=12 (3.4%).For "Fear/Worry To Find A Lump" n=32 (9.14%).For "No Time For BSE" n=21 (6%).For "No Breast Complaints" n=92 (26.2%).For "Absence of Lump During Previous Examination" n=30 (8.57%).For "Forgetfulness" n=37 (10.5%) (Graph-3).

Figure captions

Figure1. Physiological and Reproductive factors in study Population.

Figure2. Reasons for starting to perform BSE monthly.

Figure3. Barriers for participating BSE monthly.

Figure4. Participant's Attitude towards BSE.

Figure5. Participant's Attitude towards Mammography.

Table1. Frequency distribution of socio-demographic characteristics.

Table2. Knowledge and frequency of Breast examination among the participants.

Table3. Participant's opinions about BSE monthly.

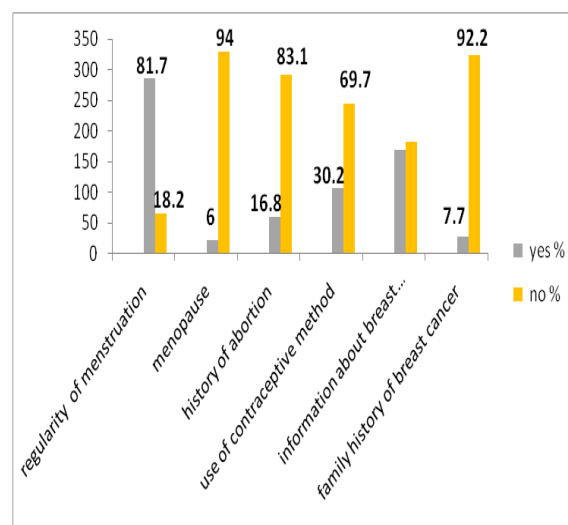


Figure: 1 Physiologic and reproductive factors in study Population.

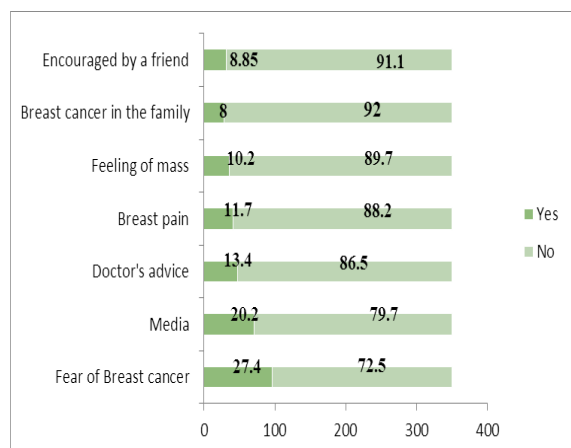


Figure: 2. Reasons for starting to perform BSE monthly

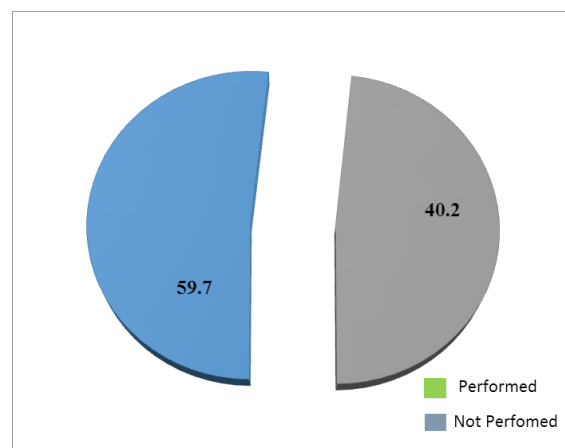


Figure: 4 Participant's attitude (%) towards BSE

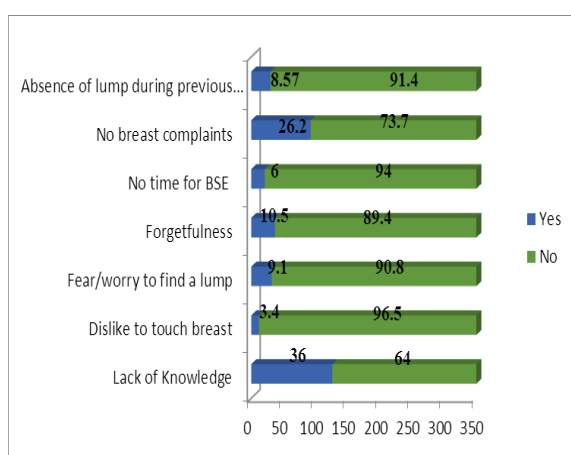


Figure: 3 Barriers for participating BSE monthly

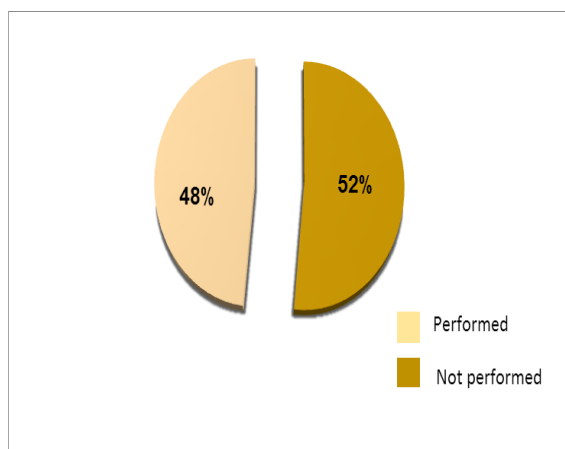


Figure: 5 Participant's attitude (%) towards Mammography

Table: 1 Frequency Distribution of Socio-demographic Characteristics of Respondents at Narayana Hrudayalaya Multispecialty Hospital, 2015.

Characteristics	No of subjects	Percentage
Age (years)		
40-49	4	85.1
30-39	15	9.4
<30	33	4.2
50-59	298	1.1
Education		
Higher	92	26.2
Intermediate	48	13.7
Illiterate	210	60
Occupation		
Government/private	221	63.1
Student	80	22.8
Housewife	49	14
Marital status		
Divorced/Widowed	142	40.5
Unmarried	206	58.8
Married	02	0.5
Duration of marriage (years)		
<5	160	17.7
>15	62	45.7
10 -15	128	36.5
Number of living children		
31	202	57.71-2

0	1	4.8
3-4	17	37.4
Regularity of menstruation		
Yes	286	81.7
No	64	18.2
Menopause		
Yes	21	06
No	329	94
History of abortion		
Yes	59	16.8
No	291	83.1
Use of contraceptive method		
No	106	30.2
Yes	244	69.7
Information about Breast cancer		
Yes	169	48.2
No	181	51.7
Family history of breast cancer		
Yes	27	7.7
Total	350	100

Table 2. Knowledge and Frequency of Breast Examination among the Participants.

Method of examination	No	Percentage
Frequency of practicing BSE		
I do not know how	209	59.7
Yes I know, but never applied	77	22
Yes I apply whenever it comes my mind	25	7.1
Yes I apply once a month	17	4.8
Yes I apply once a year	22	6.2
Breast examination by health professional		
Yes yearly	36	10.2
No	225	64.2
Yes as I had a breast problem	89	25.4
Mammography		
I have no knowledge	169	48.2
I have knowledge but never did	82	23.4
Yes yearly	99	28.2
Total	350	100.0

Table 3. Participant's opinions about Breast Self-Examination Monthly.

Participants' opinion	No. of subjects	Percentage
Reasons of starting to perform breast self-examination monthly		
Fear of breast cancer	88	25.1
Media	71	20.2
Doctor's advice	47	13.4
Breast pain	41	11.7
Nipple discharge	08	2.2
Feeling of a mass	36	10.2
Breast cancer in the family	28	8.0
Encouraged by a friend	31	8.8
Barriers for practicing breast self-examination monthly		
Lack of knowledge Dislike to touch breasts	126	36.0
Fear/worry to find a lump	12	3.4
No time for BSE	32	9.1
Forgetfulness	21	6.0
No breast complaints	37	10.5
Absence of lump during previous examination	92	26.2
Total	350	100.0

4. DISCUSSION

We undertook this study to determine the extent of breast cancer awareness and knowledge in the Indian population so that we could both assess the need for future breast cancer educational programmes that might benefit most of the population.^[13,21]

It might be argued that there is no particular reason why survey participants should know anything about breast cancer. However, it is alarming that what females think they know is often incorrect. We specifically included “Don’t Know” as a stem to the answer portion of questions so that participants could indicate their lack of knowledge.^[15]

Our survey showed that Indian women tend to know about related symptoms of breast cancer, but generally had poor awareness of other breast cancer related information including risk factors and some atypical symptoms.^[2,18] There is a high response rate of 96.4% among south Indian women in our study especially young adolescent college students and faculty of pharmacy colleges. This may be due to increasing health consciousness in present days in spite of busy life and the survey also indicate that a very poor awareness among the study subjects.^[19] In this study insufficient knowledge was mainly in two areas: poor health education and lack of awareness of Breast self examination and mammography.

A study in India on 194 women showed that the knowledge of majority of women about breast cancer is inadequate (Sadler et al, 2012). Another study carried out by Dundar et al on 244 women in a rural area in western Turkey was in line with this finding so that 44% of participants reported to have insufficient knowledge of breast cancer, about half of whom had acquired the small amount of information they had from health professionals; In the contrary, a survey in Singapore showed that breast cancer and BSE awareness among public health nurses was relatively high (Chong et al, 2002). This may be because nurses play a key role in publicizing breast cancer information and care methods because of their more frequent interaction with patients and their relatives, and the related training they have received.^[11]

Most of the women don’t know how to perform Breast self examination is major consent in our study [n=209 (59.7%)] and a very few women having awareness about breast cancer but they never applied Breast self examination [n=77 (22%)]. Where breast cancer can be best screened by self breast examination. Few participants of the study performed Breast self examination once a month [n=17 (48%)] as shown in (Table.2). Similarly, in the study carried out by Zahra Ghodsi et al.^[5] respondents practice of breast self-examination. 14.8% of the respondents claimed that they carry out breast self examination. 5.7% of the respondents started performing breast self-examination when they

were 20 years while the rest started at more than 20 years of age.

The major factor for the late presentation of breast cancer is that most women do not carry out breast self examination and they do not undergo mammography.^[20] It is either that they have never heard of breast self examination or they do not know how to carry it out. In the present study, 59.7% of the respondents have never heard about Breast self examination, while 22% of them knew the procedure but never applied it, but only 4.8% and 6.2% of the participants applied the technique monthly and yearly respectively (Fig. 3). Several studies on Breast self examination have reported similar findings. This may be as a result of poor health education in our society.^[21] In a study done among college students and faculty, only about 23.4% had adequate knowledge of breast self examination. The implication of all of these is that there is the need for proper orientation about breast cancer among the various health care professionals which in turn is expected to boost the level of awareness in the society.^[22]

The knowledge of the use of mammography as a screening tool for early detection of breast cancer was found to be poor among our respondents. Only 23.4% of the respondents have heard about screening mammography. Similarly, in the study carried out by Rabia Latif et al.,^[21] the number of participants who take part in early detection measures such as BSE, CBE and Mammography was much less (50.7%, 8.7% and 0%) respectively.^[2] Health education about the benefits of mammography screening should be encouraged. Women’s limited knowledge about breast cancer has been identified elsewhere in developed and under developing countries.^[23]

The results suggests that, there is an urgent need to explore the awareness deficits and stigma surrounding breast cancer, both in the general population and among health care professionals, as incidence and mortality rates continue to rise. Understanding barriers is important for strategic and effective awareness campaigns and interventions on prevention and early detection, concerning breast cancer education including mammography and Breast self examination methods at schools, colleges & need to conduct massive screening programmes for the public in the India.

Like in any other study, there are few limitations in our study. The fundamental limitation of the study is sample size and the study requires further evaluation in a massive population as this population would not be sufficient. The questionnaire developed by the author was the only instrument employed for recruitment of study participants. While, this may limit comparability of our results with that of other researchers. The study limit is lack of knowledge to implement in the present study. Another limitation was the lack of information regarding the responses of non-participating women. Despite these

limitations, studies like this can enhance the knowledge and awareness regarding breast cancer, Breast self examination and mammography among south Indian population

5. CONCLUSION

The study survey states that insufficient knowledge of females about breast cancer, mammography and deficit knowledge on the practice of breast self examination. It also showed that most participants knew of breast cancer as a disease entity, but their awareness and understanding about the disease was very poor. As breast cancer incidence increases, a breast cancer awareness and education program is necessary and urgent, especially for women aged 35 years and older. Indian women need to be aware of both modifiable and non-modifiable risk factors for breast cancer to adopt appropriate practices for prevention. Women should be informed about the benefits of screening tests as well as the age at which they should begin and how frequently they should be performed.

Besides that, should be focused on raising the women's awareness, self-protection abilities and improving the women's quality of life.

Finally we strongly believe that "Educating A Female Is Educating A Family"

6. CONFLICT OF INTERESTS

The authors declare that they have no conflict of interests.

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