

## Original Research Article

# Are health professionals serious about breast self-examination? a study from a medical college and tertiary level hospital of Central India

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### ABSTRACT

**Background:** Breast cancer is increasing in prevalence all over the world and health professionals are having main responsibility to counter this rapid increase by early diagnosis and prompt treatment. Breast self-examination is cheapest, easy and most cost-effective way of screening of breast cancer. If health professionals themselves know, understand and practice BSE, then only they are expected to be oriented towards taking this tool seriously and include in their practice. Therefore, to study breast self-examination (BSE) among Health professionals in tertiary hospital this study was conducted.

**Methods:** This cross-sectional study was conducted at a medical college and tertiary level hospital in Nagpur, from August 2016 to October 2016. All female Interns, female Post-graduate students, all female teaching staff in all clinical, para-clinical and non-clinical departments and nurses were included in the study. Total 400 Health professionals had participated in this study. Data entry and analysis was done using EPI-Info.

**Results:** In this study, 93.75% of participants were having knowledge regarding BSE but only 86.36% practically knew how to do BSE. Moreover only 74.75% were practicing BSE (at least once in a month). Common reasons for not practicing BSE were 'not having time', 'don't feel it's necessary' and 'feels awkward'.

**Conclusions:** This study revealed that there is strong need of intervention in health professionals in making them aware of BSE, to improve knowledge and making BSE a universal practice them.

**Keywords:** Breast cancer, Breast self-examination, Central India, Tertiary level hospital

## INTRODUCTION

Breast cancer is relatively easy to utter but leaves frightening impression on women. The health of women is at stake as breast carcinoma is the leading causes of death in women internationally.<sup>1-3</sup> According to GLOBOCAN 2012, 1.7 million women were diagnosed with breast cancer and there were 6.3 million women already diagnosed in the previous five years. In India among 144,937 women newly detected with breast cancer, 70,218 women died. In the present scenario,

roughly for every 2 women newly diagnosed of breast cancer, one lady is dying of it.<sup>4</sup>

One major factor responsible for overwhelmingly scary mortality rate in breast cancer is late presentation.<sup>5</sup> Most patients in our country present when the disease has already advanced and has a poor prognosis. A common reason for late presentation of patients is lack of awareness of breast cancer and poor attitude towards breast self-examination (BSE).<sup>5</sup>

According to Persson, BSE is inexpensive tool that can be carried out by women themselves.<sup>6</sup> It benefits women to become familiar with both the appearance of the breast and detect any changes in their breast as early as possible.<sup>3</sup>

According to a study by Gupta H “cultural taboos make Indian women embarrassed to talk about their bodies.”<sup>7</sup> In India, cultural taboos, lack of self confidence in their ability to perform the technique correctly, fear of possible discovery of a lump and embarrassment associated with manipulation of breast are the major barriers.<sup>8</sup>

Health professionals represent the responsible and educated mass of the population. It is expected from them to advise BSE to their patients using numerous opportunities.<sup>9</sup> But if health professionals themselves are not aware and/or don't practice BSE unlike expected, we can't expect good practice of advising BSE to their patients.<sup>10,11</sup> Thus, this study is planned to study status of breast self-examination and reasons for practicing BSE among health professionals in a medical college and tertiary level hospital.

The planned study is designed specifically on health professionals for following reasons, general population is much dependent on the advice and motivation of the health professionals. They play a key role in reinforcing social norms favorable towards screening and helping to develop supportive institutional policies.

By assessing the knowledge, attitude and practice of health professionals we can understand how health professionals are using resources regarding BSE.<sup>12</sup> By knowing reasons for practicing and not practicing BSE in health professionals, we can identify and focus on opportunities to improve BSE among health professionals and so in general population.

### Objectives

To study knowledge, attitude and practice of breast self-examination among health professionals in tertiary hospital. To identify reasons for not practicing BSE.

### METHODS

This is descriptive cross-sectional study conducted at a medical college named N.K.P. Salve institute of medical sciences and research centre, Nagpur, Maharashtra, India and Lata Mangeshkar hospital, Nagpur, Maharashtra, India which is tertiary level hospital situated in central India. All female Interns, female post-graduate students, all female teaching staff in all clinical, para-clinical and non-clinical departments and nurses were included in the study. The study was conducted from August 2016 to October 2016.

Universal sampling technique was used and data was collected by a self-administered questionnaire. The

questionnaire was in five parts. The first part includes socio-demographic factors (age, sex, education, occupation, marital status etc.) Questions relating to knowledge of breast self-examination were asked in the second part. Participants' attitude towards BSE was assessed in the third section. The fourth part of the questionnaire contains practice of BSE among participants. Fifth part explores reasons for practicing/non-practicing BSE. Data was entered and analyzed on computer using software MS Excel and EPI\_INFO version 7.

The study was conducted after taking approval from Institutional Ethical Committee, NKPSIMS and RC, Nagpur, Maharashtra, India. The purpose of study was explained and oral consent was obtained from each study participant included in the study. The confidentiality was assured and was maintained. The results were shared with higher authority of institute to take appropriate interventions.

### RESULTS

In this study, 400 participants were included. Majority (71.00%) were in age group of 20-29 years, followed by 30-39 years (9.50%), <20 years (8.50%), 40-49 years (7.25%). Majority (47.00%) were nurses, followed by interns (29.00%), resident doctors (18.00%) and teachers (6.00%). Majority (68.75%) were unmarried and 31.25% were married (Table 1).

**Table 1: Sociodemographic factors of participants.**

Particulars	Frequency	Percentage
<b>Age (years)</b>		
<20	34	8.50
20-29	284	71.00
30-39	38	9.50
40-49	29	7.25
50-59	13	3.25
>60	2	0.50
Total	400	100
<b>Occupation</b>		
Interns	116	29.00
Nurses	188	47.00
Resident doctors	72	18.00
Teachers	24	6.00
Total	400	100
<b>Marital status</b>		
Married	125	31.25
Unmarried	275	68.75
Total	400	100

### Knowledge regarding breast cancer and breast self-examination (BSE)

In current study, percentage of people heard of BSE was 93.75 but only 86.36% of participants were practically

feel that they know how to do BSE. The main source of knowledge was lectures (64.80%) followed by health worker (35.47%), internet (30.13%), friend (35.47%) and television (24.27 %). Early menarche (46.75%), hormone treatment (38.25%), nulliparity (36.75%) and heredity (30.25%) were blamed to be the causes of breast cancer by participants.

**Table 2: Knowledge of breast self-examination.**

Have you heard of breast self-examination (BSE)?	Frequency	Percentage
Yes	375	93.75
No	25	6.25
Total	400	100
Do you know how to do BSE?		
Yes	342	85.50
No	58	14.50
Total	400	100
How do you know about BSE?*(n=375)		
Lecture	243	64.80
Television	91	24.27
Radio	40	10.67
Health worker friend	133	35.47
Newspaper	67	17.87
Internet	113	30.13
Others	44	11.73
Which of the following do you think are the causes of breast cancer? (n=400)		
Early menarche	187	46.75
Nulliparity	147	36.75
Alcohol	73	18.25
Smoking	89	22.25
Hormone treatment	153	38.25
Obesity	83	20.75
Infections	102	25.50
Runs in family	121	30.25
Synthetic bra	80	20.00
Large breast size	74	18.50
Which of the following do you think are the symptoms of breast cancer?*(n=400)		
Lump in breast	254	63.50
Pain in the breast	200	50.00
Discharge from nipple	184	46.00
Dimpling	132	33.00
Pulled in nipple	130	32.50
Fever	73	18.25
Cough	11	2.75
Others	10	2.50
Which method of breast cancer detection do you know?*(n=400)		
Mammography	261	65.25
Breast self-exam	256	64.00
Clinical breast exam	160	40.00
Aspiration cytology	134	33.50
Blood test	88	22.00

USG	66	16.50
X-ray	46	11.50
Others	8	2.00
Most economical way to detect breast cancer you are aware of* (n=400)		
Breast self-exam	230	57.50
Mammography	144	36.00
Blood test	18	4.50
X ray	7	1.75

\*Multiple answers were allowed.

According to current study regarding common symptoms of breast cancer, participants were aware of lump in breast (63.50%), pain in breast (50.00%), discharge from nipple (46.00%), dimpling (33.00%), pulled in nipple (32.50%) etc.

This study shows that common methods known by participants for detection of breast cancer were mammography (65.25%) followed by BSE (64.00%), clinical breast examination (40.00%) and Aspiration cytology (33.50%). When participants were asked about most economical way to detect breast cancer, majority (57.50%) said BSE followed by mammography (36.00%), blood tests (4.50%) and X ray (1.75%) (Table 2).

#### **Attitude towards breast self-examination**

When attitude towards BSE were studied, it showed majority (47.00%) of participants were strongly disagree followed by disagreement (37.75%) that BSE is not necessary but more than one fifth (22.5%) participants agree that they feel embarrassing doing BSE. Few (11.75%) even think that BSE is waste of time.

Though more than 95% agreed that practice of BSE should be encouraged, 16.25% participants think BSE is against their cultural belief and practice, still more than 90% participants said they really care for their breast. Few (17.50%) participants agreed that they were afraid of BSE because they worry about having breast cancer. Among all the participants more than 80% always search for information regarding BSE and discuss BSE with their friends and even 95% participants agreed that they should advise BSE to their patients (Table 3).

#### **Practice and reason for not practicing breast self-examination**

This study showed that only 76.00% of participants had ever examined their breast. When they are asked about most important reason for not examining breast, we found common reason for not examining breast were 'they feel awkward' (38.54%), followed by 'they don't have time for it' (37.50%) and 'they don't feel it is necessary' (23.96%). Those who do BSE, majority have no regular time (42.75%). 24.00% do once a month and 9.25% do it twice a month. Majority (50.33%)

participants don't have any specific time to do BSE. Others do some days after menstruation (19.08%), before menstruation (16.78%) and during menstruation (10.86%). Majority (77.30%) participants do BSE in

standing position followed by lying down position (20.40%). Majority (66.78%) participants use their finger pad, followed by palm (29.93%) and wrist (1.32%) to palpate breast during BSE (Table 4).

**Table 3: Attitude towards breast self-examination.**

	Strongly agree	Agree	Disagree	Strongly disagree
Breast self-examination is not necessary.	23 (5.75)	38 (9.50)	151 (37.75)	188 (47.00)
Doing BSE is embarrassing to me.	23 (5.75)	67 (16.75)	162 (40.50)	148 (37.00)
Doing BSE is wasting time.	13 (3.25)	34 (8.50)	177 (44.25)	176 (44.00)
The practice of BSE should be encouraged.	193 (48.25)	185 (46.25)	17 (4.25)	5 (1.25)
BSE is against my cultural belief and practice.	27 (6.75)	38 (9.50)	163 (40.75)	172 (43.00)
I really care about my breast.	185 (46.25)	182 (45.50)	23 (5.75)	10 (2.50)
Avoid BSE because I worry about having breast cancer.	17 (4.25)	53 (13.25)	170 (42.50)	160 (40.00)
Always search for information regarding BSE.	122 (30.50)	206 (51.50)	52 (13.00)	20 (5.00)
Discuss with my friends about BSE.	124 (31.00)	229 (57.25)	37 (9.25)	10 (2.50)
I should advise BSE to my patients.	211 (52.75)	172 (43.00)	13 (3.25)	4 (1.00)

Parenthesis shows percentage.

## DISCUSSION

The medical students, interns, post graduates, faculties and nurses, who work in healthcare services, play an effective role in informing and advising women about BSE and in changing their BSE-related behaviors, which is very important for early detection of breast cancer.<sup>3,13-</sup>

<sup>15</sup> This study has been carried out among 400 health professionals of tertiary care hospital of central India with basic intention to see the seriousness of health professionals themselves about BSE.

With the data of 400 participants comprising of teachers, post graduate students, medical interns and nurses this study was conducted during August 2016 to October 2016. The participants were health professionals and have maximum chances to interact with women who need practicing BSE. There are very few studies (at least in India taking account of BSE among all these health professionals of tertiary care hospital simultaneously), comparison was difficult.

Present study showed that though participants were from medical background, not all (93.75%) were aware of BSE and only 86.36% participants thought that they practically know how to do BSE. This was like study done at Puducherry, India which showed 89.2% nursing students have heard of BSE.<sup>16</sup> Lower awareness showed in study done by Doshi et al (72%), done at Hyderabad City, India in dental students.<sup>3</sup> In study at Zaria, Nigeria 87.7% female undergraduate students heard about BSE but comparatively low (45.5%) level of awareness about BSE

was found in study done at Nigerian urban area. This shows that in all studies percentage of participants knowing BSE was not very high and there are different awareness levels in various parts of world and various parts in a same country. This may be due to different study population and different study settings.

In current study, main sources of knowledge were lectures (64.80%), health worker friend (35.47%), internet (30.13%). Similar sources were sources of knowledge in other studies like study done at University of Buea, Africa showed TV (19.9%), friends (19.3%) and physicians (17.5%) and study Lagos, Nigeria showed TV/Radio (54.8%), Newspaper (30.8%) and peer group (24.5%) were common sources of knowledge.<sup>17,18</sup> This shows that mass media plays crucial role in giving knowledge even to health professionals.

According to present study common symptoms of breast cancer that the participants knew were lump in breast (63.50%), pain in breast (50.00%), discharge from nipple (46.00%), dimpling (33.00%), pulled in nipple (32.50%) etc.

Similar findings were showed by study done in Kuwait where symptoms of breast cancer participants knew were lump in breast (96.30%), pain in breast (64.2%) and discharge from nipple (77.1%) and study done at Turkey also showed that lump in breast (53%), discharge from nipple (50.00%) and pain in breast (15%) were common symptoms.<sup>17,19</sup> This showed that three most common symptoms health professionals knew were lump in breast, pain in breast and discharge from nipple.

**Table 4: Practice of breast self-examination.**

Question	Frequency	Percentage
Have you ever examined your breast? (n=400)		
Yes	304	76.00
No	96	24.00
Total	400	100.00
If no, why? (n=96)		
I do not have time for it	36	37.50
I do not feel it is necessary	23	23.96
I feel awkward	37	38.54
Other	0	00.00
Total	96	100.00
How often do you do BSE? (n=304)		
Once a month	96	24.00
Twice a month	37	9.25
Anytime I feel like	171	42.75
Never	96	24.00
Total	400	100
At what time of your menstrual cycle do you examine your breast? (n=304)		
Before menstruation	51	16.78
During menstruation	33	10.86
Some days after menstruation	58	19.08
No particular time	153	50.33
Others	8	2.96
Which position u do BSE in mostly? (n=304)		
Standing	235	77.30
Lying down	62	20.40
Any method	7	2.30
Total	304	100.00
The part of hand used to palpate the breast commonly during BSE is, (n=304)		
Finger pad	203	66.78
Palm	91	29.93
Wrist	4	1.32
Nail	1	0.33
Total	304	100.00

Current study showed that common methods known by participants for screening of breast cancer were Mammography (65.25%) followed by BSE (64.00%), clinical breast examination (40.00%) and Aspiration cytology (33.50%).

Similar findings were shown by study at Turkey where 50.45% showed preference to BSE and 44.03% showed preference to mammography.<sup>19</sup> This shows that not high percentage of health professionals believe in the efficiency of BSE. This is very important finding considering seriousness of health professionals about BSE. This low percentage strong impact to include BSE in health education.

Current study showed that majority (47.00%) of participants were strongly disagreed followed by disagreement (37.75%) that BSE is not necessary but

more than one fifth (22.5%) participants agree that they feel embarrassing doing BSE. Similar finding was showed by study by Jenin where 23.8% were feeling embarrassing doing BSE.

Present study showed few (11.75%) even think that BSE is waste of time which was not in case of study by Ayed et al where no one was of this opinion.<sup>20</sup> This may be due to difference in study population and different orientation of health professionals in that institute. This also shows that if health professionals feel BSE embarrassing, how will they remove hesitation of doing BSE among general population.

In current study, more than 95% agreed that practice of BSE should be encouraged, 16.25% participants think BSE is against their cultural belief and practice. Few (17.50%) participants agreed that they were afraid of

BSE because they worry about having breast cancer. Similarly study by Ayed et al also showed that 20.5% were afraid of BSE because they are worried about having breast cancer.<sup>20</sup> This shows that there is elevated level of apprehension even in health professionals which is unacceptable.

This study showed that only 76.00% of participants had ever examined their breast and only one third (33.25%) practice BSE regularly (one or twice a month). Whereas study done at Kuwait (29.2%), Nigeria (83%) and Turkey (52%) showed varied percentages of regular practice of BSE.<sup>14,18,19</sup> This difference may be due to different study population and study settings but all findings shows percentage of health professionals practicing BSE is not high anywhere. This shows poor practice of BSE among health professionals.

Breast cancer is the most common cancer among women and the second leading cause of cancer deaths in women today globally and trend shows increase in prevalence. The purpose of this study was to analyze knowledge, attitude and practice of BSE in health professionals of tertiary care hospital.

The awareness and knowledge (93.75%) about BSE was not found to be universal among health professional. Even less (86.36%) were confident of knowing how to do BSE. Though all participants were health professionals, apart from lectures, mass media showed to play key role in getting knowledge about BSE. Lump in breast, pain in breast and discharge from nipple were most common symptoms of breast cancer participants were aware of but the percentage of health professionals knowing BSE being common method for screening of breast cancer was poor (64.00%). It is also seen that there were many health professionals who feel embarrassed (22.5%) or feel BSE a wastage of time (11.75%) if they do so. Few (16.25%) health professionals also think BSE is against their cultural belief and practice. Though 95% agreed that practice of BSE should be encouraged, only 76.00% of participants had ever examined their breast and very few (33.25%) practice BSE regularly (one or twice a month).

## CONCLUSION

As breast self-examination has been identified as the only feasible and reasonable approach in early detection of breast cancer in mass level, especially in developing nations one should expect huge responsibility from health professionals to percolate knowledge, develop attitude and increase practices of BSE in general population through numerous opportunities.<sup>21</sup>

Current study showed lack of knowledge, attitude and practice of BSE among health professionals. It is obvious that health professionals who don't have strong attitude and habit of practicing BSE will not be serious in percolating BSE in general population. Therefore, there is strong need of intervention in health professionals in

making them highly aware of BSE, to improve knowledge and making BSE a universal practice among health professionals first, so that they understand, practice and transfer the importance of practicing BSE to general population using all opportunities they get. Mass media like internet and television can be very crucial medium to reach health professionals for improving knowledge, attitude and practice of BSE in them.

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