

# Knowledge, attitude, and practice of breast cancer screening among female health care professionals of a tertiary care hospital of Peshawar

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## ABSTRACT

**Introduction:** Breast cancer is identified as the second leading cause of death in women throughout the world. The role of health practitioners is important to sensitize and educate the community regarding its early diagnosis through self-examination techniques.

**Objective:** To determine the knowledge, attitude, and practice about breast cancer and its diagnostic techniques among the female medical staff working in Hayatabad Medical Complex (HMC), Peshawar.

**Materials & Methods:** A cross-sectional study was conducted from April to June 2016 on 150 female health professionals of Hayatabad Medical Complex (HMC), Peshawar through convenience sampling. Data were collected using a self-administered questionnaire. The questionnaire included specific sections to test the participants' knowledge, attitude, practices, and barriers related to breast cancer and its screening. Data analysis was done for descriptive statistics by SPSS 16.

**Results:** Majority of female staff (80.7%) who participated in this study were aged between 30-35 years; 36.7% were doctors and 54.7% were nurses. Most (81.3%) female health care staff had knowledge about the diagnostic techniques of breast self-examination and mammography. Knowledge of breast self-examination was significantly associated with its practices ( $p=0.048$ ). Breast self-examination had been done by 54% in their lifetime, but the standard procedure of breast self-examination was not followed. Only 3.3% had ever performed mammography. Most females believed that the major barrier in performing breast self-examination and mammography are embarrassment and anxiety.

**Conclusion:** The magnitude of breast screening practices was not satisfactory among medical staff of HMC. Efforts should be made to influence the attitude and practices of health care providers through health education and awareness sessions so that they can sensitize the community about the alarming condition of breast cancer and the importance of screening.

**Keywords:** Breast Cancer; Breast Self-Examination; Mammography; Public Health; Screening.

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## INTRODUCTION

Breast cancer is one of the commonly diagnosed malignancies across the world. It is recognized as second leading cause of deaths among women and constitutes about 14% of female cancer related deaths.<sup>1</sup> Globally there are more than two million cases of breast cancer that constitute 11.6% of all cancers.<sup>2</sup> Breast cancer occurs approximately one in every nine Pakistani women, making it one of the highest incidence in Asia. According to a report, Pakistan has the highest rate of breast cancer mortality and morbidity in Asia with 90,000 cases reported annually and more than 40,000 deaths.<sup>3</sup> These deaths occur mostly because of lack of awareness among the women about the disease as well as lack of attitude and practices of Breast Self-Examination (BSE) and Mammography screening.<sup>4</sup> Despite significant advances in breast cancer treatment, the prognosis remains low in developing countries.<sup>1</sup> A delay in diagnosis may indeed be a significant factor in poor prognosis. Once breast cancer is detected at an early stage, the prognosis is considered to be better, with low adverse outcomes.<sup>5</sup> These deaths can be prevented by implementation of primary and secondary preventive strategies.<sup>6</sup> Awareness and health education are the two important tools to create effective strategies at primary level of prevention. These help to change the attitude and practices of the general population towards screening and treatment of breast cancer.<sup>7</sup>

Appropriate information and understanding are critical for successful screening and early detection. The most recognized tools for screening of breast cancer are Breast Self-Examination (BSE), Clinical Breast Examination (CBE), and Mammography.<sup>8</sup> It is observed that there is adequate knowledge of medical professionals but they lack teaching programs and strategies to encourage them to develop attitude towards practice of BSE and regular Mammography.<sup>9</sup> This study was conducted to determine the knowledge, attitude, and practice of breast self-examination and mammography among female health care staff of Hayatabad Medical Complex, Peshawar, so that the barriers in female health care staff regarding the practice of these screening tools are identified.

**MATERIALS & METHODS**

A cross-sectional study was conducted from April to June 2016, on 150 female health care staff, including doctors, nurses and paramedics at Hayatabad Medical complex (HMC) Peshawar. The participants were selected for this study by convenience sampling method and after obtaining informed consent. An indigenous self-administrative questionnaire was developed and used for data collection after an extensive literature search. The questionnaire had 3 portions. The first part had questions regarding the demographic characteristics. The second part had questions about knowledge, attitude, and practices of breast cancer screening among health care professionals. The last part had a portion of questions regarding the barriers among health care professionals in performing breast self-examination and mammography. Data were analysed on SPSS version 16 for descriptive analysis.

**RESULTS**

A total of 150 female medical staff participated in this study, of which 36.7% were doctors, 54.7% were nurses and 8.6% were paramedical staff from different specialities in HMC, Peshawar. The age groups of study participants are shown in Table 1.

**Table 1: Socio-demographic data of subjects (n=150).**

Socio-demographic characteristics	f	%
<b>Age groups (years) (n=148)</b>		
30-35	121	81.76
36-40	24	16.22
46-50	03	02.02
<b>Occupation (n=150)</b>		
Doctor	55	36.7
Nurse	82	54.7
Paramedic	13	08.7

Table 2 shows that majority (81.9%) of the health care staff had knowledge about BSE and mammography. Majority (96.3%) of responding doctors, (42.6% of health care staff) had the knowledge,; 72% of responding nurses, (48.4% of health care staff) had knowledge of BSE and mammography,; 84.6% of responding paramedics (9% of health care staff) had knowledge about BSE and mammography,. A significant difference (p=0.001) was seen in the knowledge of health care staff regarding BSE and mammography.

**Table 2: Knowledge of the techniques of BSE among health care staff (n=149).**

Staff	Do you know the techniques of BSE and Mammography?		Total f (%)	p value
	Yes f (%)	No f (%)		
Doctor	52 (42.6)	02 (07.4)	54 (36.2)	0.001
Nurse	59 (48.4)	23 (85.2)	82 (55.0)	
Paramedic	11 (09.0)	02 (07.4)	13 (08.7)	
Total	122 (81.9)	27 (18.1)	149 (100)	

Table 3 shows that 81/149 (54.4%) of health care staff practiced BSE; 39/55 (70.9%) of doctors performed BSE comprising

48.1% of the health care staff; 37/81 nurses performed BSE, comprising 45.7% of the health care staff; 05/13 (38.5%) paramedics performed BSE, comprising 06.2% of the health care staff. The differences in practice of BSE among the health care staff was significant (p=0.007).

**Table 3: Practice of health care staff regarding breast cancer screening (n=149).**

Staff	Have you ever performed Breast Self-Examination?		Total	p value
	Yes f (%)	No f (%)		
Doctor	39 (48.1)	16 (23.5)	55 (36.9)	0.007
Nurse	37 (45.7)	44 (64.7)	81 (54.4)	
Paramedic	05 (06.2)	08 (11.8)	13 (18.7)	
Total	81 (54.4)	68 (45.6)	149 (100)	

Mammography had been hardly done by the health care staff (Table 4), as over 96% did not have mammography done. Of the 53 responding doctors, only 01(1.9%) had mammography done, forming 20% of the health staff; similarly, only 04/79 (5.1%) of nursing staff had mammography done, forming 80% of the health care staff; none of the 13 paramedics had mammography done. As such, there was no significant difference in the responses of health care staff (p=0.479).

**Table 4: Practice of mammography by health care staff (n=145).**

Staff	Have you ever done Mammography?		Total	p value
	Yes f (%)	No f (%)		
Doctor	01 (20.0)	52 (37.1)	53 (36.6)	0.479
Nurse	04 (80.0)	75 (53.6)	79 (54.5)	
Paramedic	0	13 (09.3)	13 (09.0)	
Total	05 (3.5)	140 (96.5)	145 (100)	

Regarding barriers to performance of breast self-examination and mammography, the main barriers reported by health care staff were embarrassment and getting worried about breast cancer (Table 5). Embarrassment and feeling uncomfortable were listed by 110 (73.8%) health care staff, followed by getting worried about breast cancer, 103 (69.1%). Other hindrances listed were lack of availability of mammography facilities, 68(45.6%) and that it was a time-consuming technique, 51 (34.2%).

**Table 5: Barriers to performing BSE among health care staff (n=149).**

Barriers in performing BSE and Mammography	Responses f (%)
Embarrassing / uncomfortable	110 (73.8)
Doing BSE makes me worried about breast cancer	103 (69.1)
Lack of availability of mammography	68 (45.6)
Time consuming techniques	51 (34.2)

## DISCUSSION

This study assessed the knowledge, attitude, and practice of breast self-examination and mammography among the female medical staff of a tertiary care hospital of Peshawar, Khyber Pakhtunkhwa, Pakistan. The findings indicate that the knowledge and attitude regarding screening methods of breast self-examination and mammography were good, but practices were not good due to listed hindrances perceived by the health care staff.

A similar study conducted in King Fahad Medical City, Riyadh in 2018,<sup>1</sup> showed that 93% were aware of BSE whereas 90.6% believed it to be a useful tool for screening purposes of breast cancer; 93.2% of the study participants had heard about mammography, and 72.7% agree that mammography should be started at 40 years of age; 46.3% believed that it should be done annually. But only 18.7% of the participants had undergone mammography. Reasons for not undergoing mammography given were they were young and that their health was good enough so there was no reason to undergo mammography.

A study conducted among the primary health care workers in Diyarbakir, Turkey showed results similar to our study. The health workers had high level of knowledge regarding breast self-examination although they had low knowledge levels of breast clinical examination and mammography. Despite their awareness, their attitude and practice regarding BSE was not satisfactory.<sup>10</sup>

A study conducted in Pimpri Pune, India<sup>11</sup> on nurses showed that knowledge regarding the disease was fair enough, but attitude regarding breast self-examination revealed that 82.5% mentioned the main barriers were embarrassment and time consuming. The result showed that only 15.6% of nurses were performing BSE every month.

Another study conducted in Bolan Medical Complex, Quetta, Pakistan<sup>12</sup> regarding the knowledge and perception of health care staff and medical students about the screening methods of

breast cancer showed that 82% of the participants believed mammography was an important screening method, while 51.6% agreed that BSE could be a screening method for breast cancer. Most of the respondents (76%) believed that BSE helped in early diagnosis of breast cancer, while 61% agreed that it should be done monthly. Twenty two percent respondents said that BSE must be carried out before menstruation while 18% believed that it must be done after menstruation and majority confessed that they did not know about appropriate time to perform BSE. Embarrassment was found to be the major barrier in breast cancer screening for breast cancer, while other believed that fear of positive diagnosis is a hindrance too.

## CONCLUSION

Even though health professionals are expected to be the role models in all aspects of health services utilization, our study indicates that despite enough knowledge about breast self-examination and mammography, and a positive attitude toward these techniques, the magnitude of breast cancer screening practices was not satisfactory among the health care staff.

## LIMITATIONS

The present study was based in a single tertiary care hospital setting, hence the findings may not reflect the situation in other institutions of the province or the country. The small sample size and non-random sampling technique also limit generalization of results to other similar tertiary care hospitals.

## RECOMMENDATIONS

The proper practices of BSE and mammography can be improved by running an effective awareness campaign to remove barriers at societal level. Teaching programmes and sessions should be run in order to make female health care staff practice the screening techniques in a proper way. In this way the health care professionals will be able to sensitize the community about the alarming condition of breast cancer and the importance of the screening techniques.

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