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KNOWLEDGE ABOUT BREAST SELF-EXAMINATION AMONG FEMALE EMPLOYEES WORKING IN SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE LAHORE, PAKISTAN

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Abstract

Background: *Breast cancer is a leading cause of deaths among women worldwide. Many deaths can be prevented if breast cancer can be detected and treated early. In Pakistan, one in every nine women develops breast cancer some time in her life. Breast Self-Examination (BSE) is an inexpensive method for early detection of breast cancer. Therefore, the purpose of this study was to assess the knowledge of BSE among non- medical female staff of Shaukat Khanum Memorial cancer Hospital and Research Centre Lahore, Pakistan.*

Methods: *A cross-sectional study was conducted from May to June 2022. Data was collected using a self-administered questionnaire. The sample size was 83.The SPSS (version 20) was used for data analysis.*

Results: *The overall response rate was 98.8%. The 91.6% of the participants knew about BSE but only 75.9% had put this in their routine practiced. The most common reason for not practicing breast self- examination, as the participants explained was not knowing the correct time for breast self-examination (43.4%). The majority of the participants agreed that BSE is important in the early detection of breast cancer. Most of the participants were well- aware about breast cancer signs and symptoms (88%). Almost 62.7% employees showed knowledge about the correct frequency of BSE.*

Conclusion: *Despite a positive attitude was found among the participants toward BSE, its practice was inadequate.Among women who were aware of BSE, they were not practicing very regularly. Therefore, intensive behavioral changes are required through session and seminar for participants, to promote the practice of breast self-examination among the SKMCH &RC non-medical employees.*

INTRODUCTION:

Breast cancer is the most common type of cancer present in women and it is also leading cause of, cancer- related death in women worldwide. To decrease the mortality rate, the early detection is important. Due to poor economic condition and insufficient health facilities, women in Pakistan have limited access to mammography and clinical breast examinations. Thus, breast self - examination (BSE) becomes an important approach to detecting disease in early stages.

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Ferlay, et al (2019) stated that Pakistan has the highest incidence rate of breast cancer among Asian countries: 1 out of 9 women is at risk of having breast cancer during their lifetime. According to the International Agency of Research on Cancer 2018 report, 34,066 new cases of breast cancer had been reported in Pakistani women. Mekonnen (2020) stated that Breast self -examination technique is cost effective, painless, easy to apply, furthermore is safe, and non-invasive. Every woman can do it independently. It requires five minutes only to apply.

Our goal is to make breast self-examination as early detection tool and part of routine health care because Albeshan (2020) stated that breast cancer is the most common kind of cancer among women worldwide. Early detection is important to improving disease outcomes. There are three main screening methods – mammography, breast self-examination (BSE), and clinical breast examination (CBE). There is ongoing debate regarding the efficacy of BSE and CBE in terms of mortality reduction, and a number of international organizations no longer recommend them as screening methods. In technically less developed countries, however, where women are usually diagnosed with breast cancer at advanced stages and younger ages, the benefits of BSE and CBE are remarkable.

Staff knowledge should be an ongoing process that begins with staff orientation to hospital environment, scope of services and departmental visits. When awareness campaign carried out effectively, it helps to identify potential health problems and needs. Every health origination need to evaluate its own employee on the basis of health and health issue related knowledge. The health organizations need to be more advance in knowing the health status and health issue of the employee and their family as well. Furthermore, health organization should be given the awareness of diseases, their prevention and the early signs and symptoms. Sometime hospital launches many campaigns for community but they forget their employee's awareness.

The purpose of our study is to evaluate the knowledge and awareness about one of the easy and cost-effective breast cancer early detection method, a BSE. While working with cancer specialist hospital female employee must know about breast cancer, its signs and symptoms and risk factors.

The finding of this study will help the cancer specialist hospital to know the level of awareness about the BSE. Furthermore, as health care provider we can reduce the breast cancer mortality rate through the increasing awareness about BSE and improving early diagnosis and treatment. Besides all these SKMCH&RC can also include non-medical female from different departments of hospital during cancer awareness campaign.

Johnson et al (2021) stated that Promoting employee health and saving from disease, is an investment that pays off. From increased productivity, identifying potential diseases and engagement to lower absentee rates, employee wellness is one of the most valuable investments we can make. As health care organization and leaders, our employees need to know we care about their well-being.

This research will indicate whether the SKMCH & RC need to start breast self-examination campaign with in the hospital, furthermore the result of this study will lead our hospital to print BSE handouts for non-medical employees and schedule their workshops in this regard.

Literature Review:

Breast cancer is a major cause of morbidity and mortality among women throughout the world. Female breast cancer is the most commonly diagnosed cancer (11.7% of total cases), and the leading cause of cancer death at the global level. (Freddie, 2018).Globally. In the year 2018 alone, 2.1 million new cases of breast cancer were reported with 627,000 deaths. Incidence rate of breast cancer is very high in Pakistan among Asian countries: one in every nine women is at a risk of being diagnosed with breast cancer in her lifetime. (Fitzmaurice, et al. 2017). Regardless of an increase in knowledge about breast cancer, a low numbers of women practice breast self-examination (BSE) regularly and expertly. Pakistani women have very low rates of early detection and diagnose of breast cancer at advance

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stages with fewer chances of survival. According to Martei et al, (2018), most patients of breast cancer in developing countries are presented at first time in advanced stages (III and IV).

In many middle-income countries such as Pakistan, common causes of delay in early detection and diagnosis of breast cancer in women are both patient and health system level factors. Besides all, the other reasons for late presentation in medical facilities are the lack of awareness and health education, fallacious beliefs, fears of side effects of the chemotherapy, a strong belief in spiritual healing and old-style medicines\local treatment in area. So there is a need for increased awareness of methods for the early detection of any change\disease in breast.

The facilities of cancer diagnosis and treatments are very limited in hospitals of Pakistan. Cancer care in Pakistan is not developed as compared to other countries of the world. There are a lot of limitations regarding trained manpower and infrastructure in cancer care. The National policy for health lacked effective training programs and treatment and cancer care point of view. The patients to physician ratio is very high which does not help to maintain quality of care. (Ashraf, 2016).

Although, some charity hospitals in Pakistan like Shaukat Khanum Cancer Hospital and some other private and semi government organizations are working to support poor cancer patients, but due to low awareness, the lack of knowledge about breast cancer and screening methods and treatment, majority of patients are unable to get treatment on time. Low health literacy is also cause of delay in the detection of early breast cancer, and it is a severe growing concern for Pakistani women. Early detection is possible through screening. Screening methods commonly used are breast self-examination (BSE), clinical breast examination (CBE), and mammography. (Obaji et al, 2013). Due to lacking in experts and advanced diagnostic techniques in developing countries, regular BSE has become the practicable screening method for early detection of breast cancer. [Abate,et al,2016).

Breast self-examination (BSE) helps women to be aware about their breasts and makes it easy for them for early detection of any changes which they feel new in their breast. Through BSE, females can visualize and palpate their breast for any lump, change in shape, texture, size, and contour (Salzman, et al.2019). It is recommended that females 20 years and above should perform BSE monthly (Mark, 2021). Evidence shows that nine out of the ten breast lumps are detected by the women themselves.

Breast self- examination is the easiest and cheap way which could be helpful for early detection of breast cancer in women and improve cancer survival rate in the country. Knowledge about all the factors which indicate about BSE can inform health education programs designed to create breast cancer awareness and can stimulate regular BSE among Pakistani women.

Methods:

This descriptive cross-sectional study was conducted among female employees of Shaukat Khanum Memorial Cancer Hospital and Research Center in Lahore, Pakistan, from May2022 to June 2022 The aim of the study was to assess their knowledge regarding Breast Self-Examination. Ethical approval was obtained from the Scientific Review Committee and Institutional Review Board of Shaukat Khanum Memorial Cancer Hospital and Research Center Lahore, before data collection.

The data was collected from the 13 departments of SKMCH&RC Lahore. All these departments include Nursing Department(Health care Assistant), Human Resources Department(HR), Management Information System (MIS),Pharmacy, Operation Room (OR technician), Laboratory(Lab), Patient Care Officers\Unit Coordinator\ Outpatient Department, (PCO\UC), Radiation-Technicians(Rad-Tech), Marketing Department, Quality Patient Safety Department (QPSD), Basic Science Research Centre(BSRC), Internal Medicine (IM), Radiology Department and it was make sure that employees from most of the departments were covered from the hospital to participate in our study, minimizing the chances of selection bias.

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Sample size was calculated by using the formula: n = (Z2 x P x (1 - P))/e2. Based on the assumption that 22.7% of the women had substantial knowledge about BSE in a developing country (Tuyen, et al, 2019) and taking a 5% margin of error and 95% confidence level, the calculated sample size through the formula was 83.

The sample size was divided among all departments to attain maximum representation from all the study population. The questionnaires were kept in lock at a safe place and only authors could have the access to the data. No public or reports about assessment results could identify the participants in the way that responses, participation, or results could be recognized them. As this is a sensitive issues and in Pakistan people normally do not talk about BSE openly, therefore female researcher collected the data and was available while the participants were filling the questionnaire

The target population was consisted of all the female employees. Doctors and nurses were excluded as they have direct involvement in the care of breast cancer patients and in the education about breast self-exam as a part of their competencies and responsibilities. Participants were selected on the basis of convenience sampling technique. After the explanation of the aims of the study, informed consent was taken from each participant. All those, who were not willing to participate in the study were excluded. The questionnaire was originally in English language, but later it was translated into Urdu to facilitate the participants as they could fill in the language which they considered more easy and understandable. The study participants were requested to fill out the questionnaire in the presence of the researchers of the study, so they could clarify the doubts if any. An interactive session was also taken with the participants upon completion of questionnaire, in which information regarding their concerned questions was discussed.

A literature review of the similar published study was designed to develop the questionnaire and items were developed in reference to already validated items in published articles written by Ahmed et al (2018). After modification of the questionnaire according to study title, a self-administered research questionnaire was framed as a tool of data collection, it comprised of 15 questions according to our study title.

The questionnaire was divided into two sections. The first section had five questions regarding the socio-demographic characteristics of the participants which included age, marital status, level of education, department and Job Title. The second sections contained 15 questions to assess the knowledge of employees. Incomplete or partially filled forms were excluded from the study and response rate was calculated.

Analysis:

Analysis of the data was performed on IBM-Statistical Package for the Social Sciences version 20(SPSS. Version 20). Mean age of the sample was obtained and frequency and percentages for socio-demographic characteristics and knowledge of the participants were calculated. The responses to questions regarding the knowledge of BSE were divided according to the people who had and who had no knowledge of BSE. Overall knowledge was scored out of 15; participants scoring above 13, being significantly aware, between 10 and 13 partially aware between 10 and 13, and below 10 were considered not aware.

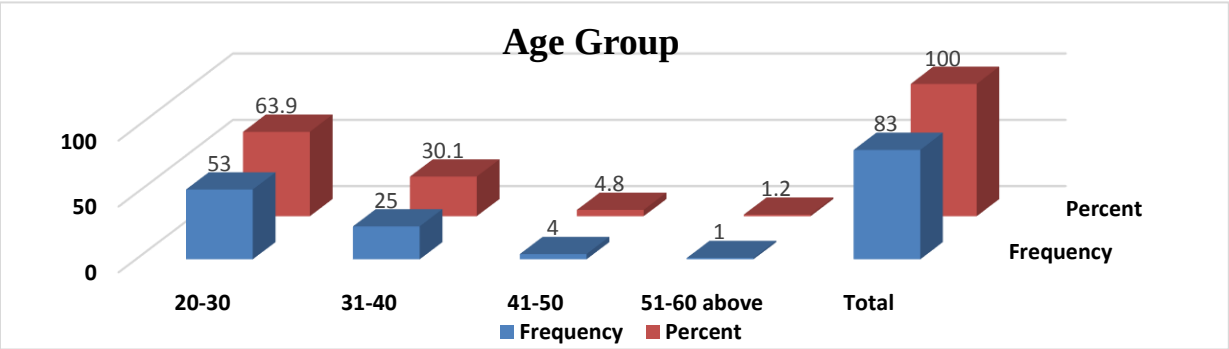
Results:

The overall response rate was 98.8%. There were total 96 participants who filled the consent form, to participate in this research but 83 had filled the questionnaires completely.

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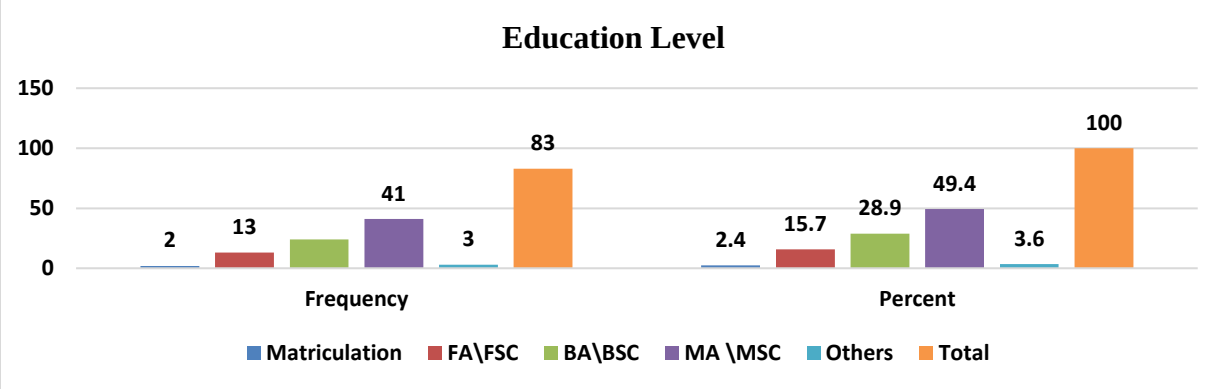
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Graph. 1: Age of Employees

Non-medical females were from age of 20 to 60, who participate in the research, in which maximum number of 63.9 % females were from the age group of 20 to 30. Mean age of the participants were 26 years. Whereas married (39.8 %) and single (60.2%) participants. Mean age of the participants were 26 years, education level of the participants was from Matric to MSc, in which almost 49.4% participants were MA and MSc.



Graph. 2: Level of Education

On comparing participants' awareness of BSE and their educational Level, results showed that the level of education and the awareness of BSE has great influence on each other, as Knowledge score about BSE was (91.6%,n=76)in which Education Level MA\MSC was (49.4%,n=41), which made more than half of the participants.

These results also showed that employees have good knowledge about BSE (91.6 %) but 24.1% participants were not having practice to do breast self-examination on regular basis and even they had inadequate knowledge about appropriate time to do BSE.

We took the participants from Nursing Department (Health Care Assistants(HCAs) working under Nursing Department but they are not nurses), Laboratory, Human Resources Department (HRD) Quality Patient Safety Department (QPSD), Management and information System (MIS), Marketing, Out-Patient Department, Operation Theatre (OR), Radiation, Basic Science Research, Radiology and Pharmacy. We had participants with job titles such as health care assistant, lap tech, patient care officer, unit coordinators, surgical tech, quality assurance officers, HR officer, radiation tech, MIS officer, marketing officer, pharmacist, OR tech, ECG tech, research associate, and radiology tech, among these maximum participants were health care assistant.

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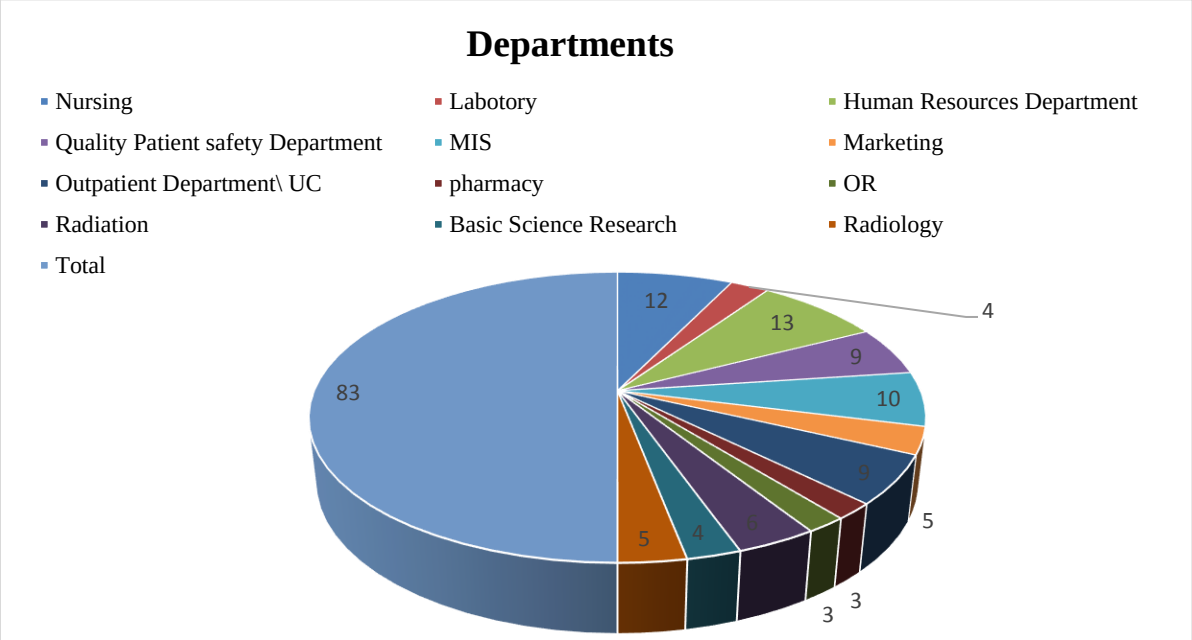


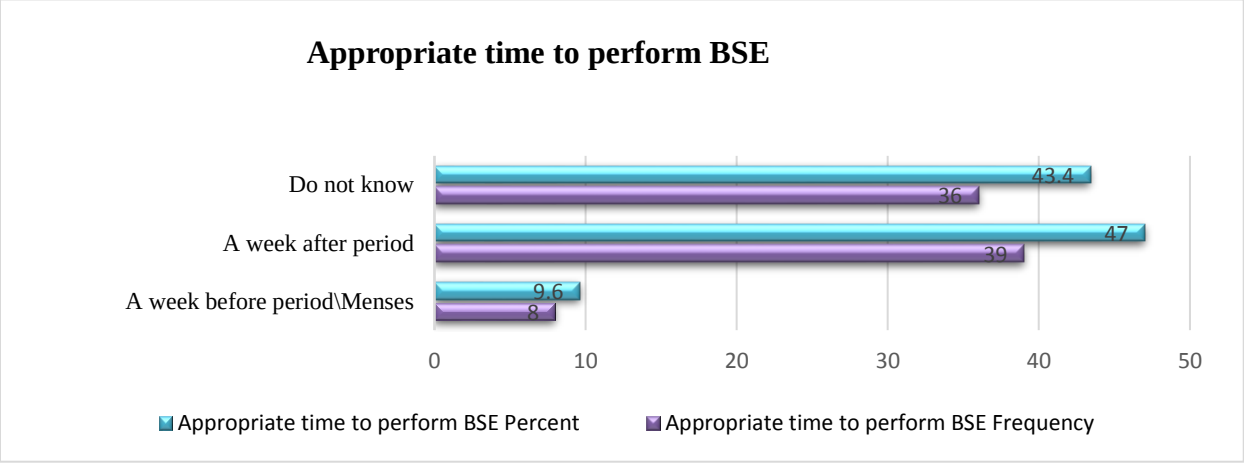
Chart. 03: Departments participated in the study about Knowledge of BSE

Among the 83 participants overall 91.6 %(n=76) were aware of BSE and only 8.4 %(n=7) were unaware, furthermore 75.9 % (n=63) had performed the BSE but 54.5% (n=36) had reported to perform it as routine medical examination.

There were 24.1 percent of non-medical employee of cancer specialist hospital never did the BSE. Among those who did not performed the BSE ever, the 6 % were had fear of detecting cancer, 3.6% thinks it is not necessary, 12% declared that they remained busy so unable to give time to BSE. Those who did not know How to perform BSE were 7.2%. Among those employees who believe that male and female should perform BSE were 63.9%. Maximum of 94% non-medical employees at SKMCH were in this favor that all women should performed BSE. The 62.7% of participants were aware of the techniques to performed BSE but 37.3% of participants were those, who only know BSE but did not has knowledge about BSE techniques.

Among the 83 participants, only 13, 3% feel shy and 28.9 % feel shy somehow but 57.8 % were not shy to performed BSE. Majority of them such as 65.1% were aware that BSE should be performed after the age of 20 but 20.5%had no idea. As per the question such as when BSE should be performed, with option of, weekly, monthly or do not know, the 18.1% participants were agreeing that it should be on weekly basis and 62.7% were in favour of monthly basis but 19.3% had no idea. As concern to the BSE performing techniques, 65.1 % of participants confirmed that they used fingers to performed BSE and 10.8% used palm and 13.3% used hands but 10.8% had no idea. According to statics of the results, 43.4 % non-medical females had no idea about the exact timing when BSE should be performed but 47.0% were aware that it should be done a week after the menses cycle completed. Almost 88 % participants knew the alarming signs of breast cancer related skin condition and breast size changes.

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Graph 4: Knowledge about Appropriate time to perform BSE.

In this study, the majority of the participants (92.8%) (n=77) were strongly agree that identification of early sings of breast cancer can be help full to fight against breast cancer. Moreover, the results of the study revealed that the more age and knowledge the females have, they are more willing to practice of BSE.

Table: 5 percentage Score about Knowledge about Breast Self-Examination among female employees working in SKMCH&RC Lahore, Pakistan (n=83)

Questions	Responses	Percentage/frequency
1-Do you know about Breast Self-Examination?	Yes	(91.6%)(n=76)
	No	(8.4%)(n=7)
2-Have you ever performed BSE before?	Yes	(75.9%)(n=63)
	No	(24.1%)(n=20)
If yes, 3. Then for what reasons did you perform it?	Advised by friends and family	(30.3%)(n=20)
	Medical reason	(6.1%)(n=4)
	Noticed a lump in the breast	(6.1%)(n=4)
	Family history of breast cancer	(3%)(n=2)
	Routine medical examination	(54.5%)(n=36)
If no, 4. Then why you have not performed it?	Fear of detecting cancer	(9.4%)(n=5)
	It is too expensive	(0%)(n=0)
	It is not necessary	(12.5%)(n=3)

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	I am very busy	(41.7%)(n=10)
	Do not know BSE	(25%)(n=6)
5. In your opinion who should perform Breast Self-Examination?	Males only	(1.0%)(n=1)
	Females only	(34.9%)(n=29)
	Both males and females	(63.9%)(n=53)
6. Do all the women should do Breast Self- Examination?	Yes	(94%)(n=78)
	No	(6%)(n=5)
7. Do you know different techniques of performing Breast Self-Examination?	Yes	(62.7%)(n=52
	No	(37.3%)(n=31)
8-Do you feel shy while performing Breast Self-Examination?	Yes	(13.3%)(n=11)
	No	(57.8%)(n=48)
	Some how	(28.9%)(n=24)
09. How often should Breast Self-Examination to be done?	Less than 18 years	(14.5%)(n=12)
	More than 20 years	(65.1%)(n=54)
	Don't know	20.5%)(n=17)
10. How often should Breast Self-Examination to be done?	Weekly	(18.1%)(n=15)
	Monthly	(62.7%)(n=52)
	Don't know	(19.3%)(n=16)
11-What is the appropriate time to perform Breast Self-Examination?	A Week before menses/ periods	(9.6%)(n=8)
	A week after menses periods	(47%)(n=39)
	Don't know	(43.4%)(n=36)
12. What is the correct method of Breast Self-Examination?	Use of palm	(10.8%)(n=9)
	Use of fingers	(65.1%)(n=54)
	Both hand	(13.3%)(n=11)
	Don't know	(10.8%)(n=9)
	While lying on bed	(4.8%)(n=4)

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13. What is the appropriate position to perform Breast Self-Examination?	In front of mirror	(39.8%)(n=33)
	While having bath	(8.4%)(n=7)
	All of above	(45.8%)(n=39)
14-Which signs identified during BSE may suggest breast cancer	Lump in breast	(8.4%)(n=7)
	Nipple discharge	(3.6%)(n=3
	Breast skin color change	(1%)(n=1)
	All of above	(88%)(n=73)
15. Do you think identifying early signs of breast cancer are important and useful?	Yes	(92.8%)(n=77)
	No	(1.2%)(n=1)
	Don't know	(6.0%)(n=5)

Table.5: percentage Score about Knowledge of BSE among the female employees of SKMCH&RC Lahore, Pakistan (n=83)

Table 6: Correct Answers about Knowledge of Breast Self-examination (BSE)

Information questions about BSE	Those who know the correct answer	
	Percentag	Number
1-Who should perform Breast Self- Examination	(63.9%)	(n=53)
2-Correct age to start Breast Self-Examination	(65.1%)	(n=54)
3-Appropriate time to perform BSE	(47%)	(n=39)
4-Frequency of BSE	(62.7%)	(n=52)
5-Appropriate position to perform	(45.8%)	(n=39)
6-Correct method of Breast Self-Examination	(65.1%)	(n=54)
7-Signs and symptoms of BSE	(88%)	(n=73)

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The number of people who had good knowledge about BSE 76 out of 83. Highest number of respondents were found to be knowledgeable about signs and symptoms of Breast cancer are 82 out of 83. This could be due to partial knowledge gained through the internet, media, friends, relatives, and information from breast cancer patient.

According to our study, almost 43.4 %(36) of the respondents were found to have poor Knowledge about correct time to perform BSE and It is interesting to note that there is very narrow gap between good knowledge (47.0%,39) and low knowledge. It is also evidenced by (62%, 52) respondents being knowledgeable about the techniques of performing BSE but Lack of knowledge (37.3%, 31) was also in high numbers , which can affect the accurate diagnosis of breast cancer. Although, people with good knowledge were expected to be low in number but our results are quite appreciable regarding the knowledge of BSE in SKMH&RC.

Discussion:

Breast self- examination (BSE) is an inexpensive method for the early detection of breast cancer and also the ideal way to reduce breast cancer mortality worldwide, especially in developing countries where health care resource is limited. This study findings highlight Knowledge of breast self-examination (BSE) in SKMH&RC. In this study, the knowledge about breast self-examination had high rate that is (91.6 %), similar findings were shown in a study conducted by Ibn-awadh et al. (2017) in Saudi Arabia, in which non-medical students' knowledge levels about BSE was 93.3%. This difference might be due to difference in educational level, participant's knowledge towards BSE, occupational difference, Culture and information access availability.

After the knowledge of BSE, The practice rate was disappointing, as the findings show that only 36 (54.5%) of the participants reported practicing or occasionally practiced BSE. Among those who were not practicing BSE, were 41.7%, and the explained reason was that they were busy and 25% non- performing respondents did not know how to do it. This finding is consistent with the finding of similar studies of BSE For example, in a study by Tuyen et al. (2019) only 40.7%.women who reported basic knowledge of BSE, actually practiced BSE. The finding was lower when compared to findings in a study by Asmare et al. (2018) in Ethiopia where BSE practice was measured 45.8%.

The 62.7%, (n=52), participants responded that BSE should be performed monthly, a week after menses (47%, n=39). Similar findings were reported by a study conducted by Rahman et al. in Sharjah (2019), where low practice had also been reported, in which 58.4% had correct knowledge regarding the recommended frequency of performing BSE and 42.8% knew about the right timing for performing BSE.

One finding in the study is about their lack of knowledge on the right technique for the examination (62.7%, n=52). Our finding was better than other reports of comparable studies as in Linda et al. (2018) that was (36.8%).

Limitation:

Since the sample of this study included employees of Shaukat Khanum Memorial Cancer Hospital &Research Centre Lahore, Pakistan, the results of the study cannot be generalized to the larger population in Pakistan.

Recommendation:

Our study illustrates a limited published research study on BSE in Pakistan among non-medical staff of hospitals. Most of the studies were conducted among students of the medical colleges, factories workers and schools students in urban setting representing a gap in literature among non-medical staff of hospitals. This study will motivate research studies on BSE knowledge and practice among non-medical staff of hospitals in other parts of country. This study also recommends primary research to assess the practice of BSE among non-medical staff as well as medical staff of hospital.

Conclusion:

Despite a positive attitude found among the participants toward BSE, its practice was inadequate.Among women who were aware

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about BSE, they were not practicing very regularly. Therefore, intensive behavioral change communication and interventions are required through session and seminar for participants to promote the practice of breast self-examination by the organization of SKMH&RC.

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