

ORIGINAL ARTICLE

Knowledge, Attitude, Risk Factors & Screening Practices Regarding Breast Cancer among Women in Islamabad

NIDA KHALIQ¹, ZILLE HUMA MUSTEHSAN², HANIA RASHID³, SHAFaq KHADIJA⁴, NAZEEHA WASEEM⁵, HAFSA WASEEM⁶

¹Lecturer Community Medicine, Fazaia Medical College Air University, Islamabad

²Assistant Professor Community Medicine, Fazaia Medical College, Air University, Islamabad

³Demonstrator, Fazaia Medical College, Islamabad

⁴Senior Lecturer Histopathology, Fazaia Medical College, Air University, Islamabad

⁵Medical Imaging Doctor, Department of Radiological Sciences and Medical Imaging Technology, University of Lahore, Gujrat

⁶Senior Lecturer Pathology, Fazaia Medical College, Islamabad

Corresponding author: Dr. Nida Khaliq, Email: nidakhaliq1@gmail.com, Cell No: +923317967907

ABSTRACT

Introduction: Cancer of breast tissue is a commonly recognized cancer among females and is the fifth main reason of cancer associated deaths in the world. It is important and beneficial for the females at risk to understand breast cancer as this may assist in timely detection and management of this deadly disease.

Objectives: To assess understanding about breast cancer, knowledge and attitude, risk factors and screening practices among female in Islamabad.

Methodology: The study is across-sectional survey which was conducted from October 2020 till March 2021. A self-administered questionnaire, using Google forms, was distributed among women residing in Islamabad, consisting of questions regarding knowledge about breast cancer symptoms, risk factors and screening methods. A total of 320 participants completed and submitted the questionnaire.

Results: The participants of the present study were familiar with the term “breast cancer”; however, their attitude towards breast cancer prevention was recorded as unsatisfactory because they lacked knowledge about the screening practices of breast cancer.

Conclusion: Women residing in Islamabad seem to have limited understanding about breast cancer, its symptoms and associated risk factors which is somewhat similar to other developing countries. Very few women in the study population practice “BSE” and have undergone “CBE” and “mammography”. They also have limited information about other screening practices of breast cancer.

Keywords: “Breast cancer”, “Breast Self-Examination”, “Clinical Breast Examination”, “Mammography”, Screening

INTRODUCTION

Cancer of breast tissue is a commonly recognized cancer among females and is the fifth main reason of cancer associated deaths in the world(1). It is important and beneficial for females at risk to understand breast cancer as this may assist in timely detection and management of this deadly disease. It is endemic in both developed and the developing world. Globally, it is one of the main causes of death among females and is the second most frequent type of cancer following cancer of lung. “Breast cancer” among females was responsible for more than 650,000 deaths worldwide in 2020. One fourth of the cancer related cases and one sixth of cancer related deaths in females are attributed to “breast cancer”. Knowledge regarding breast cancer can assist in timely detection and better management of the disease and is beneficial for the females at risk(2). In many countries breast cancer is diagnosed and treated in its last stages and the foremost causes are the paucity of understanding and incorrect perspective regarding screening for breast cancer among females (3). By 2030, it is expected that breast cancer will affect 2 million females across the world. Approximately one quarter of the total number of reported cases of breast cancer are from Asia(4). In Asia, Pakistan has the highest prevalence of breast cancer. The incidence of breast cancer in Pakistan is two and half times more as compared to its neighboring countries like India and Iran(5). This can be attributed to the lower levels of education and

awareness in the rural areas of Pakistan, (6). There are many useful screening methods to detect changes in breasts (shape, texture, appearance) which can help in earlier detection of “breast cancer” for example, “Breast Self-Examination” (BSE), “Clinical Breast Examination” (CBE) and “Mammography”. BSE is inexpensive and simple, however, contemporary research involving randomized trials suggests that it has limited effect in reducing mortality. However, considering the limited availability of resources in rural areas of developing countries, BSE is considered to be a useful screening technique to detect cancer of breast at its initial stages. BSE can be very helpful in detecting earlier signs of changes in breasts(7). CBE can improve detection of “breast cancer” and many cases would go undiagnosed if CBE is not performed(8). Mammogram is an effective screening technique to detect breast cancer but it is not inexpensive. Breast cancer is a universal problem, however, in many countries, the diagnosis and treatment are done at quite advanced stage. Absence of awareness and attitude towards screening practices and be cited as main reasons for delayed diagnosis of “breast cancer”(3). Female education can play a significant part in timely detection of breast cancer (9).

The main focus of the present study is to gauge the awareness of female population of Islamabad, Pakistan, about breast cancer and to know about their attitude towards the screening methods of breast cancer. This

information can be useful in designing interventions to detect and treat breast cancer in its early stages in Pakistan.

METHODOLOGY

The present study is a cross-sectional survey conducted by using a self-administered questionnaire pertaining to knowledge of breast cancer symptoms, risk factors and screening methods distributed among the survey participants residing in Islamabad, Pakistan via Google forms. Online medium was used to float the questionnaire among the general female population of Islamabad because of the restrictions imposed on movement within the city due to ongoing COVID-19 pandemic. A total of 320 participants completed the questionnaire. Simple random sampling technique is used in this study. SPSS software version 23.0 was used to analyze the findings collected through the questionnaire. For continuous variables, Mean and Standard Deviation (SD) were calculated along with the minimum and maximum value while for categorical variables, frequency and percentage were calculated. The results were then presented in the form of tables and graphs for better understanding of the readers.

Operational Definitions:

- (i) **“Breast Self-Examination” (BSE):** It is a routine examination of breasts by a woman herself to detect lumps or any changes which may require further evaluation to rule out breast cancer as a part of screening.
- (ii) **“Clinical Breast Examination” (CBE):** It is a physical exam of the breasts and the underarm area by a trained healthcare professional.
- (iii) **“Mammography”:** It is the process of using low-energy X-rays to examine the human breasts for diagnosis and screening.

Inclusion and Exclusion Criteria: Inclusion criteria: Women between the ages of less than 20 to above 30 years, residing in Islamabad capital territory and having access to internet.

Exclusion criteria: Females who have history or presently having cancer of breast.

RESULTS

No remarkable relation was found with age, marital status and level of education regarding knowledge, attitude and practice towards breast cancer. In our study the women who participated in the survey were aware of the physical condition of breast cancer but even then, only 30% recognized lump in the breast. 26.9% of the participants recognized nipple discharge & 23.6% recognized pain in the nipple area as one of the symptoms of breast cancer. In our study, a large number of participants had knowledge about BSE, 98% women responded that it was useful to detect breast cancer, 58.75% women were taught how to do BSE in which 20.63% were taught by a doctor. 32.81% women said that it should be started at puberty while remaining women were of mixed opinion about who taught them and what age should it be started. 47.5% women responded that BSE should be done on monthly basis and 67.5% women agreed that in practicing BSE, breasts should be examined with hands by the individual. In our study the response of at what age mammography should

be performed is that 35% said they had no idea about what age it should be started, 32% said it should be started at 40 years, about 10% said it should be started from puberty, remaining said it should be started from 20 years and some said after menopause. In the response of when mammography should perform many of them said they had no idea and the remaining responded with different durations. 22.19% participants correctly responded that it should be done every year. The female participants from Islamabad were well aware of “breast cancer” but had unsatisfactory understanding about screening practices of “breast cancer”.

Table 1: Knowledge of Breast Cancer & Prevention

QUESTIONS	YES (%)	NO (%)
Have you heard of “Breast Cancer”?	318 (99.38)	2 (0.63%)
Do you know the symptoms of “Breast Cancer”?	224 (70%)	96 (30.0%)
Have you heard of risk factors of “Breast Cancer”?	220 (68.8%)	73 (22.8%)
Are inherited genes one of the risk factors for Breast Cancer?	100 (30.8%)	220 (70.2%)
Have you heard of “Breast Self-Examination” (BSE)?	256 (80%)	64 (20%)
Have you been taught how to perform BSE?	188 (58.75%)	132 (41.25%)
Do you practice BSE?	165 (51.6%)	155 (48.4%)
Have you heard of “Clinical Breast Examination”?	206 (64.4%)	114 (35.6%)
Have you heard of “Mammography”?	238 (74.4%)	22 (6.9%)

Table 1 shows the participants’ knowledge about Breast Cancer & screening practices for its prevention. 318 (99.3%) of study population had heard about breast cancer, 224 (70%) knew about its symptoms and 100 (30.8%) had knowledge about inherited genes as being its risk factor. A significant proportion of study population (80%) had heard about “Breast Self-Examination” (BSE), whereas, 58.75% were taught how to perform BSE and only 51.6% practised BSE. 74.4% of study participants had heard about Mammography and 64.4% knew about “Clinical Breast Examination” (CBE).

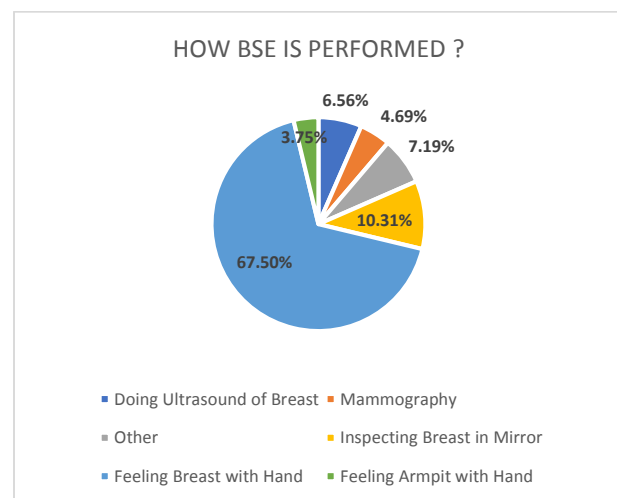


Figure 1: This figure shows the data of participants who gave their suggestions on how Breast Self Examination is performed. Majority 67.50% said feeling breast with hand, 10.31% said inspecting breast in mirror, 4.69% said mammography, 3.75% said feeling armpit with hand and 7.19% said other.

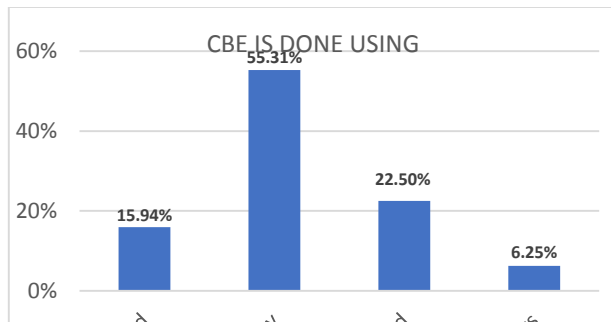


Figure 2: data represents the information about how participants responded to how CBE is performed. Majority 55.31% said mammography, 22.50% said by hand, 15.94% by ultrasound and 6.25% by others.

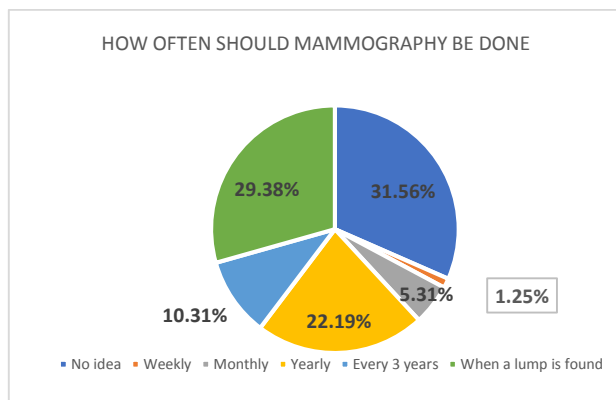


Figure 3: shows the data of participants' answer to how often "mammography" should be done. 31.56% said they had no idea, 29.38% said when a lump is found, 10.31% said after every 3 years, 22.19% said yearly and 5.31% said monthly.

Figures 1, 2 & 3 shows participants knowledge about screening practices of Breast cancer.

DISCUSSION

Breast cancer is one of the most common types of cancers among women. Attitudes, knowledge and practices towards breast cancer vary among women around the globe. A questionnaire was created using Google forms and the link was shared among the general female population of Islamabad who had access to internet. A total of 320 females responded to the questionnaire. The questionnaire included questions pertaining to knowledge and awareness about breast cancer and its screening methods. Women of different ages, level of education and marital status participated in the study. In 2019, a study by K Erum was conducted in Karachi where majority of women were aware about breast cancer factors, 48% knew about its signs and symptoms and 68% knew about the risk factors(10). These results were similar to our study in which (70%) women were aware about the signs and symptoms of breast cancer. In 2018, a study was conducted in Ethiopia among 799 women, in which 63% women had knowledge of breast cancer(11). Heredity is one of the major risk factors of breast cancer. In our study, around 31% of women knew that inherited genes can be responsible for breast cancer, however, survey conducted among young women in USA, Netherlands and Germany observed that their study participants had more knowledge about genetic

predisposition to breast cancer. A total of ninety percent of females in the United States were aware about genetic predisposition to breast cancer whereas in developing country like South Africa only 13.8% women were aware of it. A study in 2017 was conducted among women of different socioeconomic groups of Lahore Pakistan, in which majority of women recognized increasing age as a risk factor for developing "breast cancer" (12). Similarly, a study was conducted in New Delhi, India in 2018, where (56.3%) female participants marked increasing age as one of the risk factors of breast cancer(13). However, in our study, only 22% of women recognized increasing age as one of the major risk factors in developing breast cancer which is comparatively lower than other such studies. In 2018, a study was conducted in Baha Uddin Zakariya University Multan, Pakistan, in which around 25% of women recognized painless breast lump as a sign of breast cancer. However, their knowledge on other signs and symptoms was even lower than the required level to be based as a parameter for breast cancer(14). These findings are quite similar to the present study. However, another study in 2018, conducted in New Delhi, showed that women in countries like India, are more knowledgeable about breast cancer because more than half of the participants of the study correctly recognized signs and symptoms of breast cancer(13). In our study, a large number of participants had knowledge about BSE. Half of the study participants practiced BSE to detect changes in breasts in order to diagnose cancer at an early age and more than eighty percent were in favor of reporting it to a doctor. On the basis of our study results positive attitude was observed among participated volunteers about what to do after an abnormal BSE. In contrast to our findings, a study conducted in 2020, among women in Taxila/Wah Cantt, Pakistan, observed that knowledge about BSE was very poor, half of the women in study were oblivious to BSE and almost none practiced it(15). The knowledge about BSE was also found to be poor in other developing countries. A study in 2017, conducted among women in Trichy, Tamil Nadu, India, showed that the level of knowledge & practicing of "Breast Self-Examination" among women was very low, however, an extremely positive attitude was observed in help seeking behaviors if they found an abnormality in their breasts. 97.5% said that they would approach doctor(16).

The participants in our study were not much aware about CBE because more than sixty percent had not heard of CBE. Similar findings were observed in a study conducted by Khalid et al in Lahore, Pakistan in 2018, in which the participants' knowledge about CBE was poor. (17). Studies in other countries also reveal poor knowledge on CBE. A study in 2018, was conducted in Riyadh in which half of the participating women had heard of CBE but few had good knowledge about how it was performed(18). Even results from the studies in developed countries like Turkey revealed poor knowledge on CBE. A study conducted in 2019, among female university students of Turkey, nearly three fourths of the participants had knowledge about CBE(19).

In our study, more than seventy four percent of women, were aware about mammography, and responded that it was a useful tool but were uncertain about what age

it should be started. They had very poor knowledge about how often should women undergo this procedure. Most of the participants did not know the cost of the procedure. The study conducted in Lahore by Khalid A, among young women also showed poor knowledge about mammography procedure (17) whereas in our study, more than fifty seven percent of study participants were aware about the basic knowledge of when mammography should be started. In 2016, a study conducted among women in Mulago hospital in Kampala, Uganda also showed poor knowledge about mammography procedures and confused mammography with x-ray scanning, and lack of knowledge about its cost (20). Similar results were seen even in developed country like Saudi Arabia about mammography screening. A study conducted in 2018 in University of Tabuk, Saudi Arabia observed that the female university students had poor knowledge about mammography and only 8.3% of the women had undergone mammography screening (21). The reason for such low percentage of women getting mammography in University of Tabuk might have been their young age as mammography is routinely advised to women more than 40 years of age.

Recommendations: Identifying further barriers is very important for devising intervention methodologies and formulation of healthcare policies to generate widespread awareness about “breast cancer” screening and highlighting its importance in early detection and on time treatment. Considering the rise in occurrences of breast cancer, prioritizing awareness and education about breast cancer screening in national health policy formulation should be of significant importance. A Contemporary body of research suggests that awareness about the symptoms of breast cancer, its screening methods and risk factors have strong correlation with participation in breast cancer screening (22). A review of “breast cancer” screening awareness programs in Asian countries reveal that interventions only rely on electronic and print media do not produce significant outcomes unless these are combined with interventions for health providers as well. Therefore, involvement of health providers in planning and executing interventions for breast cancer screening is not only important for the success of these interventions using traditional approaches but also in exploring new and more effective ways of imparting breast cancer knowledge to women who have never participated in screening practices (23, 24).

CONCLUSION

The findings of the research study shows that majority of the females who participated in the survey were aware of breast cancer, its signs and symptoms and its risk factors. The participants were also aware of BSE and had knowledge about how it is performed. Majority of them also performed BSE. However, their knowledge about CBE was very limited and they did not have knowledge about how and how often it is performed. The knowledge of the participants was also insufficient about mammography. They did not know how it is performed and how much it costs. A very few of them had undergone CBE or mammography. However, they had a very positive attitude about seeking medical help if they ever find any abnormality in their breasts.

Conflict of Interest: None Declared

REFERENCES

1. Sung H, Ferlay J, Siegel RL, Laversanne M, Soerjomataram I, Jemal A, et al. Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA: a cancer journal for clinicians*. 2021;71(3):209-49.
2. Solikhah S, Promthet S, Hurst C. Awareness level about breast cancer risk factors, barriers, attitude and breast cancer screening among Indonesian women. *Asian Pacific journal of cancer prevention: APJCP*. 2019;20(3):877.
3. Akram M, Iqbal M, Daniyal M, Khan AU. Awareness and current knowledge of breast cancer. *Biological research*. 2017;50(1):1-23.
4. Mahmood HZ, Khaliq IH, Iqbal Bhatti Z, J Wilson K, Gondal KM, Malik S, et al. Household costs of breast cancer morbidity: An empirical assessment from Pakistan. *JBUON*. 2018;23(Suppl 1):S28-S33.
5. Asif HM, Sultana S, Akhtar N, Rehman JU, Rehman RU. Prevalence, risk factors and disease knowledge of breast cancer in Pakistan. *Asian Pacific Journal of Cancer Prevention*. 2014;15(11):4411-6.
6. Menhas R, Umer S. Breast Cancer among Pakistani Women. *Iranian journal of public health*. 2015:586-7.
7. Olowokere AE, Onibokun AC, Oluwatosin O. Breast cancer knowledge and screening practices among women in selected rural communities of Nigeria. 2012.
8. Provencher L, Hogue J, Desbiens C, Poirier B, Poirier E, Boudreau D, et al. Is clinical breast examination important for breast cancer detection? *Current Oncology*. 2016;23(4):e332.
9. Ghoncheh M, Pournamdar Z, Salehiniya H. Incidence and mortality and epidemiology of breast cancer in the world. *Asian Pacific Journal of Cancer Prevention*. 2016;17(sup3):43-6.
10. Erum K, KHALID AB, ANWAR A, SAFEER N. Knowledge Attitude and Practice Regarding Screening of Breast Cancer Among Women in Karachi, Pakistan. *Online Türk Sağlık Bilimleri Dergisi*. 2019;4(3):301-14.
11. Chaka B, Sayed A-R, Goeieman B, Rayne S. A survey of knowledge and attitudes relating to cervical and breast cancer among women in Ethiopia. *BMC public health*. 2018;18(1):1-8.
12. Rizwan A, Saleem Z, Sadeeqa S. Effect of Family Income on Knowledge, Attitude and Practices Regarding Breast Cancer and its Screening Methods Amongst Women of Lahore, Pakistan. *Journal of Applied Pharmaceutical Science*. 2017;7(08):028-33.
13. Dahiya N, Basu S, Singh MC, Garg S, Kumar R, Kohli C. Knowledge and practices related to screening for breast cancer among women in Delhi, India. *Asian Pacific journal of cancer prevention: APJCP*. 2018;19(1):155.
14. Rafique S, Waseem Z, Sheerin F. Breast cancer awareness, attitude and screening practices among university students: intervention needed. *Biomed J Sci Tech Res*. 2018;4(5):4-7.
15. Post SMRR. Assessment Of Knowledge Regarding Breast Cancer Among Women Living In Taxila/Wah Cantt.
16. Kumarasamy H, Veerakumar A, Subhathra S, Suga Y, Murugaraj R. Determinants of awareness and practice of breast self examination among rural women in Trichy, Tamil Nadu. *Journal of mid-life health*. 2017;8(2):84.
17. Khalid A, Hassnain S, Gakhar H, Khalid B, Zulfiqar F, Wahaj A. Breast cancer among young girls: KAP study conducted in Lahore. *International Journal of Scientific Report*. 2018;4(6):166-71.
18. Binhussien BF, Ghoraba M. Awareness of breast cancer screening and risk factors among Saudi females at family

- medicine department in security forces hospital, Riyadh. *Journal of family medicine and primary care*. 2018;7(6):1283.
19. Koc G, Gulen-Savas H, Ergol S, Yildirim-Cetinkaya M, Aydin N. Female university students' knowledge and practice of breast self-examination in Turkey. *Nigerian journal of clinical practice*. 2019;22(3):410.
20. Galukande M, Wabinga H, Mirembe F, Karamagi C, Asea A. Breast cancer risk factors among Ugandan women at a tertiary hospital: a case-control study. *Oncology*. 2016;90(6):356-62.
21. Abdel-Sattar SA-L, Ibrahim HA-F, El HAE. Knowledge, Attitude and Practices of Working Women in Tabuk University Regarding Breast Cancer. *International Journal of Pharmaceutical Research and Allied Sciences*. 2018;7(3):198-208.
22. Jones TP, Katapodi MC, Lockhart JS. Factors influencing breast cancer screening and risk assessment among young African American women: An integrative review of the literature. *Journal of the American Association of Nurse Practitioners*. 2015;27(9):521-9.
23. Wu Z, Liu Y, Li X, Song B, Ni C, Lin F. Factors associated with breast cancer screening participation among women in mainland China: a systematic review. *BMJ open*. 2019;9(8):e028705.
24. Corter AL, Speller B, Sequeira S, Campbell C, Facey M, Baxter NN. What young women with breast cancer get versus what they want in online information and social media supports. *Journal of adolescent and young adult oncology*. 2019;8(3):320-8.