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Original Article

Awareness and Perceived Barriers About Breast Cancer Screening and Breast Self Examination Amongst the Female Healthcare Workers at a Secondary Care Hospital in Saudi Arabia

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ABSTRACT

Objective: To assess breast cancer screening and breast self examination awareness and perceived barriers amongst the female healthcare workers of a secondary care hospital in Saudi Arabia.
Study Design: Cross Sectional Study.
Place and Duration of Study: Qassim Armed Forces Hospital, Saudi Arabia, Jun 2023 to Aug 2023
Methodology: A total of 68 workers participated in the study by non-probability convenience sampling. The data collection tool was a specially designed printed questionnaire consisting of demographic data, questions to assess awareness and perceived barriers regarding breast cancer screening and breast self examination.
Results: Out of 68 HCWs, only 16(23.5%) healthcare workers had good knowledge about breast cancer risk factors, 22(32.4%) about signs and symptoms, 28(41.1%) about breast cancer screening and 9(13.2%) about breast self examination. The majority of the participants had fair knowledge in all categories. Breast self examination was the category with poorest scores. 29(42.6%) participants had poor knowledge about BSE. Certain barriers were identified to breast cancer screening that included embarrassment to exposure 38(55.8%), lack of awareness 35(51.47%) and family disapproval 26(38.2%). Perceived barriers to breast self examination included lack of knowledge 62(91.17%) and communication problems 60(88.2%) about breast issues.
Conclusion: Although majority of healthcare workers had fair to good knowledge, there is a need to raise awareness about breast cancer screening. There is a lack of knowledge regarding breast self examination. Awareness campaigns are important to raise awareness amongst the healthcare workers and population in order to overcome perceived Barriers to breast cancer screening and self examination.

Keywords: Awareness, Breast cancer, Healthcare workers, Screening.

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INTRODUCTION

Breast cancer is one of the most common cancers globally affecting women causing 670,000 deaths and 2.3 million cases in the year 2022 as per World Health Organization (WHO).[1] Certain risk factors play a very important role such as genetic disposition, age, family history, early menarche and late menopause, hormone therapy and obesity.[2,3] In Saudi Arabia, breast cancer is the highest reported cancer (14.2%) with an increasing incidence (3.1%) and mortality of 0.93%.[4,5]

Mammography continues to be the only screening method proven to decrease breast cancer mortality.[6]The Ministry of Health (MoH) in KSA has advised mammograms for all women between the ages of 40 and 50 every two years, and for those between the ages of 51 and 69 every year, due to the greater incidence of breast cancer in this age group.[7]

Recent epidemiological studies revealed that women were less inclined to embrace breast cancer screening procedures if they had poor understanding about breast cancer risk factors and susceptibility. Inadequate knowledge and ignorance of screening and BSE were some factors contributing to the low uptake of mammography screening programs.[8,9]

Healthcare Workers (HCWs) are essential in enhancing general public's interest in screening services by disseminating information and raising awareness. They also assist in altering the behavior of an individual, families, and communities.[10] Therefore, it is crucial to regularly assess HCWs' knowledge & awareness about breast cancer, and perceived obstacles to breast cancer screening and BSE so that

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they can effectively disseminate knowledge to general population and reduce hurdles to screening and BSE. The rationale of this study was to find out the current level of awareness of female HCWs of the hospital and their perceived barriers to screening so that future training programs for HCWs about breast cancer screening and BSE could be tailored.

METHODOLOGY

This study was an analytical cross-sectional study. It was conducted at Qassim Armed Forces Hospital KSA, a secondary care hospital, from June 2023 to August 2023. Ethical approval was obtained from the Ethical Review Board of the hospital (80104404/1). The study population included all female HCWs of the hospital as part of needs assessment to determine if a breast cancer training program was required for the female healthcare workers of the hospital. However, 68 female HCWs were enrolled in the study via non-probability convenient sampling who met inclusion and exclusion criteria.

Inclusion Criteria: All female healthcare workers of the hospital between the age of 25-55 years willing to participate in the study.

Exclusion Criteria: Doctors, breast care nurses, incomplete questionnaires, unsigned questionnaires and those who did not consent to be included in the study were excluded from the study.

The instrument was a pre-formed questionnaire in English language with a purpose to assess awareness and perceived barriers of breast cancer, screening and BSE. Other than the demographic data like age, profession and address, the survey questionnaire was divided into three main parts. The first part contained questions about breast cancer, risk factors and treatment options. The second part covered breast cancer screening, screening modalities, screening eligible age and frequency of screening. The third part was about BSE, its frequency, timing, methods and barriers to examination. First part had 30 graded questions, second part had 15 and third part also had 15 graded questions. Responses to all the questions were recorded as "yes" or "no". Each correct answer was marked as 1 score and each wrong answer was marked as zero. A score of less than 50% was considered "poor knowledge'; 50–75% was considered fair knowledge and more than 75% was taken as good knowledge. To ensure validity of content and construct, the questionnaire was devised on the basis of published literature about healthcare workers' knowledge and awareness.[11,12] A written consent was also included at the end of questionnaire which was necessary to be signed by the healthcare worker to include the response in the study. The questionnaire was printed and distributed amongst the healthcare workers. All the HCWs were verbally given a brief description of the study by the researchers themselves. The questionnaire was subsequently completed at the time of interaction. It took approximately 10 minutes to complete the questionnaire. Returning the signed questionnaire indicated their consent and willingness to participate in the study.

The data was entered and analyzed using IBM Statistical Product and Service Solutions Statistics (IBM SPSS Statistics) version 21. Descriptive data was presented as percentages and frequency. The collected data was presented as charts and tables generated using Microsoft word and Excel.

RESULTS

A total of 68 female healthcare workers were finally included in the study. The mean age of the participants was 33.76±5.710 years. All the nurses participating in the study had not done any specific breast cancer courses or training. The study showed that all of them knew about breast cancer because of their nursing background. Table-I explains the scores achieved by the participants to each section.

In part 1 of the study, out of 15 questions regarding breast cancer risk factors, only 16(23.5%) participants had good knowledge. 34(50%) had fair knowledge of the risk factors whereas 18(26.5%) participants had poor knowledge. 22(32.4%) participants had good knowledge of breast cancer symptoms whereas 40(58.8%) participants had fair knowledge. Only 6(8.8%) participants had poor knowledge of the breast cancer symptoms. 38(55.9%) believed that one will develop breast cancer if there is positive family history. 30(44.1%) participants said that a family history does not mean that a woman will develop cancer in her life time. 20(29.4%) participants opined that breast cancer occurs in older age only. On the contrary majority of the participants 48(70.6%) said that it can occur in younger women as well. Majority of the participants 50(73.5%) replied that treatment includes surgery, chemotherapy and radiotherapy. 6(8.8%) participants believed that only surgery is enough while 12(17.6%) didn't know about what is preferred treatment. 44(64.7%) participants thought that mastectomy is the only option available for surgery whereas 24(35.3%) participants knew that

Breast Conservation Surgery can also be done. A major part of the study population 44(64.7%) believed breast cancer to be curable and only 24(35.3%) participants considered it to be incurable.

In the second part of questionnaire which was about screening, most of the healthcare workers 60(88%) had fair to good knowledge about screening. Half of the respondents 34(50%) said that screening is done in asymptomatic women. Rest half believed that screening can be done in symptomatic patients. All of them believed that screening is important for early cancer detection. As far as best modality of screening was concerned, 53(78%) participants considered mammography as the best modality. For 10(14.7%) respondents, Ultrasound Breast was the best modality. Only a few 5(7.35%) believed it to be Breast Self Assessment. None of the participants replied with MRI as to be the best modality for screening. Majority of the participants 44(64.7%) considered age of 50 years and above as the starting age of screening. 18(26.5%) participants considered women aged 40 years and above eligible for screening. Only 4(5.9%) participants were of the opinion that screening can be done at any age while 2(2.9%) opined that screening can be done at age 30 or above. 50(73.5%) participants were of the opinion that screening mammogram should be done on yearly basis whereas 14(20.6%) thought that is should be done after every 2 years. Certain barriers to screening were also noted (Figure-1). The most perceived barrier was found to be embarrassment due to breast exposure 38(63.33%). Likewise, Lack of awareness was considered a barrier by 38(58.33%) participants. Family disapproval was also taken as a big hurdle by 26(43.33%) participants. 20(29.4%) thought that exposure to radiation keeps women away from screening mammogram. Interestingly, painful procedure 3(5%), no family history of breast cancer 5(8.33%) and fear of discovering cancer 3(5%) were also considered barriers to screening by a few participants.

The 3rd part of Questionnaire comprised of 15 graded questions regarding BSE. Most of the Participants 30(44.11%) had a fair knowledge whereas 29(42.6%) participants had poor knowledge. Only 9(13.2%) participants had good knowledge. All of the participants had at least once done BSE. 5(7.35%) of them believed that BSE is a tool to screen cancer in younger age groups. 63(92.65%) didn't consider BSE as screening. 58(85.3%) participants responded that BSE is done once a month. 5(7.3%) thought that it's done once a year and another 5(7.3%) believed that it can be done whenever convenient. But only 4(5.9%) participants had done BSE within last month. 24(35.3%) did it once in past 3 months whereas 26(38.2%) had done it in the past one year. 14(20.5%) respondents had done it more than one year ago. Only 4(5.8%) were regularly performing BSE. Most of the participants didn't exactly know when is the best time to do a BSE 60(88.2%). A gross majority of the participants 63(92.64%) didn't know what all is included in BSE and how it is done. Certain barriers were also identified to BSE (Figure-2). Lack of knowledge of BSE was perceived as the biggest barrier as 60(91.1%) participants considered it a barrier. Similarly, difficulty in talking about breast issues was also considered a big barrier by 60(88.2%) participants. Out of total 68 respondents, 20(29.4%) opined that no family history of breast cancer and embarrassment to examine own breasts are barriers towards BSE respectively.

Table-I: Level of Awareness Regarding Different Modalities of Breast Cancer

Name of Category	Knowledge		
	Good	Fair	Poor
Breast Cancer Risk Factors	16(23.5%)	34(50%)	18(26.5%)
Signs and Symptoms	22(32.4%)	40(58.8%)	6(8.8%)
Breast cancer screening	28(41.1%)	32(47%)	8(11.76)
Breast Self Examination	9(13.2%)	30 (44.11%)	29(42.6%)

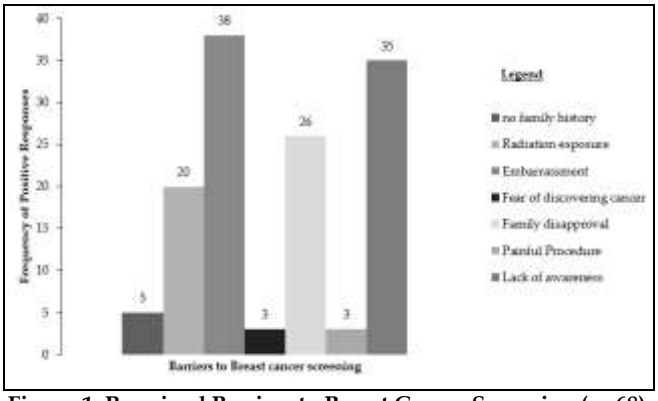

Figure-1: Perceived Barriers to Breast Cancer Screening (n=68)

DISCUSSION

The role of HCWs especially nurses is of paramount value in promoting breast cancer screening and BSE awareness amongst general population. This study found out that 73.5% of QAFH nurses had fair

to good knowledge about breast cancer risk factors. More than 90% had fair to good knowledge about breast cancer signs and symptoms. This is in accordance with some previous studies done in the region by Hisam A *et al*.[6] Yousaf SA,[11] Sultana R,[13] Yusaf SA,[14] Odusanya OO,[15] and Chong *et al*.[16] However, contrasting results were noted in some of the studies.[17-19]

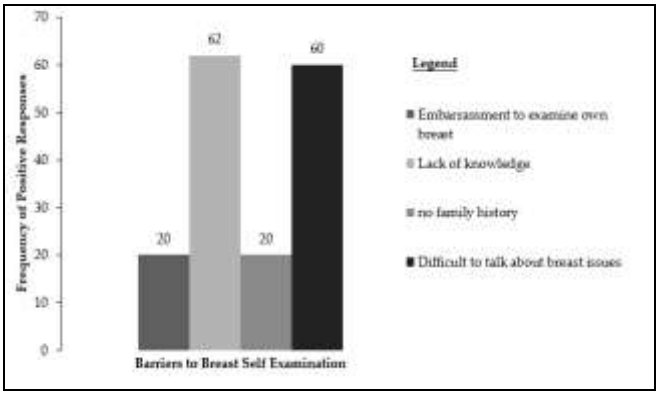

Figure-2: Perceived Barriers to Breast Self Examination (n=68)

To give adequate and accurate knowledge to general population, it is very important that the HCWs have good knowledge about the breast cancer risk factors especially to those women who are at a high risk of developing breast cancer. This will result in convincing them to go for breast cancer screening. In this study although only 23.6% of the study population had good knowledge of breast cancer risk factors, more than 70% had fair to good knowledge of these risk factors. This is in accordance with the previous studies done in Saudi Arabia and Singapore.[6,14,16]

The lack of knowledge about some very important risk factors amongst the workers clearly indicates that they were neither trained in breast health, breast cancer, breast awareness nor they updated their knowledge emphasizing the importance of knowledge updation. They should also not be involved in general awareness campaigns or patient education. This is also manifested by Alkhsawney *et al*.[20] in a Jordanian study in 2009.

Due to recent changes in guideline about mammography screening for breast cancer in Saudi Arabia by MoH, most of the nurses still believed that the age of screening is still 50 years and above (64.7%). Only 18 participants (26.5%) were up-to-date on the current guidelines for screening in Saudi Arabia which states that screening should start at 40 years of age. Even this day, half of the nurses believed that the biggest barrier to mammography was embarrassment due to breast exposure (Figure-2). This clearly indicates that breast cancer and breast cancer screening awareness of the general population is of utmost importance.

All of the participants had done BSE at least once in their lifetime. However only 4(5.9%) were doing it regularly. This is very close to the 4% figure found in a Saudi study by Yousaf SA *et al*.[14] a study done in Gaza,[22] confirming its findings. However different findings are noted in other studies where reported percentage ranges from 21%,[21] and 31%,[23] and 24(36.2%) This low percentage of breast self awareness indicates that there is a dire need to impart training and awareness regarding breast cancer, its screening and breast self assessment amongst the healthcare workers of the hospital as these healthcare workers are important vectors of transmission of awareness amongst general population.

LIMITATIONS OF STUDY

Other than study design, the main limitation of the study was language. The questionnaire was devised in English because of the multicultural and multinational environment of the hospital and the healthcare workers are generally fluent in English. However, problem was faced with a few healthcare workers to whom it had to be explained in Arabic. A dual language questionnaire would have been a better option.

CONCLUSION

These results indicate that there is a need to raise awareness about breast cancer, Breast cancer screening and breast self examination amongst the female healthcare workers. Training, courses, lectures and seminars for healthcare workers are recommended to increase the knowledge and fight the barriers towards breast screening and self examination. Resultantly, they can help in raising awareness and remove barriers to improve breast cancer screening and self examination in general population.

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Authors' Contribution

Following authors have made substantial contributions to the manuscript as under:

OBAA & MAM: Data acquisition, data analysis, critical review, approval of the final version to be published.

HAS & BA: Study design, data interpretation, drafting the manuscript, critical review, approval of the final version to be published.

NARAT & AHBH: Conception, data acquisition, drafting the manuscript, approval of the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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