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Women s' perception on role of breast self-examination in early breast cancer detection

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ABSTRACT

BACKGROUND & OBJECTIVE: A good knowledge of the predictive and precepting factors can reduce the risk of breast cancer. This study aimed to assess female patients' knowledge of breast cancer, self-examination techniques, and other screening methods.

METHODOLOGY: A cross-sectional descriptive study was carried out at the territory care hospital Khurrianwala Faisalabad, including 500 women attending the outpatient department from June 2022 to November 2022 after taking informed consent. Data collected by filling out a validated questionnaire was analyzed through SPSS software version 22.0. Relationships between categorical variables were tested by using the chi-square test, and a $p<0.05$ is considered highly significant.

RESULTS: Out of 500 study participants, 304(60.8 %) know about breast cancer, of which 64(12.8 %) have a positive family history, 436(87.2 %) have no history of breast cancer, and 196(39.2%) were unaware of breast cancer. Out of the total participants, 60.8 % were aware of Breast self-examination, while 39.2% did not know. There is a significant association for the practice of breast self-examination in the population above higher education p-value≤0.001. Similarly, occupation p-value≤0.001, marital status p-value=0.040, and education p≤0.001 have significant associations with BSE.

CONCLUSION: The current study showed that knowledge of breast cancer and the practice of BSE and mammography were very poor. A health education program involving the local and governing bodies should be organized to reduce the prevalence and create awareness.

KEYWORDS: Breast cancer, Awareness, Diagnosis, Breast Self-Examination.

INTRODUCTION

Breast cancer is a fatal cancer in females worldwide [1]. Breast cancer is the second biggest cause of death for women, but early identification and screening can increase treatment options and reduce the mortality rate [2]. Breast cancer's prevalence, morbidity, and mortality have risen to increased life expectancy, organization, and modern lifestyles [3]. As described in "Global Cancer Statistics 2020, "breast cancer is the most common cause of dead worldwide". There were 2.3 million (11.7%) new breast cancers globally [4]. According to a WHO report, the mortality rate of females with breast cancer is 685000 in 2020 [5]. In Pakistan, 25928 breast cancer cases were diagnosed, and the death rate was 11.7 % in 2020. According to the Pakistan Global Cancer Observatory 2020, the mean age of females for breast cancer was 41.8 years, showing that 56 % were of reproductive age.

The incidence of breast is higher in premenopausal age. Breast cancer diagnosis was mostly (90%) in the 3rd and fourth stages of the disease [6]. This situation includes a low preference for treatment and social-cultural effects as females do not publicly discuss breast cancer. Another factor might be the availability of doctors as there is one doctor for 877 people in Pakistan [Global Cancer Observatory December 2021]. This situation is worse in some rural areas. Illegitimacy and lack of awareness also contribute to the late detection of breast cancer [7].

Good knowledge about risk factors and early detection methods of breast cancer diagnosis is needed to decrease the mortality rate and improve prognosis. The breast self-examination technique makes early detection of breast cancer possible as it improves prognosis. The breast self-examination technique is simple, cheap, and can be performed by females at home [8]. According to Breast Health global

initiative reports, having proper and adequate knowledge of breast self-examination techniques, breast cancer can be diagnosed early, so it will be convenient to manage breast cancer at an early stage [8]. The breast cancer risk factors and early detection of breast cancer breast self-examination technique cannot be further emphasized [5]. In this context, a hospital-based survey was conducted of females to assess their knowledge regarding breast cancer and breast self-examination techniques and screening methods.

METHODOLOGY

A cross-sectional descriptive study was conducted at the territory care hospital Khurrianwala Faisalabad. A convenient sampling technique was adopted among 500 women visiting from June 2022 to November 2022. All the participants enrolled in the study were explained about the advantages and disadvantages of the study. An informed consent was taken prior to their enrollment, and their privacy was duly considered before enrolling them. The ethical approval was taken by an institutional review committee of Abwa Medical College, khurrianwala, Faisalabad [Ref No: ABWA/MC/DME/476/2022]. A self-administered questionnaire was used to collect the data. The questionnaire was in Urdu, which was later translated in English and transcribed for data analysis. The questionnaire has four sections with appropriate headings. The first section contains socio-demographic data, marital status, age, education, and socioeconomic status, and the second section contains knowledge and practice of breast self-examination techniques. The third section contains knowledge and practice of clinical breast examination. The fourth section contains knowledge of the risk factors of breast cancer. Aligning with the objective of the study, that were the assessment of symptoms of breast cancer knowledge of breast self-examination practice of BSE and CBE, and mammography.

SPSS Version 22.0 was utilized for the data analysis. Categorical variables like marital status, age, occupation & education are expressed as frequencies and percentages. The data collected was non-parametric; hence, the Chi-Square test was implied to analyze the data. The confidence interval was 95%, the margin of error 5% and a $p \leq 0.05$ was considered highly significant.

RESULTS

The results showed that knowledge regarding breast cancer was high among study participants. Out of 500 study participants, 304(60.8%) know about breast cancer, of which 64(12.8 %) have positive family history and 436(87.2 %) have no positive history of breast cancer. On the other hand, the remaining 196(39.2%) did not know breast cancer table-I.

The demographic details include age, marital status, religion, occupation, and educational level of study participants. Out of 500 participants, 131(26.2%) belong to the age group ≤20, 133(26.6%) belong to the age range from 21-30 years, 113(22.6%) from 31-40 years and 123(24.6%) belong to the

age group ≥41. Most study participants are married, 272(54.4 %), 2(0.4 %) divorced, and 209(48.2 %) unmarried.

Table-I: Distribution of respondents regarding breast cancer.

Variables	Category	n(%)
Have you heard of breast cancer	Yes	304(60.8)
	No	196(39.2)
	Total	500(100)
What are your sources of information?	Books	23(7.6)
	Media	110(36.2)
	Hospital	90(29.6)
	Friends	65(21.4)
	Others	16(5.2)
	Total	304(100)
Has any member of your family been diagnosed with breast cancer?	Yes	64(12.8)
	No	436(87.2)
	Total	500(100)
If the answer is yes what is her relationship to you?	Mother	29(3.2)
	Sister	2(3.1)
	Cousin	28(43.8)
	Aunt	10(15.6)
	Others	22(34.4)
	Total	64(100)

Out of 500 study participants, 304 (60.8 %) participants know that breast self-examination (BSE) is the useful tool for early detection of breast cancer. On the other hand, 196(39.2 %) do not know about usefulness of BSE as early detection of BSE. Most of the study participants 75.4 % do not know how to do BSE. Only 24.6 % know how to do BSE. The study participants who know how to do BSE, 70.6 % learned to perform BSE from health professional, while 25.4 % leant from teachers and friends. Only 4.0 % of participants learnt BSE from other sources like T.V newspapers, social media, etc. The 107(35.2%) of the participants ranging from 21-30 years has knowledge that BSE is a useful tool for detection.

The majority of the study participants have an education of higher secondary. Chi-square analysis showed a significant relationship between Breast self-examination practice and age, occupation, marital status, and education. The study responses were divided into two responses: aware of breast cancer & unaware of breast cancer table-II.

DISCUSSION

Breast self-examination is very important in the early detection of breast cancer. Out of 500 participants, only 304(60.8%) were aware of breast cancer early detection by breast self-examination, while the remaining 196(39.2%) of the population were unaware of breast self-examination.

A study conducted in Nigeria, 94.9% were aware of breast cancer, while only 37% of the total participants know the breast self-examination, and the mean knowledge score calculated was 6.9±3.36 [10]; on the other hand, knowledge of BSE is very poor in study at Ibadan [11].

Table-II: Association of respondents regarding their age, occupation, marital status and education level concerning their knowledge about BSE.

variables	Categories	Knowledge about BSE is tool for early detection of breast cancer			Chi-square	p-value
		Yes n(%)	No n(%)	Total n(%)		
Age (years)	≤ 20 years	67(22.0)	64(32.7)	131(26.2)	30.27**	≤0.001
	21-30 years	107(35.2)	26(13.3)	133(26.2)		
	31-40 years	60(19.7)	53(27.0)	113(22.6)		
	41+ years	70(53.0)	53(27.0)	123(24.6)		
Occupation	Housewife	147(48.8)	119(60.7)	266(53.2)	23.22**	≤0.001
	Job	26(8.6)	6(3.1)	32(6.4)		
	Student	109(35.9)	71(36.2)	180(36.0)		
	Teacher	22(7.2)	0(0.0)	22(4.4)		
Marital Status	Married	156(51.3)	116(59.2)	272(54.4)	8.32*	0.040
	Not married	131(43.1)	78(39.8)	209(41.8)		
	Divorced	2(0.7)	0(0.0)	2(0.4)		
	Widow	15(4.9)	2(1.0)	17(3.4)		
Education	No education	54(17.8)	58(29.6)	112(22.4)	75.65**	≤0.001
	Primary	48(15.8)	36(18.4)	84(16.8)		
	High	97(31.9)	98(50.0)	195(39.0)		
	Graduation	105(34.5)	4(2.0)	109(21.8%)		
Total		304(100)	196(100)	500(100)		

NS = Non-significant (p>0.05); * Significant (p<0.05); ** highly significant (p<0.01)

Some other studies form similar results regarding knowledge and performance of BSE [11, 12].

The present study shows a significant relationship between the knowledge and performance of BSE, showing that more aware study subjects are more likely to perform BSE. This relates to the fact that awareness about breast cancer can be used to show that more knowledge about breast cancer knowledge can perform BSE. Studies conducted in Pakistan revealed a very low percentage of people being aware of breast cancer and breast self-examination. According to a study only 20.9% identified the correct year to start the breast cancer self-examination [13].

In countries like Pakistan, BSE can be used as a vital screening method for prevention and early diagnosis of breast cancer, which is similar to the methods done in Bangladesh. Like Pakistan, Bangladesh is a underdeveloped country where mammography as a screening procedure, cannot be used as a first-line diagnostic procedure. More than 33% of participants reported a lack of knowledge about breast self-examination, and 22% reported shyness [14].

The role of media was found as the main factor for the information in our current study and this is identical with other studies [15,16,17]. The use of different modes of breast imaging for the detection and classification of breast lesions, breast lesion segmentation, breast density evaluation help to decrease breast cancer risk and improve in treating breast lesion problem. So, the females must have knowledge of different breast imaging tools [2].

Our study shows a significant relationship of breast cancer knowledge. Those with a family history of breast cancer in close relatives or friends have more awareness about BSE. This association is similar to a study done in Saudi Arabia [18,19]. This is in contrast with the Malaysian study where breast cancer knowledge was low among youngsters and uneducated females; on the other hand, in an Indian study, no significant relationships were shown among demographic variables and BSE and in quite young teenage girls at college. Hence it can be concluded that social, cultural, and demographic factors show an association between breast cancer and diagnosis and performance level [20,18,19]. These studies indicate that breast cancer awareness is the main factor hindering the performing BSE. A cross-sectional study conducted in Peshawar, Pakistan, revealed only 2.5% of participants performed breast self-examination once a month [21]. Family history of breast cancer shows significant knowledge about the performance of BSE; this is similar to a study done in Saudi Arabia and in Pakistan, as 22% of participants had a positive family history of breast cancer [17, 22]. A study done on Chinese immigrants in San Francisco shows that 80.9 % of females know how to perform BSE in the USA to detect any breast lump. Breast lump occurrence frequency and performance of BSE regularly were the main contributing factors for further investigation of breast cancer [18,20]. In Australia, 31 % of females know about BSE and other screening methods [21]. These findings are identical to other studies from developing countries [18]. In the U.K., 70 % of females know how to perform BSE very well. The studies in which awareness programs on detecting breast lumps and

performing BSE positively affected breast health awareness in women [24,22,]. These findings are similar to a study done in Turkey, where females were educated and trained to detect breast lumps and perform BSE, even in illiterate women [23, 24]. Due to advances in prevention, early detection, and treatment, early breast cancer mortality has decreased by nearly 40% during the last four decades [25].

The main source of information in the current study about breast cancer was through electronic media (37.5%), friends (20.8%), and health workers (34.1%). A study conducted in Pakistan revealed social and electronic media as a significant source of information about breast cancer and breast self-examination[26]. The role of health professionals and electronic media would be pivotal in this context [27]. BSE is associated with age, marriage education, and screening program for breast lumps. Less educated women had less knowledge of clinical breast examination and mammography. The current study has no significant relationship between personal and family history of breast cancer. In contrast, there were studies in which women with a family history of breast cancer would have performed BSE regularly.

Breast cancer knowledge was high in young study subjects (52.8%) compared to middle-aged and older women (47.2%). Knowledge of breast cancer was high in young and educated females (60.8%) compared to the Malaysian study, where breast cancer knowledge was low in less educated females [29]. Our study indicated that lack of knowledge about breast cancer was the most important factor that hindered the performance of BSE in study subjects, as females who were highly educated were more aware (60.8%) of breast cancer knowledge and the performance of BSE. Another study reported a high percentage of females who have education more than higher secondary were aware of breast cancer and breast self-examination [22]. Social stigmas and hesitancy to visit the doctor are also two factors identified in a study [30].

LIMITATIONS: Data collected from the study subjects was self-reported, so there is a chance of recall bias. There is no way to validate study subjects' claim about performance/nonperformance of BSE. There is no way out to determine the occurrence, timing, understanding, and accuracy of BSE performance. Moreover, it was a cross-sectional study, so we cannot apply the generalized ability to study subjects. Hence in future studies, a larger sample size should be included to overcome the study's limitations.

CONCLUSION

Breast self-examination is a very useful tool for the early diagnosis of breast cancer. In low to middle-resource countries, breast self-examination needs to be evaluated and encouraged highly because much more work is needed to be done on prevention rather than the disease itself. Local and national governing bodies should arrange seminars and health education programs to fill this gap. Social media campaigns should be arranged and awareness must be created in females for the performance of BSE to pick breast mass in the early stage to decrease mortality and morbidity rates in the community.

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Author's Contribution:

Uzma Kausar: Substantial contributions to the conception and design of the work.

Amir Ahmad: Acquisition, analysis, and interpretation of data for the work.

Muhammad Sohail Anjum Noor: Drafting the work and reviewing it critically for important intellectual content.

Areeba Sohail: Interpretation of data for the work.