

## Research paper

# Knowledge and Awareness about Breast Cancer among Female Population of Southern Khyber Pakhtunkhwa, Pakistan

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## ABSTRACT

Breast cancer is the most common female cancer worldwide including in Pakistan, where advanced stages at diagnosis, growing level, and mortality rates, make it indispensable to understand cancer knowledge in women. The current study was designed to evaluate the knowledge and awareness about breast cancer in the female population of Southern Khyber Pakhtunkhwa Pakistan. A total of 1500 women from southern districts were interviewed from different villages, towns, cities, schools, and colleges in a span of six months from November 2017 to April 2018 using a stratified questionnaire with proportional allocation. Results showed that 45% of females had heard about breast cancer. Along with age the ratio of hearing about breast cancer increases. Education and high-income status play a major role in breast cancer awareness. Mass media and school knowledge (21.4%) were the main sources of awareness about breast cancer. It is concluded that the women's knowledge and awareness about breast cancer, warning signs, and effective screening methods were insufficient. Hence there is an urgent need for health education programs to rectify the lack of women's knowledge and awareness level of breast cancer.

**KEYWORDS** Awareness; Breast; Knowledge; Khyber Pakhtunkhwa; Questionnaire.

## INTRODUCTION

Among all cancer, breast cancer is the most frequent one affecting women throughout the world. The incidence of breast cancer increases globally and is estimated to increase by 25% by the year 2020. The greatest increase in breast cancer has been shown in women in developing countries, especially in Asian countries [1,2]. In 2012, 14.1 million cases of cancer were estimated globally by IARC estimates with which the majority of the cases which is about 8 million reported from developing countries; encompassing 82% population of the world [3].

BC screening facilities are limited in Pakistan and 9.5% and 4.8% of clinical facilities are accounted for urban and rural area females respectively.

While radiological facilities are present in 2.5% of urban and 0.7% of rural females [4]. According to Breast Health Global Initiative (BHGI), the means of early detection of breast cancer in developing countries are breast cancer awareness and self-examination [5]. In Pakistan, most breast cancer patients present late due to lack to lack of awareness and poor socioeconomic conditions [6,7].

## MATERIALS AND METHODS

This cross-sectional survey was conducted in five southern districts of Khyber Pakhtunkhwa (Bannu, Karak, Lakki Marwat, Dera Ismail Khan, and Tank) to

find out the knowledge and awareness about breast cancer in the female

population. A total of 1500 women were interviewed from different villages, towns, cities, schools, and colleges in a span of six months from November 2017 to April 2018 using a stratified questionnaire with proportional allocation.

A questionnaire was prepared and distributed with the assistance of well-trained and experienced research assistants among females during their function timings and they were asked to fill out the questionnaire. The questionnaire comprised four sections. The first section looked at the demographic features of respondents which included ages, sex, marital status and education, income, etc of respondents.

In the second section, respondents were asked to agree or disagree on a list of questions regarding breast cancer. This section of the questionnaire was designed to get female views on awareness of breast cancer. The third section was comprised to answer the questions concerning their knowledge and awareness of breast cancer. At the last respondents were asked to state their reactions towards awareness of breast cancer.

### **Ethical approval**

The study protocol was approved by Kohat University of Science and Technology, Kohat ethics review board. From each woman written consent was obtained after explaining the objectives of the study prior to her enrolment

### **Data analysis**

SPSS (Statistical Package for Social Scientists) statistical software version 18 was used for data analysis. P value was calculated and 0.05 was considered significant at the 95% CI (Confidence Interval) level.

## **RESULTS**

This study was conducted among the female population of both rural and urban areas of southern Khyber Pakhtunkhwa Pakistan. Table 1 showed various demographic features related to whether the study participants heard about BC or not. Age of the study participants were 15-58 years with a mean of 35.39 years and a standard deviation of  $\pm 11.24$

Among all 674/1500(44.93%) females had heard about breast cancer. To know the relation of knowledge and awareness about breast cancer with the age of the female then it was found that most females of the age groups 48-58 heard about BC. Most women in the urban area had heard about BC than in rural areas. On the bases of education level, females of the present study were divided into four groups illiterate, primary, metric, and graduate. A high level of awareness was found in graduate women (71.31%). Married has more knowledge (51.56%) as compared to other females. When the rate of hearing about breast cancer was analyzed on the basis of economic position females having high economic position showed high awareness level (70.49%) than low (70.49%) and medium economic positions (50.92%).

As overall 674/1500(44.93%) females had heard about breast cancer. More questions were asked about breast cancer from these 674 females which are presented in Table 2. Reactions of these females to various questions regarding breast cancer are presented in Table 2. Response of females regarding BC was: breast cancer is fatal disease 511(34.06%), family history 197(13.13%), Breast lump risk factor for breast cancer 379(25.25%), Breast cancer increase with age 356(23.73%), Breast cancer is treatable 201(13.4%). 528(35.2%) female knows that breastfeeding decreases the risk of breast cancer. In all 334(22.26%) answered that the skin of the breast change during breast carcinoma. Females answered

to early screening and treatment is beneficial 577(38.46%), Breast cancer is heritable 79 (11.93%) and Mammography is the screening method 67(4.46%). The main source of knowledge and awareness about BC was mass media and school knowledge followed by friends and parents (Table 3).

## DISCUSSION

According to Pakistani data; less parity, lack of breastfeeding, and family history are the main risk factors for breast cancer in Pakistani females [8]. The rate of delayed presentation of BC has remained persistently high in Pakistan due to a lack of awareness. The leading cause of the late appearance is becoming contentious; the reasons challenging for dominance are lack of awareness, the fright of treatment joined with non-acceptance of treatment or preference for alternative therapy, ignorance, and poverty. In the present study out of 1500 women, 674(44.93%) only heard about cancer as a disease. However, our result is low from the same study conducted in Nigeria where 97% and 92% of the respondents were aware of breast cancer as a disease [9,10], while in India 56% of females were aware of breast cancer as a disease [11].

Hearing of breast cancer as a disease significantly correlated with age, education status, income sources, marital status, and urban area of residency. This is comparable with the same studies conducted in Nigeria and Africa [12,13].

Women who had heard about BC as a disease were further interviewed and certain BC-related questions were asked from those women and poor responses to BC-related questions were noted in this study. Females answered to breast cancer is a fatal disease 511(34.06%), breast lump risk factor for breast cancer 379 (25.26%), monthly pain in one or both breast

symptoms of breast cancer 402(26.8%), breast cancer is heritable 179(11.93%) and breast cancer increase with age 356(23.73%). In all about 201(13.4%) females believed that cancer breast cancer is treatable and 577(38.46%) Early screening and treatment is beneficial. When questions were asked about the screening method from the study participants then 67(4.46%) females answered that mammography is the best screening method. However, a lot of women had no idea about the diagnostic method for BC screening. Similarly, poor awareness level was found about the warning signs of BC among the study participants.

The main source of information for the study participants was media (television) followed by school knowledge 357(23.8%). Also, in a study conducted in Iran, the commonest source of information was mass media[14]. However, parents and friends as a source of information were considered comparatively less.

## CONCLUSION

The findings of the present study indicated that the women's knowledge and awareness about breast cancer and warning signs (painless lump, retraction of nipple, and change in skin color) and effective screening methods i.e. mammography and clinical examination were very insufficient. So there is an urgent need for health education programmers to rectify the lack of women's knowledge and awareness level of BC.

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**Table 1: Socio-demographic features of the study participants (n=1500)**

Characteristics		<u>heard about BC as a disease</u>			
		Total No	NO	Percentage	P value
<b>Age groups</b>	15-25	453	134	29.58	0.0013*
	26-36	413	200	48.42	
	37-47	358	182	50.82	
	48-58	276	158	57.24	
<b>Residence</b>	Rural	847	346	40.84	0.0170*
	Urban	653	328	50.22	
	Illiterate	643	224	34.83	
<b>Education</b>	Primary	461	196	42.51	0.0096*
	Metric	267	162	60.67	
	Graduate	129	92	71.31	
<b>Marital status</b>	Married	830	428	51.56	0.1896*
	Unmarried	572	222	38.81	
	Widows	82	20	24.39	
	Divorced	16	4	25.00	
<b>Economic position</b>	Low	834	312	37.41	0.3077*
	Medium	542	276	50.92	
	High	122	86	70.49	

\* ONE sample t-test

**Table 2: Response of Females to breast cancer-related questions**

<b>Knowledge</b>	<b>Yes</b>	
<b>Percentage</b>		
Breast cancer is a fatal disease	511	
34.06%		
Family history of breast cancer	197	13.13%
Breast lump risk factor for breast cancer	379	25.26%
Monthly pain in one or both breast symptoms of breast cancer	402	26.8%
Breast cancer increase with age	356	23.73%
Breast cancer is treatable	201	13.4%
Breastfeeding decreases the risk of breast cancer	528	35.2%
Asymmetry of the breast since childhood	112	7.46%
Skin changes of breast	334	22.26%
Early screening and treatment are beneficial	577	38.46%
Breast cancer is heritable	179	11.93%
Mammography is a screening method	67	4.46%

**Table 3: Source of knowledge about breast cancer**

<b>Source of knowledge</b>	<b>number</b>	<b>Percentage</b>	<b>P value</b>
School knowledge	321	21.4	
Television	357	23.8	
Newspaper	111	7.4	0.0450*
Parents	92	6.13	
Friends	43	2.86	

\* ONE sample t-test

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