

AWARENESS & EARLY DETECTION OF BREAST CANCER

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ABSTRACT:

The present study critically studies the awareness and early detection of breast cancer in females of all ages. The analysis of the present research explores the real importance of awareness and early detection of breast cancer in females from different walks of life. Breast cancer is the leading cause of death in females and an emerging challenge for new-era technology. The awareness about breast cancer and early detection of the disease is constructive and a step to save humanity from fatal results. The data collected on breast cancer was derived from interviews with 50 women with breast cancer and the questionnaire was filled after signs and symptoms of breast cancer. Data has been collected from the oncology department NHM. The present result highlights the commonality of breast cancer in females is due to a lack of awareness and no facility for early detection of breast cancer. So, the findings demonstrate women experience breast cancer due to a lack of awareness as females are largely ignorant that could get cancer but are not allowed to visit their doctors. In turn, they have to put their lives into Death Valley. So, the commonality of diminished breast cancer can be reduced by the awareness programs among women about breast cancer.

Keywords: Breast Cancer Awareness, Early Detection, Female Health, Oncology, Cancer Prevention, Health Education, Screening Programs, Public Health

INTRODUCTION

Breast cancer (BC) is a serious disease and the most common cause of death among females worldwide (Gilani et al., [2010](#)). The World Health Organization (WHO) reported that nearly 1.15 million new BC cases are being diagnosed every year and nearly half a million deaths are

occurring annually due to this fatal disease (World Health Organization, [2008](#)).[1]Despite the importance of breast cancer disease, a severe lack of awareness has been observed all over the world[2]. In Pakistan, the occurrence of breast cancer disease is high. An epidemiological study has reported that the incidence of breast cancer is very high in females in Pakistan (25 -B Cancer Ward in NHM & Minar Cancer Diagnostic centre 2021). Every one in nine women in Pakistan has a risk of breast cancer during her life. There is a severe lack of breast cancer awareness in addition to a higher prevalence among people living in large cities in Pakistan [3].

The Breast Cancer Society proposed that if females are equipped with an adequate level of breast cancer awareness and skills regarding breast cancer self-examination, the disease can be diagnosed at an earlier stage. In developing countries, such as Pakistan, paid less attention to the awareness of self breast examination.[4]

Early detection of disease with breast self-examination and breast cancer screening programs can lead to reduce the mortality rates due to breast cancer. The aim of our study was to assess the risk factors of breast cancer among women and to attention the importance of early screening among them. [5]

The International Agency for Research on Cancer (IARC) estimates that in 2018, there would be 18.1 million new cases and 9.6 million deaths linked to cancer worldwide. Breast cancer typically produces no symptoms when the tumor is small and most easily treated, for which screening is important for early detection. The most common sign is a painless lump. Sometimes breast cancer spreads to underarm lymph nodes and causes a swelling, even before the original breast tumor is large enough to be felt. Breast cancer is detected during a screening & self breast examination, before symptoms have developed, after a woman feels a lump in the breast.[6]

Most masses seen on a mammogram and most breast lumps turn out to be benign (not cancerous), do not grow uncontrollably spread, and is not life threatening. When cancer is suspected, microscopic ally analysis of breast tissue is necessary for a diagnosis and to determine the stage of breast cancer and characterize the type of the disease. The mortality rates for most cancers (including lung, colorectal, female breast, and prostate) are decreasing in the Pakistan, that's why

increasing in many developing countries as an outcome of the trends to a unhealthy lifestyles of smoking, physical inactivity and consumption of junk food.[7]

In Pakistan, breast cancer is one of the leading cancers. Lack of proper facilities and most importantly the awareness among the females about self breast examination in Pakistan, there is progress and occurrence of breast cancer. Higher costs of cancer treatment and fewer hospitals especially designed for cancer treatment in a low numbers. The Pakistani population is deficient in information regarding breast cancer causes and epidemiology.[8]

Among Asian countries especially in Pakistani population there has been an alarming increase in the occurrence of breast cancer. Breast cancer is more common in middle aged women of average age 48 years in Pakistan, whereas, in the western countries, the breast cancer is more common in older age after 60 years.[9]

Other factors include overexposure to estrogen due to early menstrual cycle of 12 years, late menopause after 55 years, late childbirth at 30 years or no childbirth, , breastfeeding for less than two years, previous breast benign lesion of one breast that have metastasis to another non diseased breast and previous chest radiations mostly at the time of adolescence are at a higher risk, due to continuous growth of breast .[10]

Performance of specific breast self examination may reduce the risk of death from breast cancer. It is very important to early detection and start the treatment of breast cancer. Periodic screening mammography with or without clinical breast self examination reduces rates of death from breast cancer.[11]

Breast self-examination is self-administered and cheap way to become aware of any visible changes in breast. The purpose of breast self-examination is for a female to learn the topography (artificial feature) of her breast, know how her breasts normally feel and be able to identify changes in the breast should they occur in the future.[12]

Incidence of new cancers which was 56% reported in 2008, has been projected to 60% by year 2030. Historically, Asian breast cancer incidence has been lower than the Europe and North America but in recent decades incidence of the same seems significantly increasing in Pakistan. Statistically a significant rise in mortality rate was shown in less developed countries like Pakistan]. Global Cancer Statistics 2018 announced that the incidence of breast cancer was second around the globe after lung cancer.[13]

. Breast cancer is the most commonly diagnosed cancer in women (24.2%, i.e. about one in 4 of all new cancer cases diagnosed in women worldwide are breast cancer), and the cancer is the most common in 154 of the 185 countries .[14]

Objectives

- To help our understanding and knowledge of breast cancer in female & explore women's experience of having breast cancer.
- To create awareness among women about breast cancer symptoms and motivate for their early detection and treatment.

Research Question

- What are women's experiences of having breast cancer?
- To evaluate awareness about breast cancer and diagnose and treatment

Study Question

Awareness & Early detection of Breast Cancer in Females

Demographic Questions

Name: _____ W/O, D/O _____

Age: _____

Address: Rural / Urban

Education: Literate / Illiterate

Marital Status: Married / Unmarried

Sr#	Questions	YES	NO	DON'T KNOW
1	Do you know about Breast Cancer?			
2	Is Breast Cancer common in Pakistan?			
3	Do our people perceive breast cancer?			
4	Have you any awareness about Self Breast Examination.			
5	Does Breast Cancer occur in male?			
6	Do you think early detection of Breast Cancer has better cure.			
7	Did you feed your child?			
8	Do you think breast feeding saves from breast cancer?			

LITERATURE REVIEW

Work already done

The percentage of young women with risk factors for breast cancer was found to be alarmingly high. Therefore, screening for breast cancer should start at an early age especially in high risk groups. Awareness about breast self-examination should be emphasized. Moreover, screening programs should be started to ensure early detection and reduction of mortality rates caused by breast cancer also in young Pakistani females.[15]

The BCI is the first research instrument tested for appropriateness in Pakistani women both with pilot studies and statistical analysis. Above all, it extracted respondents' information with high acceptability in pilot studies, which is quite difficult to achieve in a culturally-conservative and highly-stigmatized Pakistani society.[16]

The knowledge and practices regarding breast cancer screening, breast self-examination and mammogram among women were not good. The knowledge about breast cancer risk factors was very poor and showed an alarming attitude towards practices. [17]

We concluded that the majority of female respondents had inadequate awareness regarding breast cancer. We noted that the breast cancer awareness was significantly associated with old age ($p = 0.012$), personal history of cancer ($p = 0.005$), and occupation ($p = 0.040$) of female respondents. These findings suggest the need of culturally appropriate, socially-acceptable and effective disease awareness programs in Pakistani settings to improve the awareness of female population of this life threatening malignancy. [18] In conclusion, the available evidence on breast cancer incidence in women reveal that, in Pakistan, only few centers provide early and multimodality protocol-based treatments for breast cancer, thus, a majority of the patients with breast cancer attain inadequate treatments. Due to low health budget of the country, modern cancer care infrastructure is scarce. It also shows that Pakistani women are deficient in knowledge about breast cancer and follow many prevalent superstitions and spiritual statements about the disease. This review highlights that there is an urgent need to educate the women, promote early diagnosis of breast cancer and ensure the better equipped public facilities for palliative care of

patients suffering from breast cancer. We believe, with further inquiries addressing the delay factors in early diagnosis of breast cancer in Pakistan, awareness and an affordable, accessible health-care system will win the war against breast cancer in women and improve cancer survival rate in the country.[19][20]

Knowledge of BC and BSE practices are highly deficient in this study population. However, there is generally a positive attitude which provides a fertile ground for awareness dissemination in order to improve knowledge and practices.[21]

With existing breast cancer awareness strategies, the rate of change for early detection of this deadly disease is very slow. Effective and acute measures are needed at local and national levels to bring about the desired change in younger and older women.[22]

Our findings indicate that a majority of female students in the University of Buea do not practice breast self-examination as a screening method for the early detection of breast cancer. Also a majority of the students have never been to any health facility to have their breast examined. The attitude of the students was observed to be moderately in favors of BSE but the knowledge on BSE was generally unsatisfactory which could have affected the practice of BSE by these young women. Sensitization campaigns using the audiovisual media and other programs designed to create awareness about BSE should be intensified in order to change the attitude of young women in the study area towards the practice of BSE in the prevention of breast cancer.[24]

METHODOLOGY

Introduction This chapter deals with methodology used in this present study. It employs a modified research method of qualitative and quantitative interview /semi –structured question SPSS and MS Excel respectively like descriptive frequencies. The main purpose of the descriptive frequencies is find out the facts and figures about breast cancer in females and assess the sign and symptoms which are the main tool of the breast cancer. Interview has undertaken and analyzed

using framework analysis to identify the main cause of breast cancer in female and fatal result of breast cancer in females.

Qualitative Research

Qualitative research explores the social world, providing meaning and explanation for complex phenomena, and was best suited to this study's aim to explore the lived experiences of men with breast cancer (Marshall, 1996, Snape and Spencer, 2003). Qualitative data are either generated naturally and collated using participant observation or are reconstructed in focus groups or interviews (Lewis, 2003). Naturally occurring data can be observed, and the researcher may choose to immerse oneself in the world of the respondents. The focus of this study is the unique lived experience of each individual, which would have been compromised during the group discussion. Furthermore, organizing a focus group would have been logistically very difficult due to the geographical spread of participants throughout the the south Punjab so, in contrast to focus groups, interviews have been undertaken locally to the participant, sustain a person-centred approach and give the participant the full attention of the researcher to facilitate the re-telling of their experiences of cancer, a life-threatening disease that would require sensitivity to support the individual through the interview (Lewis, 2003). Consideration of these points in-depth interviews would be the most appropriate method for this study.

Narrative Interview

The in-depth interview had been undertaken was a narrative method where the respondent was asked to 'tell a story' of his experiences since first suspecting that something might be wrong (Herxheimer et al., 2000). A narrative approach allows the respondent to tell their story in their own reality, how they perceive what has happened to them. It may or may not be 'factually correct' (Miller, 2003). Central to this approach is the relationship between the interviewer and interviewee, who together collaborate to produce the story that the interviewee wishes told, with the interviewer supporting and offering encouragement (Miller, 2003). The story told may change depending on who it is being told to, and the social context in which it is being told (Miller J and

Glassner B, 1997, Greenhalgh et al., 2005). Greenhalgh et al (2005) cite Fontana and Frey (2003) who describe a narrative interview as a “practical production, the meaning of which is accomplished at the intersection of the interaction of interviewer and respondent” (p 444). During the interview process the relationship between researcher and femaleinterviewed, facilitated the production of the narrative told, created at a specific time and place. The Interviewershave elicited different data. Most interviews took place in the women’s own hospital, facilitating their comfort, whereas the interviews undertaken in oncology department (25B) Nishtar hospital Multan, 2022 unfamiliar venues (a hospital sitting room and serviced offices) have been constructed a different narrative. This however, does not invalidate the narrative constructed during the interview. The narrative was a social construction of the women’s experiences they wanted to share with researcher. The researcher I was aware throughout the research process that what was said may not be wholly accurate but what the women constructed as reality. It is impossible for researcher to know how the narratives may have been constructed had they been carried out by another researcher or at a different time and place. At times in the findings chapters researcher refer to the wo men’s narratives as reflecting reality and at other times as accounts. However, the researcher was always aware their narratives were socially constructed.

Framework Analysis

Greenhalgh et al (2005) suggests the narrative interview is a “process of accessing deeper truths” and requires the researcher to undertake rigorous, reflexive analysis to gain deeper meaning and understanding from the narratives. In qualitative research there is no ‘best’ approach for analysis that often involves large, inconsistent volumes of data (Ritchie and Spencer, 2002). Qualitative analysis is “essentially about detection, and the tasks of defining, categorizing, theorizing, explaining, exploring and mapping are fundamental to the analyst’s role” (Ritchie and Spencer, 2002 p 309). In this study, framework analysis was chosen to analyse data from in-depth interviews. Framework analysis is an analytic hierarchy that provides “conceptual scaffolding” (Spencer et al., 2003 p 213) to help the researcher undertake a systematic and rigorous approach to analysis. First the analysis is a deductive process that begins by exploring the initial research

questions of the study before an inductive process of including new and developing themes. The data are then collated systematically into a matrix that facilitates an open and transparent account of the analysis undertaken. The main stages of this process are shown in figure 1(adapted from National Centre for Social Research, 2002). Organizing the data in this way allows for within and between case investigation that can be flexible and accommodate new and unexpected data (Spencer et al., 2003). One advantage of this type of analysis is the transparency of the process undertaken, meaning that it can easily be viewed and understood by another researcher (Pope et al., 2000). Caroline Sime, 2011 43 Figure1: Overview of the Analysis Process, National Centre for Social Research, 2002

Women with breast cancer

Early in the study design process it was agreed with researcher supervisors that researcher would interview approximately fifty women who had breast cancer. It was anticipated this would be an achievable goal within the research project timescale and generate a manageable amount of data. The objective was to recruit women aged 20 -60 years or older, and at various stages of having breast cancer: e.g. soon after diagnosis, at different stages in their treatment cycle and post treatment. This was to maximise comparability with the women's characteristics (such as being older and post menopausal) and stages in treatment at which they were interviewed. Our aim was, if possible given the low prevalence of breast cancer amongst women, to capture a wide range of women's experiences and personal characteristics Caroline Sime, 2011 46 (Marshall, 1996). Due to the relative rarity of women with breast cancer, the study was Oncology department and south Punjab wide to ensure that a maximum variation sample was recruited.

Data collection

We conducted a cross-sectional study among women aged 21 to 60 using a self- administered questionnaire. Data was collected over a period of one month in March 2022. A total of 50 women selected randomly from Oncology department (25B) Nishtar Medical College Multan successfully completed the survey. So, Data has been collected from oncology department 25-B

Nishter Hospital Multan (South Punjab).Data has been collected from general masses in March 2022.the analysis has been done at surface level and deep level. The research is of Qualitative of nature but the thematic quantification of data will also be done by bar charts .The selected data has been consciously sampled as the general masses have been interview at significant forum of oncology on the crucial issue of women’s experience of breast cancer. So , the content of the interview is very essential material for this present research .The content of the interview has been analyze has been neutral observer the central findings are located summed up and synthesized after the collection of that data with different use of descriptive frequencies of SPSS Data and MS Excel point .In the present research the interview of fifty general masses were conducted to collect the personal opinion of masses concerning to the women’ experience of breast cancer .So , The interview methodology is adopted to analyze the data.

ANALYSIS

Awareness & Early detection of Breast Cancer in Females

Demographic Questions

Name: _____ W/O, D/O _____

Age: _____

Address: Rural / Urban

Education: Literate / Illiterate

Marital Status: Married / Unmarried

Sr#	Questions	YES	NO	DON'T KNOW
1	Do you know about Breast Cancer?			
2	Is Breast Cancer common in Pakistan?			
3	Do our people perceive breast cancer?			
4	Have you any awareness about Self Breast Examination.			
5	Does Breast Cancer occur in male?			
6	Do you think early detection of Breast Cancer has better cure.			
7	Did you feed your child?			
8	Do you think breast feeding saves from breast cancer?			

4.1 Overview

This chapter deals with analysis of the awareness and early detection of Breast Cancer in women. This chapter also highlights the fifty interviews with women has been included in the analysis. The women's interviews provided high quality data, collected by the researcher. Analysis was an iterative process that commenced after the first interview. Subsequent interviews and analysis took

place side by side. This allowed new and emergent themes to be incorporated into the interviews (Bryman, 2004).

ANALYSIS

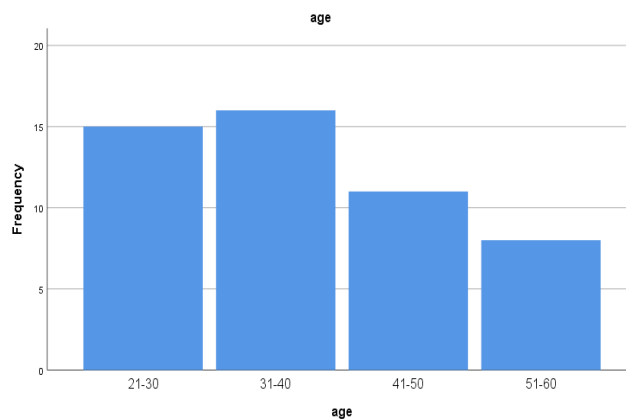
FREQUENCY TABLE

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21-30	15	30.0	30.0	30.0
	31-40	16	32.0	32.0	62.0
	41-50	11	22.0	22.0	84.0
	51-60	8	16.0	16.0	100.0
	Total	50	100.0	100.0	

Table 1

Figure 1



Description:

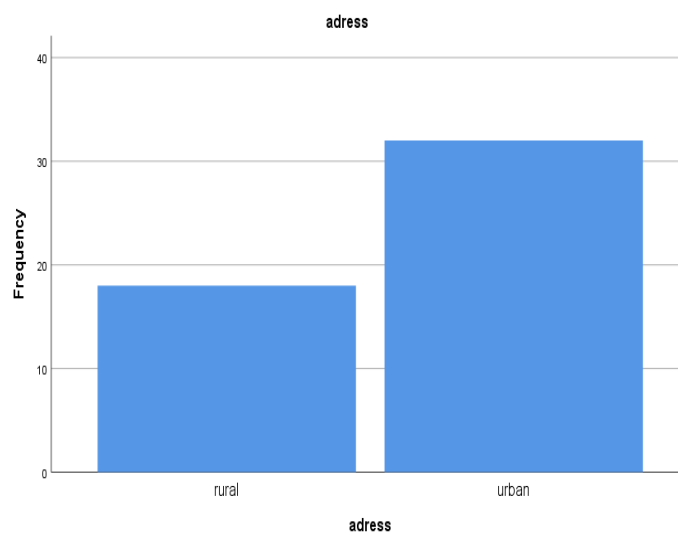
30 % females belong to age group of 21-30 years 32 % females belong to age group of 31-40 years, 22 % female belongs to age group of 41-50 years, and 16 % female belongs to age group of 51-60 years

Address

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rural	18	36.0	36.0	36.0
	Urban	32	64.0	64.0	100.0
	Total	50	100.0	100.0	

Table 2

Figure 2



Description:

72% females belongs to rural area

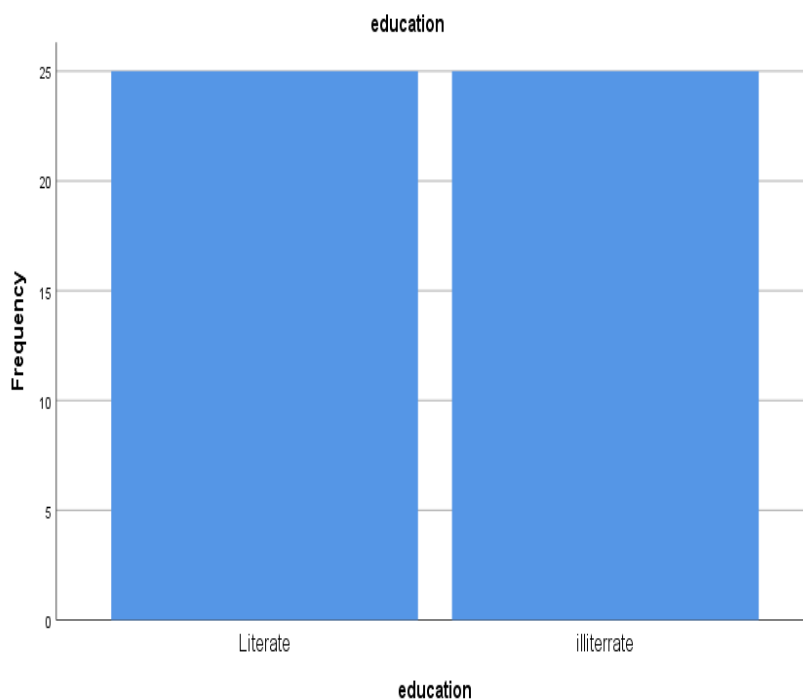
28% females belong to urban area

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Literate	25	50.0	50.0	50.0
	Illiterate	25	50.0	50.0	100.0
	Total	50	100.0	100.0	

Table 4.3

Figure 3



Description:

50 % females were literate

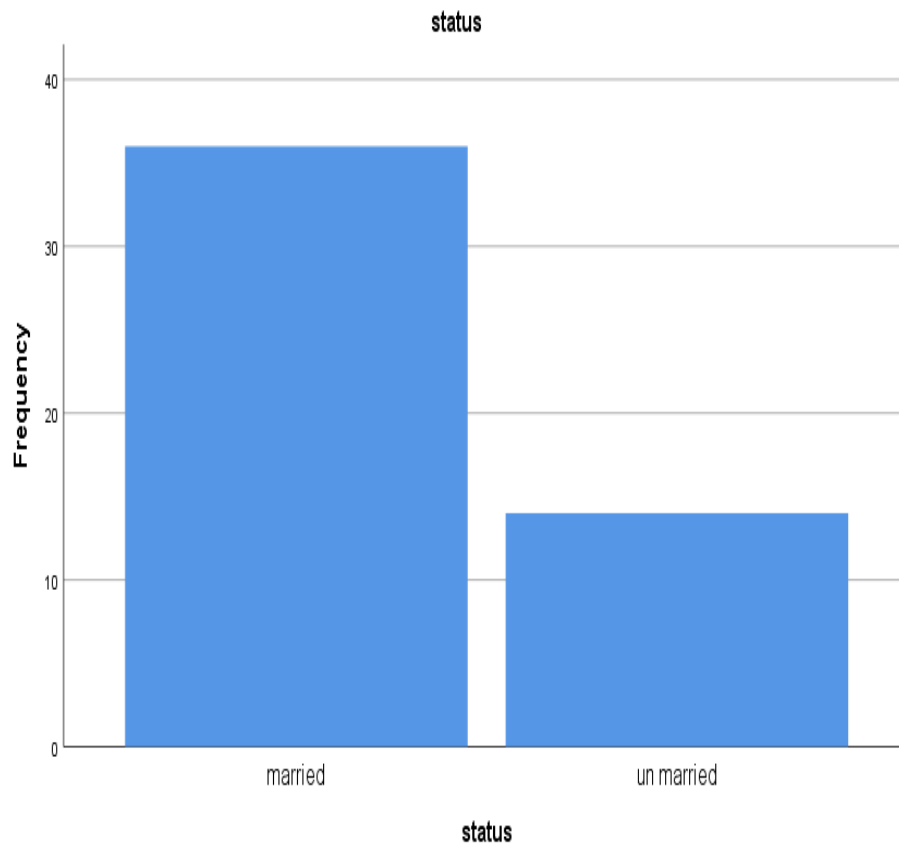
46 % females were illiterate

Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Married	36	72.0	72.0	72.0
	un married	14	28.0	28.0	100.0
	Total	50	100.0	100.0	

Table 4

Figure 4



Description:

72 % females are married

28 % females are un-married

Do you know about Breast Cancer?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	24	48.0	48.0	48.0
	NO	15	30.0	30.0	78.0
	DON'T KNOW	11	22.0	22.0	100.0
	Total	50	100.0	100.0	

Table 5

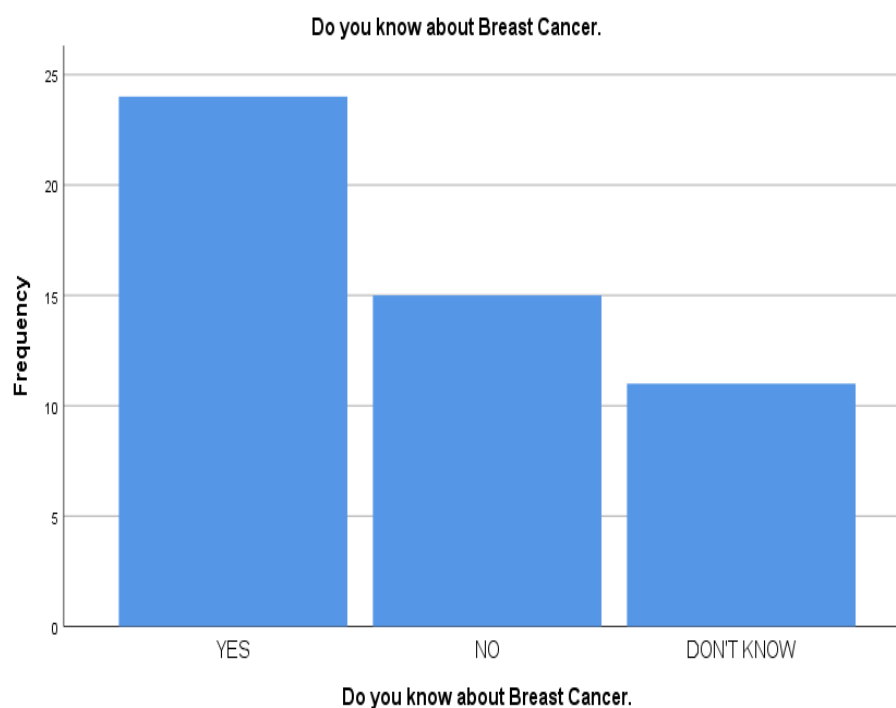


Figure 5

Description:

48% females know about Breast Cancer

30 % females not know about Breast Cancer

22 % females don't know about Breast Cancer

Is Breast Cancer common in Pakistan?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	26	52.0	52.0	52.0
	NO	12	24.0	24.0	76.0
	DON'T KNOW	12	24.0	24.0	100.0
	Total	50	100.0	100.0	

Table 6

Valid	YES	21	42.0	42.0	42.0
	NO	14	28.0	28.0	70.0
	DON'T KNOW	15	30.0	30.0	100.0
	Total	50	100.0	100.0	

Table 7

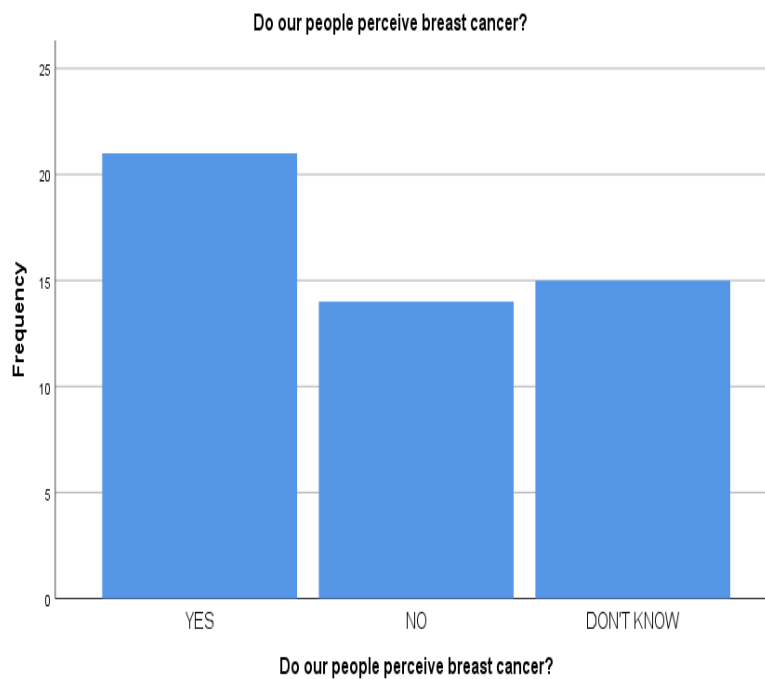


Figure 7

Description:

42% females know that our people perceive about breast cancer

28% females not know that our people perceive about breast cancer

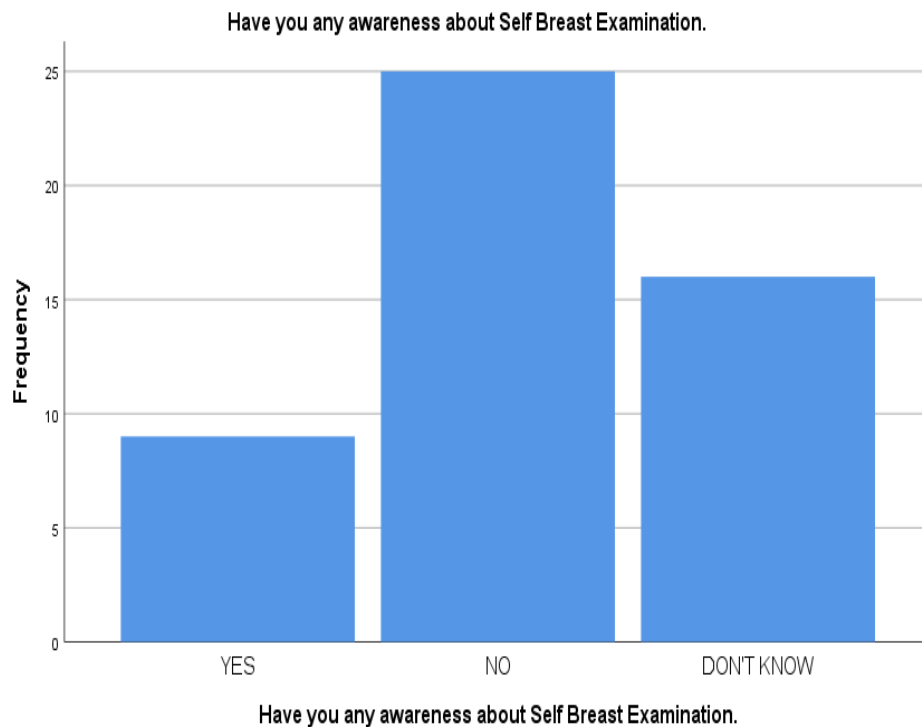
30% females don't know that our people perceive about breast cancer

Have you any awareness about Self Breast Examination.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	9	18.0	18.0	18.0
	NO	25	50.0	50.0	68.0
	DON'T KNOW	16	32.0	32.0	100.0
	Total	50	100.0	100.0	

Table 8

Figure 8



Description:

18 % females know about awareness of Self Breast Examination

50% females not know about awareness of Self Breast Examination

32% females don't know about awareness of Self Breast Examination

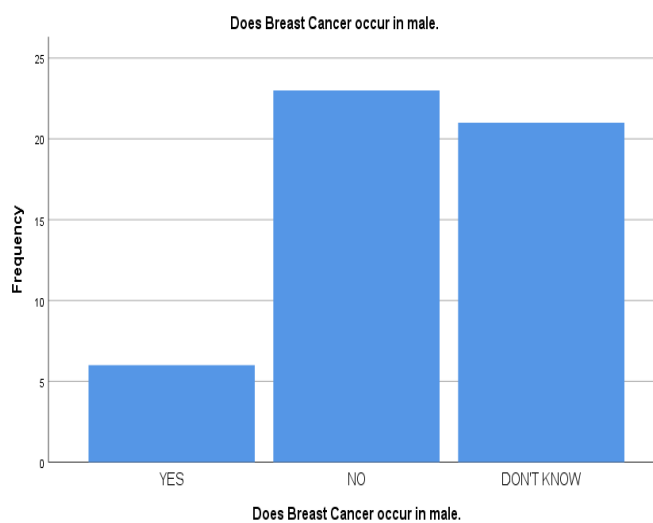
Does Breast Cancer occur in male?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid YES	6	12.0	12.0	12.0

NO	23	46.0	46.0	58.0
DON'T KNOW	21	42.0	42.0	100.0
Total	50	100.0	100.0	

Table 8

Figure 8



Description:

12 % females know that Breast Cancer occur in male

46 % females not know that Breast Cancer occur in male

42 % females don't know that Breast Cancer occur in male

Do you think early detection of Breast Cancer has better cure.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	34	68.0	68.0	68.0
	NO	8	16.0	16.0	84.0
	DON'T KNOW	8	16.0	16.0	100.0
	Total	50	100.0	100.0	

Table 9

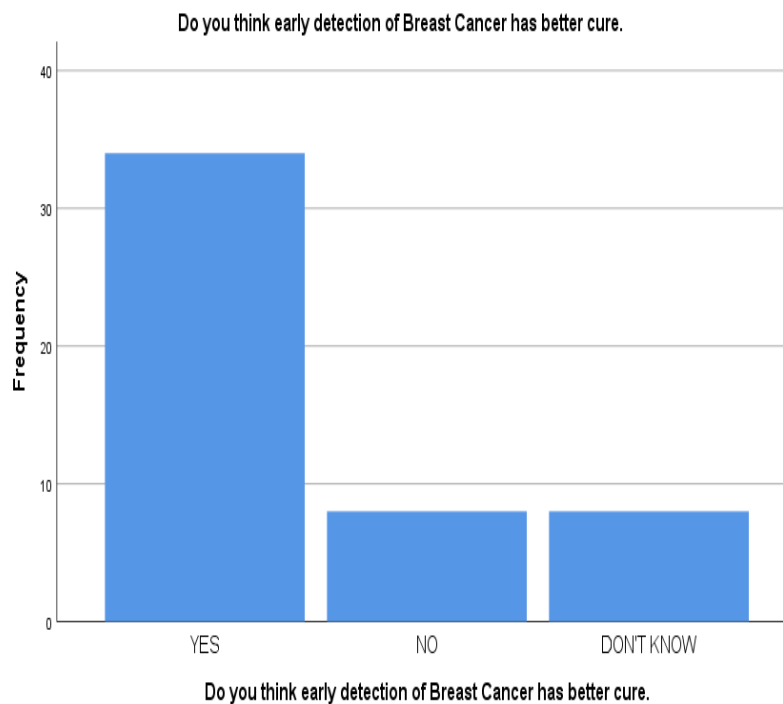


Figure 9

Description:

68 % females know early detection of breast cancer has better cure

16 % females not know early detection of breast cancer has better cure

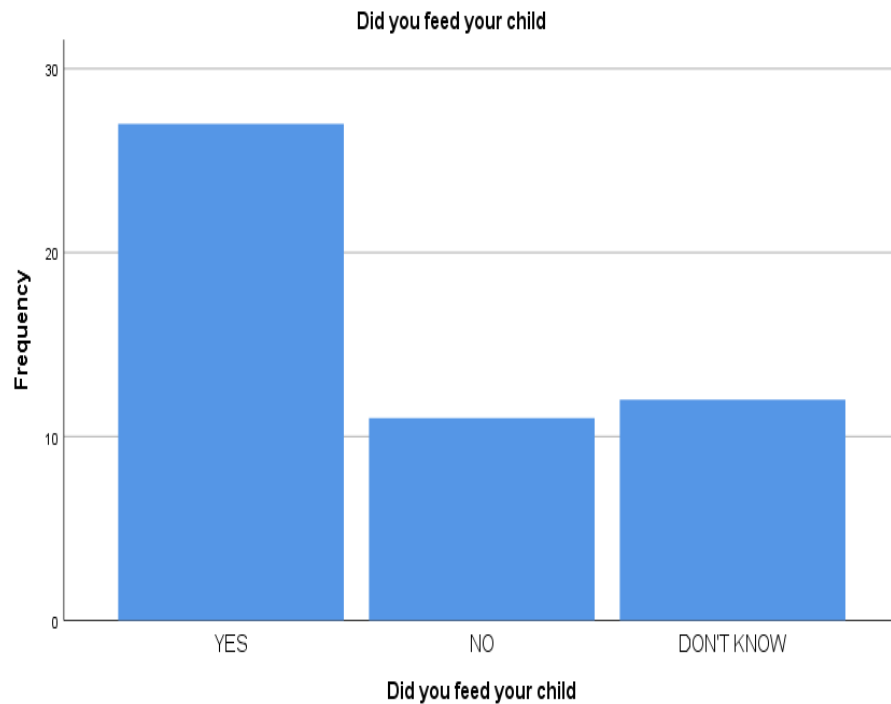
16 % females don't know early detection of breast cancer has better cure

Did you feed your child?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	27	54.0	54.0	54.0
	NO	11	22.0	22.0	76.0
	DON'T	12	24.0	24.0	100.0
	KNOW				
	Total	50	100.0	100.0	

Table 10

Figure 10



Description:

54 % females feed their child

22 % females not feed their child

24 % females don't have child

Do you think breast feeding saves from breast cancer?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	18	36.0	36.0	36.0
	NO	15	30.0	30.0	66.0
	DON'TKNO	17	34.0	34.0	100.0
	W				
	Total	50	100.0	100.0	

Table 11

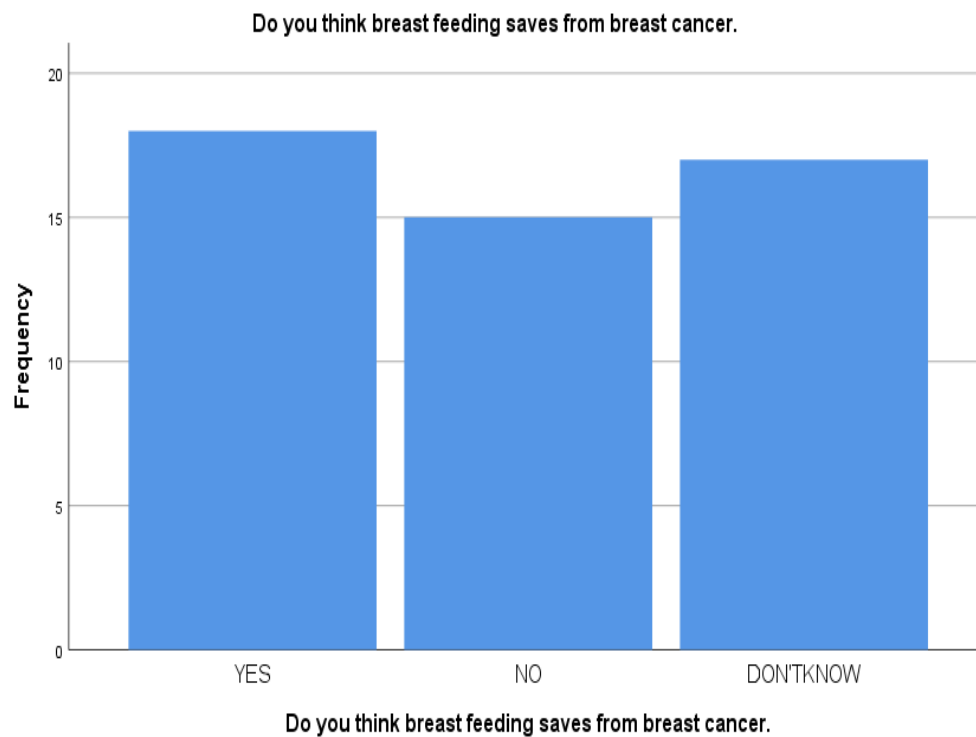


Figure 11

Description:

36 % females know that breast feeding saves from cancer

30 % females not know that breast feeding saves from cancer

34 % females don't know that breast feeding saves from cancer

Statistics

	Valid	Mean	Std. Deviation
Age	50	2.2400	1.06061
Address	50	1.6400	.48487
education	50	1.5000	.50508
Status	50	1.2800	.45356
Do you know about Breast Cancer?	50	1.7400	.80331
Is Breast Cancer is common in Pakistan	50	1.7200	.83397
Do our people perceive breast cancer?	50	1.8800	.84853
Have you any awareness about Self Breast Examination.	50	2.1400	.70015
Does Breast Cancer occur in male?	50	2.3000	.67763
Do you think early detection of Breast Cancer has better cure.	50	1.4800	.76238
Did you feed your child?	50	1.7000	.83910

Do you think breast feeding saves from breast cancer?	50	1.9800	.84491
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FINDINGS

Results

Overall, 50 females participated in the study, giving a response rate of 91.55%. Demographic characteristics are given in Table 1. The mean age of female respondents was 2.2400 years. The majority of respondents (72%) were married, 28% were single, and very few were divorced or widowed. We observed that 50% respondents were literate and 46% were illiterates. The majority of females had a graduate level education, 72% were urban residents and only 28% participants were rural.

. Demographical characteristics of respondents

When we assessed general knowledge of breast cancer in females, 48% participants reported that they had already heard of breast cancer. When we asked respondents about breast self-examination, (82%) reported they did not know how to perform it. About 32% respondents never had heard of any breast cancer screening programs, and 36% respondents considered breast feeding as a safe way for breast cancer as a rare disease. 48% women are unaware about the spread of breast cancer and 58% respondents and also unaware about their diseased community. 88% respondents unaware about the spread of breast cancer in male and only 12% female have knowledge about male breast cancer and only 54% female have fed their kids. The responses of females regarding general knowledge of breast cancer are given in Table 2

. Awareness in females about the symptoms and risk factors of breast cancer

We computed breast cancer awareness scores and noted that the average score of participants were 14.94 ± 6.30 . None of the respondents showed complete breast cancer awareness, except four

respondents. Overall, we found that the majority of females had poor to very poor breast cancer awareness. The gaps in knowledge of female respondents are explained in detail in Table 4.

. Status of breast cancer awareness in study population

Lastly, the non-parametric tests revealed that females in age 51–60, divorced women, working women, and females with graduate level education showed significant breast cancer awareness as compared to others. In addition, participants having a personal or family history of breast cancer showed good awareness while no significant difference was observed in awareness of rural and urban participants. The non-parametric tests further showed that the knowledge was significantly associated with older age ($M = 2.22400$), married and unmarried status ($M = 1.2800$) and education ($M = 1.5000$) of females. However, association was found in marital status, level of education, residence and age of female with breast cancer knowledge.

Discussion

The present study was conducted to assess the breast cancer awareness among females in Nishtar Hospital Multan Pakistan. Despite the fact that the majority of females stated they were aware of breast cancer, only 9 females showed very good awareness. The average score was borderline (18%), which showed that females were lacking adequate awareness regarding breast cancer. These findings are consistent with the previous studies performed in Pakistan. This reflects that no preventive measures have been taken even to date in Pakistan especially in south Punjab to raise breast cancer awareness. Secondly, we found limited knowledge regarding breast self-examination. A similar situation exists in other cities of the South Punjab as well as provinces of Pakistan like Sindh, KPK, and Balochistan.

To get some more insight, scoring and non-parametric test were performed which showed that there is a significant association of breast cancer awareness with age ($SD = 1.06061$), Rural and Urban ($SD .48487$) and Education ($SD .50508$) Married and Unmarried ($SD .45356$) (Table 4). These findings are consistent with some previous studies that were performed in Pakistan, Turkey

and Nigeria (Karayurt et al., [2008](#); Khokher et al., [2011](#); Okobia, Bunker, Okonofua, & Osime, [2006](#)). However, in contrast with some other studies from Pakistan and Jordan that showed a significant association of many study variables with breast cancer knowledge (Gilani et al., [2010](#); Madanat & Merrill, [2002](#)). The reason behind this variation could be due to the differences in study designs and selected population groups.

Furthermore, women with an older age (40–60 years), divorced women, married women, working women, women with graduate level education, and women with personal or family history of breast cancer had a comparatively high awareness. Better awareness in these females could be due to their higher education and more life experience; as the majority of participants were aged above 40 years, and could be due to their extended social network that possibly made them able to discuss breast cancer with their friends and colleagues. There is another possibility that the perception of married women might have been shaped by their partner's attitudes and beliefs towards breast cancer. In contrast to older women, the students and younger females showed severe lack of awareness. This could be due to their lack of interest in breast cancer due to a common social norm that breast cancer affects only married and aged women and could be due to the obtained knowledge from unreliable sources such as social media (Masood et al., [2016](#); Peacey et al., [2006](#)).

Evidence based knowledge provided by healthcare professionals, especially, doctors, pharmacists and allied health professional can play a significant role in raising breast cancer awareness through community awareness programs. The role of awareness about breast self-examination in detecting breast cancer at an early stage is controversial and the American Cancer Society (ACS) does not recommend it because it increases anxiety and does not improve survival in females (Knutson & Steiner, [2007](#)). Conversely, the same practice is recommended for people living in developing countries where mammography based screening program are not well performed (Okobia et al., [2006](#)). Therefore, it is suggested that population specific breast cancer awareness and breast self-examination programs should be designed to promote the level of knowledge in high risk populations, keeping in view the occurrence of disease and available resources of the country.]

Despite these interesting findings, our study has several limitations. First, the study did not receive any source of funding, which limited us to collect data from only one city. Therefore these findings are not generalizable to all over the Pakistan. Second, we did not apply any intervention nor we measured that specifically designed programs improve breast cancer awareness or not, therefore, further research can be performed to answer this question. Third, due to the lack of sampling frame, convenience sampling method was used to approach female respondents which could cause unequal enrollment from different demographic groups. Therefore, this study is not a representative of breast cancer awareness in whole Pakistani population.

Study Strength

This study provides insight into how and what types of breast cancer spread in female at any sphere of life and at any age.

This study explores the interaction of women with breast cancer and awareness concerning to breast cancer among female in Pakistan culture and environment.

The results of the study are reliable and precise .

The results of the study are generalizable.

Study Weakness

This study has been conducted in cross sectional study due to time limitations

This study has conducted in one month of duration and limited area of population in Oncology department 25B Nishtar hospital Multan

This study did not receive any source of funding, which limited us to collect data from only one city.

We did not apply any intervention nor we measured that specifically designed programs improve breast cancer awareness or not, therefore, further research can be performed to answer this question.

Due to the lack of sampling frame, convenience sampling method was used to approach female respondents which could cause unequal enrollment from different demographic groups.

This study is not a representative of breast cancer awareness in whole Pakistani population

Recommendation

In the present research the researcher has critically analyzed the the awareness and early detection of the of breast cancer in female the researcher has selected the one month duration and selected area is Oncology department (25 B) of Nishtar hospital Multan .It is recommended that future research could be conducted on the similar topic by including the different contexts belonging to previous regimes .

- 1.A study with a large sample size may give many valid results.
2. Comparative study design may as breast cancer in male and female further explore the different aspects of the study .
- 3.A hypothesis –based study may give more valid and useful results.

Conclusions

The knowledge and practices regarding breast cancer screening, breast self-examination and mammogram among women were not good. The knowledge about breast cancer risk factors was very poor and showed an alarming attitude towards practices . So,We concluded that the majority of female respondents had inadequate awareness regarding breast cancer. We noted that the

breast cancer awareness was significantly associated with older age ($M = 2.22400$), married and unmarried status ($M = 1.2800$) and education ($M = 1.5000$) of females. These findings suggest the need of culturally appropriate, socially-acceptable and effective disease awareness programs in Pakistani settings to improve the awareness of female population regarding this life threatening malignancy

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