



## **FEMALE MEDICAL STUDENTS' AWARENESS, ATTITUDES AND KNOWLEDGE ABOUT EARLY RECOGNITION OF BREAST CANCER IN JASU.**

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### **ABSTRACT**

#### **BACKGROUND**

Breast cancer is the principal cause of cancer death among woman worldwide. In recent years, the incidence of BC has been increasing, and most cases are diagnosed at late stages, making treatment more difficult. More and better early detection could help more women to survive. Female students in the medical field can have a positive impact on the attitudes, beliefs and practices of general public. Therefore, it is important that the female medical students themselves have adequate knowledge and positive attitudes.

#### **OBJECTIVE**

The aim of this study was to identify the current knowledge, attitude and awareness about early detection of BC among the female students in JASU.

#### **METHODS**

A cross sectional study was carried in a group of female medical students in Jasu to determine the attitude, awareness and knowledge about early recognition of breast cancer among female students. The study area contained students from the background of medical sciences. The researcher used descriptive research design. We collected the data from different literature reviews from different articles. Data was recorded and entered in the software using SPSS version 26 per analysis.

#### **RESULTS**

About 70% of the respondents had overall knowledge and awareness whereas 50% had partial knowledge and awareness towards early detection of breast cancer. Awareness of BC was associated with social media, family history of BC and socio-economic status. About 50% had fear of hospitals due to lack of awareness. More than 70% of the respondents were having positive attitude regarding early detection of breast cancer.

#### **KeyWords**

Breast cancer,BSC,Knowledge and Practice,risk factors

## **INTRODUCTION**

Breast Cancer arises in the lining cells (epithelium) of the ducts (85%) or lobules (15%) in the glandular tissue of the breast. Initially, the cancerous growth is confined to the duct or lobule (“in situ”) where it generally causes no symptoms and has minimal potential for spread (metastasis). It presents with diverse signs and symptoms and differs from person to person. These include pain and swelling of the breast, redness of the skin over the breast or nipple, nipple discharge, nipple erosion, painless lump in the breast.

There are many risk factors associated with BC such as increased age, early age at menarche, late age at menopause and family history of BC, oral contraceptive use, infertility drugs. In addition a significant positive increase in BC risk has been found with smoking and high BMI. Whilst, breast feeding, healthy diet and physical activity were found as defensive factors. The most appropriate measures for early detection of breast cancer are BSE, CBE, breast USG, and mammograms. Mammography is considered the most effective and reliable screening method for detecting breast lesions at early stages. For effective screening and early diagnosis, adequate knowledge and awareness are of utmost importance. Female medical students can bring about a significant change in the overall perspective of the female patients, regarding screening practices and positively influence their attitudes and beliefs.

In 2020 there were 2.3 million women diagnosed with BC and 685,000 deaths globally. As of the end of 2020 there were 7.8 million women alive who were diagnosed with BC in the past 5 years, making it the world’s most prevalent cancer. And female BC has surpassed lung cancer as the most commonly diagnosed cancer, with an estimate 2.3 million new cases (11.7%) followed by lung (11.4%), colorectal (10%), prostate (7.3%) and stomach (5.6%) cancers.

In India, a recent report published by NCRP estimates that the number of cancer cases is likely to increase from 13.9 lakh in 2020 to 15.7 lakh by 2025, an increase of nearly 20%. However, the one good thing is that at least one-third of common cancers are preventable. Out of all the types of cancers, BC has become a major health concern across Indian cities, especially in the metropolitan cities like Delhi, Bengaluru, and Chennai as it accounts for more than a fourth of all female cancers. With the latest study reports, India’s highest cancer rate is listed in the state of Kerala. The survival rate of BC in India is low because the detection takes place late. It is reported that with every 4 minutes, an Indian woman is diagnosed with BC.

The risk of having BC has increased in Pakistan, whereby 1 in every 9 women in Pakistan has a life time risk of being diagnosed with BC. The current demographic trends indicate that BC will pose an even greater public health concern in future for Pakistan. According to the international agency of research on cancer 2018 report, 340,066 new cases of BC had been reported in Pakistani women. Unfortunately, coupled with delayed referral to appropriate facilities and late diagnosis in the country, mortality rate of BC patients is high.

According to the latest WHO data published in 2018 BC deaths in Kyrgyzstan reached 269 or 0.78% of total deaths. The age adjusted death rate is 11.07 per 100,000 of population ranks Kyrgyzstan #143 in the world. Ergene is a nonprofit organization founded in August 2006 in the Republic of Kyrgyzstan. They deliver BC control programs in collaboration with the Ministry of Health and other government departments. In order to increase awareness and support patients, Ergene developed an evidence-based MBC patient information booklet in plain and simple language, which was approved by the Kyrgyz Ministry of Health. Furthermore, as a result of their advocacy work 3 medicines have been added to the Kyrgyzstan essential medicines’ list (Gemcitabine, Anastrozole, Trastuzumab).

## **METHODOLOGY**

**METHOD OF DATA COLLECTION:** A cross sectional study was carried in a group of female medical students in Jasu to determine the attitude, awareness and knowledge about early recognition of breast cancer among female students. The study area contained students from the background of medical sciences. The researcher used descriptive research design. We collected the data from different literature reviews from different articles.

**TECHNIQUES AND TOOLS OF DATA COLLECTION:** A structured and pretested questionnaire was adopted and used consisting of close – ended questions. The research data were collected through questionnaire method. The main domains of the study were socio-demographic characteristics, IEC related to breast cancer, knowledge related to breast cancer, attitudes and behavior towards breast cancer. And the sub domains of knowledge related to breast cancer were symptoms related to breast cancer, risk factors related to breast cancer and diagnosis and treatment related to breast cancer. The questionnaire was both in English and Russian language.

**DATA COLLECTION PROCEDURE:** The researcher will visit individual respondent personally and handover the questionnaire and they will fill it themselves. The questionnaire comprised of a consent form which the respondent are expected to read and accept or reject to participate in the research study.

**SOCIO-DEMOGRAPHIC CHARECTERISTICS:** This section of the questionnaire includes 12 questions, about the basic information about the respondents.

**IEC RELATED TO BREAST CANCER:** This section includes 4 questions about information/education and communication related to breast cancer. The overall scoring is done on the basis of the quality of their knowledge and their understanding. The scoring system ranges from 0-4

Where: -

Total score under - low knowledge and understanding  
-moderate level of knowledge and understanding

**KNOWLEDGE RELATED TO BREAST CANCER:** This section of questionnaire consists of 26 questions including 3 sub-sections, Symptoms related to BC, Risk factors related to BC, Diagnosis and treatment related to breast cancer. These questions have one correct option/answer which carries one mark. The overall scoring system ranges from 0-26

Where: -

Total score under 10 - low knowledge and understanding  
11-15 – moderate level of knowledge and understanding  
16 and above -high level of knowledge and understanding

**ATTITUDES AND BEHAVIOR TOWARDS BREAST CANCER:** To evaluate the attitudes and behavior towards breast cancer of the respondent 12 questions were provided in this section. These questions have one correct option/answer which carries one mark. The overall scoring system ranges from 0-12

Where: -

Total score under 4 - low knowledge and understanding  
5 - 7– moderate level of knowledge and understanding  
8 and above -high level of knowledge and understanding

#### **INCLUSION AND EXCLUSION CRITERIA:**

##### **INCLUSION**

- The students who were interested were considered as our respondents.
- Only JASU students were taken into consideration.
- Only female medical students were included.

##### **EXCLUSION**

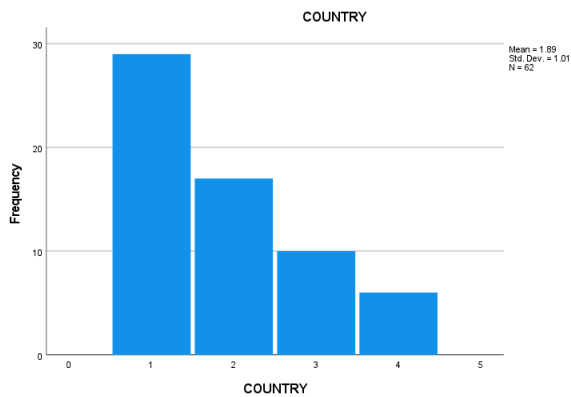
- The students who were not interested were not considered as our respondents.
- Students from other universities or local people were not included.
- Male medical students were not included.

**ETHICAL CONSIDERATION:** The researchers obtained ethical approval from administrative bodies before conducting the study. The respondents were informed about the purpose of the study. The respondents were also informed that their participation was voluntary and they could stop their participation at any stage in case they felt uncomfortable. The confidentiality of the information obtained was kept and respondent names were not recorded.

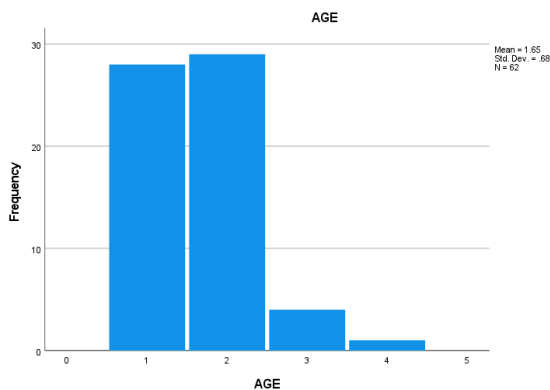
**DATA PROCESSING AND ANALYSIS:** Data will be recorded and will be entered in the software using SPSS version 26 per analysis, Frequency, means, standard deviation will be calculated. knowledge score calculation: in this study, a knowledge score calculation was used to calculate questions in the questionnaire, which contain the respondents' knowledge of different aspects of bc

## SOCIO DEMOGRAPHIC

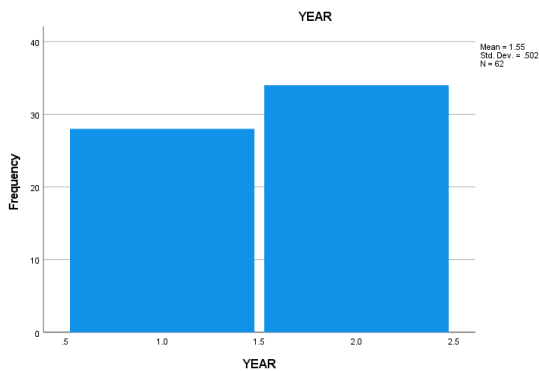
The choice of country frequency of India was 29 and 46.8%, of Pakistan was 17 and 27.4%, of Kyrgyzstan was 10 and 16.1% and frequency of other countries was 6 and 9.7%.



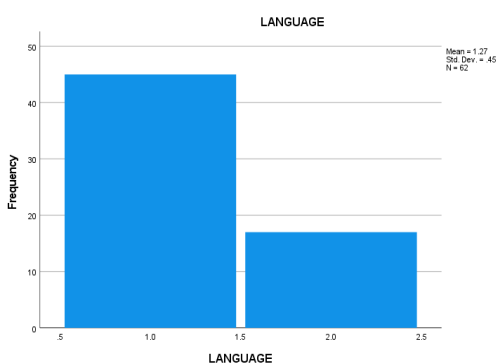
The frequency of age between 15-20 was 28 and 45.2%, between 20-25 was 29 and 46.8%, between 25-30 was 4 and 6.5%, and between 30-35 was 1 and 1.6%.



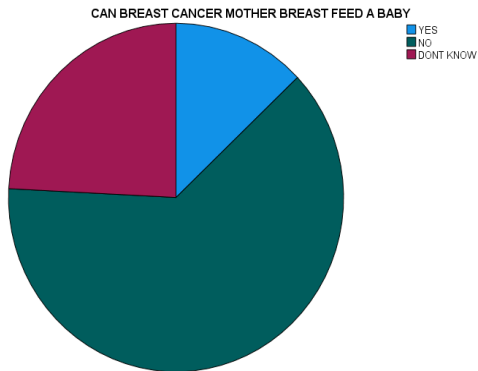
The frequency of the student year of 1<sup>st</sup> year was 28 and 45.2%, and 2<sup>nd</sup> year was 34 and 54.8%.



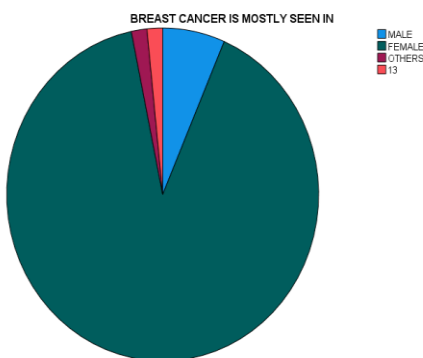
The language frequency of English was 45 and 72.6% and the Russian frequency was 17 and 27.4%.



## IEC\* RELATED TO BREAST CANCER.

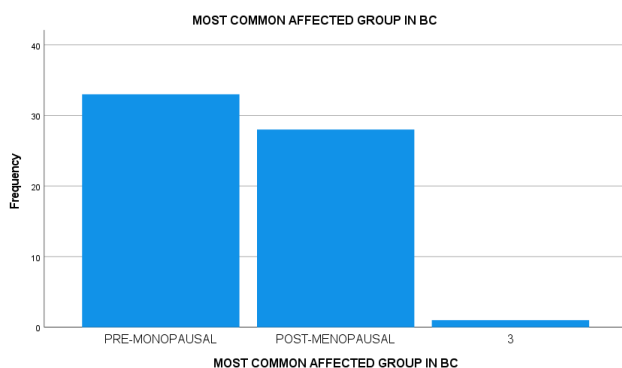


Can BC mother breast feed was 8 and 12.9%,"NO" was 39 and 62.9% and to "DON'T KNOW" Was 15 and 24.2%.



The frequency for BC mostly seen in "MALE" was 4 and 6.5%, in "FEMALE" was 56 and 90.3% and in "OTHERS" was 1 and 1.6%.

## KNOWLEDGE RELATED TO BREAST CANCER.



The frequency of most common affected group in BC at "PRE-MENOPAUSAL" was 33 and 53.2% and at "POST-MENOPAUSAL" was 28 and 45.2%.

## Symptoms related to BC

The frequency of students who said "YES" to change in nipple position as a symptom was 34 and 54.8%, "NO" was 23 and 37.1% and "DON'T KNOW" was 5 and 8.1%.

CHANGE IN NIPPLE POSITION					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	34	54.8	54.8	54.8
	NO	23	37.1	37.1	91.9
	DONT KNOW	5	8.1	8.1	100.0
	Total	62	100.0	100.0	

The frequency of students who said “YES” to nipple retraction as a symptom was 39 and 62.9%, “NO” was 20 and 32.3% and “DON’T KNOW” was 3 and 4.8%.

#### NIPPLE RETRACTION

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	39	62.9	62.9	62.9
	NO	20	32.3	32.3	95.2
	DONT KNOW	3	4.8	4.8	100.0
	Total	62	100.0	100.0	

The frequency of students who said “YES” to pain in one of the breast or armpits as a symptom was 46 and 74.2%, “NO” was 13 and 21.0% and “DON’T KNOW” was 3 and 4.8%.

#### PAIN IN ONE OF THE BREAST OR ARMPITS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	46	74.2	74.2	74.2
	NO	13	21.0	21.0	95.2
	DONT KNOW	3	4.8	4.8	100.0
	Total	62	100.0	100.0	

The frequency of students who said “YES” to dimpling of breast skin as a symptom was 37 and 59.7%, “NO” was 12 and 19.4% and “DON’T KNOW” was 13 and 21.0%.

#### DIMPLING OF BREAST SKIN

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	37	59.7	59.7	59.7
	NO	12	19.4	19.4	79.0
	DONT KNOW	13	21.0	21.0	100.0
	Total	62	100.0	100.0	

The frequency of students who said “YES” to bleeding nipple discharge as a symptom was 27 and 43.5%, “NO” was 25 and 40.3% and “DON’T KNOW” was 10 and 16.1%.

#### BLEEDING NIPPLE DISCHARGE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	27	43.5	43.5	43.5
	NO	25	40.3	40.3	83.9
	DONT KNOW	10	16.1	16.1	100.0
	Total	62	100.0	100.0	

The frequency of students who said “YES” to lump or thickening in breast or armpit as a symptom was 40 and 64.5%, “NO” was 7 and 11.3% and “DON’T KNOW” was 15 and 24.2%.

#### LUMP OR THICKENING IN BREAST OR ARMPIT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	40	64.5	64.5	64.5
	NO	7	11.3	11.3	75.8
	DONT KNOW	15	24.2	24.2	100.0
	Total	62	100.0	100.0	

The frequency of students who said "YES" to redness of the breast as a symptom was 47 and 75.8%, "NO" was 8 and 12.9% and "DON'T KNOW" was 7 and 11.3%.

#### REDNESS OF BREAST SKIN

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	47	75.8	75.8	75.8
	NO	8	12.9	12.9	88.7
	DONT KNOW	7	11.3	11.3	100.0
	Total	62	100.0	100.0	

The frequency of students who said "YES" to change in size and shape of breast as a symptom was 44 and 71.0%, "NO" was 14 and 22.6% and "DON'T KNOW" was 3 and 4.8%.

#### CHANGE IN SIZE And shape of breast

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	44	71.0	71.0	71.0
	NO	14	22.6	22.6	93.5
	DONT KNOW	3	4.8	4.8	98.4
	12	1	1.6	1.6	100.0
	Total	62	100.0	100.0	

#### RISK FACTORS RELATED TO BC.

The frequency of students who said "YES" to women with large breast as a risk factor was 17 and 27.4%, "NO" was 33 and 53.2% and "DON'T KNOW" was 12 and 19.4%.

#### LARGE BREST

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	17	27.4	27.4	27.4
	NO	33	53.2	53.2	80.6
	DONT KNOW	12	19.4	19.4	100.0
	Total	62	100.0	100.0	

The frequency of students who said "YES" to obesity as a risk factor was 23 and 37.1%, "NO" was 27 and 43.5% and "DON'T KNOW" was 12 and 19.4%.

#### OBESITY

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	23	37.1	37.1	37.1
	NO	27	43.5	43.5	80.6
	DONT KNOW	12	19.4	19.4	100.0
	Total	62	100.0	100.0	

The frequency of students who said "YES" to nuliparity as a risk factor was 21 and 33.9%, "NO" was 15 and 24.2% and "DON'T KNOW" was 26 and 41.9%.

#### NULIPARITY

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	21	33.9	33.9	33.9
	NO	15	24.2	24.2	58.1
	DONT KNOW	26	41.9	41.9	100.0
	Total	62	100.0	100.0	

The frequency of students who said "YES" to long term breast feeding as a risk factor was 10 and 16.1%, "NO" was 34 and 54.8% and "DON'T KNOW" was 18 and 29.0%.

#### LONG TERM BREAST FEEDING

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	10	16.1	16.1	16.1
	NO	34	54.8	54.8	71.0
	DONT KNOW	18	29.0	29.0	100.0
	Total	62	100.0	100.0	

The frequency of students who said "YES" to advancing age as a risk factor was 31 and 50.0%, "NO" was 21 and 33.9% and "DON'T KNOW" was 10 and 16.1%.

#### ADVANCING AGE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	31	50.0	50.0	50.0
	NO	21	33.9	33.9	83.9
	DONT KNOW	10	16.1	16.1	100.0
	Total	62	100.0	100.0	

The frequency of students who said "YES" to 1<sup>st</sup> child birth at the age above 30 years as a risk factor was 23 and 37.1%, "NO" was 21 and 33.9% and "DON'T KNOW" was 18 and 29.0%.

#### 1ST CHILD BIRTH ABOVE AGE 30

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	23	37.1	37.1	37.1
	NO	21	33.9	33.9	71.0
	DONT KNOW	18	29.0	29.0	100.0
	Total	62	100.0	100.0	

The frequency of students who said "YES" to late menopause as a risk factor was 31 and 50.0%, "NO" was 17 and 27.4% and "DON'T KNOW" was 14 and 22.6%.

#### LATE MENOPAUSE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	31	50.0	50.0	50.0
	NO	17	27.4	27.4	77.4
	DONT KNOW	14	22.6	22.6	100.0
	Total	62	100.0	100.0	

The frequency of students who said "YES" to being a female as a risk factor was 41 and 66.1%, "NO" was 12 and 19.4% and "DON'T KNOW" was 9 and 14.5%.

#### BEING A FEMALE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	41	66.1	66.1	66.1
	NO	12	19.4	19.4	85.5
	DONT KNOW	9	14.5	14.5	100.0
	Total	62	100.0	100.0	



# DIAGNOSIS AND TREATMENT RELATED TO BREAST CANCER.

The frequency of students who said “YES” to screening is helpful for early detection of BC was 44 and 71.0%, “NO” was 5 and 8.1% and “DON’T KNOW” was 13 and 21.0%.

## **SCREENING IS HELPFUL FOR EARLY DETECTION**

	N	%
YES	44	71.0%
NO	5	8.1%
DONT KNOW	13	21.0%

The frequency of students who said “MAMMOGRAPHY” to most common investigation of BC was 52 and 83.9%, “BLOOD TEST” was 6 and 9.7% and “FULL BODY X-RAY” was 3 and 4.8%.

## **MOST COMMON INVESTIGATION**

	N	%
MAMMOGRAPHY	52	83.9%
BLOOD TEST	6	9.7%
FULL BODY X-RAY	3	4.8%
Missing System	1	1.6%

“ULTRASOUND” to method used in diagnosis of BC was 40 and 64.5%, “TRIPLE ASSESSMENT” was 14 and 22.6% and “ULTRA SOUND” was 7 and 11.3%.

## **METHOD USED IN DIAGNOSIS**

	N	%
BIOPSY	40	64.5%
TRIPLE ASSESSMENT	14	22.6%
ULTRASOUND	7	11.3%
13	1	1.6%

The frequency of students who said “YES” to radiation therapy a treatment method of BC was 41 and 66.1%, “NO” was 8 and 12.9% and “DON’T KNOW” was 13 and 21.0%.

## **RADIATION THERAPY A TREATMENT METHOD**

	N	%
YES	41	66.1%
NO	8	12.9%
DONT KNOW	13	21.0%

The frequency of students who said “YES” to hormonal therapy a treatment method of BC was 27 and 43.5%, “NO” was 21 and 33.9% and “DON’T KNOW” was 14 and 22.6%.

## **HORMONAL THERAPY A TREATMENT METHOD**

	N	%
YES	27	43.5%
NO	21	33.9%
DONT KNOW	14	22.6%

The frequency of students who said "YES" to sectoral resection a treatment method of BC was 27 and 43.5%, "NO" was 12 and 19.4% and "DON'T KNOW" was 23 and 37.1%.

#### SECTORAL RESECTION A TREATMENT METHOD

	N	%
YES	27	43.5%
NO	12	19.4%
DONT KNOW#	23	37.1%

The frequency of students who said "YES" to chemo therapy a treatment method of BC was 39 and 62.9%, "NO" was 11 and 17.7% and "DON'T KNOW" was 12 and 19.4%.

#### CHEMO THERAPY A TREATMENT METHOD

	N	%
YES	39	62.9%
NO	11	17.7%
DONT KNOW	12	19.4%

#### ATTITUDES AND BEHAVIOR TOWARDS BREAST CANCER.

The frequency of students who said "YES,DESPITE THE EXAMINERS GENDER" is acceptable to touch my body during examination as a attitude and behavior towards BC was 32 and 51.6%, "NO" was 14 and 22.6% and "YES,ONLY IF IT IS A FEMALE EXAMINER" was 16 and 25.8%.

##### ACCEPTABLE TO TOUCH MY BODY DURING EXAMINATION

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES,DESPITE THE EXAMINERS GENDER	32	51.6	51.6	51.6
	NO	14	22.6	22.6	74.2
	YES,ONLY IF IT IS FEMALE EXAMINER	16	25.8	25.8	100.0
	Total	62	100.0	100.0	

The frequency of students who said "YES" to embarrassing to tell people as a attitude and behavior towards BC was 14 and 22.6%, "NO" was 38 and 61.3% and "DON'T KNOW" was 9 and 14.5%.

##### EMBARRASSING TO TELL PEOPLE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	14	22.6	22.6	22.6
	NO	38	61.3	61.3	83.9
	DONT KNOW	9	14.5	14.5	98.4
	11	1	1.6	1.6	100.0
	Total	62	100.0	100.0	

The frequency of students who said "YES" to feeling shy to uncover breast as a attitude and behavior towards BC was 26 and 41.9%, "NO" was 23 and 37.1% and "DON'T KNOW" was 13 and 21.0%.

##### FELLING SHY TO UNCOVER BREAST

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	26	41.9	41.9	41.9
	NO	23	37.1	37.1	79.0
	DONT KNOW	13	21.0	21.0	100.0
	Total	62	100.0	100.0	

The frequency of students who said "YES" to fear of hospitals and health facilities as a attitude and behavior towards BC was 24 and 38.7%, "NO" was 31 and 50.0% and "DON'T KNOW" was 7 and 11.3%.

#### FEAR OF HOSPITALS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	24	38.7	38.7	38.7
	NO	31	50.0	50.0	88.7
	DONT KNOW	7	11.3	11.3	100.0
	Total	62	100.0	100.0	

The frequency of students who said "YES" to feeling worried about what doctor might find as a attitude and behavior towards BC was 32 and 51.6%, "NO" was 24 and 38.7% and "DON'T KNOW" was 6 and 9.7%.

#### FEELING WORRIED ABOUT WHAT DOCTOR MIGHT FIND

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	32	51.6	51.6	51.6
	NO	24	38.7	38.7	90.3
	DONT KNOW	6	9.7	9.7	100.0
	Total	62	100.0	100.0	

The frequency of students who said "YES" to difficulty to talk to doctor about BC as a attitude and behavior towards BC was 19 and 30.6%, "NO" was 31 and 50.0% and "DON'T KNOW" was 12 and 19.4%.

#### DIFFICULTY TO TALK TO DOCTOR

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	19	30.6	30.6	30.6
	NO	31	50.0	50.0	80.6
	DONT KNOW	12	19.4	19.4	100.0
	Total	62	100.0	100.0	

The frequency of students who said "YES" to afraid of having mammography as a attitude and behavior towards BC was 21 and 33.9%, "NO" was 31 and 50.0% and "DON'T KNOW" was 10 and 16.1%.

#### AFRAID OF HAVING MAMMOGRAPHY

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	21	33.9	33.9	33.9
	NO	31	50.0	50.0	83.9
	DONT KNOW	10	16.1	16.1	100.0
	Total	62	100.0	100.0	

The frequency of students who said "YES" to does self examination of breast as a attitude and behavior towards BC was 31 and 50.0%, "NO" was 18 and 29.0% and "DON'T KNOW" was 10 and 16.1%.

#### DOES SELF EXAMINATION OF BREAST

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	31	50.0	50.8	50.8
	NO	18	29.0	29.5	80.3
	DONT KNOW	10	16.1	16.4	96.7
	5	2	3.2	3.3	100.0
	Total	61	98.4	100.0	
Missing	System	1	1.6		
Total		62	100.0		

## Conclusion

Overall, the knowledge attitudes and practices of the medical students related to breast cancer at JASU were found to be pretty good which was expected to be excellent. In order to make the results excellent there is a need for well-planned and comprehensive educational programs for the medical students. Knowledgeable medical students with good communication skills and well-planned educational campaigns could make difference in helping women overcome their fears and hesitations.

## Acknowledgment

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