# **Original Research Article**

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# Knowledge on prevention of breast cancer among females attending outpatient department of All India Institute of Medical Sciences, Jodhpur, Rajasthan

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# **ABSTRACT**

**Background:** Breast cancer is the most common cancer and principal cause of death among females. Breast cancer related awareness and practices of female are known to have crucial contribution in the prevention. The aim of the study was to assess knowledge on prevention of breast cancer among females.

**Methods:** This descriptive study was conducted on females attending outpatient departments of All India Institute of Medical Sciences, Jodhpur, Rajasthan. 70 females within age group of 15-60 year were enrolled in the study via convenience sampling technique. Data was collected through face-to-face interview. Reliability of self-structured knowledge questionnaire was determined by KR 20 method and found reliable (0.84). Data collected was analyzed for frequency, mean, standard deviation and test.

**Results:** Findings showed that most (51%) of the respondents were from age group 15-30 years. Only 14% of the subjects had family history of breast cancer. Most of the subject (81.4%) previously heard about breast cancer. The mean knowledge score was 14.43±2.9. Most of the respondents (74.3%) had average knowledge about prevention of breast cancer whereas only 3% had excellent knowledge levels. Knowledge of subjects about prevention of breast cancer was found to have significant association with level of education and area of living only.

**Conclusions:** Result of the study provided information that maximum number of participants had average knowledge about different aspects about prevention of breast cancer. The knowledge of females was significantly associated with their educational status.

Keywords: Breast cancer, Knowledge, Prevention, Breast self-examination

# **INTRODUCTION**

Cancer is a general term used to refer to a condition where the body's cells begin to grow and reproduce in an uncontrollable way. Cancer can start almost anywhere in the human body. Normally, cells grow and divide to produce more cells only when the body needs them. This orderly process helps to keep the body healthy. In cancer patients, these cells keep dividing and form a mass of extra tissue called a tumor. These tumors can be benign or malignant.<sup>1</sup>

The most common types of cancer in INDIA are breast cancer, cervical cancer, prostate cancer, oral cancer, lung cancer, uterine and ovarian cancer and Blood cancer. Breast cancer is the most common cancer and a principal

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cause of cancer death among females globally. Once considered a disease of high-income countries, about 50% of breast cancer cases and 58% of breast cancer deaths occur in developing nations. In India, Breast cancer tops the list of common cancers occurring among females. Nationally, the relative prevalence of breast cancer ranged from 14.4% to 30.3%, and nearly accounted for 27% mortality rates (ICMR report Hospital registry).<sup>2</sup>

Most breast cancers start in the ducts or lobules. The two most common cancers are: ductal carcinoma and lobular carcinoma.<sup>3</sup> Screening can help find cancer at an early stage. When breast cancer is found and treated early, the chances for survival are better. Women can take an active part in the early detection of breast cancer by regular screening mammograms, clinical breast exams (breast exams performed by health professionals), performing breast self-examination, magnetic resonance imaging in women with high risk of breast cancer and tissue sampling.<sup>4,5</sup>

It is important to know that cancer usually does not cause pain, in fact when breast cancer first develops, there may be no symptoms at all. For early diagnosis and treatment of breast cancer women should know about sign and symptoms of breast cancer and should have knowledge about where and how screening can be done.<sup>6</sup>

Though a deadly disease, breast cancer can be prevented and managed efficiently if detected as early as possible. <sup>7</sup> Knowledge is a universal phenomenon and helps a person to act efficiently and take timely decision. Knowledge about breast cancer, its sign and symptoms helps to understand, prevent and manage breast cancer. Although it is an important issue, it has been seen in various research studies that women have very poor knowledge regarding breast cancer. Such as a study conducted in Karnataka showed that out of 320 women, 46.6% had poor knowledge and 45.3% had average knowledge about breast cancer. <sup>8</sup> Knowledge deficiency may lead to delayed presentation with advanced stages of breast cancer.

Breast cancer is silently killing females- mainly those who have no knowledge and continue to be ignorant about breast cancer and its prevention. For presentation at an early stage, females must be 'Aware of breast cancer' and must be capable of identifying symptoms of Breast cancer through routine practice of screening techniques. As the prognosis of this disease in advanced stages is very bad, it is alarming note of high attention because females as wife or mother have a great role and her death causes great loss and negative impact on family. In order to reduce the vulnerability of females to cancer, a culture of prevention must be promoted and strengthened among females.<sup>9</sup>

# **Objectives**

The objective of this study were- (a) to assess the knowledge on prevention of breast cancer among females attending outpatient department; and (b) to find the

association of knowledge on prevention of breast cancer with selected personal variables.

# Rationale for conducting present study

Breast cancer is one of the most dreaded conditions among females. It is the most common cancer in females and the second leading cause of death. Especially in India, breast cancer has a poorer outcome among Indian females compared with the western countries due to more advanced stage at presentation.

This is because of the poor knowledge and awareness regarding causes, risk factors, sign and symptoms, screening methods and other preventive strategies. Apart from all these during clinical posting also the poor knowledge regarding breast cancer and prevention strategies have been observed among females. Further most of the females do not communicate their problems due to ignorance/shyness, certain cultural beliefs, stigma and other familial/social responsibilities and tend to panic after hearing about such disease. With this view, the current study will be an initiative in the same direction and try to collect information about knowledge on prevention of breast cancer among females of Jodhpur.

### **METHODS**

This descriptive study was conducted on females attending outpatient departments. 70 females within age group of 15-60 years were enrolled in the study via convenience sampling technique. Data was collected through face-to-face interview in month of April 2017.

# Sampling criteria

Inclusion criteria

Females who were willing to participate in the study. Females, who were able to understand, read and write Hindi. Females attending outpatient department were inclded.

Exclusion criteria

Females who were suffering from any congenital problem/mental health problems were excluded.

# Data collection tools

The data collection tools were developed to assess the knowledge regarding prevention of breast cancer. The tools were developed based on the: (a) review literature from books, journals and web search; and (b) consultation with experts.

# Description of the tools

It was self-structured interview-based questionnaire, which was divided in to 2 parts:

### Part A

It included information on data such as age, marital status, education, occupation, religion, place of living, type of family, total no. of family member, age at menarche, last menstrual period, duration (days) and frequency (days) of periods, any discomfort during periods, total no. of pregnancy, no. of living children, type and years of use of contraceptive methods, any health problem, any previous knowledge/information about breast cancer, any family history of breast cancer etc.

### Part B

It was self-structured knowledge questionnaire used to assess female's knowledge regarding prevention of breast cancer. There were 28 multiple choice-based questions. The subjects were asked to answers questions related to risk factor, symptoms, screening and knowledge of breast cancer and its prevention. Every right answer was given score of 1 and wrong answer was given score of 0 with no negative scoring. Knowledge levels were categorized based upon the knowledge scores such as excellent (>21), good (18-21), average (12-17) and poor (0-11).

## Content validity

The content validity of the tool was established by taking expert' opinion.

# Ethical consideration

The formal permission was taken from Institutional Ethical Committee.

# Try out and pilot study

Before main study, pilot study was conducted on 10 females attending outpatient department. Pilot study subjects were excluded from the main study. No major problem was faced during pilot study.

# Reliability

Reliability of the tool was calculated by using Kuder-Richardson method (KR-20) and the reliability was found to be 0 .84 which is within the acceptable range.

# Procedure of data collection

The main study data collection was carried out on the females (age 15-60 years) attending various outpatient department of All India Institute of Medical Sciences, Jodhpur in April 2017. After taking formal permission to carry out the study from concerned authorities, the subjects were approached and explained about purpose of conducting present study. Thereafter written consent was taken from them. The subjects were assured about confidentiality of their information. Data was collected from each subject by interview method and responses were

filled in data sheet. Thereafter collected data was coded and filled into master sheet and used for data analysis.

# Data analysis and interpretation

The data analysis is conducted to reduce organize and give meaning to data. For the current study data, analysis was done using descriptive and inferential statistics. The level of significance was set as p<0.05. The analyzed data was depicted in the form of tables, graphs and charts. The statistical tests used were as following- (a) Frequency and percentage distribution of personal variables data of females; (b) Mean and standard deviation for calculating knowledge scores; (c) Chi-square was used to determine association of knowledge level with selected personal variables.

### **RESULTS**

This study shows that maximum number (51.43%) of subjects were from age group of 15-30 years, most (75.7%) of the subjects were married, followed by 21.4% were unmarried and 2.9% were widow. Education wise nearly 48.6% of the respondents were graduate. As per type of family is concerned around 61.4% respondents belongs from joint family and 38.6% were from nuclear family. Most of the respondents (71.4%) were from urban area and 28.6% were from rural area. More than 60% of total sample had their start of menarche before 13 years of age. (Table 1).

# Any discomfort during menstruation

Figure 1 shows the percentage distribution of participants having discomfort during menstrual period. It shows that nearly 40% of respondents did not have any discomfort, 25% had abdominal pain followed by 15% had back pain. Nearly 17% of subjects had attained menopause.

# Types of contraceptive methods used

Figure 2 tells us about the frequency distribution of contraceptive methods used by participants of the study. Most of the respondents (N=31) did not use any type of contraceptive methods, Rest of the subjects reported use of condom and Cu-nearly 8 study subjects had undergone tubectomy.

# Family history of breast cancer

Figure 3 shows percentage distribution of family history of breast cancer among participants. Most of the respondents (86%) had no family history of breast cancer. Only 14% of the females under study reported occurrence of breast cancer among family members. Study findings shows that almost 74.3% of participants had average knowledge about prevention of breast cancer, 14.3% of participants had poor knowledge, 8.6% participants had good knowledge and only 2.8% of participants had excellent knowledge level. The overall mean knowledge score is 14.43±2.9 (Table 2).

Knowledge levels of the subjects were found to have significant association with Education ( $\chi^2=19.792$ , p value=0.000) and place of living ( $\chi^2=10.086$ , p value=0.007) respectively.

All the other personal variables did not have significant association with knowledge levels of the subjects (Table 3).

Table 1: Frequency and percentage distribution of personal variable data (N=70).

		Percentage (%)
Age (completed years)		
.5-30 36	)	51.43
31-45		27.14
15		21.43
Marital status		
Jnmarried 15	í	21.4
Married 53		75.7
Widow 02	,	2.90
Education		
lliterate 03	1	4.30
Jpto primary 12	,	17.1
Jpto 10th 11		15.7
Jpto 12th 09		12.9
Occupation		
Non-working 51		72.9
Working 19		27.1
Religion		
Hindu 60		85.7
Muslim 06	i	8.60
Christian 01		1.40
Others 03		1.30
Type of family		
Nuclear 27	1	38.6
oint 43	1	61.4
Total number of family members		
5 41		58.57
>5 29		41.43
Per capita family monthly income		
<u>&lt;</u> 5000 19		27.1
5001-10000 16	)	22.9
0001-15000 14		20.0
21 21 21 21		30.0
Place of living		
Rural 20		28.6
Jrban 50		71.4
Age of menarche (years)		
$\leq$ 13 25		35.7
>13 45		64.3

Table 2: Frequency distribution of knowledge scores with mean and SD.

Knowledge levels (score)	N	Percentage (%)	Overall mean knowledge Score±SD		
Poor (0-11)	10	14.3			
Average (12-17)	52	74.3	14.43±2.9		
Good (18-21)	06	8.6	- 14.43±2.9		
Excellent (22-28)	02	2.8			

Table 3: Association of knowledge levels with selected personal variables.

Variables	Knowledge levels				2	df	P value
	Poor (N)	Average (N)	Good (N)	Excellent (N)	$\chi^2$	aı	P value
Age (completed years)							
15-30	3	30	2	1	8.875	6	$0.104^{NS}$
31-45	2	15	2	0			
46-60	5	7	2	1			
Marital status							
Unmarried	0	15	0	0	10.078	6	$0.107^{NS}$
Married	10	37	4	2	10.078		
Widow	0	1	1	0			
Education							
Upto primary	8	6	1	0	10.702	6	$0.000^{S}$
Upto 12th	1	18	1	0	19.792		0.000
Graduate and above	1	28	4	2			
Occupation							
Non-working	9	37	3	2	3.379	3	$0.278^{NS}$
Working	1	15	3	0	_		
Religion						3	
Hindu	8	45	5	2	1.089		0.793 <sup>NS</sup>
Others	2	7	1	0			
Type of family					4.443	3	
Nuclear	2	24	1	0			0.198 <sup>NS</sup>
Joint	8	28	5	2	_		
Family income							
≤5000	3	15	1	0	6.270	9	0.748 <sup>NS</sup>
5001-10000	2	12	1	2			
10001-15000	3	9	3	0			
≥15001	2	16	3	0			
Place of living							
Rural	7	13	0	0	10.086	3	$0.007^{S}$
Urban	3	39	6	2			
Previously heard about breast cancer							
Yes	6	43	6	2	3.621	3	0.266 <sup>NS</sup>
No	4	9	0	0			
Anyone in the family with history of breast cancer							
Yes	2	15	0	0	1.218	3	$0.702^{NS}$
No	8	37	6	2			

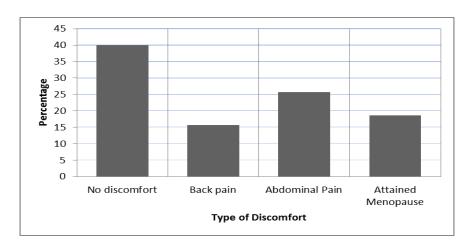


Figure 1: Percentage (%) distribution about any discomfort during menstruation (N=70).

Note: NS: Non-significant at p=0.05 level, S= significant at p=0.05 level.

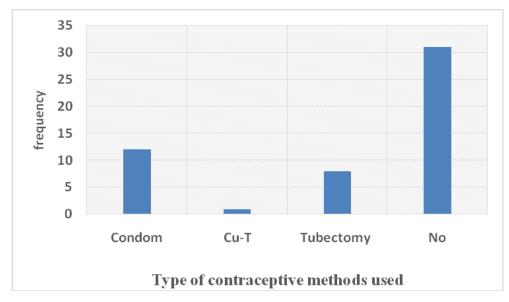


Figure 2: Types of contraceptive methods used.

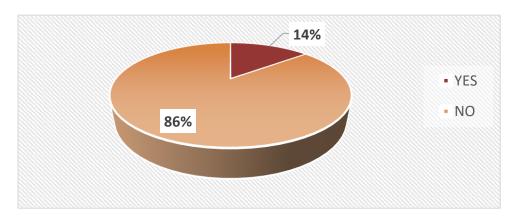


Figure 3: Family history of breast cancer.

## DISCUSSION

The present study was conducted to find about knowledge of women regarding prevention of breast cancer. The total sample was 70. Nearly half of the study subjects were from age group 15-30 years and only 40% of the females reported family history of breast cancer. In our study the mean knowledge score of the study subjects was 14.43±2.9. Maximum no of participants (74.3%) had average knowledge score (12-17), whereas only 2.8% had excellent knowledge score. In the studies conducted in Mumbai (Ganhgane et al) and in Delhi (Somdatta and Baridalyne, 2008) knowledge score of most women was poor. 10,11 In the present study we found that most of the people (81.4%) had heard about breast cancer and were aware of breast cancer as a disease whereas in a study conducted at Delhi by Somdatta and Baridalyne in 2008, only half of the women had previously heard about breast cancer.11 As per the association of knowledge with personal variables is concerned, only two demographic variables i.e.; education level and area of living had significant association with level of knowledge. Similar results were found in studies conducted in Mumbai (Gangane et al), in Andhra Pradesh (Sharma et al), and in Delhi (Somdatta et al) whereas in a study conducted in Pondicherry (Rajini et al) no association was found between knowledge and education status of participants. <sup>10-13</sup> The difference in results among previous studies and the current study may be due to different research setting, small sample size and difference in characteristics of general population.

# **CONCLUSION**

Result of the study provided information that Mean knowledge score of study subjects was 14.43±2.9. Majority (74.3%) of women had average knowledge about prevention of breast cancer. The knowledge of females regarding prevention of breast cancer was significantly associated with their educational status and area of living.

# Limitations

The study was confined to small sample size. Shortage of time for data collection.

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Ethical approval: The study was approved by the

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