

## **ORIGINAL RESEARCH**

# **Knowledge, Attitude and Practice on prevention of Breast cancer and its screening methods among 40-65 years age group females in Siddipet District– A Cross-sectional study**

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## **ABSTRACT**

**Introduction:** Breast cancer is the most common cancer in women in India and accounts for 14% of all cancers in women. Its survival rate is very low due to presentation of women at advance stage of the disease. **Aims and Objective:** To assess the knowledge, attitude and practice regarding risk factors, symptoms and screening methods of breast cancer in 40-65 years females and to assess the determinants associated with KAP. **Material and Methods:** This community based cross sectional study was conducted among 545 females of 40-65 years of age group in villages of Mulugu Mandal, District, Siddipet, Telangana and their KAP was assessed. **Results:** Mean age of the study participants was 52.10±8.72. 98.5% were married women out of which 265(48.6%) married at the age of 15 years. Hindus were 84.4% by religion. Women with 1<sup>st</sup>-5<sup>th</sup> class education was 34.1% and illiterate 27.3% followed by 6<sup>th</sup>-10<sup>th</sup> and inter and above i.e., 23.5% and 15%, respectively. Lower middle class were 32.5% followed by middle, lower class, upper middle and upper class are with 31.9%, 20%, 10.1% and 5.5% respectively. Women with good knowledge on risk factors was 290 (53.2%), symptoms 294(53.9%), self-breast examination was 141(25.8%) and mammography was 149(27.4%). Females with positive attitude towards self-breast examination and mammography was 141(25%) & 149 (27%). Total number of women who practice self-breast examination regularly was only 35 (6.4%) whereas mammography was 45(8.2%). **Conclusion:** Knowledge on risk factors, symptoms and screening methods for breast cancer is low, and practice of self-breast examination and mammography is very low.

**Keywords:** Breast Cancer, Knowledge, Attitude, Practice, Screening methods

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## **INTRODUCTION**

Breast cancer affects women both in developed and developing world. As per WHO, breast cancer accounts 2.09 million cases and 627000 deaths globally. It is the most common cancer in women in India and accounts for 14% of all cancers in women. It can occur at any age but the incidence rates in India begin to rise in the early thirties and peak at ages 50-64 years.<sup>[1]</sup>

One in twenty-eight Indian women is likely to develop breast cancer during her life time. It is more (1 in 22) for urban women than the rural group (1 in 60). India's high cancer rate is listed in the state of Kerala other

states with high cancer rates in India include Mizoram, Haryana, Delhi and Karnataka. Mizoram accounted for the highest cancer death rates in the country followed by Kerala and Haryana.<sup>[2]</sup>

There are multiple demographic and social risk factors of breast cancer like age of the women, early age at menarche, delayed first birth and menopause, nulliparity, short duration lactation, use of birth control pills, obesity, excess consumption of fats, hormone replacements and women having family history are considered as significant risk factors of breast cancer.<sup>[3]</sup> Most common Symptoms of breast cancer are new lump in the breast or underarm

(armpit), thickening or swelling of breast or part of the breast, irritation or dimpling of breast skin, redness or flaky skin in the nipple area or the breast, pulling in of the nipple or pain in the nipple area, nipple discharge other than breast milk, including blood, any change in the size or shape of the breast, pain in any area of the breast.<sup>[4]</sup>

Screening methods for breast cancer are self-breast examination and mammography. SBE should be done at least once in a month whereas mammography should be done for age group 40-49 years females once in a year and for 50-59 years age group females once in 2 years.<sup>[5]</sup>

Cancer survival becomes more difficult in higher stages of its growth and more than 50 % of Indian women suffer from stage 3 and stage 4 of breast cancer. Post cancer survival for women with breast cancer was reported 60 % for Indian women, as compared to 80% in U.S.<sup>[2]</sup> Evidence shows that women who seek treatment in early stages of breast cancer have better chance of survival. For detection at early stages, women must be aware of the disease symptoms, risk factors and screening methods like SBE and mammography.<sup>[6]</sup>

Keeping in view the above facts, the current study was conducted to understand women's knowledge, attitude and practice towards breast cancer in 40-65 years age group females to develop effective strategies for early detection of cancer.

## OBJECTIVES

1. To assess the knowledge, attitude and practice regarding risk factors, symptoms and screening methods of breast cancer in 40-65 years females.
2. To assess determinants associated with knowledge, attitude, practice.

## SUBJECT AND METHODS

The present community based cross sectional study was conducted among females of 40-65 years of age group with complete enumeration of villages of Mulugu Mandal which comes under Siddipet District of Telangana and their KAP was assessed. Ethical approval was obtained from institutional ethical committee before start of the study. Women who were already diagnosed with breast cancer, pregnant and lactating women were excluded from the study. The present study was conducted for a period of three months from October 2021-December 2021.

The sample size was calculated by taking a prevalence of a previous study carried out by Prusty et al in Mumbai which showed prevalence of knowledge on lump in the breast as 74.8%.<sup>[7]</sup> In this study  $P =$  prevalence of knowledge = 0.748,  $Q = 1 - p = 0.252$ ,  $d =$  margin of error 5% of prevalence i.e., 0.0374.  $n = \frac{1.96^2 \times p \times q}{d^2} = \frac{3.8416 \times 0.748 \times 0.252}{0.00139876} = 517.69$ , with 5% of non-responder rate i.e.,  $25.8 + 517.69 = 543.49 = 545$ . Hence sample size on calculation was 545. Simple random sampling technique was used.

Semi structured questionnaire which included demographic details, physical characteristics, knowledge of women regarding risk factors and symptoms of breast cancer, attitude and practice towards breast cancer and screening methods.

## OPERATIONAL DEFINITION

**Knowledge on risk factors:** **Good knowledge** - If females answer 6-8 risk factors, **Moderate knowledge** - If females answer 4-5 risk factors and **Poor knowledge** - If female answers 1-3 risk factors.

**Knowledge on symptoms:** **Good knowledge** - If female answers 5-6 symptoms, **Moderate knowledge** - If females answer 3-4 symptoms and **Poor knowledge** - If female answers 1-2 symptoms.

**Attitude:** Each question has 3 options maximum points she can score was 18 and minimum score was 6.  $\geq 9$  is considered as having positive attitude whereas  $\leq 8$  is considered as having negative attitude.

**Practice of self-breast examination:** - Regular practice was considered if women does self-breast examination once in every month, Irregular practice is considered if women does self-breast examination but not every month and No practice if women does not perform self-breast examination.

**Practice of Mammography:** Regular practice was considered if women aged 40-49 years gets mammography done once in a year and for 50 years and above once in two years, Irregular practice was considered if women aged 40-49 years gets mammography done in more than a year and for 50 years and above more than two years, no practice was considered if women does not perform mammography.

**Data collection procedure:** Females were approached and explained about the purpose and procedure of the study and their consent was taken. Females were assured regarding the confidentiality of their identity and data were used only for research purpose after obtaining written consent.

Health education was given regarding breast cancer and its screening methods at the end of the survey. Females were motivated to get the mammography by conducting camps and those who are willing were brought to the institute and were sent to the radiology department.

## STATISTICAL ANALYSIS

Data was entered and analysed using MS excel and SPSS version 22. Data presented as percentage, mean and standard deviation. Data were represented in tables. Chi-square was used for statistical analysis with  $p < 0.05$  was considered as significant.

## RESULTS

Total number of women with good knowledge on risk factors is 291 (53.4%) symptoms 293 (53.8%) and total number of women with good knowledge on SBE is 142 (26.1%) and mammography is 150 (27.5%). Total number of women who practice SBE regularly is 35 (6.4%) whereas mammography is

44(8.1%). Females with positive attitude towards breast cancer is 160(29.4%) (Table 1).

**Table 1: Knowledge of women regarding risk factors, symptoms, self-breast examination, mammography**

Parameters	Knowledge	No.	Percentage
Knowledge of women regarding risk factors	Good Knowledge	291	53.4
	Moderate Knowledge	233	42.8
	Poor Knowledge	21	3.9
Knowledge of women about symptoms	Good Knowledge	293	53.8
	Moderate Knowledge	225	41.3
	Poor Knowledge	27	5.0
Knowledge of women regarding self-breast examination	Yes	142	26.1
	No	403	73.9
Knowledge of women regarding mammography	Yes	150	27.5
	No	395	72.5
Practice of Self Breast Examination	Regular	35	6.4
	Irregular	186	34.1
	No	324	59.4
Practice of Mammography	Regular	44	8.1
	Irregular	230	42.2
	No	271	49.7
Attitude	Positive	160	29.4
	Negative	385	70.6

Total of 545 females were interviewed. Mean age of the study participants was  $52.10 \pm 8.72$ . A total of 265(48.6%) women married at the age of 15 years. When it comes to the religion Hindu's were 84.4%. In education 1<sup>st</sup> – 5<sup>th</sup> class corresponds to 34.1% and illiterate 27.3% followed by 6<sup>th</sup> – 10<sup>th</sup> class and inter

and above with 23.5% and 15%. We used B.G. Prasad 2021 socio economic scale and according to this lower middle class are 32.5% followed by middle 31.9% and lower class, upper middle and upper class are with 20%, 10.1% and 5.5% respectively (Table 2).

**Table 2: Demographic profile of study participants**

Variable		Frequency	Percentage
Age in Years	40-45	125	22.9
	45-50	113	20.7
	50-55	31	5.7
	55-60	109	20.0
	≥ 60	167	30.6
Marital Status	Married	537	98.5
	Unmarried	8	1.5
Age at the time of marriage	<15	265	48.6
	>15	280	51.4
Occupation	Daily labourer	140	25.7
	Farmer	59	10.8
	House Wife	346	63.5
Education	Illiterate	149	27.3
	1 <sup>st</sup> – 5 <sup>th</sup> class	186	34.1
	6 <sup>th</sup> – 10 <sup>th</sup> class	128	23.5
	Inter and above	82	15.0
Religion	Hindu	460	84.4
	Muslim	48	8.8
	Christian	37	6.8
Socioeconomic status	Class – I	30	5.5
	Class – II	55	10.1
	Class – III	174	31.9
	Class – IV	177	32.5
	Class – V	109	20.0

Females within the age group of 40-45 years had good knowledge regarding risk factors of breast cancer (70%) when compared to other groups and it is

statistically significant with p value <0.05. Females with good knowledge regarding risk factors of breast cancer in education is highest among participants who

did inter and above (73%) and lowest in 1<sup>st</sup> – 5<sup>th</sup> class value <0.05 (Table 3).  
with (39%) and it was statistically significant with p

**Table 3: Association between demographic details of study participants with knowledge regarding risk factors of breast cancer**

Demographic details		Knowledge of women regarding risk factors						Total	P Value
		Good		Moderate		Poor			
		No.	%	No.	%	No.	%		
Age in Years	40-45	88	70	35	28	2	2	125	0.004
	45-50	60	53	48	42	5	4	113	
	50-55	18	58	12	39	1	3	31	
	55-60	52	48	52	48	5	5	109	
	≥ 60	73	44	86	51	8	5	167	
Occupation	Daily labourer	76	54	60	43	4	3	140	0.879
	Farmer	29	49	28	47	2	3	59	
	House Wife	186	54	145	42	15	4	346	
Education	Illiterate	69	47	76	51	4	3	149	0.000
	1 <sup>st</sup> – 5 <sup>th</sup> class	73	39	104	56	4	5	186	
	6 <sup>th</sup> – 10 <sup>th</sup> class	89	70	33	26	6	5	128	
	Inter and above	60	73	20	24	2	2	82	
Socioeconomic status	Class – I	14	47	13	43	3	10	30	0.101
	Class – II	30	55	23	42	2	4	55	
	Class – III	109	63	59	34	6	3	174	
	Class – IV	87	49	83	47	7	4	177	
	Class – V	51	47	55	50	3	3	109	

Females within the age group of 45-50 years had good knowledge regarding symptoms of breast cancer with (65%) when compared to all other groups 55-60 years (40%) and this association is statistically significant with p value <0.05. Most of the women with good knowledge on symptoms who did education inter and above with (77%) whereas it is least among

who are illiterates and who did their education up to 1<sup>st</sup> – 5<sup>th</sup> class (45%) and this association was statistically significant with p value <0.05. Females belonging to class III socioeconomic status had good knowledge (71%) and it is lowest in case of women from class V socioeconomic status (45%) p value <0.05 and this association was statistically significant (Table 4).

**Table 4: Association between knowledge of women about symptoms of breast cancer**

		Knowledge of women about symptoms						Total	P Value		
Age in years		Good		Moderate		Poor			0.003		
		No.	%	No.	%	No.	%				
		40-45	78	62	44	35	3			2	125
		45-50	73	65	35	31	5			4	113
		50-55	19	61	12	39	0			0	31
		55-60	44	40	56	51	9			8	109
		≥ 60	79	47	78	47	10			6	167
Occupation	Daily labourer	83	59	50	36	7	5	140	0.547		
	Farmer	29	49	26	44	4	7	59			
	House Wife	181	52	149	43	16	5	346			
Education	Illiterate	63	77	14	17	5	6	82	0.000		
	1 <sup>st</sup> – 5 <sup>th</sup> class	67	45	76	51	5	3	148			
	6 <sup>th</sup> – 10 <sup>th</sup> class	83	45	92	49	11	6	186			
	Inter and above	80	63	43	34	5	4	128			
Socio economic status	Class – I	13	43	14	47	3	10	30	0.000		
	Class – II	35	64	15	27	5	9	55			
	Class – III	124	71	44	25	6	3	174			
	Class – IV	72	41	96	54	9	5	177			
	Class – V	49	45	56	51	4	4	109			

Knowledge of women regarding SBE is highest among 45-50 years age (38.9%) whereas lowest among women within the age group of 50-55 years (11%) and this association was statistically significant

with p value <0.05. Females who did education up to inter and above had more knowledge regarding SBE (37.8%) whereas it is lower in case of females who

were illiterates (15.4%) and this association was statistically significant with p value <0.05 (Table 5).

**Table 5: Knowledge of women regarding self-breast examination and Mammography**

		Knowledge of women regarding self-breast examination				P Value	Knowledge of women regarding Mammography				P Value
		Yes		No			Yes		No		
		No.	%	No.	%		No.	%	No.	%	
Age in Years	40-45	46	36.8	79	63.2	0.000	46	36.8	79	63.2	0.000
	45-50	44	38.9	69	61.1		44	38.9	69	61.1	
	50-55	9	29.0	22	71.0		5	16.1	26	83.9	
	55-60	12	11.0	97	89.0		22	20.2	87	79.8	
	≥ 60	31	18.6	136	81.4		33	19.8	134	80.2	
Occupation	Daily labourer	43	30.7	97	69.3	0.256	51	36.4	89	63.6	0.005
	Farmer	12	20.3	47	79.7		9	15.3	50	84.7	
	House Wife	87	25.1	259	74.9		90	26.0	256	74.0	
Education	Illiterate	23	15.4	12.6	84.6	0.002	32	21.5	117	78.5	0.229
	1 <sup>st</sup> – 5 <sup>th</sup> class	53	28.5	133	71.5		53	28.5	133	71.5	
	6 <sup>th</sup> – 10 <sup>th</sup> class	35	27.3	93	72.7		38	29.7	90	70.3	
	Inter and above	31	37.8	51	62.2		27	32.9	55	67.1	
Socioeconomic status	Class – I	5	16.7	25	83.3	0.060	8	2≥6.7	22	73.3	0.159
	Class – II	20	36.4	35	63.6		19	34.5	36	65.5	
	Class – III	53	30.5	121	69.5		57	32.8	117	67.2	
	Class – IV	43	24.3	134	75.7		41	23.2	136	76.8	
	Class – V	21	19.3	88	80.7		25	22.9	84	77.1	

Knowledge regarding mammography is highest within the age group of 45-50 years (38.9%) whereas lower knowledge was seen within the age group of 50-55 years (11%) and this association is statistically significant with p value <0.05. Women with highest knowledge regarding mammography seen in daily labour (36.4%) and is lowest in case of farmer (15.3%) (Table 5)

Most of the women who practice SBE regularly belong to age group of 40-45 years (15%) whereas no practice in the age group of 50-55 years (0%) association is statistically significant. Females with education inter and above has regular practice with 21 % and it is lowest in case of females who did education up to 1<sup>st</sup> – 5<sup>th</sup> class(1%) and the association

is statistically significant with p value <0.05. In the age group of 40-45 years and ≥60 years, present study showed that 13 women each had regular practice of mammography and 54 and 70 women had irregular practice (p>0.05). Occupation wise distribution also showed no significant relationship between regular and irregular practice of mammography. Present study observed that women who did inter and above i.e., 11, illiterate 26 and 7 women who did education up to 6<sup>th</sup> – 10<sup>th</sup> class had regular practice of mammography as compared to irregular i.e., 46, 93, 53 and 38, respectively (p <0.001). Socio economic status also revealed no significant difference among regular and irregular practice of mammography (p>0.05) (Table 6).

**Table 6: Practice of self-breast examination and Mammography**

		Practice of self-breast examination						P Value	Practice of Mammography						P Value
		Regular		Irregular		No			Regular		Irregular		No		
		No.	%	No.	%	No.	%		No.	%	No.	%	No.	%	
Age in Years	40-45	19	15	28	22	78	62	0.000	13	10	54	43	58	46	0.759
	45-50	13	12	29	26	71	63		11	10	47	42	55	49	
	50-55	0	0	13	42	18	58		1	3	16	52	14	45	
	55-60	2	2	45	41	62	57		6	6	43	39	60	55	
	≥60	1	1	71	43	95	57		13	8	70	42	84	50	
Occupation	Daily labourer	11	8	53	38	76	54	0.293	15	11	63	45	62	44	0.217
	Farmer	1	2	23	39	35	59		3	5	30	5	26	4	

											1		4	
	House Wife	23	7	110	32	21	62		26	8	137	4	18	5
												0	3	3
Education	Illiterate	13	9	96	64	40	27	0.000	26	1	93	6	30	2
	1 <sup>st</sup> -5 <sup>th</sup> class	1	1	26	14	15	85		0	0	53	2	13	7
	6 <sup>th</sup> -10 <sup>th</sup> class	4	3	27	21	97	76		7	5	38	3	83	6
	Inter and above	17	2	37	45	28	34		11	1	46	5	25	3
												6		0
Socio-economic status	Class - I	4	1	9	30	17	57	0.002	2	7	17	5	11	3
	Class - II	6	1	16	29	33	60		5	9	26	4	24	4
	Class - III	20	1	51	29	10	59		16	9	70	4	88	5
	Class - IV	3	2	65	37	10	62		9	5	70	4	98	5
	Class - V	2	2	45	41	62	57		12	1	47	4	50	4
												3		6

Women belonging to Hindu religion has positive attitude towards breast cancer it is statistically significant with p value <0. 05. Marital status also showed significant difference among positive and negative attitude women i.e., 153 women had positive attitude and 384 had negative who were married, 7 and

1 were unmarried (p<0.001). Similarly, with regard to educational level, positive attitude women who did inter and above among 44 women, illiterate 89, 1<sup>st</sup> – 5<sup>th</sup> class is 13 and 6<sup>th</sup> – 10<sup>th</sup> class 14 (p<0.001) (Table 7).

**Table 7: Attitude of women towards breast cancer**

		Attitude				Total	P Value
		Positive		Negative			
		No.	%	No.	%		
Age in Years	40-45	36	28.8	89	71.2	125	0.916
	45-50	33	29.2	80	70.8	113	
	50-55	7	22.6	24	77.4	31	
	55-60	32	29.4	77	70.6	109	
	≥ 60	52	31.1	115	68.9	167	
Marital Status	Married	153	28.5	384	71.5	537	0.000
	Unmarried	7	87.5	1	12.5	8	
Occupation	Daily labourer	46	32.9	94	67.1	140	0.436
	Farmer	19	32.2	40	67.8	59	
	House Wife	95	27.5	251	72.5	346	
Education	Illiterate	89	59.7	60	40.3	149	0.000
	1 <sup>st</sup> – 5 <sup>th</sup> class	13	7.0	173	93.0	186	
	6 <sup>th</sup> – 10 <sup>th</sup> class	14	10.9	114	89.1	128	
	Inter and above	44	53.7	38	46.3	82	
Religion	Hindu	158	34.3	302	65.7	460	0.000
	Muslim	2	4.2	46	95.8	48	
	Christian	0	0.0	37	100.0	37	
Socioeconomic status	Class – I	10	33.3	20	66.7	30	0.782
	Class – II	16	29.1	39	70.9	55	
	Class – III	49	28.2	125	71.8	174	
	Class – IV	57	32.2	120	67.8	177	
	Class – V	28	25.7	81	74.3	109	

## DISCUSSION

Total number of women with good knowledge on risk factors is 291(53.4%) symptoms 293 (53.8%) and total number of women with good knowledge on SBE is

142(26.1%) and mammography is 150(27.5%). Total number of women who practice SBE regularly is 35(6.4%) whereas mammography is 44(8.1%).

Females with positive attitude towards breast cancer is 160(29.4%) (Table 1).

Demographic profile of the present study showed that mean age was  $52.10 \pm 8.72$  years, 98.5% married women, 84.4% Hindu's by religion, women who studied 1<sup>st</sup> – 5<sup>th</sup> class 34.1%, illiterate 27.3%, 6<sup>th</sup> – 10<sup>th</sup> class 23.5% and inter and above was 15%. Lower middle class were 32.5%, middle 31.9% and lower class, upper middle and upper class were 20%, 10.1% and 5.5% respectively (Table 2). Kathrikolly et al<sup>[8]</sup> study reported mean age  $42.8 \pm 7.8$  years and Rosmawati et al<sup>[9]</sup> reported  $40.5 \pm 15.51$  years which was less as compared to the present study. Singh et al<sup>[10]</sup> showed 30.0% women in the age group of 26-35 years that was much younger age group. Rosmawati et al<sup>[9]</sup> reported 80% women had secondary education. The married women were 36.96% and 34.94%. Illiteracy rate of women in this study was 7.9%, 71.31% women belonged to upper class. Prusty et al<sup>[7]</sup> study median age was 39 years and 98% women educated up to school level. 93% women were Hindu by religion which was found to be almost comparable to the present study. 69% women were from upper caste, 6% women Scheduled Caste or Scheduled Tribe, 16% women were working, 84% were married which was comparable to the present study i.e., 98.5%. The current study found females who had 40-45 years age, good knowledge regarding risk factors of breast cancer was 70% when compared to >60 years i.e., 44% ( $p < 0.05$ ). Educated women had good knowledge regarding risk factors of breast cancer i.e., inter and above 73% and 1<sup>st</sup> – 5<sup>th</sup> class 39% ( $p < 0.05$ ) (Table 3). Age group of 45-50 years had good knowledge regarding symptoms of breast cancer 65% as compared to 55-60 years 40% ( $p < 0.05$ ). Women with good knowledge on symptoms having education inter and above was 77% but less in illiterates and in 1<sup>st</sup>-5<sup>th</sup> class it was 45% ( $p$  value  $< 0.05$ ). Class III socioeconomic status had good knowledge i.e., 71% and less in class V socioeconomic status was 45% ( $p < 0.05$ ) (Table 4). Study conducted by Prusty et al<sup>[7]</sup> showed only 6.5% participants had knowledge and Rahman et al<sup>[11]</sup> reported about 50% women and 38% had knowledge of few signs and symptoms.

Current study shows that knowledge of women regarding self-breast examination was highest among 45-50 years was 38.9% whereas it was less in 50-55 years i.e., 11% ( $p < 0.05$ ). Women who did inter and above had more knowledge 37.8% and it was less in illiterates i.e., 15.4% ( $p < 0.05$ ). Regarding mammography, it was higher in 45-50 years i.e., 38.9% and less in 50-55 years 11% ( $p < 0.05$ ). Higher knowledge regarding mammography was seen in daily labourer 36.4% and less in farmer 15.3% (Table 5) Heena et al<sup>[12]</sup> reported 1.5% participants had good knowledge and 26.8% had fair knowledge. In their study, 93.7%, 85.8% and 93.2% women had knowledge of self-breast examination, clinical breast examination, and mammography, respectively. Okobia et al<sup>[13]</sup> study found women who had practice of breast

self-examination was 43.2%, 9.1% had knowledge of clinical breast examination. Dadzi et al<sup>[14]</sup> reported 88.3% were aware regarding breast cancer, 64.9% had good knowledge and 37.6% women practiced breast self-examination. More than 50% participants had no knowledge. Rahman et al<sup>[11]</sup> reported 68.5% had knowledge of breast self-examination, Similar to the current study, study conducted on 500 women in five primary healthcare centers in Najran, Saudi Arabia reported 57% women unaware regarding mammogram and breast self-examination and 44% unaware of clinically breast examination<sup>[15]</sup>. Thus, we can say that lack of awareness regarding use of various practice/screening methods was an important barrier among women. Alam et al<sup>[16]</sup> study reported 1,007 women of which 50% had knowledge about various risk factors.

In a study conducted in Cameroon on 200 women, 15% had knowledge of breast self-examination and practiced BSE and in Oyo State in Nigeria, 14.5% reported engaging in BSE. Their finding was lower when compared to findings in relatively more developing countries like in India and Malaysia where BSE practice was measured at 59% and 55%, respectively.<sup>[17-20]</sup> Heena et al<sup>[12]</sup> reported 74.7% women had practice of breast self-examination, 24.1% underwent clinical breast examination, and 18.7% underwent mammography. Awareness of screening methods was better among 40-50 years age group i.e., 25% whereas mammography among 40-52 years age group females was 27%. In the present study positive attitude towards breast cancer was 29.4% but it was low 5.1% in the study conducted by Heena et al<sup>[12]</sup> and 8.2% in Okobia et al study.<sup>[13]</sup> Alam et al<sup>[16]</sup> reported 32.2% women had knowledge of screening methods, 14.7% knew about BSE and were using regularly breast self-examination. Rosmawati et al<sup>[9]</sup> study reported that women with good score for knowledge, attitude and practice were 38.4%, 73.3% and 7.0%, respectively.

Major difference regarding knowledge, attitude with practice in this study was found to be comparable and consistent with other studies. In the literature, various studies reported that level of knowledge related to self-breast examination was 24.5% to 53.7% while the level of practice reported to be 1.5% to 39.0% and in Taiwan, a study which was conducted on 3040 randomized women, only 8.4% women found to be performing breast self-examination on monthly basis.<sup>[21,22]</sup>

## CONCLUSION

This study aimed to assess KAP regarding breast cancer where women with good knowledge on risk factors was 53.2%, symptoms 53.9%, SBE 25.8% and mammography 27.4%. Females with positive attitude towards SBE and mammography were 25% & 27%, respectively. Total number of women who practiced SBE regularly was 6.4% whereas mammography was 8.2%. This study calls for intervention to enhance the

knowledge regarding risk factors, symptoms and regular practice to be followed towards screening methods for detection of cancer at an early stage. In conclusion, we found that knowledge and regular practice of self-breast examination found to be poor in the study participants. Various factors found to be involved to contribute on these problems. Incorrect method of self-breast examination, less knowledge of breast cancer signs/symptoms, motivational support from mother, spouse, friends or other family members are directly related with poor practices, but there is possibility to enhance the knowledge, attitude and practices towards BSE through various awareness programs, organizing village level camps to reduce the different barriers.

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### CONFLICTS OF INTEREST

There are no conflicts of interest.

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