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RESEARCH ARTICLE

A STUDY TO ASSESS THE KNOWLEDGE, ATTITUDE AND PRACTICES REGARDING BREAST CANCER AMONG GOVERNMENT SCHOOL TEACHERS OF AMBALA CANTT, DISTRICT AMBALA, HARYANA

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ABSTRACT

A cross sectional study was carried out to assess the Knowledge, Attitude and Practices regarding breast cancer among 491teachers of Government Schools using self-administered method with pre-tested questionnaire. The objectives were to evaluate knowledge, attitude and practices and to study their relationship with socio-demographic variables. Data collected from government schools were entered and analysed using SPSS version 23. The study revealed, majority of teachers,23% were within 41-45 years and 21.2% within 26-50 years of age group. The mean age was 44.79±7.69. Most, 54.2% were aware of the term breast self-examination (BSE) and 55.6% subjects had the knowledge that the breast cancer was indicated by breast lump. Regarding risk factors of breast cancer, 44.6% knew little or no breastfeeding, 44.0% tobacco/smoking, 43.4%family history of breast cancer, 42.2% radiation exposure and 41.5% role of inherited gene as a risk factors for breast cancer. Most 48.5% respondents were aware that pain in the breast is a symptom for breast cancer. Most, 57.6% had average and 41.5% had poor knowledge regarding breast cancer with mean score 12.99. 88% had positive and 12% had negative attitude. 85.1% opined to do BSE if they knew how to do it. About 42% of the respondents performed breast self-examination. The only significant association was found between type of family and attitude level ($p<0.006$). In sum, the teachers lack knowledge regarding breast cancer which needs to be viewed as serious, considering this problem in the larger context in the society.

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INTRODUCTION

Cancer has been always a challenge in life since many decades, despite tremendous advances in medical science. Cancer is the second leading cause of death globally and accounted for 9.6 million death in 2018 whereas in low and middle- income countries, approximately 70% of deaths occur (WHO, 2018).Breast cancer is the most common type of cancer in India. Breast cancer accounts for 14% of all cancers in women (India Against Cancer, 2018).In urban areas, 1 in 22 women is likely to develop breast cancer as compared to rural areas where in 1 in 60 women develops breast cancer in her lifetime. Its incidence rises in the early 30s and peak at ages 50-60 years (Golobocan 2018).Rare type of inflammatory cancer occurs in 2.5% of all cases wherein, the cancer cells spread very fast and block the lymph vessels and channels in the skin that results in hard and warm surface with a clear red colour (Ravind *et al*, 2016).The abnormal release of progesterone, prolactin and estrogen can results in abnormal growth and division of breast tissue which in turn develop cancer. Breast cancer can be due to factors such as use of pesticides, food adulteration, overweight, physically inactive, old age, no breastfeeding, improper nutrition etc. The biggest risk factor is the use of tobacco with approximately 22% of cancer related deaths globally (WHO, 2018). Prevention can be done by limiting alcohol and tobacco, not smoking, controlling weight, being physically active, breastfeeding, limiting dose and duration of hormone therapy and by taking healthy food like green vegetables and fruits, too much sun exposure etc. Test or procedures used to diagnose include breast self-examination, clinical breast examination, breast ultrasound, breast MRI, mammogram.

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Mammography is one of the method but due to its high cost and unavailability its use is limited. The purpose of BSE is for a woman to learn the topography of her breasts, know how her normal breasts feel and be able to identify changes in them should they occur in the future (Singh *et al*, 2018). Haryana has total 39% of cases recorded in the state. The present trends shows Haryana may report around 2-2.5 lakh cases of breast cancer out of all 6.5 lakh cancer cases. According to ICMR report, breast cancer shares 10% of all cases (Outlook, 2018). In India, the overall incidence of breast cancer is less as compared to the US. In the year 2012, there were about 2,32,000 breast cancer cases reported in the US, whereas in India, 1,45,000 new cases were diagnosed (Breast Cancer India, 2018). In 2016, there were an estimated 3,477,866 women living with breast cancer in the U.S (National Cancer Institute).

MATERIALS AND METHODS

Research approach: Quantitative research approach.

Research design: Cross sectional descriptive research design
Research setting: Government schools of Ambala Cantt, District Ambala, Haryana.

Sampling technique: Purposive sampling.

Sample size: 491

Description of tool: Structured questionnaire was used to collect the Data. School visits were conducted and fill the questionnaire from the female teachers. The questionnaire consisted of 4 Sections; Section A- It included information about socio-demographic variables, Section B- It included questions regarding knowledge, Section C- It included questions regarding attitude, Section D- It included questions regarding practices.

Reliability of tool: Appropriate literature review were done before the conduction of the study. Questionnaire was framed with reference of various pertaining literature and research papers. Pretesting and modifications of questionnaire was done in every aspect of the study as per expert's opinion. Then questionnaire was validated by subject experts and their suggestions were incorporated in every aspect of the questionnaire. Reliability of structured questionnaire for knowledge and practice was done by split-half method and Pearson correlation coefficient was found to 0.7, which was acceptable reliability.

Procedure of data collection: All the female teachers were administered the questionnaire and data was collected by the researcher. Self-administered technique was used to collect data from the respondents who were required assistance.

Inclusion criteria

- Female teachers of government schools who were willing to participate in the study.
- Female teachers who were present on the day of study.

Exclusion criteria

- Teachers who were not physically well.
- Teachers who were on leave on the day of study.
- Teachers who were unwilling to participate.
- Male teachers will be excluded.

RESULTS

This chapter will objectively report the observations in relation to the responses obtained through the tool according to the objectives that will cover the meaning of the results. Study was conducted to assess the knowledge, attitude and practices regarding breast cancer among government school teachers of AmbalaCantt, District Ambala, Haryana. Self-administered method was held using structured questionnaire on sample size 491 and data so collected was processed by using SPSS new version 23. This chapter contains inferential and descriptive statistics.

In current study data analysis is described under following section:

- Socio-demographic profile of the respondents
- knowledge about breast cancer
- Knowledge regarding risk factors of breast cancer
- Knowledge regarding symptoms of breast cancer
- Knowledge about screening and diagnosis of breast cancer
- Attitude of the respondents
- Practices of the respondents
- Association between knowledge, attitude, practices and socio-demographic varibales
- Other findings

Socio – demographic profile of the respondents

Knowledge about breast cancer

Level of knowledge among respondents

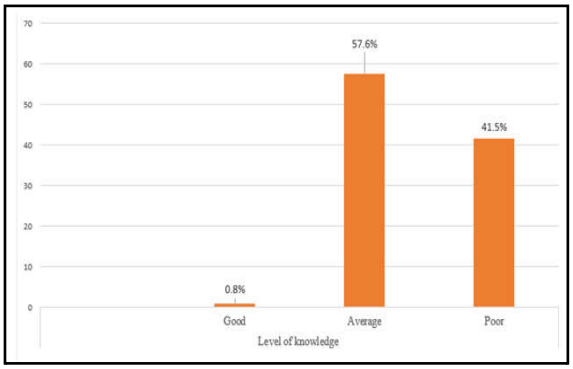

Figure 1 reveals about level of knowledge among respondents. More than half (57.6%) had average, 41.5% poor and only 0.8% had good knowledge of breast cancer.

Table 2.1 shows the results regarding the knowledge about breast cancer. More than half (55.2%) knew that they would go for early treatment on early detection of breast cancer, while others had not correct knowledge about it. 54.2% were aware of the term breast self-examination (BSE). Only 15.9% respondents knew about the correct steps of breast self-examination, while the rest had no knowledge about it. About only 4.9% had the knowledge about the no. of stages of breast cancer, but 75.8% had deficient knowledge; 4 stage (10.4%), 3 stages (5.7%) and 2 & 1 stage (1.6 % each).

Table 1. Distribution of socio – demographic variables of the respondents

N=491

Socio-demographic variables	Group/Category	Frequency	Percentage (%)
	<24	1	.2
Age	25-30	9	1.8
	31-35	59	12.0
	36-40	85	17.3
	41-45	113	23.0
	46-50	104	21.2
	51-55	63	12.8
	56-60	57	11.6
Mean= 44.79±7.69			
Education	Graduation	153	31.2
	Post-graduation	336	68.4
	PhD	2	.4
Marital status	Married	473	96.3
	Unmarried	15	3.1
	Divorced	3	.6
Income	6327-18949	13	2.6
	18953-31589	82	16.7
	31591-47262	54	11
	47266-63178	189	38.5
	63182-126356	153	31.2
Religion	Hindu	408	83.1
	Sikh	80	16.3
	Jain	1	.2
	Muslim	2	.4
Type of family	Nuclear	282	57.4
	Joint	209	42.6
Place of living	Urban	435	88.6
	Rural	56	11.4
Number of children	0	26	5.3
	1	104	21.2
	2	322	65.6
	3	38	7.7
	4	1	.2
Family history of breast cancer	Mother	9	1.8
	Sister	2	.4
	Grand mother (Maternal)	4	.8
	None	476	96.9

Table 2.1.Knowledge about breast cancer

Questions	Variables	Frequency	Percentage (%)
Finding breast cancer early means	Becoming well being	132	26.9
	Will worsen the condition	53	10.8
	Does not affect at all	35	7.1
	Will lead to go for early treatment	271	55.2
Aware of the term breast self-examination (BSE)	Yes	266	54.2
	No	225	45.8
Steps of BSE	Yes	78	15.9
	No	413	84.1
Stages of breast cancer	5	24	4.9
	4	51	10.4
	3	28	5.7
	2	8	1.6
	1	8	1.6
	Don't know	372	75.8
Have you heard about BSE	Yes	310	63.1
	No	181	36.9

Table 2.2. Early signs of breast cancer by self-examination

Early signs of breast cancer by self-examination			
Questions	Variables	Frequency	Percentage (%)
(a) Breast lump	Yes	273	55.6
	No	218	44.4
(b) Discharge	Yes	54	11.0
	No	437	89.0
(c) Breast shape and size change	Yes	82	16.7
	No	409	83.3
(d) Pain	Yes	132	26.9
	No	359	73.1
(e) Colour and texture change	Yes	35	7.1
	No	456	92.9
(f) No signs at all	Yes	111	22.6

Table 3.1: Knowledge regarding risk factors of breast cancer

Risk factors for breast cancer			
	Variables	Frequency	Percentage (%)
(a) Late period start	Yes	70	14.3
	No	421	85.7
(b) Increasing age	Yes	108	22.0
	No	383	78.0
(c) Inherited genes	Yes	204	41.5
	No	287	58.5
(d) Oral contraceptive pills	Yes	135	27.5
	No	356	72.5
(e) Early period start	Yes	47	9.6
	No	444	90.4
(f) Fatty diet	Yes	124	25.3
	No	367	74.7
(g) Obesity	Yes	117	23.8
	No	374	76.2
(h) Never conceived	Yes	93	18.9
	No	398	81.1
(i) Late childbearing	Yes	96	19.6
	No	395	80.4
(j) Exposure to radiation	Yes	207	42.2
	No	284	57.8
(k) Alcohol	Yes	180	36.7
	No	311	63.3
(l) Little or no breastfeeding	Yes	219	44.6
	No	272	55.4
(m)Tobacco/smoking	Yes	216	44.0
	No	275	56.0
(n) Beginning menopause at an older age	Yes	110	22.4
	No	381	77.6
(o) Family history of breast cancer	Yes	213	43.4
	No	278	56.6

Table 4.1: Knowledge regarding symptoms of breast cancer

Breast cancer symptoms			
	Variables	Frequency	Percentage
(a) Painless mass	Yes	220	44.8
	No	271	55.2
(b) Lump under armpit	Yes	159	32.4
	No	332	67.6
(c) Change in breast shape	Yes	143	29.1
	No	348	70.9
(d) Pain in the region of breast	Yes	238	48.5
	No	253	51.5
(e) Change colour of breast skin	Yes	79	16.1
	No	412	83.9
(f) Inverted nipple	Yes	85	17.3
	No	406	82.7
(g) Peeling, scaling, crusting or flaking of the pigmented area of skin around the nipple or breast skin	Yes	94	19.1
	No	397	80.9
(h) Redness or pitting of the skin over breast	Yes	111	22.6
	No	380	77.4

Table 5.1. Knowledge about screening and diagnosis of breast cancer

Breast cancer is diagnosed by			
	Variables	Frequency	Percentage (%)
(a) Doctor	Yes	382	77.8
	No	109	22.2
(b) Lady health worker	Yes	43	8.8
	No	448	91.2
(c) Self-examination	Yes	129	26.3
	No	362	73.7
(d) Traditional healer	Yes	8	1.6
	No	483	98.4
Knowledge on medical test/procedures regarding diagnosis of breast cancer			
(a) Blood test	Yes	50	10.2
	No	441	89.8
(b) Mammography	Yes	279	56.8
	No	212	43.2
(c) Breast MRI	Yes	105	21.4
	No	386	78.6
(d) Bone scan	Yes	11	2.2
	No	480	97.8
(e) CT scan	Yes	23	4.7
	No	468	95.3
(f) PET scan	Yes	9	1.8
	No	482	98.2
	Yes	121	24.6
(g) Don't know			
	0	132	26.9
Do you know on which stage one should go for tests?	1	311	63.3
	2	10	2.0
	3	9	1.8
	7	2	.4
	Don't know	27	5.5

Table 6.1. Attitude of the respondents

Questions	Variables	Frequency	Percentage (%)
Do you think it is embarrassed to have breast cancer	Yes	101	20.6
	No	390	79.4
Do you think treatment of breast cancer is embarrassing	Yes	99	20.2
	No	392	79.8
Do you think treatment of breast cancer is time consuming	Yes	300	61.1
	No	191	38.9
Do you think a women treated for breast cancer can have a normal life	Yes	411	83.7
	No	80	16.3
Would you go to a doctor as soon as you feel mass/lump in a breast	Yes	472	96.1
	No	19	3.9
Will you do BSE regularly if you know how to do it	Yes	418	85.1
	No	73	14.9
Do you think that breast cancer lowers one's prestige	Yes	225	45.8
	No	266	54.2
Do you think that breast cancer will adversely affect relationship	Yes	250	50.9
	No	241	49.1
Do you think breast cancer is communicable	Yes	236	48.1
	No	255	51.9

Table 7.1: Practices of the respondents regarding breast cancer

Had a physical examination of your breast by a health professional		
Variables	Frequency	Percentage (%)
Yes	69	14.1
No	422	85.9
Ever been examined for mammography		
Yes	32	6.5
No	459	93.5
Ever practiced BSE		
Yes	206	42.0
No	285	58.0
If yes,		
Total	206	100%
	Frequency (n)	Valid percentage
Once a year	31	15.0
Few times in a year	101	49.0
Once a month	39	18.9
Every week	35	17.0
If no,		
Total	285	100%
I don't know how to do it	230	80.7
I don't think the method is useful	12	4.2
I don't think i can get breast cancer	22	7.7
I don't want to do it intentionally	21	7.4

Table 7.2: Preference for receiving the information during cancer prevention and control programme

Receiving the information about breast cancer during cancer prevention and control programme			
Questions	Variables	Frequency	Percentage (%)
(a) Personal interaction with health professional	Yes	333	67.8
	No	158	32.2
(b) Information at workplace	Yes	170	34.6
	No	321	65.4
(c) Posters in public places	Yes	78	15.9
	No	413	84.1
(d) Newspaper	Yes	130	26.5
	No	361	73.5
(e) Television	Yes	141	28.7
	No	350	71.3
(f) Radio	Yes	66	13.4
	No	425	86.6
(g) Internet	Yes	181	36.9
	No	310	63.1
(h) Others	Yes	61	12.4
	No	430	87.6

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Table 8.1. Association between knowledge and attitude

		Attitude		χ^2	df	p value
		Positive	Negative			
Knowledge	Good	4	0	0.592	2	0.744^{NS}
	Average	248	35			
	Poor	180	24			

*Statistically significant at $p<0.05$

** Statistically highly significant at $p<0.01$

NS= non-significant

Table 8.2. Association between knowledge and on aspects of practices

	n		Good	Average	Poor	χ^2	df	p value
Ever practiced BSE	206	Yes	4	147	55	35.961	2	0.001**
	285	No	0	136	149			
Physical examination by a health professional	69	Yes	1	46	22	3.337	2	0.189^{NS}
	422	No	3	237	182			
Examined by mammography	32	Yes	1	262	10	3.495	2	0.174^{NS}
	459	No	3	21	194			

*Statistically significant at p<0.05 **Statistically highly significant at p<0.01 NS= non-significant

Table 8.3. Association between attitude and on aspects of practices

	n		Positive	Negative	χ^2	df	p value
Ever practiced BSE	206	Yes	181	251	0.005	1	0.945^{NS}
	285	No	251	34			
Physical examination by a health professional	69	Yes	62	7	0.266	1	0.606^{NS}
	422	No	370	52			
Examined by mammography	32	Yes	26	6	1.468	1	0.226^{NS}
	459	No	406	53			

*Statistically significant at p<0.05 **Statistically highly significant at p<0.01 NS= non-significant

Table 8.4: Association between knowledge with socio-demographic variables N=491

Socio-Demographic variables	Frequency	Average Knowledge n	%	Good knowledge n	%	Poor knowledge n	%	χ^2	df	p value
AGE										
<24	1	0	0%	0	0%	1	100%	18.244	14	0.196^{NS}
25-30	9	5	55.6%	0	0%	4	44.4%			
31-35	59	36	61%	1	1.7%	22	37.3%			
36-40	85	50	63.5%	1	1.2%	30	35.3%			
41-45	113	71	62.8%	0	0%	42	37.2%			
46-50	104	47	45.2%	2	1.9%	55	52.9%			
51-55	63	42	66.7%	0	0%	21	33.3%			
56-60	57	28	49.1%	0	0%	29	50.9%			
FAMILY MONTHLY INCOME										
6327-18949	13	8	61.5%	0	0%	5	38.5%	7.299	8	0.512^{NS}
18953-31589	82	52	63.4%	0	0%	30	36.6%			
31591-47262	54	36	66.7%	0	0%	18	33.3%			
47266-63178	189	107	56.6%	3	1.6%	79	41.8%			
63182-126356	153	80	52.3%	1	0.7%	72	47.1%			
RELIGION										
Hindu	408	233	57.1%	4	1%	171	41.9%	3.823	6	0.701^{NS}
Sikh	80	48	66%	32	40%	0	0%			
Jain	1	0	0%	0	0%	1	100%			
Muslim	2	2	100%	0	0%	0	0%			
PLACE OF LIVING										
Urban	435	252	57.9%	4	0.9%	179	41.1%	0.718	2	0.698^{NS}
Rural	56	31	55.4%	0	0%	25	44.6%			
EDUCATION										
Graduation	153	80	52.3%	0	0%	73	47.7%	6.266	4	0.180^{NS}
Post- graduation	336	201	59.8%	4	1.2%	131	39%			
PhD	2	2	100%	0	0%	0	0%			
MARITAL STATUS										
Married	473	274	57.9%	4	0.8%	195	41.2%	4.390	4	0.356^{NS}
Unmarried	15	6	40%	0	0%	9	60%			
Divorced	3	3	100%	0	0%	0	0%			
TYPE OF FAMILY										
Nuclear	282	150	53.2%	3	1.1%	129	45.7%	5.585	2	0.061^{NS}
Joint	209	133	63.6%	1	0.5%	75	35.9%			
NUMBER OF CHILDREN										
0	26	12	46.2%	1	3.8%	13	50%	6.497	8	0.592^{NS}
1	104	61	58.7%	1	1%	42	40.4%			
2	322	190	59%	2	0.6%	130	40.4%			
3	38	19	50%	0	0%	19	50%			
4	1	1	100%	0	0%	0	0%			
FAMILY HISTORY										
Mother	9	3	33.3%	0	0%	6	66.7%	2.968	6	0.813^{NS}
Sister	2	1	50%	0	0%	1	50%			
Grand mother (maternal)	4	3	75%	0	0%	1	25%			
None	476	276	58%	4	0.8%	196	41.2%			

*Statistically significant at p<0.05 **Statistically highly significant at p<0.01 NS= non-significant

The same table also shows that more than half (63.1%) have heard about breast self-examination. Table 2.2 represents the knowledge regarding early signs of breast cancer. More than half (55.6%) subjects had the knowledge that the breast cancer was indicated by breast lump, only 11.0% that discharge is indicated, 16.7% breast shape and size change, 26.9% pain, 7.1% colour and texture change during self-examination for breast cancer. Below one fifth responded did not know about these signs.

Knowledge regarding risk factors of breast cancer

Level of knowledge regarding risk factors

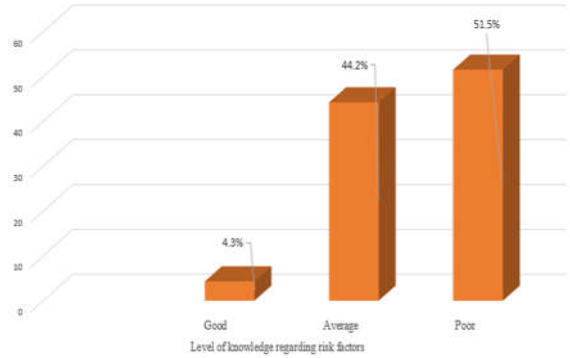

Figure (2): Reveals about level of knowledge of riskfactors among respondents. More than half (51.5%) had poor, 44.2% had average and 4.3% had good knowledge regarding riskfactors.

Table 3.1 reveals knowledge about risk factors of breast cancer. Less than half, 44.6% knew that little or no breastfeeding, 44.0% tobacco/smoking, 43.4% family history of breast cancer, 42.2% radiation exposure, 41.5% role of inherited genes, 36.7% alcohol abuse, 27.5% oral contraceptive pills, 25.3% fatty diet and 23.8% obesity as a risks for breast cancer.

Only 22.0% were aware that other risk factors could be increasing age and 22.4% knew menopause at an older age. Least recognized factors were effect of early period start(9.6%), late period start(14.3%), never conceived(18.9%) and late bearing of child(19.6%).

Knowledge regarding symptoms of breast cancer

Level of knowledge regrding symptoms

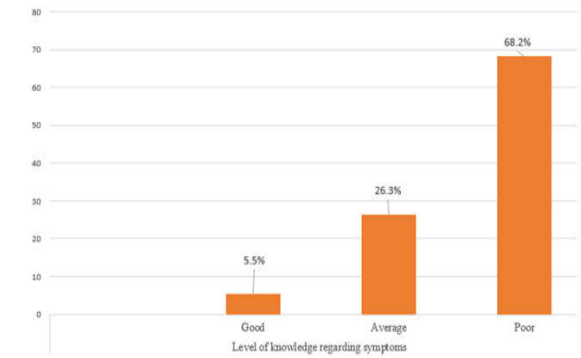

Figure (3): Reveals about level of knowledge of symptoms among respondents. 68.2% had poor, 26.3% had average and only 5.5% had good knowledge regarding symptoms of breast cancer.

Table 4.1 illustrates the knowledge of respondents regarding breast cancer symptoms. 48.5% respondents knew pain as a symptom for breast cancer, painless mass (44.8%), presence of lump under armpit (32.4%) and redness or pitting of the skin over breast (22.6%). Only 19.1 % know about the peeling, scaling, crusting or flaking of the pigmented area around the nipple, 17.3% about the inverted nipple and 16.1 % about the change colour of breast skin as a symptoms of breast cancer.

Knowledge about screening and diagnosis of breast cancer: Table 5.1 illustrates the knowledge of respondents regarding breast cancer screening and diagnosis. About 80% of them knew that the doctors could screen and diagnose breast cancer whereas others had incorrect knowledge that is, lady health worker (8.8%), self-examination (26.3%) and 1.6% by traditional healers.

More than half(56.8%) responded test of mammography to diagnose breast cancer, 21.4% MRI of breast, 10.2% blood test and 24.6% didn't know about the tests or procedures to diagnose breast cancer. Regarding the knowledge of the stage at which test should be done, only 26.9% responded correctly as stage 0 while others 63.3% incorrectly stated stage 1 and 5.5% don't know about it.

Knowledge on Medical tests/procedures regarding diagnosis of breast cance

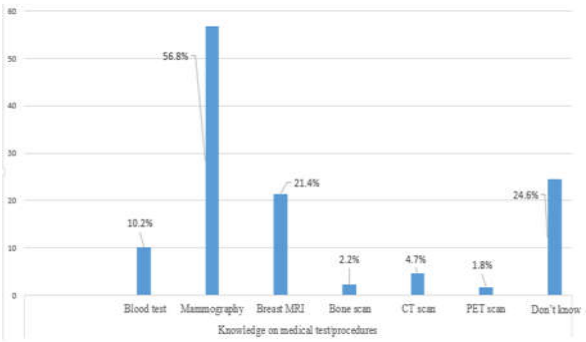

Figure 4 shows that 10.2% responded test of blood, 56.8% of mammography, 21.4% of breast MRI, 2.2% of bone scan, 4.7% of CT scan, 1.8% of PET scan to diagnose breast cancer and 24.6% don't know obout the tests/ procedures to diagnose breast cancer

Attitude of the respondents

Level of attitude among respondents

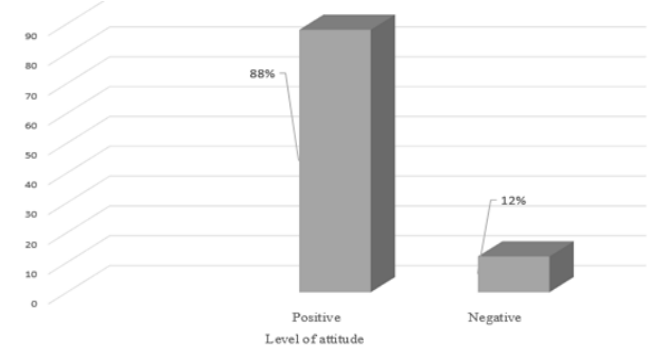

Figure (5): Shows that 88% had positive and only 12% had negative attitude towards breast cancer.

Table 8.5: Association between attitude with socio-demographic variables

N=491

Socio-Demographic variables	Frequency	Positive attitude n	%	Negative attitude n	%	χ^2	df	p value
AGE								
<24	1	1	100%	0	0	2.170	7	0.975^{NS}
25-30	9	8	88.9%	1	11.1%			
31-35	59	54	91.4%	5	8.5%			
36-40	85	73	85.9%	12	14.1%			
41-45	113	100	88.5%	13	11.5%			
46-50	104	89	85.6%	15	14.4%			
51-55	63	57	90.5%	6	9.5%			
56-60	57	50	87.7%	7	12.3%			
FAMILY MONTHLY INCOME								
6327-18949	13	11	84.6%	2	15.4%	2.142	4	0.710^{NS}
18953-31589	82	73	89%	9	11%			
31591-47262	54	50	92.6%	4	7.4%			
47266-63178	189	167	88.4%	22	11.6%			
63182-126356	153	131	85.6%	22	14.4%			
RELIGION								
Hindu	408	360	88.2%	48	11.8%	2.908	3	0.406^{NS}
Sikh	80	70	87.5%	10	12.5%			
Jain	1	1	100%	0	0%			
Muslim	2	1	50%	1	50%			
PLACE OF LIVING								
Urban	435	385	88.5%	50	11.5%	0.983	1	0.321^{NS}
Rural	56	47	83.9%	9	16.1%			
EDUCATION								
Graduation	153	136	88.9%	17	11.1%	0.466	2	0.762^{NS}
Post- graduation	336	294	87.5%	42	12.5%			
PhD	2	0	0%	2	100%			
MARITAL STATUS								
Married	473	415	87.7%	58	12.3%	0.843	2	0.656^{NS}
Unmarried	15	14	93.3%	1	6.7%			
Divorced	3	0	0%	3	100%			
TYPE OF FAMILY								
Nuclear	282	258	91.5%	24	8.5%	7.701	1	0.006**
Joint	209	174	83.3%	35	16.7%			
NUMBER OF CHILDREN								
0	26	24	92.3%	2	7.7%	0.669	4	0.955^{NS}
1	104	91	87.5%	13	12.5%			
2	322	283	87.9%	39	12.1%			
3	38	33	86.8%	5	13.2%			
4	1	1	100%	0	0%			
FAMILY HISTORY								
Mother	9	8	88.9%	1	11.1%	0.919	3	0.821^{NS}
Sister	2	2	100%	0	0%			
Grand mother (maternal)	4	3	75%	1	25%			
None	476	419	88%	57	12%			

*Statistically significant at p<0.05 **Statistically highly significant at p<0.01 NS= non-significant

Table 9. Correlation among socio-demographic variables, knowledge and attitude

		Age	Education	Marital status	Income	Religion	Place of living	Type of family	Number of children	Family history	Knowledge	Attitude
Age	R P- value	1	.204** .000**	.051 .259	.421** .000**	-.055 .222	-.012 .792	-.154** .001**	.221** .000**	-.048 .292	-.068 .130	-.012 .798
Education	R P- value		1	.065 .151	-.008 .865	-.039 .394	-.079 .081	.006 .888	.088 .051	-.034 .456	-.098* .030*	.015 .736
Marital status	R P- value			1	.020 .660	.010 .822	-.067 .141	.070 .119	.433** .000**	.028 .540	.008 .864	-.041 .360
Income	R P- value				1	-.062 .167	.074 .100	-.119** .008**	.148** .001**	-.065 .148	-.072 .110	-.036 .427
Religion	R P- value				.	1	.156** .001**	-.039 .392	.003 .947	-.022 .634	-.029 .524	.032 .473
Place of living	R P- value						1	-.171** .000**	-.069 .128	-.018 .684	.028 .541	.045 .322
Type of family	R P- value						.	1	-.034 .447	-.054 .236	.090* .045*	-.125** .005**
Number of children	R P- value								1	.042 .356	-.007 .869	-.018 .690
Family history	R P- value									1	.058 .197	.000 .998
Knowledge	R P- value										1	.000 .993
Attitude	R P- value											1

Above table shows highly significant positive correlation was observed between religion-place of living (r= 0.156, p<0.001**), number of children-marital status (r=0.433, p<0.001**), age-education (r=0.204, p<0.001**), age-number of children (r= 0.221, p<0.001**), income-number of children (r=0.148, p<0.001**), income-age (r= 0.421, p<0.001**). But there was statistically significant correlation between number of children-education (r=0.88, p<0.051*) and knowledge level-type of family (r=0.090, p<0.045*). It means that if these significant variables increase their will be reciprocal increase in their related variable.

Table 6.1 presents about attitude of the female teachers towards the breast cancer. About one fifth (20.6%) respondents think having breast cancer and its treatment (20.2%) are embarrassing, 61.1% think treatment of breast cancer is time consuming and majority of them (83.7%) think women can have a normal life if treated. Almost all (96.1%) express to go to doctor if mass is detected in the breast, 85.1% opine to do BSE if they knew how to do it. About 46% think breast cancer lowers one's prestige. Half (50.9%) of the respondents think breast cancer can adversely affect the relationship and 48.1% think that breast cancer is communicable.

Practices of the respondents: Table 7.1 illustrates about the practices of the respondents regarding breast cancer. About 42% of the respondents performed breast self-examination, 14.1% participants had physical examination of their breasts by a health professional and 6.5% were examined for mammography. Nearly half of them (49%) practiced BSE few times in a year and 15% practiced BSE once a year. In addition, only 18.9% and 17% of the teachers did BSE on a monthly and weekly basis respectively. About 81% of the respondents did not perform BSE due to lack of knowledge as how to do it. Rest did not perform it due to some reasons; 7.7% did not perform BSE as they thought that they would not get breast cancer, 4.2% and 7.4% avoided it intentionally and it being not useful respectively.

Distribution according to ever practiced breast self-examination

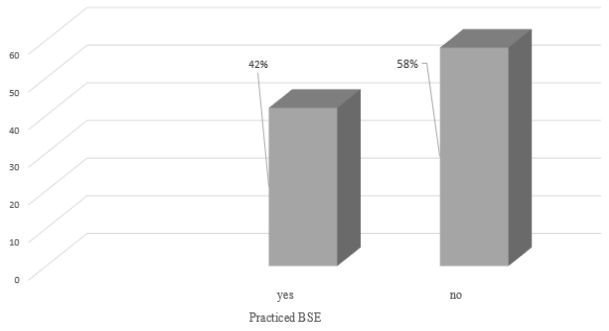

Figure (6): Shows that about 42% of the respondents practiced breast self-examination and 58% didn't practiced breast self-examination

Table 7.2 reveals about the preference regarding receiving the information about breast cancer prevention and control programme.

About 68 % preferred to receive through personal interaction with health professional, 36.9 % through internet, 34.6% wanted at workplace, 28.7% through television, 26.5% by newspaper. Only 15.9% wanted the information through posters in public places, 13.4% through radio and 12.4% through others. Table 8.1 illustrate association between knowledge with attitude. There was no statistically significant association between knowledge and attitude ($p>0.744$). Table 8.2 illustrate association between knowledge and practices. There was highly statistically significant association between knowledge and practice of breast self-examination ($p>0.001^{**}$). Table 8.3 illustrate association between attitude and practices. There was no statistically significant association between attitude and practices. Table 8.4 and 8.5 reveals association between socio-demographic variables with knowledge and attitude. There was statistically significant association between type of family and attitude level ($p<0.006$). Above table shows highly significant positive correlation was observed between religion-place of living ($r= 0.156$, $p<0.001^{**}$), number of children-marital status ($r=0.433$, $p<0.001^{**}$), age-education ($r=0.204$, $p<0.001^{**}$), age-number of children ($r= 0.221$, $p<0.001^{**}$), income-number of children ($r=0.148$, $p<0.001^{**}$), income-age ($r= 0.421$, $p<0.001^{**}$). But there was statistically significant correlation between number of children-education ($r=0.88$, $p<0.051^{*}$) and knowledge level-type of family ($r=0.090$, $p<0.045^{*}$). It means that if these significant variables increase their will be reciprocal increase in their related variable.

DISCUSSION

In this study 44.8% knew about painless mass as a symptom. Less than half (43.67%) had knowledge of breast cancer. A study conducted in Medchal Mandal, Andhra Pradesh found that only 21.4% knew painless mass as a symptom, 4.58% were aware of the breast self-examination which is much less than this study, and none had a physical examination in the past. Only 8.4% indicated visiting alternative health practitioner (Sharma *et al*, 2013). In present study, 55.6% knew breast lump as early sign of breast cancer, 44.8% painless lump and 48.5% pain as symptoms. A similar study in New Delhi on urban women reported lower findings that 42% knew lump as an early sign and 41% pain as breast cancer symptom but differed too much with 5% painless lump (Somdatta and Baridalyne, 2008).

Our study also revealed that 18.9% did BSE on monthly and 17% on weekly basis. In comparison, Korea study showed 13.2% did BSE on monthly basis which was lower (Yoo *et al*, 2012). Present study revealed, 56.8% respondents were aware of mammography as a diagnostic tool whereas study in Lahore revealed 34% knew about it (Khalid *et al*, 2018). In our study, 44% identified tobacco/ smoking as a risk factor of breast cancer. But in another study only 1% of the respondents identified tobacco use as a risk factor. It means that our study sample has good awareness about tobacco as a risk factor (Makurirofa *et al*, 2018). In our study, 57.6% had average and 41.5% had poor and rest of the respondents had good knowledge. Only 18.9% teachers did BSE on monthly basis and 88% had positive attitude towards breast cancer whereas another study conducted in Central Ethiopia on urban health workers found that 64% had adequate knowledge with 81% attitude towards breast self-examination. Less than half (40%) of the respondents practiced breast self-examination BSE on monthly basis (Zeru *et al*, 2019).

In present study, pain (48.5%) and painless mass (44.8%) opined as important symptoms of breast cancer. More than half (55.2%) perceived that finding breast cancer early means to go for early treatment. Whereas in other study conducted among Iranian women in Iran found that 60.8% and 44.9% were reported painless mass and bloody discharge as important symptoms. 70.6% perceived that early detection and operation in early stages are effective issues (Nafissi *et al*, 2019).

Conclusions

Almost all the teachers (about one percent with good knowledge) had average to poor knowledge; were aware to consult doctor in case of breast cancer detection, knew breast self-examination (BSE), new that mammography test was for diagnosing breast cancer. Majority were aware that surgery, chemotherapy and radiation therapy were the key to success in treatment of breast cancer. Less than half practiced breast self-examination, but nearly half of this did BSE either on monthly or weekly basis. The major reason for not performing BSE was reported that they were not informed about it.

Majority had positive attitude towards breast cancer. There was statistically significant association between type of family and attitude level ($p<0.006$), while all other socio-demographic variables showed non- significant relationship either with knowledge or practice. Positive attitude was considered to provide a good ground for knowledge acquisition and dissemination in order to improve practices.

The lack of knowledge regarding breast cancer in educated teachers suggests that there will be much more unawareness in general masses.

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