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Knowledge, attitude and practice regarding breast and cervical cancer among women of reproductive age residing in a rural area of West Bengal, India

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Abstract

Background and objectives: Developing screening programmes to lower breast and cervical cancer morbidity and mortality requires a better knowledge of psychological, socioeconomic, and environmental variables that may affect screening behaviours. This study was conducted to assess the knowledge, attitude and practices regarding breast and cervical cancer among women of reproductive age group in a village in West Bengal, India.

Materials and methods: A descriptive type of observational study was conducted in village Muchisa of Budge-Budge II block, West Bengal among 300 women from January to June 2022 using a pre-designed, pre-tested, structured schedule by face-to-face interview method. Data were analyzed using SPSS version 25.0 using suitable descriptive and inferential statistics.

Results: The mean age of the study participants was 31.6 ± 7.4 years. Out of 300 women, 41.7% and 41.3% had adequate knowledge on breast and cervical cancer respectively. Regarding attitude, 57.3% and 75.3% had highly favourable attitude on breast and cervical cancer respectively. Only 38 (12.7%) had performed breast self-examination at least once whereas only 5.3% had undergone Pap smear test at least once before the survey. Socio-demographic and economic factors of the respondents were significantly ($p<0.05$) associated with knowledge on breast cancer while none of these factors were found to have statistically significant association with knowledge on cervical cancer.

Conclusion*:* Most of the study population did not have adequate knowledge of breast and cervical cancer, their risk factors and symptoms. Their attitude was positive but practice related to screening was very unsatisfactory.

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Introduction

Globally, breast and cervical cancers are the most common cancer among women. There were about 2.3 million new cases of breast cancer worldwide and about 685 000 deaths from this disease in 2020 [1]. The burden of breast cancer is expected to increase to over 3 million new cases, and 1 million deaths every year by 2040. Likewise, there were about 570,000 new cases and 311,000 deaths of women from cervical cancer globally in 2018 [2]. It is evidenced that, approximately 83% of the world's new cases and 85% of all cervical cancer deaths reported are from developing countries [3].

Age standardized incidence rate of breast cancer in India is about 25.8 per 100,000 women that means roughly 1 in 4000 females are affected [4]. According to Globocan data 2020, breast cancer accounted for 10.6% (90,408) of all fatalities in India and 13.5% (1,78,361) of all cancer cases, with a cumulative risk of 2.81[5]. The mortality rate is

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lower in developed countries compared to developing countries due to availability of early cancer screening programmes.

The established risk factors for breast cancer include early menarche, late menopause, late pregnancy, oral contraceptives, and hormone therapy for menopause. The main risk factors for the human papillomavirus (HPV), which causes cervical cancer, include being single, being illiterate, having antibodies against the herpes simplex virus (HSV), smoking, parity and having several sex partners [6]. Breast cancer unlike other type of cancers, is an easily screenable cancer, affects an easily visible organ and has an effective treatment. One of the major causes of low survival rate among breast cancer patients in developing countries is late diagnosis, and delay in initiation of effective treatment. Early diagnosis is aided by early reporting of patients to the health care set-up which can only be possible by creating awareness about the early detection of clinical symptoms and signs. Breast self-examination (BSE) helps in early detection of breast cancer. But, several studies have reported low or inadequate knowledge and practice of BSE among women of developing countries [7-12]. Similarly, several studies have reported low state of knowledge on cervical cancer as well as practice of cervical cancer screening among rural and tribal women in India [13,14].

Improving understanding of psychological, socio-economic, and environmental factors that may influence screening behaviour is a critical element of developing screening programs to reduce breast and cervical cancer morbidity and mortality. The success and benefits of screening to control and prevent breast and cervical cancer depend to a great extent on the level of awareness of the women of reproductive age group. With this background, the present study was conducted to assess the knowledge, attitude, and practice regarding breast cancer and cervical among women of reproductive age residing in a village of Budge-Budge II block, West Bengal, India. The study also attempted to find out the association (if any) between knowledge of breast and cervical cancers and socio-demographic and other epidemiological factors.

Materials and methods

This descriptive type of observational study with cross sectional design was conducted among women of reproductive age residing in Muchisa village of Budge-Budge II block, West Bengal which is the rural field practice area of Institute of Post Graduate Medical Education and Research, Kolkata. The study period was from January to June 2022 (6 months). The study was initiated after approval from the institutional Ethics Committee (Approval letter no. IPGME&R/IEC/2022/244 dated 18.04.2022). Women of reproductive age, aged 15-49 years, who were permanent resident of that area for more than 1 year, were selected as study population. Women who did not give informed written consent were excluded from the study.

Sample size was calculated using the following formula:

$n=(Z^2 * pq)/d2$, where n=sample size, Z=1.96 (for Confidence interval = 95%), p=58% (prevalence of adequate knowledge regarding breast cancer from Singh *et al.* study)[8], q=1-p, d=relative error 10% and Non-Response=10%

Hence, putting the values in the equation: n=278 + 10% of 278 = 306

The study participants were selected from the list maintained at the sub-centre by simple random sampling. The schedule had the following sections:

1. Socio-demographic information of the respondents,
2. Information on the knowledge, attitude, and practice regarding breast and cervical cancer.

The schedule was prepared in English and later translated into Bengali (local language) by a language expert and retranslated by an independent expert. It was then pretested among 20 randomly selected women from the same setting to assess its clarity, validity, and reliability. After some minor modifications, the schedule was revaluated by the experts. The participants who were included in pretesting were excluded in the final study sample. After a brief introduction about the study and its importance, informed written consent was obtained. Data were then collected by face-to-face interview method. Investigator assured the participants that their identity and the

information they provided would be treated as confidential. A maximum of 3 visits were made to every house to minimize drop out.

The study variables were broadly dependent variables (knowledge, attitude and practice regarding breast and cervical cancers) and independent variables (socio-demographic characteristics such as age, religion, level of education, occupation, socio-economic status as per Modified BG Prasad Scale 2022 [15], type of family, etc). The forms were checked for completeness.

Knowledge of breast cancer was assessed on 7 questions. Each correct response was scored one while incorrect/do not know was scored zero. Range of knowledge scores was zero to seven. The 75^{th} percentile score (4) was taken as cut off. Those scoring 4 and above were categorized as having adequate knowledge. Attitude on breast cancer was assessed on 4 items on a 5-point Likert scale (responses ranging from strongly willing to strongly unwilling). The range of scores was 4 to 20. Respondents scoring 17 (Median) and above were said to have highly favourable attitude. The study participants were asked if they had undergone breast self-examination ever. Those who responded “yes” were said to have satisfactory practice.

Seven questions were used to assess knowledge on cervical cancer. Each accurate response was given a score of 1, while wrong or do not know responses were scored 0. Scores on knowledge ranged from 0 to 7. The cut off was set at the 75^{th} percentile score (3). Those who received a score of 3 or higher were considered to have adequate knowledge. Four items on a 5-point Likert scale measuring attitude towards cervical cancer were employed (responses ranged from highly willing to strongly unwilling). Scores ranged from 4 to 20. Respondents who received a score of 16 or higher were considered to have a highly favourable attitude. The study participants were questioned if they had ever undergone a Pap smear test. Those who replied "yes" were considered to have satisfactory practice.

Data were tabulated into Microsoft Excel 2019 (Microsoft Corp, Redmond, WA, USA) and then imported to Statistical Package for the Social Sciences (SPSS for Windows, version 25.0, SPSS Inc., Chicago, USA) for interpretation and analysis. Descriptive and inferential statistics for study variables were performed. Pearson’s Chi square test was applied to test association between knowledge of breast and cervical cancer and socio-demographic variables. A *p* value of less than 0.05 was considered statistically significant.

Results

The study was conducted among women of reproductive age group between 15-49 yrs of age Among the 306 participants contacted at their homes; data was available from 300 participants with 98% response rate. The mean age of the study participants was 31.6 ± 7.4 years and 87.3% were Hindus. Out of the total study participants, 92% were married and 81.3% were homemakers. Of the total, 29% and 26.7% had completed higher secondary and secondary level education respectively. About 45% belonged to lower middle socio-economic class according to Modified BG Prasad Scale 2022 and most of them were living in joint families (67.7%). Only 8.7% of the study participants were having past or family history of breast cancer.

All the study participants had heard the terms breast cancer and cervical cancer. A large percentage of subjects (77.3%) were aware that breast cancer is one of the most prevalent cancers in women but only 30% could correctly coin that its occurrence increases with increasing age, 33% women said that breast cancer exhibits a hereditary pattern and 71.7% of them said that it is curable if detected early (Table-1).

A mixed result was found in knowledge regarding breast self-examination. Only 17.3% respondents had knowledge of BSE and only 38 (12.7%) had performed BSE beforehand. Interestingly, friends and relatives were the most common source (31) of knowledge about BSE. Only 14 women got knowledge from health workers (Table-1).

About 81% of the women were willing to know more about breast cancer, 46.3% were strongly willing to visit a doctor if they felt any lump in their breast, all (100%) were willing to do BSE regularly if they were shown how to do it and all of them were

Table-1: *Distribution of the study population according to their knowledge, attitude, and practice regarding breast cancer (n=300)*

Information sought on	Response	Score	Number (%)
Knowledge			
i. Breast cancer is the most prevalent cancer in women	Yes	1	232 (77.3)
	No	0	33 (11.0)
	Don't know	0	35 (11.7)
ii. Breast cancer occurrence increases with age	Yes	1	90 (30.0)
	No	0	137 (45.7)
	Don't know	0	73 (24.3)
iii. Heredity has role in breast cancer occurrence	Yes	1	99 (33.0)
	No	0	143 (47.7)
	Don't know	0	58 (19.3)
iv. Breast cancer can be cured if it is detected early	Yes	1	215 (71.7)
	No	0	46 (15.3)
	Don't know	0	39 (13.0)
v. Can name any one symptom of breast cancer	Yes	1	133 (44.3)
	No	0	167 (55.7)
vi. Can name any one risk factor of breast cancer	Yes	1	76 (25.3)
	No	0	224 (74.7)
vii. Know about Breast self-examination	Yes	1	52 (17.3)
	No	0	248 (82.7)
Attitude			
i. Willing to know more about breast cancer	Strongly willing	5	57 (19.0)
	Willing	4	243 (81.0)
ii. Willing to visit doctor if subject notices any lump in breast	Strongly willing	5	139 (46.3)
	Willing	4	161(53.7)
iii. Willing to perform Breast self-examination	Strongly willing	5	300(100.0)
iv. Willing to share knowledge on breast cancer with other female friends	Willing	4	300 (100.0)
Practice			
i. Ever performed Breast self-examination	Yes	1	38 (12.7)
	No	0	262 (87.3)

willing to share this knowledge with their friends of similar age (Table-1).

Out of 300 participations, 133 (44.3%) could correctly point out at least one symptom of breast cancer and 132 (99.2%) respondents indicated presence of any lump or tumor in the breast as a symptom of breast cancer. However, there was less knowledge regarding any risk factors for breast cancer as only 25.3% (76/300) could correctly name one of them. The knowledge regarding risk factors of breast cancer among the study-population was maximum for tobacco/smoking (58, 76.3%), followed by alcohol (56, 73.7%) and least for exposure to radiation (6, 7.9%) (Table-2).

The risk factors of breast cancer currently present among the study participants were long term use of OCPs (9.3%), followed by obesity (BMI >30.0) (4%). Only 2 had history of exposure to radiation (Table-3).

Table-2: *Distribution of the study population according to their knowledge on symptoms and risk factors of breast cancer*

Knowledge on	Number (%)
Symptoms of breast cancer (n=133)*	
Any lumps or tumor in the breast that don't hurt	132 (99.2)
Any change in the breast skin texture/colour	93 (69.9)
Any change in the breast shape/shape of the nipple or its direction	15 (11.3)
Any abnormal or bloody discharge from the nipple	68 (51.1)
Occurrence of any ulceration on the skin/nipple which doesn't heal	39 (29.3)
Risk factors of breast cancer (n=76)*	
Late menopause	13 (17.1)
Early menarche	22 (28.9)
Nulliparity	9 (11.8)
Late childbearing	10 (13.1)
Little or no breastfeeding	49 (64.5)
Oral contraceptive pills	18 (23.5)
Exposure to radiation	6 (7.9)
Alcohol	56 (73.7)
Obesity	25 (32.9)
Tobacco/ smoking	58 (76.3)

**Includes multiple response*

Table-3: *Distribution of the study population currently having risk factors of breast cancer (n=300)**

Currently having risk factors of breast cancer	Number (%)
Early menarche	7 (2.3)
Nulliparity	10 (3.3)
Late childbearing	4 (1.3)
Little or no breastfeeding	10 (3.3)
Oral contraceptive pills (OCP)	28 (9.3)
Exposure to radiation	2 (0.7)
Alcohol	7 (2.3)
Obesity (BMI >30.0)	12 (4.0)
Tobacco/ smoking	6 (2.0)

**Includes multiple response*

It was found that nearly half (49.0%) of the study participants recognised cervical cancer as a major public health problem. Only 33 (11%) could name at least one symptom correctly, 35 (11.7%) could say at least one risk factor and 13.3% responded 'yes' when asked if HPV was a causative agent of cervical cancer. More than half (56.7%) said that cervical cancer was preventable and 64% said that it could be cured if detected early (Table-4). Only 25 (8.3%) had knowledge about Pap smear and only 5.3% had undergone the test, at least once, on their own. Out those who knew about Pap smear test, most of them heard it from health care workers (19/25), followed by friends and relatives (8/25). About 87.3% were willing to know more about cervical cancer and 66% were inclined towards visiting a doctor if they noticed any post-menopausal bleeding or abnormal vaginal discharge. Around 60% were willing to undergo Pap smear test but the rest 40% were not sure (Table-4).

Table-4: *Distribution of the study population according to their knowledge, attitude, and practice regarding cervical cancer (n=300)*

Information sought on	Response	Score	Number (%)
Knowledge			
i. Cervical cancer is a major health care problem among reproductive age group women	Yes	1	147 (49.0)
	No	0	66 (22.0)
	Don't know	0	87 (29.0)
ii. Can name any one symptom of cervical cancer	Yes	1	33 (11.0)
	No	0	267 (89.0)
iii. Can name any one risk factor of cervical cancer	Yes	1	35 (11.7)
	No	0	265 (88.3)
iv. Is HPV a causative agent of cervical cancer?	Yes	1	40 (13.3)
	No	0	82 (27.3)
	Don't know	0	178 (59.3)
v. Cervical cancer is preventable	Yes	1	170 (56.7)
	No	0	71 (23.7)
	Don't know	0	59 (19.7)
vi. Cervical cancer is curable if detected early	Yes	1	192 (64.0)
	No	0	56 (18.7)
	Don't know	0	52 (17.3)
vii. Know about Pap smear test	Yes	1	25 (8.3)
	No	0	275 (91.7)
Attitude			
i. Willing to know more about cervical cancer	Strongly willing	5	38 (12.7)
	Willing	4	262 (87.3)
ii. Willing to visit doctor if subject notices any abnormal vaginal discharge	Strongly willing	5	102 (34.0)
	Willing	4	198(66.0)
iii. Willing to undergo Pap smear test	Willing	4	180 (60.0)
	Neutral	3	120 (40.0)
iv. Willing to share knowledge on cervical cancer with other female friends	Willing	4	300 (100.0)
Practice			
i. Ever undergone Pap smear test	Yes	1	16 (5.3)
	No	0	284 (94.7)

The knowledge regarding symptoms of cervical cancer depicted by the study population was bleeding after menopause (32), persistent blood-tinged vaginal discharge (31) and foul-smelling vaginal discharge (28). None of the study participants were having any symptoms pertinent to cervical cancer. Out of the 35 participants who could name the risk factors of cervical cancer, 35, 30 and 24 respondents identified multiple sexual partners, sexually transmitted diseases and family history of cancer respectively as the (24) (Table-5).

Table-5: *Distribution of the study population according to their knowledge on symptoms and risk factors of cervical cancer*

Knowledge on	Number (%)
Symptoms of cervical cancer (n=33)*	
Intra or post coital bleeding	26 (78.8)
Post menopausal bleeding	32 (97.0)
Persistent blood-tinged vaginal discharge	31 (93.9)
Lower abdominal pain	25 (75.8)
Weight loss	10 (30.3)
Foul smelling vaginal discharge	28 (84.8)
Risk factors of cervical cancer (n=35)*	
Conceiving multiple times	11 (31.4)
Oral contraceptive pills	19 (54.3)
Family history	24 (68.6)
Early marriage	17 (48.6)
Poor dietary habits	4 (11.4)
Having multiple sexual partners	35 (100.0)
Smoking	21 (60.0)
Sexually transmitted disease	30 (85.7)

**Includes multiple response*

The mean knowledge score on breast cancer was 2.99 ± 1.63, median score was 3 and 75th percentile score was 4. About 41.7% of the study population had adequate knowledge on breast cancer. The mean attitude score on breast cancer was 16.65 ± 0.62 and median score was 17. About 57.3% had highly favourable attitude (Table-6 and 7).

The mean knowledge score on cervical cancer was 2.14 ± 1.54, median score was 2 and 75th percentile score was 3. About 41.3%% of the study population had adequate knowledge on cervical cancer. The mean attitude score on cervical cancer was 16.07 ± 0.79 and median score was 16. About 75.3% had highly favourable attitude (Table-6 and 7).

Table-6: *Range of scores and central tendency measures of knowledge, attitude, and practice regarding breast and cervical cancer among the study population (n=300)*

Cancer	Variable	Possible maximum score	Mean (±SD) score	Median score	Range score
Breast cancer	Knowledge	7	2.99 ± 1.63	3	6 (0, 6)
	Attitude	20	16.65 ± 0.62	17	2 (16, 18)
	Practice*	1	-	-	1 (0, 1)
Cervical cancer	Knowledge	7	2.14 ± 1.54	2	7 (0)
	Attitude	20	16.07 ± 0.79	16	3 (15, 18)
	Practice*	1	-	-	1 (0, 1)

**Practice was evaluated on only 1 item for both types of cancers*

Age group, marital status, occupation and socio-economic status of the respondent were significantly associated with knowledge on breast cancer (Table-8). None of the socio-demographic factors were found to have statistically significant association with knowledge on cervical cancer (Table-9).

Table-7: *Distribution of the study population according to their knowledge, attitude, and practice regarding breast and cervical cancer (n=300)*

Cancer	Variable		Number (%)
Breast Cancer	Knowledge	Adequate	125 (41.7)
		Inadequate	175 (51.3)
	Attitude	Highly favourable	172 (57.3)
		Favourable	128 (42.8)
	Practice	Satisfactory	38 (12.7)
		Unsatisfactory	262 (87.3)
Cervical Cancer	Knowledge	Adequate	124 (41.3)
		Inadequate	176 (58.7)
	Attitude	Highly favourable	226 (75.3)
		Favourable	74 (24.7)
	Practice	Satisfactory	16 (5.3)
		Unsatisfactory	284 (94.7)

Table-8: *Association between knowledge regarding breast cancer and socio-demographic variables (n=300)*

Socio-demographic Variables		Adequate knowledge	Inadequate knowledge	Chi square test df	*p* value
Age group (yrs)	15 to 25	31 (44.9)	38 (55.1)	9.400;	0.009
	26 to 35	49 (33.3)	98 (66.7)	2	
	≥36	45 (53.6)	39 (46.4)		
Marital status	Married	110 (39.9)	166 (60.1)	4.658;	0.031
	Unmarried	15 (62.5)	9 (37.5)	1	
Education	Illiterate	9 (60.0)	6 (40.0)	4.938;	0.294
	Primary	11 (35.5)	20 (64.5)	4	
	Middle school	41 (47.1)	46 (52.9)		
	Secondary	33 (41.3)	47 (58.8)		
	≥Higher Secondary	31 (35.6)	56 (64.4)		
Occupation	Homemaker	93 (38.1)	151 (61.9)	6.785;	0.009
	Employed	32 (57.1)	24 (42.9)	1	
Socio-economic status	Upper Middle	10 (50.0)	10 (50.0)	14.195;	0.003
	Middle	14 (22.6)	48 (77.4)	3	
	Lower Middle	68 (50.4)	67 (49.6)		
	Lower	33 (39.8)	50 (60.2)		
Type of family	Joint	86 (42.4)	117 (57.6)	0.126;	0.723
	Nuclear	39 (40.2)	58 (59.8)	1	
History of cancer in family	Breast cancer	9 (56.3)	7 (43.8)	2.466;	0.291
	Other cancer	13 (50.0)	13 (50.0)	2	
	Nil	103 (39.9)	155 (60.1)		

df: degree of freedom

Table-9: *Association between knowledge regarding cervical cancer and socio-demographic variables (n=300)*

Socio-demographic Variables		Adequate knowledge	Inadequate knowledge	Chi square; df	*P* value
Age group	15 to 25	30 (43.5)	39 (56.5)	0.278;	0.870
	26 to 35	61 (41.5)	86 (58.5)	2	
	≥36	33 (39.3)	51 (60.7)		
Marital status	Married	112 (40.6)	164 (59.4)	0.808;	0.393
	Unmarried	12 (50.0)	12 (50.0)	1	
Education	Illiterate	5 (33.3)	10 (66.7)	2.794;	0.593
	Primary	11 (35.5)	20 (64.5)	4	
	Middle school	32 (36.8)	55 (63.2)		
	Secondary	36 (45.0)	44 (55.0)		
	≥Higher Secondary	40 (46.0)	47 (54.0)		
Occupation	Homemaker	97 (39.8)	147 (60.2)	1.344;	0.246
	Employed	27 (48.2)	29 (51.8)	1	
Socio-economic status	Upper Middle	11 (55.0)	9 (45.0)	1.741;	0.628
	Middle	24 (38.7)	38 (61.3)	3	
	Lower Middle	55 (40.7)	80 (59.3)		
	Lower	34 (41.0)	49 (59.0)		
Type of family	Joint	86 (42.4)	117 (57.6)	0.275;	0.600
	Nuclear	38 (39.2)	59 (60.8)	1	
History of cancer in family	Breast cancer	8 (50.0)	8 (50.0)	0.982;	0.612
	Other cancer	9 (34.6)	17 (65.4)	2	
	Nil	107 (41.5)	151 (58.5)		

df: degree of freedom

Discussion

Most cancer patients in India usually seek medical advice when the disease is in an advanced stage. This may be attributed to lack of awareness on various screening programmes. This study attempted to assess the knowledge and attitude of reproductive age group women on breast and cervical cancer as these two are the commonest cancers occurring amongst Indian women. Along with this, presence of various self-reported risk factors was also documented.

Gangane *et al.* from their study from Wardha district in rural Maharashtra reported that about 63% of the study participants were aware of breast cancer [14].This was greater than the present study findings where 41.7% had adequate knowledge on breast cancer. Very high proportions (89%) of women were reported aware of breast cancer in Trichy, Tamil Nadu India [9].

BSE is an inexpensive, simple, noninvasive method for early detection of breast tumors. Thus, knowledge about this procedure and consistent practice can impede severe morbidity and mortality due to breast cancer. Only 52 (17.3%) of the study participants in the current study knew of BSE which was strikingly unusual and was a matter of concern. In Prathipadhu, Guntur, Andhra Pradesh almost 70% of the respondents had not heard of BSE [10]. Around 62.5% of the women did not have any idea of the procedure of BSE in Trichy, Tamil Nadu [9]. On the contrary, Baburajan *et al* [11] in their study in rural Ramanagara district in Karnataka reported that 85.1% of respondents had never heard of BSE which is a significantly lower proportion that the current study.

In the present study, only 38 (12.7%) women responded that they perform BSE. In Tamil Nadu, BSE was practiced by 18% women and out of them,

only 5% participants practiced it regularly every month [9]. In Karnataka study, less than 10% of women had ever performed BSE [11]. A very small proportion of the participants reported practicing BSE at least once in Maharashtra study (3.45%) [12].

About 97.5% were willing to approach a doctor in case of presence of lump/abnormality in their breast in Trichy as reported by Kumarasamy *et al* [11] which was lower than this study (100%). In the present study, all of the study participants were willing to do BSE regularly if they were taught about the technique while the response was 83% in Tamil Nadu study [9].

Oral contraceptive pill usage was found as the most prevalent risk factor for breast cancer in the present study. However, other similar studies on breast cancer mentioned only about the awareness of risk factors among the study participants and not regarding the presence of risk factors.

Over 99% had not heard about Pap smear in a study in Tripura, India by Banik *et al* [13]. In the present study, 91.7% had never heard Pap smear test before. The respondents in Tripura did not undergo any screening test for cervical cancer citing absence of symptoms as the main reason. About 5.3% of the women in this study reported undergoing Pap smear test. According to Ghosh *et al* [14] in a study among tribal women in Karnataka, 82.9% of the participants said they had heard of cervical cancer, only 2.3% were aware that it could be detected early and only 51% knew that it could be prevented. However, 99.9% were in favour of cervical cancer screening. None of them had undergone screening for cervical cancer.

Limitations

The study was conducted in only one village of a large block thus limiting the generalization of the findings. Also, some of the respondents may have given socially favourable answers. Inclusion of a health education intervention followed by post test among the study participants would have been better.

Conclusion

Most of the study participants did not have adequate knowledge of breast cancer and cervical cancer, its risk factors and symptoms. Their attitude was positive but practice related to screening was very unsatisfactory. Knowledge and practice regarding breast self-examination and Pap smear test were poor. Age group of the study population, occupation and family history of cancer were found to have statistically significant association with knowledge on breast cancer. More awareness programmes stressing on screening methods including availability of HPV vaccine should be carried out, especially in rural areas.

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Authors' contribution

KR, VC, MB and VS equally involved in Concept devlopment and design of the study, analysis and interpretation of data, drafting and revising and final approval of the manuscript.

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Conflict of interest

There are no conflicts of interest.

References

1. Arnold M, Morgan E, Rumgay H, Mafra A, Singh D, Laversanne M, et al. Current and future burden of breast cancer: global statistics for 2020 and 2040. *Breast*. 2022 Dec; **66**: 15-23. doi: 10.1016/j.breast.2022.08.010.
2. Arbyn M, Weiderpass E, Bruni L, de Sanjosé S, Saraiya M, Ferlay J, et al. Estimates of incidence and mortality of cervical cancer in 2018: a worldwide analysis. *Lancet Glob Health*. 2020; **8**(2): e191–203. https://doi.org/10.1016/S2214-109X(19)30482-6.

3. World Health Organization. Comprehensive Cervical Cancer Control. A guide to essential practice. Geneva: WHO; 2006.

4. Malvia S, Bagadi SA, Dubey US, Saxena S. Epidemiology of breast cancer in Indian women. *Asia Pac J Clin Oncol*. 2017; **13**(4): 289-295. doi: 10.1111/ajco.12661.

5. International Agency for Research on Cancer. India. Source: Globocan 2020 [Internet]. Availablefrom: https://gco.iarc.fr/today/data/factsheets/populations/356-india-fact-sheets.pdf. [Accessed on 17 May 2023]

6. Kolawole A. Cervical cancer prevention in Nigeria: issues arising. *Int J Genomics Proteomics*. 2012; **6**(2).

7. Taşçı A, Usta YY. Comparison of knowledge and practices of breast self examination (BSE): a pilot study in Turkey. *Asian Pac J Cancer Prev*. 2010; **11**(5): 1417-1420.

8. Singh R, Turuk A. A study to assess the knowledge regarding breast cancer and practices of breast self-examination among women in urban area. *Int J Community Med Public Health*. 2017; **4**: 4341–4347. DOI: https://doi.org/10.18203/2394-6040.ijcmph20174856

9. Kumarasamy H, Veerakumar AM, Subhathra S, Suga Y, Murugaraj R. Determinants of awareness and practice of breast self examination among rural women in Trichy, Tamil Nadu. *J Mid-life Health.* 2017; **8**: 84-88. doi: 10.4103/jmh.JMH_79_16

10. Yerpude PN, Jogdand KS. Knowledge and practice of breast self-examination (BSE) among females in a rural area of South India. *Natl J Community Med* [Internet]. 2013; **4**(02): 329-332. doi: 10.4081/jphia.2019.805

11. Baburajan C, Pushparani MS, Lawenya M, Lukose L, Johnson AR. Are rural women aware of breast cancer and do they practice breast self-examination? A cross-sectional study in a rural hospital in South India. *Indian J Cancer*. 2022; **59**: 354-359. doi: 10.4103/ijc.IJC_799_19

12. Gangane N, Nawi N, Sebastian MS. Women's knowledge, attitudes, and practices about breast cancer in a rural district of central India. *Asian Pac J Cancer Prev*. 2015; **16**(16): 6863-6870. doi: 10.7314/apjcp.2015.16.16.6863.

13. Banik S, Sahu DP, Bhattacharjya H. Knowledge and practice regarding cervical cancer prevention among women in a rural area of Tripura, *India. Int J Community Med Public Health*. 2022; **9**: 763-766. doi:10.18203/2394-6040.ijcmph20220236

14. Ghosh S, Mallya SD, Shetty RS, Pattanshetty SM, Pandey D, Kabekkodu SP, et al. Knowledge, attitude and practices towards cervical cancer and its screening among women from tribal population: a community-based study from southern India. *J Racial Ethn Health Disparities*. 2021; **8**: 88-93. doi: 10.1007/s40615-020-00760-4

15. Pentapati SSK, Debnath DJ. Updated BG Prasad's classification for the year 2022. *J Family Med Prim Care*. 2023; **12**: 189-190.

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