



## KNOWLEDGE ON BREAST CANCER AMONG WOMEN IN NORTH EASTERN STATES OF INDIA: AN ONLINE SURVEY

Maongkala Aier., Bijaya Thongam., Manju Chapagain., Reshma Begum and Unmona Borgohain Saikia

Asian Institute of Nursing Education, Guwahati Assam

### ARTICLE INFO

**Article History:**

Received 6<sup>th</sup> June, 2021

Received in revised form 15<sup>th</sup> July, 2021

Accepted 12<sup>th</sup> August, 2021

Published online 28<sup>th</sup> September, 2021

**Key words:**

Knowledge, Breast Cancer, Online Survey, Women.

### ABSTRACT

Breast cancer is the most common invasive cancer in women, and the second main cause of cancer death in women, after lung cancer. Incidence of breast cancer has increased in recent years. Screening helps in early detection of cancer and early diagnosis and timely treatment of breast cancer lead to a better prognosis. The present study was carried out among women in an urban area with objective to assess knowledge of women in age group 20-60 years regarding knowledge of breast cancer.

**Method:** An online survey was done among 210 women using structured questionnaire.

**Results:** The overall level of knowledge regarding breast cancer among women reveals that out of 210 women, majority i.e.125(59.52%) had moderately adequate knowledge, 52(24.76%) had inadequate knowledge and 33(15.71%) had adequate knowledge. The mean score was 12.96±4.19. The study also reveals that the demographic variables number of children and sedentary lifestyle had shown statistically significant association with level of knowledge regarding breast cancer among women at  $p < 0.05$  and  $p < 0.01$  respectively.

Copyright©2021 Maongkala Aier et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

### INTRODUCTION

Breast cancer is the most frequent cancer among women, impacting 2.1 million women each year, and also causes the greatest number of cancer related death among women. Cancer occurs when changes called mutations take place in genes that regulate cell growth. The mutations let the cells divide and multiply in an uncontrolled way.<sup>1</sup> The risk of breast cancer increases with age; most breast cancers are diagnosed after age 50. Rates of breast cancer are low in women under 40. Rates begin to increase after age 40 and are highest in women over age 70.<sup>2</sup> With being the most common type of cancer in women, breast cancer accounts for 14% of cancers in Indian women. Breast cancer is on the rise, both in urban and rural Indian. A 2018 report of breast cancer statistics recorded 1,62,468 new registered cases and 87,090 reported death. As the most common cancer type in Indian women, women in their early thirties till fifties are at considerable risk to develop breast cancer, and the incidence risk increases till its peak by the time they reach 50-64 years of age. One in twenty-eight Indian women is likely to develop breast cancer during her lifetime.<sup>3</sup> There are many different types of breast cancer, to determine an appropriate approach to treating the disease, first to evaluate the specifics of the breast tumor including whether the disease has spread beyond the breast and the type of tissue

where the disease began. Most types of breast cancers are adenocarcinomas of the breast.<sup>4</sup>

Certain factors increase the risk of breast cancer including increasing age, obesity, harmful use of alcohol, family history of breast cancer, history of radiation exposure, reproductive history (such as age that menstrual period began and age at first pregnancy), tobacco use and postmenopausal hormone therapy.<sup>5</sup>

Breast cancer is sometimes found after symptoms appear, but many women with breast cancer have no symptoms. The most common symptom is a lump in breast or armpit. Others include skin changes, pain, a nipple that pulls in-ward, and unusual discharge from your nipple. This is why regular breast cancer screening is so important.<sup>6</sup> Early diagnosis of cancer focuses on detecting symptomatic patients as early as possible so they have the best chance for successful treatment. Early diagnosis improves cancer outcomes by providing care at the earliest possible stage.<sup>5</sup> Treatment of breast cancer often consists of a combination of surgical removal, radiation therapy and medication (hormonal therapy, chemotherapy and/or targeted biological therapy) to treat the microscopic cancer that has spread from the breast tumor through the blood. Such treatment, which can prevent cancer growth and spread, thereby saves lives.<sup>5</sup>

\*Corresponding author: Maongkala Aier

Asian Institute of Nursing Education, Guwahati Assam

**Objectives**

1. To assess the knowledge of breast cancer among women in northeastern states of India.
2. To find out the association between the knowledge of breast cancer with selected demographic variables among women in Northeastern states of India.

**Review of Literature**

Section A - Knowledge regarding breast cancer

Singh R and Turuk A (2017) conducted a community based cross-sectional study with 100 subjects of age group 20-60 years to assess the knowledge regarding breast cancer and practices of breast self-examination among women in urban area. The subjects were selected by multistage sampling technique and the data were obtained through the use of structured questionnaire. The study revealed that, out of 100 women, 58% had knowledge that breast cancer was the most prevalent cancer among women, 52% knew what breast self-examination is and 28% were practicing breast self-examination. The study concluded, there is a need for developing health programs about symptoms and early signs of breast cancer with emphasis on the importance of early breast cancer detection. Breast self-examination should be encouraged. The health education programs and mass media education should be targeted towards females in the age group between 20 years above, ideally those 35 years of age and above. Further research regarding knowledge and practice of women towards breast cancer is recommended.<sup>6</sup>

Santhana L, Sugunadevi G (2017), conducted a cross-sectional study on knowledge about breast cancer among 200 women aged 20-30 years in CSI Kalyani Multi-Speciality Hospital, Chennai, Tamil Nadu. The study showed that most women (91%) were not aware about the risk factors of Breast cancer and only 7.5% knew that lesser duration of breast-feeding for 6 months is an important risk factor for breast cancer. 89.5% were not aware about the symptoms of breast cancer. 92.5% were not aware about the preventive measures of breast cancer. None of them were aware of breast self-examination (BSE) as an important early detection measure of breast cancer. The study concluded that the knowledge on risk factors, symptoms and on the preventive measures of breast cancer among the women aged 20-30 years was very low. To increase the awareness about breast cancer in the community, frequent educational interventions and screening programs needs to be conducted by health workers.<sup>7</sup>

Section B- Risk Factors of breast cancer

Abedralrahman, Sarab K et.al., (2018) conducted a retrospective case control study on 147 breast cancer cases compared with 161 non-malignant cases selected randomly from women health center in Al-Elwyia maternity teaching hospital to identify the risk factors of breast cancer. The study results shows, increased risk for breast cancer significantly associated with increased age especially 60 years, widow or divorced women (OR 3.7, CI (1.5-1.8)), menopause (OR 6.43, CI(1.04-3.8)), age at menarche <12 years (OR 1.99, CI (1.04-3.8), and use of contraceptive pills for 1 year (OR 1.99, CI (1.01-3.95)). The study concluded that positive risk factor for breast cancer was old age 60 years, widow or divorced women, menopause, age at menarche<12 years, and use of contraceptive pills for 1 year. Family history, 2<sup>nd</sup> degree relative, not associated with breast cancer. There are some

discrepancies between our findings and other studies in the literature need further studies.<sup>8</sup>

**METHODS AND MATERIALS**

Quantitative research approach was adopted for the study. 210 women in the age group of 18-60 years from North eastern states of India were selected using purposive sampling technique. Consent was taken through social media. An online survey was performed using structured questionnaire to assess the knowledge regarding breast cancer among women in North Eastern States of India.

**Table 1** Frequency and percentage distribution of women according to the demographic variables

Demographic Variables	n = 210	
	Frequency (f)	Percentage (%)
<b>1. Age in years</b>		
a. 20	27	12.8
b. 21-40	170	81.0
c. 41-60	12	5.7
<b>2. Educational status of women</b>		
a. Primary school	1	0.5
b. High school	11	5.2
c. Secondary school	17	8.1
d. Graduate and above	181	86.2
<b>3. Occupation</b>		
a. Daily wage	38	18.1
b. Housewife	20	9.5
c. Employed	149	71.0
d. Retired	3	1.4
<b>4. Marital status</b>		
a. Married	38	18
b. Unmarried	170	81.0
c. Divorce	2	1.0
<b>5. Number of children</b>		
a. None	179	85.2
b. 1-2	24	11.4
c. 3-4	6	2.9
d. 5	1	0.5
<b>6. Regularity of menstruation</b>		
a. Regular	186	88.6
b. Irregular	24	11.4
<b>7. Menopause</b>		
a. Attained	19	9.0
b. Not attained	191	91.0
<b>8. History of oral contraceptive pills intake</b>		
a. Yes	26	12.4
b. No	184	87.6
<b>9. History of breast feeding</b>		
a. Yes	31	14.8
b. No	179	85.2
<b>10. Previous history of cancer</b>		
a. Yes	2	1.0
b. No	208	99.0
<b>11. Family history of cancer</b>		
a. Yes	5	2.4
b. No	205	97.6
<b>12. History of thyroid problems</b>		
a. Yes	19	9.0
b. No	191	91.0
<b>13. Sedentary lifestyle</b>		
a. Yes	80	38.1
b. No	130	61.9

The table 1 shows that out of 210 women, most of the women 170(81%) were in the age group of 21 – 40 years, 181(86.2%) were graduate and above, 149(71%) were employed, 170(81%) were unmarried, 179(85.2%) had no children, 186(88.6%) had regular menstruation, 191(91%) had not attained menopause, 184(87.6%) had no history of oral contraceptive pills intake, 179(85.2%) had no history of breast feeding, 208(99%) had no previous history of cancer,

205(97.6%) had no family history of cancer, 191(91%) had no history of thyroid problems and 130(61.9%) were not leading a sedentary lifestyle.

**Table 2** Frequency and percentage distribution of women according to the level of knowledge regarding breast cancer.

n= 210

Knowledge	Inadequate ( 50%)		Moderately Adequate 51 – 75%)		Adequate (>75%)		Mean S.D
	f	%	f	%	f	%	
General aspect	56	26.67	92	43.81	62	29.52	1.97 0.87
Risk Factors	104	49.52	0	0	106	50.48	1.39 0.69
Signs & Symptoms	73	34.76	68	32.38	69	32.86	1.87 1.00
Diagnostic evaluation and treatment	125	59.52	58	27.61	27	12.86	3.05 1.41
Prevention	78	37.14	106	50.48	26	12.38	4.69 1.76
Overall Knowledge	52	24.76	125	59.51	33	15.71	12.96 4.19

The table 2 depicts that with regard to general aspect 92(43.81%) had moderately adequate knowledge, 62(29.52%) had adequate knowledge and 56(26.67%) had inadequate knowledge. The mean score was 1.97±0.87.

With respect to risk factors, 106(50.48%) had adequate knowledge and 104(49.52%) had inadequate knowledge. The mean score was 1.39±0.69.

Regarding signs and symptoms, 73(34.76%) had inadequate knowledge, 69(32.86%) had adequate knowledge and 68(32.38%) had moderately adequate knowledge. The mean score was 1.87±1.00.

Considering the diagnostic evaluation and treatment, 125(59.51%) had inadequate knowledge, 58(27.61%) had moderately adequate knowledge, 27(12.86%) had adequate knowledge. The mean score was 3.05±1.41.

With regard to prevention of breast cancer, 106(50.48%) had moderately adequate knowledge, 78(37.14%) had inadequate knowledge and 26(12.38%) had adequate knowledge. The mean score was 4.69±1.76.

The overall level of knowledge regarding breast cancer among women revealed that 125(59.52%) had moderately adequate knowledge, 52(24.76%) had inadequate knowledge and 33(15.71%) had adequate knowledge. The mean score was 12.96±4.19.

**Table 3** Association of level of knowledge regarding breast cancer among women with their selected demographic variables

n = 210

SL. No	Socio- demographic performa	Calculated chi-square value t <sup>2</sup>	Degree of freedom (df)	p- value	Remarks
1.	Age in years	8.951	6	0.176	NS
2.	Educational status	10.938	6	0.090	NS
3.	Occupation	7.706	6	0.260	S*
4.	Marital status	1.638	4	0.802	NS
5.	Number of Children	14.792	6	0.022	S*
6.	Regularity of menstruation	1.691	2	0.429	NS
7.	Attainment of menopause	4.156	2	0.125	NS
8.	History of oral contraceptive pills use	1.166	2	0.558	NS
9.	History of breast feeding	1.682	2	0.431	NS
10.	Previous history of cancer	2.041	2	0.360	NS
11.	Family history of cancer	2.297	2	0.317	NS
12.	History of thyroid problems	4.723	2	0.094	NS
13.	Sedentary life	9.500	2	0.009	S**

\*\*p<0.01, \*p<0.05, S – Significant, N.S – Not Significant

The table 3 shows that the demographic variables like number of children and sedentary lifestyle had shown statistically significant association with level of knowledge regarding breast cancer among women at p<0.05 and p<0.01 respectively and the other demographic variables had not shown statistically significant association with level of knowledge regarding breast cancer among women.

## DISCUSSION

The present study showed that majority i.e 50.48% women had adequate knowledge on risk factors of breast cancer whereas 49.52% had inadequate knowledge which is in contrast to a cross-sectional study done by Santhana L, Sugunadevi G (2017), on knowledge about breast cancer among 200 women aged (20-30) years in CSI Kalyani Multi-Speciality Hospital, Chennai, Tamil Nadu and the study showed that most women (91%) were not aware about the risk factors of Breast.<sup>7</sup>

The study finding revealed that majority of the women i.e 34.76% had inadequate knowledge on sign and symptoms of breast cancer which is in accord with the cross sectional study done by Ng'ida FD, Kotoroi GL, Mwangi R, Mabelele MM, Kitau J and Mahande MJ to assess the knowledge and practice on breast cancer among women aged 35 years and above in Lubungo, Newland and Fulwe villages and Mikese ward in Morogoro and the study revealed that only 37.7% knew about the signs and symptoms.<sup>9</sup>

The finding of the study revealed that majority 59.51% had inadequate knowledge on the diagnostic evaluation and treatment of breast cancer which is in contrast to the cross sectional study conducted by Singh R, Shetty N, et.al to assess the breast cancer awareness among 500 women belonging to the age group of 18-70 years in urban area of Mumbai which showed that most i.e 85.71% of the respondents knew about breast self examination but awareness regarding diagnostic tests was limited to mammography and biopsy whereas 90.47% of the women were willing to undergo these tests and majority i.e 66.67% of women reported that the best treatment for breast cancer was surgery.<sup>10</sup>

The study finding on the overall level of knowledge regarding breast cancer among women revealed that majority i.e 59.52% had moderately adequate knowledge on breast cancer which is in contrast to the cross-sectional survey done by Chattu VK, Kumary S, Bhagavathula AS (2018), among 189 females attending the two days health exhibition event at a polyclinic, in Al-Buraimi which showed that out of the total of 189 participants, 80% had information regarding breast cancer and they had better knowledge of symptoms but less knowledge about risk factors.<sup>11</sup>

The study revealed that demographic variables like number of children and sedentary lifestyle had shown statistically significant association with level of knowledge regarding breast cancer among women at p<0.05 and p<0.01 respectively.

## CONCLUSION

The study concludes that the overall level of knowledge regarding breast cancer among women was moderately adequate knowledge 125(59.52%). The mean score was 12.96±4.19. One of the leading causes of high breast cancer deaths is lack of awareness and screening leading to the late

presentation at an advanced stage. Therefore more emphasis must be given to create awareness among women about breast cancer for its early detection and treatment.

## References

1. Connie H Y, Debra W, Barbara H G, Eight Edition cancer nursing principles and practice, 2018.
2. Susan G Komen, Breast cancer in Women. <http://www.komen.org>
3. Statistics of breast cancer in India- Cytecare Hospitals. <https://cytecare.com>
4. Cancer Treatment Centers of America (CTCA). <https://www.cancercenter.com>
5. Breast cancer- World Health Organization. <https://www.who.int>
6. Breast cancer- American Cancer society. <http://www.cancer.org>
7. Santhana Lakshmi M, Sugunadevi. A cross- sectional study on knowledge about breast cancer among women aged 20-30 years. *Int J community Med Public Health* 2017. DOI: <http://dx.doi.org/10.18203/2394-6040.ijcmph20174646>
8. Abedalrahman SK, *et al.* Risk factors of breast cancer among Iraqi women. *Journal of Contemporary Medical Sciences* June 2019 <http://www.jocms.org/index.php/jcms/article/view/609>
9. Ng'ida FD, Kotoroi GL, *et.al.* Knowledge and practices on breast cancer detection and associated challenges among women aged 35 years and above in Tanzania: a case in Morogoro Rural District. *Dovepress journal: Breast Cancer: Targets and Therapy* May 2019. DOI: <http://doi.org/10.2147/BCTT.s199889>
10. Singh R, Shetty N, Rai P, Yadav G, Gandhi M, Naveed M, Ronghe AM. Breast cancer awareness among women in an urban setup in Western India. *Indian J Med Paediatric Oncology* March 2018. <http://www.ijmpo.org/text.asp?2018/39/2/215/228094>
11. Chattu VK, Kumary S, Bhagvathula AS, community based study on the knowledge, awareness, and practices of females towards breast cancer in Buraimi, Oman. *South Asian J Cancer*, October 2018. <http://journal.sajc.org/text.asp?2018/7/4/215/242801>

### How to cite this article:

Maongkala Aier *et al* (2021) 'Knowledge on Breast Cancer among Women in North Eastern States of India: an Online Survey', *International Journal of Current Advanced Research*, 10(9), pp. 25238-25241. DOI: <http://dx.doi.org/10.24327/ijcar.2021.25241.5037>

\*\*\*\*\*