

Knowledge and Practice Regarding Breast Cancer among Women in Rural Telangana

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ABSTRACT

Background: Breast Cancer (BC) being the second most common cancer globally, impacting 2.1 million women every year, and also causing the highest number of cancer-related deaths among women. BC is the most common cancer in most cities and second most common in rural India. BC is considered as disease of rich lately, but due to westernisation it is now a disease in moderate and low economic countries too.

Methods: A cross-sectional study was conducted among 225 women with a pre-tested, semi structured questionnaire in order to assess their knowledge regarding Breast Cancer. Data collected was analysed using SPSS software.

Results: 83.1% of the participants knew that breast cancer is a killer disease and only 11.1% knew about breast self-examination and only 5.8% do BSE. Lacking knowledge about procedure of BSE (100%) was identified as important barrier for conducting BSE among women who were aware of it and not practicing.

Conclusions: majority of the women were aware of breast cancer but doesn't have clue regarding breast self-examination and very few participants were practising BSE.

Keywords: Breast Cancer, Self-examination, Women

INTRODUCTION

In present era, the prevalence of Non-Communicable diseases is in increasing trends and is a major public health concern. Cancer is one among them where most of the deaths occur. Cancer is defined as a large group of diseases

characterised by abnormal growth of cells uncontrollably, ability to invade adjacent tissues and distant organs eventually leading to death of the affected person.¹ Cancer is the second leading cause of death globally, and is responsible for an estimated 9.6 million deaths in 2018. Breast Cancer (BC) being the second most common cancer globally, impacting 2.1 million women every year, and also causing the highest number of cancer-related deaths among women. In 2018, about 627,000 deaths occurred from BC, approximating 15% of all cancer deaths among women.² BC is the most common cancer in most cities and second most common in rural India. BC is considered as disease of rich lately, but due to westernisation it is now a disease in moderate and low economic countries too. In 2018, 1,62,468 new cases and 87,090 deaths were reported for BC in India.³ In view of magnitude of the problem, India has launched National Cancer Control Programme in 1975-76, which is now integrated with National Programme on Prevention and Control of Diabetes, Cardiovascular Disease and Stroke (NPCDCS). The services provided under this programme are health education, early detection and diagnosis, strengthening of existing institutions for palliative care.¹ There are different tests like Ultrasonography, Mammogram, MRI and gene tests to detect various types of BC. But still majority of them are diagnosed in late stages because of social stigma and lack of

knowledge of the risk factors, symptoms, availability of diagnostic facilities. Hence, the present study was taken up to assess the knowledge of rural women regarding awareness of BC and also to educate them about early detection, treatment of BC and hence reduce the mortality.

METHODS

Study Design: Cross Sectional Study.

Study Period: May, 2019 to July, 2019.

Study Setting: 3 randomly selected villages out of 11 villages attached to rural health centre of a medical college in Telangana state.

Sample size: 225 by using formula $4pq/l^2$, where $p=83.2\%$ based on previous study,⁴ $l = 5\%$.

Study Subjects: Women of aged 20 – 60 years residing in the study area for the last one year.

Sampling Method: Simple random sampling method was followed to select villages and based on proportionate sampling method, it was decided to collect data of 90 subjects, 56 subjects 79 subjects from 3 villages. Houses were selected by systematic random sampling method. After visiting the selected house, elder eligible subject among the available was included in the study.

Study Tool: A semi-structured questionnaire was prepared and suitable modifications were made after administering in a pilot study. The questionnaire consists of the demographic information and a series of questions to assess the knowledge, Practice and source of information regarding breast cancer

Method of Data Collection: Data was collected by face to face interview method

after obtaining consent. The importance of this study was explained and ensured that confidentiality of the participant's responses.

Statistical Analysis: Data was analysed using Microsoft Excel and SPSS Statistical Package version 22. Data was expressed in proportions with 95% confidence interval (CI). Pearson's chi-square test was applied as test of significance considering $P < 0.05$ as statistically significant.

RESULTS

The mean age of study participants was 40.7 ± 9.5 years. Majority of the participants were having school level education (42.2%), married (88.4%), home maker (52.4%) and belongs to below poverty line family (56.9%). (Table 1)

Majority (83.1%) of the participants knew that breast cancer is a killer disease and only 11.1% knew about breast self-examination and only 5.8% do BSE. (Table 2)

Table:1 Socio demographic profile of study participants (n=225)

Age	Frequency (%)
20 - 30	33 (14.7)
30 - 40	70 (31.1)
40 - 50	81 (36)
50 - 60	41 (18.2)
Education	Frequency (%)
Illiterate	79 (35.1)
School	95 (42.2)
College	51 (22.7)
Marital status	Frequency (%)
Married	199 (88.4)
Un married	17 (7.5)
widowed	9 (4)
Working status	Frequency (%)
Home maker	118 (52.4)
Student	26 (11.5)
Working women	81 (36)
Socio economic status	Frequency (%)
Above poverty line	97 (43.1)
Below poverty line	128 (56.9)

Table:2 Knowledge about breast cancer among study participants (n=225)

Question	Total Subjects answered Yes (%)	95% CI
Cancer can occur in breast	225 (100)	98.4, 100
Breast cancer is communicable disease	40 (17.8)	13, 23.4
Breast cancer is a killer disease	187 (83.1)	77.6, 87.8
Testing available	106 (47.1)	40.4, 53.9
Do you think the early detection of breast cancer can improve survival?	119 (52.9)	46.1, 59.6
Aware of breast self-examination (BSE)	25 (11.1%)	7.3, 16
BSE is essential for any women aged 20 years and above	17 (7.5)	4.5, 11.8
Do you do BSE	13 (5.8)	3.1, 9.7

Table:3 Knowledge about risk factors of Breast cancer (n=225)

Risk factor	Frequency (%)
Age	153 (68)
Married women without children	47 (20.9)
Menarche below 12 years	20 (8.9)
Family history of breast cancer	187 (83.1)
First child after the age of 30 years	40 (17.8)
High fat diet	40 (17.8)
Oral contraceptive pills	121 (53.8)
Short or No breast-feeding duration	94 (41.8)
Exposure to radiation	58 (25.8)
Previous treatment of breast cancer	173 (76.9)
Obesity	81 (36)

Table:4 Knowledge about symptoms of breast cancer (n=225)

Symptom	Frequency (%)
Lump in the breast	225 (100)
Nipple discharge/bleeding	83 (36.9)
Change in breast shape	16 (7.1)
Discoloration of the breast	31 (13.7)
Dimpling/Pulling in of the nipple	16 (7.1)
Lump under the armpit	3 (1.3)

Table:5 Barriers to BSE among participants who were aware and not practicing (n=12)*

Barriers	Frequency (%)
Don't know the procedure	12 (100)
I don't have symptoms	7 (58.3)
Not necessary for me	5 (41.7%)

* Total doesn't correspond to 100% because of multiple response

Most of the participants identified family history (83.1%), previous treatment of breast cancer (76.9%) followed by age (68%) as risk factors of breast cancer. (Table 3)

Lump in the breast (100%) and nipple discharge or bleeding (36.9%) were identified as symptoms of breast cancer by most of the participants. (Table 4)

Lacking knowledge about procedure of BSE (100%) was identified as important barrier for conducting BSE among women who were aware of it and not practicing. (Table 5)

The association between education status and knowledge about availability of tests, improving survival chances with early detection, BSE and practicing BSE was found to be statistically significant. (Table 6)

Most common source of information was found to be Television (79.1%) and Health care team (60.9%). (Table 7)

Table:6 Association between education of the subjects and knowledge about breast cancer (n=225)

Question	Illiterates (%) (n=79)	School (%) (n=95)	College (%) (n=51)	P value
Breast cancer is communicable disease	18 (22.8)	14 (14.7)	8 (15.7)	0.34
Breast cancer is a killer disease	67 (84.9)	78 (82.1)	42 (82.3)	0.88
Testing available	21 (26.6)	48 (50.5)	37 (72.5)	0.01
Do you think the early detection of breast cancer can improve survival?	28 (35.4)	47 (49.5)	44 (86.3)	0.01
Aware of BSE	4 (5.1)	6 (6.3)	15 (29.4)	0.01
Do you do BSE	1 (1.3)	1 (1.1)	11 (21.6)	0.01

Table:7 Source of information (n=225)

Source of information	Frequency (%)
Television, Radio	178 (79.1)
Newspaper, Magazines	29 (12.9)
Relatives or friends who have breast cancer	43 (19.1)
Internet	13 (5.8)
Doctor/Health care workers	137 (60.9)
Academic institutes and books	25 (11.1)

DISCUSSION

In the present study, majority (36%) of the study participants are of 40-50 years of age with the mean age of 40.7±9.5 years. Majority of the participants were having school level education (42.2%), married (88.4%), home maker (52.4%) and belongs to below poverty line family (56.9%). In current study, all the study participants (100%) knew that cancer can occur in breast. (This increase in awareness of BC may be due to media as almost every house

has a television and smart phone now a days.) In a study done by Yambem LC et al., three-fourths of the women were aware of breast cancer and in a study conducted in Srinagar by Sideeq K et al., shockingly only 26% of participants had heard of breast cancer.^{5,6} About 17.8% of the study participants thought that breast cancer is communicable disease contrary to a study conducted in Ethiopia by Hussen A et al., in which majority (87.6%) of the women stated that BC is communicable disease.⁷ In present study, 83.1% of them thought that BC is a killer disease contrary to a study done by Abdel-sattar SA et al., were 11.7% of the studied subjects agreed that BC is a killer disease.⁸ In our study, about half (47.1%) of the women knew that testing is available for BC similar to findings of a

study conducted in Hyderabad by Ahmad SR et al., where only half of study populations were aware of the test to detect breast cancer.⁴ About 52.9% of women in our study knew early detection of breast cancer can improve survival similar to study done by Sayed S et al., where 58.2% of women knew that survival is possible with early detection and according to Almukhlifi TS et al., study about 6% agreed that time of diagnosis of BC does not affect survival.^{9,10} About 80% of women had knowledge about BSE in a study done by Veena KS et al., contrary to our study where only 11.7% of women were aware of breast self-examination (BSE).¹¹ Similar results were observed in Gangane N et al.,(7%) and Sunita S et al.,(23%) studies.^{12, 13} BSE is an important screening test and essential for any women aged 20 years and above. This was known by only 7.5% of women in current study whereas about 46.4% of them agreed that BSE is a necessary tool for early detection of breast cancer in Sah SK et al., study.¹⁴ Practising BSE would help in early detection of BC and can reduce the mortality. In current study only 5.8% of women practised BSE similar to a study done by Hassan EE et al., where only 4.5% practised BSE which needs to be improved and in Alharbi SH et al., study 76.9% of females thought that BSE has a preventive role.^{15, 16}

In current study, most of the women identified family history of BC (83.1%) as the major risk factor followed by Previous treatment of BC (76.9%), Age (68%), Oral Contraceptive Pills (53.8%) and Short or No breast-feeding duration (41.8%). Same findings were reported in studies conducted by Azubuike SO et al., Ahmad SR et al., Kashiwagi Y et al., where family history of BC, OCPs, decrease risk with breast feeding practices are some of the major risk factors of BC.^{17, 4, 18} Majority (64%) were not aware of the genetic association of BC according to Subramanian L et al., study.¹⁹ In current study, Obesity (36%), Exposure to radiation (25.2%), Nulliparity (20.9%), High fat diet (17.8%), Elderly primi (17.8%) Early

menarche (8.9%) are the other risk factors identified by only few subjects which was similar to the findings of Kohler RE et al., study.²⁰ In another study conducted by Izanloo A et al., more than 84% of the participants were not aware of risk factors of BC which can be attributed to poor awareness programmes.²¹ All the current study participants knew Lump in the breast as a symptom of BC similar to Alaudeen et al., study where 91.2% answered that lumps in the breast are amongst the symptoms of BC.²² The warning signs of BC like lump (81.5%), ulceration (75.9%) were identified by majority participants in Batra D et al., study.²³ The present study observed poor knowledge among women regarding other risk factors of BC like Nipple discharge/bleeding (36.7%), Discoloration of the breast (13.7%), Dimpling/Pulling in of the nipple (7.1%), Lump under the armpit (1.3%). In a study done by Nwaneri A et al., 38.2%, 43.6% and 30.9% identified redness, breast discharge, and nipple aversion/dimpling as manifestations of BC respectively.²⁴ According to Rajini S et al., study 41% identified lump under armpit as a symptom of BC.²⁵ About 18% of respondents did not know of any BC symptoms in Makurirofa L et al., study.²⁶ Hence there is a necessity to conduct health campaigns in the community to generate awareness regarding BC. Regarding the barriers for BSE, all the study subjects don't know the procedure for BSE (100%). More than half (58.3%) of the women don't do BSE as they don't have symptoms and few (41.7%) thought that it wasn't necessary for them. According to Kumar M et al., study Lack of knowledge (70.5%), Embarrassment (58.8%), Fear (35.3%) are reasons for not doing BSE.²⁷ In a study done by Nsenga M et al., 85.1% had no idea on what to check for in the breasts (BSE).²⁸ Lack of information on BSE and its procedure was the major barrier for BSE according to Kalliguddi S et al., study.²⁹ The proper procedure of BSE should be taught to every women and can help them to seek

health advice immediately if any abnormality detected.

The association between education status and knowledge about availability of tests, improving survival chances with early detection, BSE and practicing BSE was found to be statistically significant. According to Kumaraswamy H et al., study, Women with higher level of education had better knowledge of BC and BSE than women with low education status.³⁰ There were significant associations between knowledge, level of education and use of BSE in Ohaeri B et al., study.³¹ In current study, Television, Radio (79.1%) was the most common source of information followed by Doctor/Health care workers (60.9%) similar to Liu LY et al., study where majority of women obtained BC information through traditional TV broadcasts (30.6%) and friends or relatives with BC (29.6%).³² Relatives or friends who have BC (19.1%), Newspaper, Magazines (12.9%) and Internet (5.8%) are other sources in current study. Source of information about BC was from friends and relatives followed by newspaper, television, magazines in Kumar M et al., study.³³

CONCLUSION

The present study found that majority of the women were aware of breast cancer but doesn't have clue regarding breast self-examination and very few participants were practising BSE. Current study emphasise the need to conduct breast cancer awareness programmes with main focus on BSE in rural communities in order to reduce morbidity and mortality due to breast cancer.

ACKNOWLEDGEMENTS

The authors were grateful to all the study subjects who had participated in the study

Declarations

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Park K. Park's textbook of Preventive and Social Medicine. 25th ed. Jabalpur: M/S Banarsidas Bhanot Publishers;2019.p.411, 510
2. WHO. Cancer fact sheet 2019. Available from: <https://www.who.int/news-room/fact-sheets/detail/cancer> (Accessed on 12th April).
3. ICMR. National Institute of Cancer Prevention and Research 2019. Available from: <http://cancerindia.org.in/breast-cancer/> (Accessed on 12th April).
4. Ameer SR, Chandrasekhar A. A study to assess the knowledge and belief of female towards breast cancer and its screening practices in Hyderabad, India. National Journal of Research in Community Medicine 2017;6(2):116-19.
5. Yambem LC, Rahman H. Knowledge, attitudes, and beliefs about breast cancer and barriers to breast self-examination among Sikkimese women. Indian J Med Paediatr Oncol 2019;40:175-81.
6. Sideeq K, Ayoub T, Khan SMS. Breast self-examination: assessing its knowledge attitude and practice among ethnic Kashmiri females. Int J Community Med Public Health 2017;4:3288-92.
7. Hussen A, Kumbi M, Lette A, Nuriye S. Knowledge of Breast Cancer and Associated Factors among Women Reproductive Age in Bale Zone, Southeast Ethiopia: A Community based Cross Sectional Study. Emergency Med 2019; 9(395):1-7.
8. Abdel-Sattar SA, Ibrahim HA, Sayed HAE. Knowledge, Attitude and Practices of Working Women in Tabuk University Regarding Breast Cancer. Int. J. Pharm. Res. Allied Sci., 2018;7(3):198-208.
9. Sayed S, Ngugi AK, Mahoney MR, Kurji J, Talib ZM, Macfarlane SB et al., Breast Cancer knowledge, perceptions and practices in a rural Community in Coastal Kenya. BMC Public Health 2019;19:1-13.
10. Almukhlifi TS, Alanzan AAA, Alghuwainem SOA, Alotaibi STM, Alokifi MAA, Alkathlan MSB et al. Knowledge of breast cancer among rural women among Saudi Arabian population. Int J Diabetes Dev C 2019;3(9):780-83.

11. Veena KS, Kollipaka R, Rekha R. The Knowledge and attitude of breast self examination and mammography among rural women. *Int J Reprod Contracept Obstet Gynecol* 2015;4:1511-6.
12. Gangane N, Nawi N, Sebastián MS. Women's Knowledge, Attitudes and Practices about Breast Cancer in a Rural District of Central India. *Asian Pac J Cancer Prev*, 2016;16:6863-70.
13. Sunita S, Phani Madhavi K, Devi Madhavi B. Breast cancer and its screening awareness among rural and urban women of visakhapatnam - a community based study . *J. Evid. Based Med. Healthc.* 2020;7(14):734-38.
14. Sah SK, Pradhan A, Neupane N, Shah S, Shrestha P, et al. Knowledge, Attitude and Practice Regarding Prevention and Screening of Breast Cancer among Reproductive Age Women. *Arch Cancer Res.* 2019;8(1):1-5.
15. Hassan EE, Seedhom AE, Mahfouz EM. Awareness about Breast Cancer and Its Screening among Rural Egyptian Women, Minia District: a Population-Based Study. *Asian Pac J Cancer Prev*, 2018;(6):1623-28.
16. Alharbi SH, Alreshidi FS, Binahmed IA, Alrashidi AG, Alrashedi SA, Alshammeri KJK et al. Assessment of Knowledge and Perception towards Breast Cancer Prevention and Early Detection. *Int J Med Res Health Sci* 2018;7(1): 65-76.
17. Azubuikwe SO. Breast cancer risk factors and signs: How much do Nigerian women know?. *Int J Adv Med Health Res* 2017;4:40-3.
18. Kashiwagi Y, Kakinohana S. Breast Cancer Knowledge and Preventive Behavior Among Filipino Women in a Rural Area: A Cross-Sectional Study. *Nurs Midwifery Stud.* 2016;5(3):1-13.
19. Subramanian L, Salini VU, Anandan H, Insuvai U. Breast Cancer Awareness in South India. *Int J Sci Stud* 2018;6(5):39-42.
20. Kohler RE, Gopal S, Lee CN, Weiner BJ, Reeve BB, Wheeler SB. Breast Cancer Knowledge, Behaviors, and Preferences in Malawi: Implications for Early Detection Interventions From a Discrete Choice Experiment. *J Glob Oncol* 3 2017;3(5):480-89.
21. Izanloo A, Ghaffarzadehgan K, Khoshroo F, Haghiri ME, Izanloo S, Samiee M et al. Knowledge and attitude of women regarding breast cancer screening tests in Eastern Iran. *ecancer* 2018;12:1-6.
22. Alaudeen SRBS and Ganesan K. Knowledge, attitude, and practice of Malaysian medical students towards breast cancer: A cross-sectional study. *Int Med Care*, 2019;3:1-7.
23. Batra D, Ahuja D, Sharma M, Banerjee B. Health-Related Knowledge and Attitude Toward Common Cancers Among Slum Dwellers in Delhi. *MAMC J Med Sci* 2019;5:13-18.
24. Nwaneri A, Osuala EO, Okpala PU, Emesowum AC, Iheanacho P. Knowledge and awareness of breast cancer among rural women in Umuowa Orlu Local Government Area Imo State, South East, Nigeria. *Niger J Clin Pract* 2017;20:489-94.
25. Rajini S, Vell CK, Senthil S. Knowledge of breast cancer and its risk factors among rural women of puducherry – a cross sectional study. *Int J Cur Res Rev* 2015; 7(19):60-4.
26. Makurirofa L, Mangwiro P, James V, Milanzi A, Mavu J, Nyamuranga M et al. Women's knowledge, attitudes and practices (KAP) relating to breast and cervical cancers in rural Zimbabwe: a cross sectional study in Mudzi District, Mashonaland East Province. *BMC Public Health* 2019;19:1-9.
27. Kumar M, Kashyap V. Awareness about breast cancer among women attending obstetrics and gynaecology department in a tertiary care hospital of Jharkhand, India. *Int J Community Med Public Health* 2016; 3:938-43.
28. Nsenga, M & Rutebemberwa, E. Knowledge, Attitudes and Practices of breast cancer screening among Rural women in Bubaare Subcounty, Rubanda District. *Journal of African Interdisciplinary Studies* 2019;3(8):178-89.
29. Kalliguddi S, Sharma S, Gore CA. Knowledge, attitude, and practice of breast self-examination amongst female IT professionals in Silicon Valley of India. *J Family Med Prim Care* 2019;8:568-72.
30. 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;8:84-8.

31. Ohaeri B, Aderigbigbe M. Knowledge and use of breast self-examination and mammogram among women of reproductive age in Oyo State Secretariat, Ibadan, Oyo State, Nigeria. *Eur J Midwifery* 2019; 3(7):1-7.
32. Liu L-Y, Wang Y-J, Wang F, et al. Factors associated with insufficient awareness of breast cancer among women in Northern and Eastern China: a case– control study. *BMJ Open* 2018;8:1-9.
33. Kumar M, Srivastava DK, Jain PK, Kumar S, Dixit AM, Yadav R. A Comparative Assessment of Knowledge and Awareness Regarding Breast Cancer among Women of Reproductive Age Group in District Etawah. *Natl J Community Med* 2017; 8(11):636-40.

How to cite this article: Jothula KY, Sreeharshika D. Knowledge and practice regarding breast cancer among women in rural Telangana. *International Journal of Research and Review*. 2020; 7(5): 186-192.
