ORIGINAL ARTICLE
pISSN 0976 3325 | eISSN 2229 6816
Open Access Article
www.njcmindia.org

Awareness Regarding Breast Cancer and Its Screening Methods among Women of the Reproductive Age Group in Rural Coastal Karnataka

Nischith KR[1], Navya N[2], Ramesh Naik Poonam[3]

Financial Support: None declared
Conflict of Interest: None declared

How to cite this article:
Nischith KR, Navya N, Poonam RN. Awareness Regarding Breast Cancer and Its Screening Methods among Women of the Reproductive Age Group in Rural Coastal Karnataka. Natl J Community Med 2018; 9(3):211-215

Author's Affiliation:
[1]Post graduate; [2]Assistant Professor; [3]Professor, Dept of Community Medicine, Yenepoya Medical College, Mangaluru

Correspondence
Navya N
navya1211@yahoo.com

Date of Submission: 02-03-18
Date of Acceptance: 30-03-18
Date of Publication: 31-03-18

ABSTRACT

Introduction: Incidence of breast cancer is on the rise in the developing nations due to increasing urbanization and adoption of western lifestyles. High mortality rate among women is attributable to barriers such as 'low cancer awareness'. Objective: To assess the awareness regarding breast cancer among women of reproductive age group.

Methodology: A Cross-sectional study was conducted in Kumpala village among women in the age group 15-49 years for a period of one month between April to May 2017. After taking informed consent, all the participants were personally interviewed through predesigned and pre-tested questionnaire regarding awareness of breast cancer. Data was analyzed using SPSS version 23.0.

Results: Of the 165 people included in the study 81.8% (135) of the study participants had heard about breast cancer. Among 135 participants, 50.4% (68) of the participants were not aware of the symptoms of breast cancer, 76.3 %(103) were not aware of risk factors of breast cancer and 52.9% (70) were not aware about breast self examination (BSE).

Conclusion: Awareness regarding breast cancer was found to be poor, be it about risk factors, warning signs, or early detection procedures. Socioeconomic status and education was found to be significantly associated with their level of awareness.

Keywords: Breast cancer, Awareness, breast self examination, mammography

INTRODUCTION

Worldwide breast cancer is the most common cancer among women. By 2030 the global burden of breast cancer is expected to exceed 2 million, with increasing proportions from developing countries[1]. Among Indian women after cancer cervix, breast cancer is the second most common cancer and is already the leading cancer in metros. Annually India reports roughly 100,000 new cases and 1 in 26 women are expected to be diagnosed with breast cancer in their life time[2]. Incidence of breast cancer is rising even in the developing nations due to increasing urbanization and adoption of western lifestyles and increase in life expectancy[3].

Diagnosis of breast cancer in low and middle income countries is usually in very late stages[4]. Various factors which contribute to diagnosis at advanced stages of disease leading to high mortality rate includes low levels of awareness, cumbersome referral pathways to diagnosis, limited access to effective treatment at regional cancer centres and incomplete treatment regimens[5, 6].

Mammography is found to be an effective tool for detection for breast cancer among the various other methods of detection. In countries with good health infrastructure, mammography screening is feasible and cost effective whereas in limited resource settings, low cost screening approaches

such as clinical breast examination can be implemented[3]. On the other hand breast self examination (BSE) is simple, self generated, cost free approach which can be repeated at monthly intervals. BSE involves systematic examination visually and by palpation of the breasts and axillary area for any signs of abnormality. It is important for every woman to adopt the correct method of performing BSE as demonstrated by a nurse or physician because it has been observed that how a woman learns about BSE can determine the frequency with which she performs it [10].

High mortality rate among women is attributable to barriers such as 'low cancer awareness', also referred to as 'awareness deficit' or 'scarcity of awareness', presence of stigma, fear, gender inequality and reduced engagement in screening behaviours, such as breast self-examinations [7]. Although many studies regarding prevalence and treatment of breast cancer is published in India, there are very few studies assessing the awareness about of the breast cancer. Hence, the present study was designed to gather information on awareness of breast cancer and various contributing factors to the same.

MATERIALS AND METHODS

Study Area: A Cross-sectional study was conducted in rural area as it is field practice area of our institution. The study was conducted among women in the age group15-49 years residing in Kumpala village for a period of one month between April to May2017.

The sample size estimated by using the formula $n=Z^2pq/d^2$ was 165. Taking prevalence of breast cancer awareness as 51% from a study conducted in New Delhi[12]. Precision of 8%, the calculated sample size was 150. Considering 10% as non response rate, the total sample size was 165.

Systematic random sampling method was adopted to select the study participants. Women fulfilling the inclusion criteria from every 3rd house were selected for the study.

Data was collected after obtaining ethical approval from the Institutional ethics committee. A written Informed consent from the study participants was obtained prior to data collection.

Data was collected using a structured, pre-tested and validated proforma by face-to-face interview with the study participants. Information regarding the socio-demographic profile of the study participants, awareness regarding the risk factors, signs and symptoms of breast cancer and various screening methods available for diagnosis of the same was obtained. Information regarding breast self-examination practices among the study participants was also obtained. There were a total of 20 questions excluding information related to socio-demographic characteristics. Each correct response was scored 1 and incorrect response was scored 0. Certain questions with multiple answers were scored accordingly. The maximum score was calculated to be 30. Based on the overall scores their level of awareness was categorized as excellent (>26), good (21 -25), satisfactory (15- 20), poor (8 -14) and very poor (< 7)

Study Analysis: The data was analyzed using SPSS version 23.0. Descriptive statistics are reported in form of percentages and proportions. Independent t test was applied to study the difference in mean awareness scores among family type and marital status and ANOVA test was applied to find difference in mean awareness score among factors like socioeconomic status, occupation and educational status.

RESULTS

In the present study 96.4% (159) of the study participants were married and majority of the participants 72.7% (120) belonged to nuclear family. It was observed that 89.7% (147) of the study participants were literate and majority of the participants are unskilled workers (Table 1).

Table: 1 Socio demographic variables of study participants (N= 165)

Socio demographic variables	Frequency (%)
Marital status	
Married	159 (96.4)
Unmarried	6(3.6)
Family type	
Nuclear	120(72.7)
Joint	45(27.3)
Level of Education	
Illiterate	17(10.3)
Primary school	47(28.5)
High school	47(28.5)
PUC	33(20)
Degree	21(12.7)
Occupation	
Unemployed	135(81.8)
Semi skilled	11(6.7)
Skilled	1(0.6)
Clerk/businessman	10(6.1)
Semi-professional	7(4.2)
Professional	1(0.6)
Socioeconomic class*	
Lower class	1(0.6)
Lower middle class	30(18.2)
Middle class	56(33.9)
Upper middle class	56(33.9)
Upper class	22(13.3)

* as per Modified B.G. Prasad classification

Table 2: Awareness regarding Symptoms and Risk factors for Breast Cancer (N=135)

Breast cancer symptoms & risk factors	Frequency (%)
Aware of any symptoms of breast cancer (N=135)	
Yes	67 (49.6)
No	68(50.4)
Symptoms of breast cancer*	
Lump in breast	60(44.4)
Pain in breast	42(31.8)
Don't know	68(50.5)
Aware about any risk factors for breast cancer	
Yes	32(23.7)
No	103(76.3)
Risk factors*	
Inadequate breast feeding	28(20.7)
Lifestyle related	20(14.8)
Don't know	103(76.3)
Genetic	13(9.6)
Source of information*	
Doctor	22(16.3)
TV	78(57.8)
Family/friends	49(36.3)
Print media	26(19.3)

*Multiple responses

Table 3: Awareness regarding methods for screening breast cancer and practices among study group (n=135)

Breast cancer screening methods awareness and practice	Frequency (%)
Awareness on Breast self-examination (BSE)	
Yes	65(48.1)
No	70(52.9)
Frequency of BSE	
Weekly	16(11.8)
Monthly	28(20.7)
Don't know	91(67.5)
Correct position for BSE	
Standing in front of mirror	27(20.0)
Sitting	2(1.5)
Don't know	106(69.5)
Correct time for BSE	
After menstruation	20 (14.8)
Don't know	115(85.2)
Have you done BSE	
Yes	46(34.1)
No	89(65.9)
Awareness about mammography	
Yes	67(49.6)
No	68(50.4)
Can breast cancer prevented	
Yes	84(62.2)
No	14(10.4)
Don't know	37(27.4)

It was observed that 33.9%(56) of the study participants belonged to middle class and 33.9%(56) belonged to upper middle class, followed by 18.2% (30) belonging to lower middle class, 13.3%(22) belonging to upper class and 0.6%(1) belonging to lower class according to modified BG Prasad's Classification[14].

It was observed that 81.8% (135) of the participants had heard about breast cancer and remaining 18.2% (30) had not a heard about breast cancer.

Table 2 shows that among 135 participants 50.4% (68) of the participants were not aware of the symptoms of breast cancer. Among the study participants who were aware about symptoms of breast cancer 44.4% (60) participants mentioned that lump in breast as symptom of breast cancer. 76.3%(103) of the participants are not aware of risk factors of breast cancer and 23.7%(32) are aware about some risk factors of breast cancer. TV is the source of information for majority of participants 57.8% (78) followed by family & friends 36.3% (49).

Table 3 shows that 52.9% (70) of the participants are not aware of the breast self examination (BSE) and 48.1% (65) are aware of BSE, among them only 34.1 %(46) participants have done BSE. Among the participants 20.7 %(28) of them have done BSE monthly, only 11.8 %(16) participants have done BSE weekly. Among 46 participants who have done BSE, 20%(27) participants examined their breast standing in front of mirror, 1.5%(2) of them in sitting position and other 69.5% (106) participants do not know the correct position. Only 14.8 %(20) participants know correct time for BSE.

In the present study 50.4% (68) of the participants are not aware of mammography and 49.6% (67) were aware of mammography. Among all 62.2% (84) of the participants believe that breast cancer can be prevented, 27.8 %(37) participants said don't know and 10.4% (14) participants believe that breast cancer cannot be prevented.

In the present study 7.9%(13) have excellent knowledge on breast cancer, 13.9%(23) have good knowledge, 21.8%(36) have satisfactory knowledge, 23.6%(39) have poor knowledge and 32.8%(54) have very poor knowledge.

In this study it was observed that there was significant difference between mean awareness scores with respect to socio-economic status ($p = 0.004$) and education status ($p<0.001$), whereas there was no significant difference between mean awareness scores and other sociodemographic variables (Table 4).

DISCUSSION

In countries with limited resources breast cancer is commonly diagnosed at late stages. Odds of survival and cure can be improved by efforts aiming at early detection and thus enabling simpler and more cost-effective treatment[15]. Early detection of breast cancer includes both screening in asymptomatic women and early diagnosis in symptomatic women[4].

Table 4: Association between various sociodemographic factors and awareness scores

Socio demographic Factors	Frequency	Mean awareness score	P value
Level of Education			
Illiterate	17	12.41	<0.001
Primary school	47	13.30	
High school	47	13.26	
PUC	33	18.33	
Degree	21	18.10	
Socioeconomic class*			
Lower class	1	9	0.004
Lower middle class	30	14.90	
Middle class	56	12.18	
Upper middle class	56	15.64	
Upper class	22	18.32	
Occupation			
Unemployed	135	14.99	0.31
Semi skilled	11	11.45	
Skilled	1	7	
Clerk/business	10	13.40	
Semi-professional	7	15	
Professional	1	22	
Marital Status			
Married	159	14.82	0.08
Unmarried	6	10	
Family type			
Nuclear	119	14.61	0.89
Joint	46	14.76	

* as per Modified B.G. Prasad classification

In our study it was found that 81.8% women had heard about breast cancer. However 43.6% of the study participants had aw Available from: Available from: Available from: Available from: Available from: Available from: Available from: areness regarding various aspects of breast cancer. In a study done by S Ahuja et al[10] in Mumbai it was observed that breast cancer awareness was found to be 52%.

In the present study it was found that only 48.1% are aware of BSE and 15% were regular while 23% were irregular in practising BSE and others were not aware of BSE. A study done by Khokhar[8]also reported similar findings where 36.1%of participants had heard about self breast examination and 13.4% knew the correct frequency of examination and only 7.2% knew about the position in which it should be done. It was seen that 1.36% of the participants were aware of the right time of doing it. A study done by Jahan S et al [9]concluded that almost 70% of 300 women included in their study had never heard of BSE and only 18.7% reported practicing it. This emphasises the need for awareness on screening methods of breast cancer.

In our study only 16.3% of all women had received information about breast cancer from health professionals while a majority stated their source of information to be family, friends and Television (TV).Similar results were found in a study conducted in Jordan where 72.1% obtained information on breast cancer from family, friends and TV and 27.6% obtained information from health workers[13].This highlights need for health care professionals to sensitize female during OPD consultation on various aspect of breast cancer prevention.

In the present study it was observed that socio economic status and education were significantly associated with the level of awareness among study participants. Similar findings were observed in a study conducted by Ahuja et al[10] in Mumbai.

The World Health Organization stresses on promoting awareness in the community and encouraging early diagnosis of breast cancer, especially for women aged 40-69 years who are attending primary health care centres or hospitals for other reasons, by offering clinical breast examination[11]

CONCLUSION

In conclusion, this study has shown that women who have participated in this study have poor knowledge about breast cancer be it about risk factors, warning signs, or early detection procedures. Therefore it is important to create awareness among the rural community about breast cancer by community based educational/awareness campaign. The importance of recognising early warning signs needs to be emphasized. Educating health care workers can be an important step towards dissemination of knowledge within the community.

Acknowledgement

The role of Mrs. Himani Kotian, Medico social workers from the Department of Community Medicine and IInd year MBBS students in collecting data and analysis was immense.

REFERENCES

1. Jemal A, Bray F, Melissa MC, Jacques F, Elizabeth W, Forman D. Global cancer statistics. CA : a Cancer Journal Clinicians. 2011 Mar-Apr; 61(2):134.
2. Raina V, Bhutani M, Bedi R, Sharma A, Deo SV, Shukla NK, Mohanti BK, Rath GK. Clinical features and prognostic factors of early breast cancer at a major cancer center in North India. Indian journal of cancer. 2005 Jan 1;42(1):40.
3. Lodge M. The evidence base for cancer control in developing countries: what is to be done? The Newsletter of the International Network for Cancer Treatment and Research. 2005;6(3) http://www.inctr.org/publications/2005_v06_n03_w02.shtml.
4. WHO. World health organization on cancer prevention [Internet]. 2009. Available from http://www.who.int/ cancer/prevention/en/
5. Sharma K, Costas A, Shulman LN, Meara JG. A systematic review of barriers to breast cancer care in developing coun-

tries resulting in delayed patient presentation. Journal of oncology. 2012;2012:8

6. Jones CE, Maben J, Jack RH, Davies EA, Forbes LJ, Lucas G, Ream E. A systematic review of barriers to early presentation and diagnosis with breast cancer among black women. British Medical Journal open. 2014 Feb;4(2) :e004076.
7. Dey S. Preventing breast cancer in LMICs via screening and/or early detection: the real and the surreal. World journal of clinical oncology. 2014 Aug 10;5(3):509.
8. Khokhar A. Level of awareness regarding breast cancer and its screening amongst Indian teachers. Asian Pac J Cancer Prev. 2009 Jan 1;10(2):247-50.
9. Jahan S, Al-Saigul AM, Abdelgadir MH; Breast cancer-Knowledge, attitudes and practices of breast selfexamination among women in Quassim region of Saudi Arabia; Saudi Medical Journal 2006 November; 27(11): 1737-41
10. Ahuja S, Chakrabarti N. To determine the level of knowledge regarding breast cancer and to increase awareness about breast cancer screening practices among a group of women in a tertiary care hospital in Mumbai, India. International Journal of Public Health. 2010;1(1):
11. WHO. WHO Screening for breast cancer (internet). 2008. Available from: http://www.who.int/cancer/detection /breastcancer/en/.
12. Somdatta P, Baridalyne N. Awareness of breast cancer in women of an urban resettlement colony. Indian Journal Cancer.2008;45:149-153
13. Suleiman AK. Awareness and attitudes regarding breast cancer and breast self-examination among female Jordanian students. Journal of basic and clinical pharmacy. 2014 Jun; 5(3):74.
14. Mangal A, Kumar V, Panesar S, Talwar R, Raut D, Singh S. Updated BG Prasad socioeconomic classification, 2014: A commentary. Indian Journal of public health. 2015 Jan 1; 59(1):42.
15. WHO. World health organization on early cancer detection [Internet]. 2009.Available from: http://www.who.int/ cancer/detection/en/