RESEARCH COMMUNICATION

Level of Cancer Awareness among Women of Low Socioeconomic Status in Mumbai Slums

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Abstract

Background: Cancer, a major cause of morbidity and mortality in India can be prevented by early detection through screening, for which, awareness is essential. Aim: Determining cancer awareness among low socio-economic women in Mumbai. Settings and Design: Community based cancer screening study using a mobile van. Materials and methods: Data of consenting participants, collected using structured questionnaire, was differentiated into good and poor level of awareness using point based grading procedure. Results: Mean age of 182 participants, majority (90.5%) belonging to lower socioeconomic strata, was 43.0±8.8 years. Knowledge about cancer (84.6%) was good compared to knowledge of cancer screening (35.1%), awareness being higher among richer and more educated. Major sources of information were friends or relatives (46.1%) and media (35.2%). Only 6.6% had undergone prior screening. Conclusion: In spite of appreciable knowledge about cancer, creating awareness about screening, its availability, and motivating the general population for screening is necessary.

Keywords: Mumbai, India - slum dwelling females - cancer screening - awareness - health education

Asian Pacific J Cancer Prev, **12**, 1295-1298

Introduction

According to World Cancer Report, there is a high incidence rate of cancer throughout the world and it may reach about 20 million by 2030 (World Cancer Report, 2008). In India, around 0.95 million new cancer cases are detected every year with 0.63 million deaths. The most common sites for cancer among men are lung, oral cavity, pharynx, oesophagus and stomach while among women they are cervix, breast, ovary, oral cavity and oesophagus. Overall, the three leading sites are cervix, breast and oral cavity, accounting for 0.32 million cases and 0.18 million deaths (Ferlay et al., 2008).

There are established screening methods to detect these common cancers at very early stages like visual inspection with 5% acetic acid (VIA), visual inspection with Lugol's iodine (VILI), cytology (Sankaranarayanan et al., 2003; Shastri et al., 2005) and colposcopy for cervical cancer; clinical breast examination (CBE) (Mcdonald et al., 2004) and mammography (Elmore et al., 2005) for breast cancer and oral visual examination (OVE) (Sankaranarayanan et al., 2005) for oral cancer. Decision to participate in such cancer screening programs depends upon the knowledge, beliefs and attitudes about the disease and the screening tests. Unfortunately, in a developing country like India there is a lack of awareness among people about the various risk factors and preventive aspects of these common cancers, like early detection through screening and treatment of precancerous lesions. Women, in particular, fail to disclose the early symptoms of cervical and breast cancers due to ignorance and cultural taboos. Hence, about 80% of all patients present to healthcare facility in the advanced stages of the disease (World Cancer Report, 2008). Considering these factors, the present study was carried out to assess the level of awareness about cancer and screening for cancers among women belonging to low socio-economic sections of the society in various parts of Mumbai.

Materials and Methods

This was a community based cancer screening study using a mobile van. Participants included around 200 healthy, ambulant and asymptomatic women in the age group of 30 – 65 years residing in jurisdiction of Greater Mumbai on a permanent basis. Recruitment of the women was done in co-ordination with various Non Governmental Organizations (NGO) in different parts of Mumbai.

After finalizing the arrangements like van parking, availability of electricity, health-talk delivery place and day and timing for screening, women belonging to low socioeconomic status were invited to participate in the camp by the staff of Preventive Oncology Department, Tata Memorial Hospital (TMH), in co-ordination with different local NGOs. Twenty five women were screened in each camps, considering the time factor required to deliver health education programme and screen each woman for oral, cervix and breast cancer in a mobile

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screening vehicle. Altogether, eight camps were held to cover approximately 200 women from December 2009 to April 2010.

A mobile cancer screening van with all the facilities to screen breast cancer, cervical and oral precancerous lesions was used for the study. Prior to the actual screening, knowledge and practices regarding cancer and cancer screening among the study participants was collected by Medical Social Workers (MSW) using a pre-structured questionnaire. A total of ten points were given to questions related to cancer knowledge of cancer screening. Those women who scored more than or equal to five points were considered to have good knowledge and those who scored less than five points were considered to have poor knowledge. Later, health education programme explaining the signs, symptoms, risk factors and early detection measures for breast, cervical and oral cancers was delivered. The women interested in participating in screening signed a written informed consent form.

All women were screened for breast cancer by trained Primary Health Worker (PHW) using Clinical breast examination (CBE) which was conducted in sitting and lying down position as per the modified version of the Canadian National Breast Screening Study protocol (Basset.,1985). All tobacco users were screened for oral pre-cancers and cancers irrespective of age, duration and type of tobacco consumption by Oral Visual Examination (OVE) performed by the PHW. All women screened positive by the PHW for breast or oral cancers were examined by the Medical Officer and those requiring further test were referred to the TMH for further diagnostic investigations and management. All eligible women were then screened for cervix cancer by the PHW using visual examination tests i.e. Visual inspection with 5% acetic acid (VIA) and visual inspection with Lugols iodine (VILI) as per the IARC manual and chart (Sankaranarayanan et al., 2005). The Medical Officer performed Pap test, Colposcopy, guided biopsy and /or endocervical curettage for all women screened positive by the PHW. Women requiring further diagnostic tests were recalled at TMH after reviewing the reports. 10% of participant women who were screened negative by PHWs were also examined by the Medical Officer for quality assurance. After completion of screening, each woman was interviewed to complete a satisfaction survey to record her experiences and opinion regarding cancer screening undertaken by her and her views regarding future participation. The patients referred to TMH were managed as per the evidence based management protocols of the TMH.

In this paper, we present the details of knowledge about cancer and cancer screening among the participant women, so that the existing gaps could be filled by the policy makers before carrying out a screening activity under National Cancer Control Program.

Statistical Analysis

Checks for consistency and data analysis were done using Intercooled Stata 8.2. The prevalent knowledge about various aspects of cancer and the prevalent knowledge and practices about cancer screening are calculated as percentages of total respondents.

Table 1. Prevalent Knowledge of Cancer among Participant Women

Knowledge	Number	%
Women who had ever heard about cancer	154	84.6
Women who had never heard about cancer	28	15.4
Total respondents	182	
Women who could name few cancers	131	85.1
Women who could not name any cancers	23	14.9
Total respondents	154	
Source of information about cancer		
a) Print media	10	6.5
b) Audio-video	50	32.5
c) Doctors	33	21.4
d) Friends/ Relatives	71	46.1
e) Family history	18	11.7
f) Others	10	6.5
j) Not Known	8	5.2
Total respondents	154	
Women who perceived cancer as curable	102	66.2
Women who perceived cancer as not curable	43	27.9
Did not know	9	5.9
Total respondents	154	
Women who perceived cancer as preventable	86	55.8
Women who perceived cancer as non-prevented	54	35.1
Did not know	14	9.1
Total respondents	154	
Participants knowledge about preventive measures of cancer*		
a) Early Diagnosis	51	59.3
b) Life style modification	15	17.4
c) Good Nutrition	26	30.2
d) Staying away from deleterious habit	25	29.1
e) Others	3	3.5
Total respondents	86	
Women who perceive that cancer can spread from one person to another	39	25.3
Women who perceive that cancer cannot spread from one person to another	46	29.9
Did not know	69	44.8
Total respondents	154	

*Multiple responses were permitted

Depending on the responses to the questionnaire, the level of prevalent knowledge of cancer among participant women was graded as good and poor and was correlated with their socio-demographic status by univariate and multivariate logistic regression, by estimating odds ratios and their 95% confidence interval.

Results

Socio-demographic profile

A total of 200 women were selected for the study. Eighteen of them refused to participate (n=182). Among the study participants, 39.6% women were in 40-49 years age group and 39% in the age group of 30-39 years. (Mean= 43.0 years, Standard Deviation 8.75). About 44% of them had studied till secondary school level and 33% were illiterate. Most of them (65.38%) were Hindus and primarily housewives (56.0%) belonging to lower socioeconomic status with income less than 5000 rupees per month (90.5%).

Awareness about cancer (Table 1)

Out of the total 182 participants, 154 (84.6%) had

Table 2. Prevalent Knowledge of Cancer Screening among Participant Women

Knowledge	Number	%
Women who had heard of cancer screening	54	35.1
Women who had not heard of cancer screening	100	64.9
Women who perceive that regular screening help in prevention and early detection of cancer	48	88.9
Women not perceiving such benefit	5	9.3
Did not know	1	1.9
Source of information about cancer screening		
a) Print media	8	14.8
b) Audio-video	19	35.2
c) Doctors	16	29.6
d) Friends/ Relatives	15	27.8
e) Family history of cancer	7	13.0
i) Others	9	16.7
Women participating in screening in the past	12	6.6
Women not participating in screening	170	93.4
Women who have participated in the following test/ examination for cancer screening in the past		
a) PAP test	2	16.7
b) Visual test for cervix cancer	0	0.0
c) Clinical Breast Examination	3	25.0
d) Ultrasonography of Breast	2	16.7
e) Oral Visual Examination	1	8.3
f) Mammography of Breast	6	50.0
g) Others	1	8.3

* The total respondents in each category differ based on whether the participants had heard about cancer, cancer screening and participated in it

heard about cancer and most of them (85.1%) could name few cancers. The main source of information was friends and relatives (46.10%) followed by audio visual media (32.47%) and physicians (21.43%). Many participants perceived cancer as curable (66.23%) and preventable (55.84%). The preventive measures that were thought to be of importance were early diagnosis (59.30%), good nutrition (30.23%) and by staying away from deleterious habits (29.07%).

Knowledge and practice of Cancer screening (Table 2)

Among the 154 participants with some knowledge about cancer, only 54(35.06%) had heard about cancer screening, among whom 44(88.89%) women thought that regular screening could help in early detection and prevention of cancer. The important sources of information about screening were audio visual media (35.19%), closely followed by physicians (29.63%) and friends and relatives (27.78%). Past history of participation in cancer screening was very poor with only 12(6.59%) women who had ever participated in any kind of cancer screening before.

According to multivariate analysis (Table 3), correlating prevalent knowledge of cancer among participant women with their socio-demographic status, level of education and socioeconomic status appeared to be significantly correlated with knowledge of cancer. Women who were well educated (higher secondary school and above) and women from higher socioeconomic status (monthly family income > Rs. 2000) had better knowledge about cancer as compared to other participant women.

Table 3. Correlating Prevalent Knowledge of Cancer among Participant Women with their Socio-demographic Status

Features	No.	Knowledge of Cancer		Univariate Analysis		Multivariate		Screening Practice	
		Good	Poor	OR	95% CI	OR	95% CI	Good	Poor
Age (in years)									
a) 30-39	71 (39.0)	28 (36.8)	43 (40.6)					1 (16.7)	70 (39.8)
b) 40-49	72 (39.6)	26 (34.2)	46 (43.4)	0.868	0.441 - 1.708			4 (66.7)	68 (38.6)
c) 50-59	24 (13.2)	13 (17.1)	11 (10.4)	1.815	0.714 - 4.616			1 (16.7)	23 (13.1)
d) 60-65	15 (8.24)	9 (11.8)	6 (5.66)	2.304	0.739 - 7.184			0 (0.00)	15 (8.52)
Education									
a) Illiterate	60 (33.0)	16 (21.1)	44 (41.5)					0 (0.00)	21 (11.9)
b) Primary (1-4)	21 (11.5)	10 (13.2)	11 (10.4)	2.5	0.893 - 7.002	2.32	0.779-6.897	2 (33.3)	78 (44.3)
c) Secondary (5-10)	80 (44.0)	35 (46.1)	45 (42.5)	2.139	1.038 - 4.407	1.94	0.911-4.134	1 (16.7)	9 (5.11)
d) Higher (11-12)	10 (5.49)	8 (10.5)	2 (1.89)	11.0	2.109 - 57.98	8.62	1.583-46.93	3 (50.0)	8 (4.55)
e) Sr. college(13-15)	11 (6.04)	7 (9.21)	4 (3.77)	4.813	1.241 - 18.66	4.89	1.156-20.64	0 (0.00)	60 (34.1)
Religion									
a) Hindu	119 (65.4)	44 (57.9)	75 (70.8)					2 (33.3)	117 (66.5)
b) Muslim	10 (5.49)	3 (3.95)	7 (6.60)	0.731	0.18 - 2.971			0 (0.00)	10 (5.68)
c) Christian	50 (27.5)	29 (38.2)	21(19.8)	2.354	1.2 - 4.617			4 (66.7)	46 (26.1)
d) Buddhist	3 (1.65)	0 (0.00)	3 (2.83)					0 (0.00)	3 (1.70)
Occupation									
a) Housewife	44 (24.2)	14 (18.4)	30 (28.3)	0.546	0.259-1.15			0 (0.00)	44 (25.0)
c) Service	15 (8.24)	6 (7.89)	9 (8.49)	0.780	0.259-2.352			1 (16.7)	14 (7.95)
d) Self employed	12 (6.59)	5 (6.58)	7 (6.60)	0.836	0.249-2.808			2 (33.3)	10 (5.68)
e) Others	9 (4.95)	4 (5.26)	5 (4.72)	0.936	0.238-3.689			0 (0.00)	9 (5.11)
Monthly Family Income (in Rs.)									
a) ≤ 2000	74 (41.3)	20 (26.7)	54 (51.9)					2 (33.3)	72 (41.6)
b) 2001 – 5000	88 (49.2)	48 (64.0)	40 (38.5)	3.24	1.670-6.286	3.11	1.563-6.198	2 (33.3)	86 (49.7)
c) >5000	17 (9.50)	7 (9.33)	10 (9.62)	1.89	0.633-5.642	1.40	0.428-4.551	2 (33.3)	15 (8.67)

* Since there were only six women who had good scores for knowledge and practices regarding cancer screening, statistical significance was not calculated with various socio-demographic variables.

Unfortunately, only six women had good knowledge and participated in cancer screening as compared to other women.

Discussion

Cancer screening is still in its infancy in India. To avail the cancer screening facilities, sufficient knowledge about common cancers and screening modalities is essential. In our study, knowledge about cancer was good compared to that of cancer screening. Similar findings were noted in a study conducted among slum population in New Delhi, India (Seth et al., 2005). Most of the women in the current study had got information about cancer from their relatives and friends. Audio visual media was responsible for creating awareness about cancer screening. In a study conducted in New Delhi, women had acquired knowledge about breast cancer through media and relatives followed by physicians (Somdatta et al., 2008). In our study, it was observed that women who were well educated and who came from higher socioeconomic status had better knowledge about cancer and screening which was similar to other studies (Claeys et al., 2002; Hiatt et al., 2002). Naturally they may not attend the awareness sessions and may avail screening facilities at higher centres whereas women who are not well educated and coming from middle and low income status utilize such awareness sessions and get themselves screened in such camps.

Before we conducted this study, only 6.59% women (n=12) had got themselves screened for any cancer, ever in their lifetime. Majority of them underwent screening for breast cancer in the form of mammography(6 women), clinical breast examination (3 women) and ultrasound examination of the breast (2 women).As noted in previous studies the major hurdles for cancer screening are administrative failures, unavailability of female screeners, absence of any medical problems, inconvenient screening timings, lack of awareness of screening tests and its benefits, negligence, embarrassment due to the procedures involving genital exposure, fear of pain or detection of cancer and considering oneself as not to be at risk of developing cancer(Seth et al. ,2005; Fylan 1998; Fernandes et al., 2009).

In conclusion, even though the knowledge about cancer among women was encouraging, their knowledge and practice of cancer screening was very disappointing. There is a need to bridge this existing gap so that cancer screening will emerge as a routine procedure in medical practice and will help in reducing the morbidity and mortality. Regarding limitations of the study, all the participant women in the study belonged to low socioeconomic status. Results of this study may not be similar among women belonging to higher socio-economic strata.

Acknowledgements

The authors thank Department of Atomic Energy (Government of India), Women's Cancer Initiative and Tata Memorial Hospital for providing funds and support. The authors also thank Dr.Suchita Nagarsekar, Dr.Renuka Matti, Dr.Sharmila Pimple, Mrs Parishi Muzumdar, Miss Esha Chudasama, Health Workers of Department of Preventive Oncology and the six Non Governmental Organizations from Mumbai who co-ordinated in this programme for their kind cooperation. The authors also acknowledge the women who participated in the programme and further declare that they have no conflict of interest.

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