



Cancer awareness and barriers to seeking help among the residents of Raipur City, Chhattisgarh, India

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ABSTRACT

Background

Cancer is a leading public health problem worldwide and a growing problem in India. Factors contributing to the morbidity and mortality burden include lack of awareness regarding cancer risk factors and symptoms and barriers to seeking help. This study was conducted in selected areas of Raipur City, India to assess cancer awareness with regard to nine early warning signs selected for the project study, associated risk factors and barriers patients were likely to encounter in seeking help.

Methods

We conducted a community based, descriptive cross-sectional study among 244 adults in the age group 18-59 years, in selected areas under the municipal corporation of Raipur City, Chhattisgarh, India. Respondents were chosen from this age group so that they could learn about the signs and symptoms of cancer at an age before cancer is generally diagnosed, and thus be better prepared to look out for such signs in later life. Data was collected through interviews, using pre-designed, pre-tested questionnaires, and was compiled and analysed in MS Excel by the project team.

Results

Overall, only 17% of the study respondents were aware of all nine warning signs of cancer. The most commonly known risk factor was smoking cigarettes (98%), followed by passive smoking (73%). The most commonly known early warning sign of cancer was finding an unexplained lump or swelling (83%) followed by persistent unexplained pain (68%). Only 24% of the respondents were aware that HPV infection was a risk factor for cancer, and a similar number (25%) answered that it was not a risk factor (51% were unsure). The most common barrier in seeking help for cancer treatment was being too scared (65%), followed by having other things, other than getting a cancer diagnosis, to worry about (43%).

Conclusion

There was a low level of overall awareness about cancer risk factors and warning signals among study participants. Being too scared to seek treatment, and having too many other things to worry about were major barriers to seeking help identified by this study.

Keywords: Awareness, Barriers to help-seeking behaviour, Cancer

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INTRODUCTION

The global cancer burden continues to grow, exerting tremendous physical, emotional and financial strain on individuals, families, communities and health systems worldwide. Cancer is the world's second leading cause of death, accounting for an estimated 9.6 million deaths, or one in six of all global deaths, in 2018. Lung, prostate, colorectal, stomach and liver cancer are the most common types of cancer in men, while breast, colorectal, lung, cervical and thyroid cancer are the most common among women.¹ The annual number of new cancer cases is projected to increase from 14.1 million in 2012 to 21.6 million by 2030. Certain population groups experience inequalities in risk factor exposure and in access to screening, early diagnosis, and to timely and appropriate treatment; they also experience poorer outcomes for cancer; and different cancer control strategies are required for specific groups of cancer patients, such as children and adolescents.²

Cancer is more likely to respond to effective treatment when identified early, leading to a greater probability of patient survival and less expensive treatment. The value of detecting cancer early is clear, and can make significant improvements in the lives of cancer patients³ but in many low- and middle-income countries, health systems are poorly prepared to manage this burden. Large numbers of cancer patients globally do not have access to timely, high-quality diagnosis or treatment. The present study was an attempt to assess awareness of cancer and barriers to seeking help in Rapiur City, India. Cancer incidence is increasing in the country but very few studies have been conducted related to this issue and there is a need to spread more awareness about early warning signs in order to promote early diagnosis and treatment.

MATERIALS AND METHODS

A community-based cross-sectional observational study was conducted by the Department of Community Medicine, Pt. J.N.M. Medical College, Raipur, Chhattisgarh, India, among residents of Raipur City. The study was undertaken from 15 December 2019 to 28 February 2020. House-to-house visits were made and eligible subjects were briefed regarding the purpose of the study. Study inclusion

criteria were adults aged 18-59 years; people under 60 were chosen so that they could be educated about preventative measures and signs of cancer they might encounter in later life. Participants were selected by multistage random sampling method. Data collection was carried out by interview using a pre-designed, pre-tested questionnaire. Informed consent (given verbally) was obtained from the subjects after assuring them that confidentiality and anonymity would be maintained. Details regarding their socio-demographic characteristics, awareness of cancer, knowledge of warning signs and barriers to seeking help were recorded. Assuming the prevalence of awareness to be 50%, sample size is calculated using the formula:

$$4pq/d^2$$

where p is the awareness of cancer, p=50%, q = 1-p, d = 0.07 for 7% relative precision (20% non-response rate).

This gave a sample size of 244. The 244 samples were divided equally among four areas of the city; 61 samples were collected from each area. To select the four areas, multistage random sampling was used. Two zones were randomly selected via a lottery and from these two zones, two wards were then selected via lottery. From each ward, two areas were selected via lottery; and then houses were visited house-to-house by data collectors. Inclusion criteria for the study were adults ≥ 18 and <60 years of age. Exclusion criteria were people <18 and >60 years of age; critically ill patients; and those who did not give consent. The collected data were compiled, cleaned and analyzed in MS Excel. Descriptive analysis for demographic characteristics are presented in the form of frequencies, proportions and means.

RESULTS

Sociodemographic characteristics of the participants are shown in Table 1. Numbers of male and female participants were almost equal. Participants had a mean age 38.02 ± 12.12 years; and belonged mostly to the Hindu religion (85%). The majority were from the upper class (74%) with no subjects from the lower class. Three quarters (77.5%) were university graduates. The majority were married (73%).



Table 1 Sociodemographic details of subject

Variables	Frequency	Percentage
Male	121	50%
Female	123	50%
18 - 27	63	26%
28 - 37	60	25%
38 - 47	52	21%
48 - 57	54	22%
≥ 58	15	6%
Mean age	38.02 ±12.12	
Religion		
Hindu	207	85%
Muslim	11	4%
Sikh	24	10%
Christian	1	0.5%
Others	1	0.5%
Education		
Postgraduate	56	23%
Graduate	133	54.5%
High school	34	14%
Middle school	12	5%
Up to primary school	9	3.5%
Socio-economic status		
Upper class	181	75%
Upper middle class	40	16%
Middle class	10	4%
Lower middle class	13	5%
Lower class	00	00%
Marital status		
Married	178	73%
Unmarried	66	27%

Table 2 Awareness and risk factors of cancer

Risk factors	Yes (%)	No (%)	Don't know (%)
Smoking cigarette	238 (98%)	4 (1%)	2 (1%)
Exposure to second hand cigarette smoke	177 (73%)	36 (14%)	31 (13%)
Drinking alcohol > 1 unit per day	169 (69%)	51 (21%)	24 (10%)
Eating < 5 portion fruits and vegetables per day	65 (27%)	131 (54%)	48 (19%)
Overweight	96 (39%)	104 (43%)	44 (18%)
> 70 years	82 (34%)	119 (49%)	43 (17%)
Having close relative with cancer	84 (34%)	140 (58%)	20 (8%)
Infection with HPV	60 (24%)	61 (25%)	123 (51%)

More than half of the study participants were aware of lung (51%) and breast cancer (52%), but cervical cancer was less well known (11%) (Fig 1). The majority (98%) were aware that smoking is a risk factor for cancer; 69% were aware of drinking alcohol but only 24% knew that infection with HPV is a risk factor (Table 2). Unexplained swelling or lump (83%) were

well-known, followed by persistent unexplained pain (68%), difficulty in swallowing (62%), unexplained weight loss (55%) and persistent cough and hoarseness (59%). Only 39% were aware that a persistent change in bowel habits can be an early warning. Overall, only 17% were aware of all the nine warning signs listed in this study (Table 3).

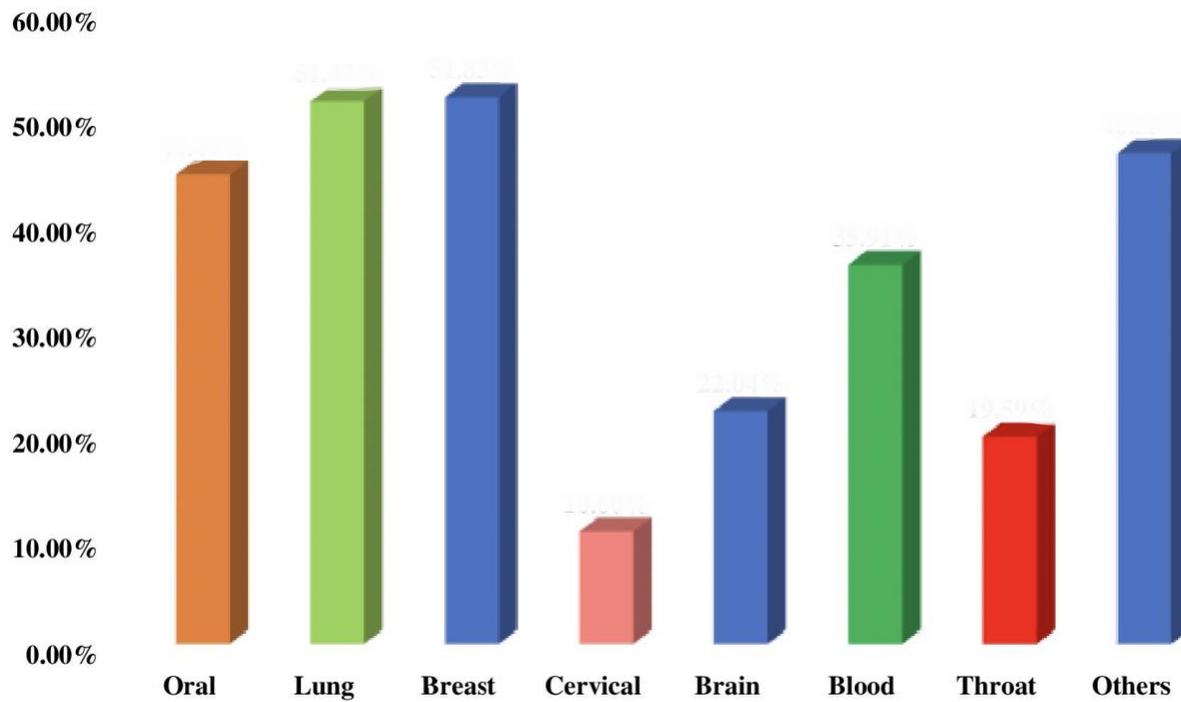


Fig 1 Awareness of types of cancer among study population
*multiple responses possible

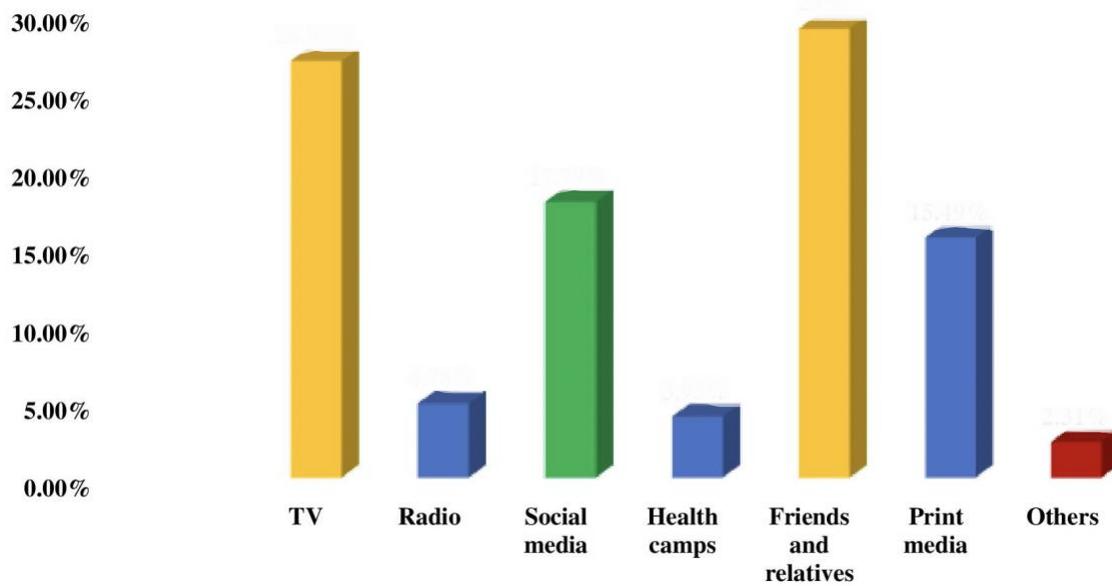


Fig 2 Sources of information about cancer
*multiple responses possible

Table 3 Warning signs of cancer

Warning signs of cancer	Yes (%)	No (%)	Don't know (%)
Unexplained swelling or lump	202 (83%)	25 (10%)	17 (7%)
Persistent unexplained pain	166 (68%)	37 (15%)	41 (17%)
Unexplained bleeding	161 (66%)	55 (23%)	28 (11%)
Persistent cough and hoarseness	144 (59%)	67 (27%)	33 (14%)
Persistent change in bowel habit	95 (39%)	68 (28%)	81 (33%)
Persistent difficulty in swallowing	152 (62%)	44 (18%)	48 (20%)
Change in appearance of mole	112 (46%)	63 (26%)	69 (28%)
Sore that does not heal	110 (45%)	81 (33%)	53 (22%)
Unexplained weight loss	134 (55%)	65 (27%)	45 (18%)
Awareness of all signs of cancer	41 (17%)	188 (77%)	15 (6%)

Table 4 Barriers to seeking help

Reasons for not seeking help	Yes (%)	No (%)	Don't know (%)
Too embarrassed	93 (38%)	144 (59%)	7 (3%)
Too scared	159 (65%)	83 (34%)	2 (1%)
Worried about wasting doctor's time	20 (8%)	220 (90%)	4 (2%)
Doctor would be difficult to talk to	69 (29%)	169 (69%)	6 (2%)
Difficult to make an appointment with doctor	44 (18%)	194 (80%)	6 (2%)
Busy to make time to go to doctor	67 (27%)	166 (68%)	11 (5%)
Many other things to worry about	105 (43%)	132 (54%)	7 (3%)
Difficulty to arrange transport to the doctor's surgery	54 (22%)	180 (74%)	10 (4%)
Worried about what the doctor might find	98 (40%)	134 (56%)	12 (5%)
No confidence in talking about the symptom with the doctor	97 (40%)	139 (57%)	8 (3%)

Nearly two thirds of the study participants (65%) reported that they are "too scared to talk" about cancer and 43% do not seek help as they have "many other things to worry about".

"What the doctor might find" was also reported as a barrier to seeking help (by 40%) as was "no confidence in talking about the symptom with the doctor" (40%).

On a more positive note, only 8% were worried about wasting doctors' time (Table 4) and less than one fifth (18%) reported difficulties in making an appointment with the doctor.

The most common source of information about cancer was friends and relatives (29%) followed by TV (27%), social media (18%) and print media (15%). The least common source was health camps (4%) (Figure 2). Government medical college/regional centre care was the most commonly known place

for getting a diagnosis and cancer treatment (86%) followed by private hospitals (86%).

DISCUSSION

This study focussed on assessing the knowledge about different types of cancer, risk factors, warning signs and perceived barriers to seeking help for cancer symptoms amongst a population that largely comprised educated, upper-class urban residents. More than half of the study participants were only aware of lung and breast cancer; but only one in 10 knew about cervical cancer. This finding is similar to previous studies carried out in Chandigarh, India, Nepal and Oman.^{4,5,6} Low awareness amongst even the more educated classes is concerning, particularly with regard to low awareness of cervical cancer, which is the second most common cancer in India, affecting 23% of women.⁷ One woman dies of cervical cancer every 8 minutes in India.⁸ This low level of awareness about cervical cancer should be addressed as a priority.

The International Agency for Research on Cancer (IARC) lists smoking tobacco as the major cause of lung cancer worldwide; the habit is also associated with oral cancer. Secondhand tobacco smoke, chewing betel quid (areca nut mixed with slaked lime) with tobacco, and tobacco mixed with lime all have carcinogenic potential.⁹ All are popular in India. There is a well-established causal link between alcohol use and cancers of the oropharynx, larynx, oesophagus, liver, colon, rectum and, in females, the breast.¹⁰ According to the World Health Organization, nearly one in three men in India drinks alcohol at above recommended weekly intake.¹¹ WHO estimates that if risk factors such as tobacco use, poor diet and physical inactivity were prevented, there would be an 80% reduction in heart diseases, strokes and diabetes and a 40% reduction in cancers.¹² This study identified that the majority of study participants know that smoking cigarettes, exposure to secondhand cigarette smoke and drinking >1 unit alcohol per day are risk factors for cancer. This suggests that providing knowledge alone is not enough: the participants know the risks and yet choose to engage in these behaviours regardless. More research is needed to determine the reasons why and identify solutions.

General levels of awareness in this study are similar to those found in others¹³ with low overall awareness of all the warning signs of cancer having been identified before.¹⁴ Friends, relatives and TV were all major sources of information about cancer among study participants. This finding was contrary to those of Aggarwal et al¹⁵ which found that in Europe, print media was the main information source. TV advertising and information campaigns would be a good way to reach the population, directly or via friends and family.

CONCLUSION

There was inadequate awareness about some cancer warning signals and help-seeking behaviour faces a number of barriers. It is therefore recommended that healthcare professionals in India should scale up efforts to discourage people from engaging with known risk factors and improve awareness of early warning signals of cancer.

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