RESEARCH ARTICLE

Awareness Regarding Risk Factors, Symptoms and Treatment Facilities for Cancer in Selected States of India

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Abstract

    <u>Objective</u>: To study the level of awareness and knowledge about cancers and associated risk factors among households in selected states of India. <u>Methods</u>: In the study 3070 households were interviewed from six states viz, West Bengal, Kerala, Madhya Pradesh, Rajasthan and Mizoram. <u>Results</u>: Knowledge of cancers other than those related to tobacco was very low (prostrate 8%, colon 11%) among the communities, with a poor awareness of warning signs and symptoms. The knowledge varied from state to state. It is found that the major source of information related to cancers was television (38%) followed by friends and relatives (36%). Only about 15 % of respondents had knowledge about cancer awareness camps organized in their districts but they did not have knowledge about the organizers of the camp. Findings suggested a strong need for strengthening of DCCP. <u>Conclusion</u>: It is important to create awareness among community through educational programs on cancer prevention, preventable cancer risk factors, benefits of early diagnosis, and availability of screening facilities. Integration of District Cancer Control activities with NRHM could be the most cost-effective strategy to prevent cancers and rural population.

Keywords: Awareness - types of cancer - risk factors - symptoms of cancer - diagnosis and treatment - screening

Introduction

    Cancer is emerging as a major health problem globally with over 10 million new cases of cancer and more than 6 million deaths due to cancer (12% of all deaths) worldwide. 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 (WHO, 2008).Cancer has become one of the leading causes of death in India. The total cancer cases are likely to go up from 979,786 cases in the year 2010 to 1,148,757 cases in the year 2020 (Takiar, 2010).

    Every year about 4 lakh deaths occur due to cancer (MOHFW, 2009; 2010). Data from population-based cancer registry on pattern of cancer have remained unchanged over the years, namely oral cavity, lungs, oesophagus and stomach amongst men and cervix, breast and oral cavity amongst women. Cancers of oral and lungs in males, and cervix and breast in females account for over 50% of all cancer deaths in India. Tobacco smoking causes cancers of lung, urinary bladder, oral cavity (Mouth and Tongue), Sino-nasal cavity, nasopharynx, oropharynx and hypopharynx, larynx, pancreas, oesophagus, stomach, liver, uterine cervix and myeloid leukaemia (IARC, 2004). WHO has estimated that 91% of oral cancers in South-East Asia are directly attributable to the use of tobacco and this is the leading cause of oral cavity and lung cancer in India. Tobacco smoking causes cancers of lung, urinary bladder, oral cavity (Mouth and Tongue), Sino-nasal cavity, nasopharynx, oropharynx and hypopharynx,

larynx, pancreas, oesophagus, stomach, liver, uterine cervix and myeloid leukaemia (IARC, 2004).

    According to the World Health Organisation (WHO), most cases of cancer are detected only in the advanced stages, when they are untreatable (ICMR, 2004). This is especially true in developing countries. The fact is that in the case of head and neck cancers, Cervical cancer and Breast cancer, i.e., the most common cancers in India, there are proven screening methods to catch the disease at an early stage when it is curable.

    Unfortunately, in developing country like India there is 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 (Bhurgri et al., 2008; Kumar et al., 2011). Awareness of public about warning signs of cancer in relation to early detection and prevention has been surveyed in a few countries, and results showed poor knowledge among them (Khalil, 1996; Brunswick, 2001; Ali and San, 2005). Education on risk factors, early warning signals and their management are lacking. Cancer screening is not practised in an organized fashion in any part of India (Nair, 2004).

    In 1970s, the Government of India designed primary and secondary prevention strategies for the cancer to be carried out through the district cancer control projects. Primary Prevention is generating awareness amongst the masses about cancer, good dietary and healthy living habits, ill effects of tobacco and passive smoking, carcinogens. Secondary prevention is generating

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awareness on the symptoms of cancer in the primary stages promoting self-examination, followed by early diagnosis and treatment when it is likely curable and cost of treatment is comparatively lesser thereby saving the precious human lives, their families and the National resources which are often wasted in advanced stage treatment (about 80% of the cases are detected in the advanced stages).

The present study is carried out to assess the level of community awareness on symptoms and risk factors of cancer and utilization of services in selected states in India.

Materials and Methods

Keeping in view the all India character of the study, a multistage random sampling design was adopted. The country was divided into six major regions i.e. East, West, North, South, Central, and North-East region. From each region one State was selected based on availability of cancer treatment facilities, such as existence of RCC, Oncology Wing, DCCP, and NGO scheme. The six states selected were Kerala (South), Rajasthan (North), Madhya Pradesh (Central), Maharashtra (West), West Bengal(East) and Mizoram(North-East). From each selected state two districts; one where Regional Cancer Center (RCC) is located and other where no such facility exist were selected for the community survey. A sample of 125 households in urban and 125 households in rural area from each district was decided for the study. Thus, a sample of 250 from each district, 500 per state and altogether 3000 individual, aged between 15-60, from six selected states were selected for interview. The ethical approval for the study was obtained from the Institutional Review Board of the Institute.

Results

Socio-Economic Profile of Respondents

Socio-Economic profile of the respondents indicates that highest number of the respondents were in the age group of 45-54 years with sex distribution as male (60%) and female (40%). About 11 percent respondents were illiterates which vary significantly across States (Rajasthan, 25% and Kerala, 3%). Distribution of respondents by occupation shows that 24% were house wives, 13 percent were agricultural labourers and 15 percent were in government/private job. More than 67 percent of the respondents were Hindus, 22 percent were Christians and nearly 7.4 percent were Muslims. 32 percent of the respondents belong to general category, 33 percent were in the OBC category, 12.4 percent were scheduled tribes and 18 percent were scheduled castes. About 44 percent of the patients were categorized as poor on the basis of household assets (data not presented).

Awareness about various Types of Cancers

The study found that 87 percent of the community respondents were aware about cancer. The highest was in Mizoram (99%) followed by Kerala (94%). The lowest was In Madhya Pradesh (78%).

Further analysis shows that, overall more than half of the respondents were heard about mouth/pharynx Cancer (57.9%) followed by breast cancer (50.8%) and Lung Cancer (41.5%). Though Cervix cancer is the most common cancer among women in India, but only one-fourth of the respondents were aware about the cervix cancer. However, other types of cancer were less known. Only 8 percent of the respondents were heard about prostrate cancer.

The level of awareness in Mizoram and Kerala seems to be better as compared to remaining 4 states. For instance, only 0.8 percent and 1.3 percent of people were aware of colon cancer in Maharashtra and Rajasthan respectively. The least heard Cancer in Mizoram, West Bengal, Madhya Pradesh and Rajasthan is Prostrate (26.8%, 10.5%, 1.8% and 0.8% respectively), Gall Bladder (5.1%) in Kerala and Colon/Rectum (0.8%) in Maharashtra. The awareness about Oesophagus cancer was also quite low except in Mizoram .

Source of Cancer related Information

It was found that the most popular source, mentioned by more than one third respondents was TV (37.7%) followed by Friends and Relatives (36.1%), Newspaper (19.5%.) and Internet (0.4%) was the least mentioned sources of information on cancer).

The role of print materials like pamphlets, booklets etc., Government Health Functionaries and Government run Health Camps in awareness raising are quite low (3.9%, 1.4% and 15% respectively) which indicates, inadequate activities being undertaken in states for spreading awareness about cancer. Even the involvement of NGOs in spreading the awareness is quite low (2.3%).

Awareness about Risk Factors of Cancer

Table 1 shows the knowledge about various risk factors among the people in selected districts. It is observed that people are mostly aware about use of smokeless tobacco (79.3%) and smoking (79.2%) as the main cause of cancer, followed by alcohol (58.8%). However, they were not aware of other risk factors like industrial radiation (17.8%), early puberty (5.3%), null parity (5.0%), over weight (4.3%) etc. The state wise data shows similar pattern of awareness about risk factors with exception of Mizoram, where awareness is high due to high literacy rate.

Source of Information on Risk Factors of Cancer

Table 1 also shows various sources of information about the associated risk factors. Friends and relatives (44.4%) emerged as the main source, followed by TV (41.0%) and Newspapers (20.6%). About 23% respondents were ignorant about various risk factors.

This implies limited role of Govt. health camps (7.4%), NGO's (2.9%), IEC material (5.6%), Govt. health functionaries (1.6%) etc. in spreading the awareness about risk factors associated with cancer. There is strong need for integration of cancer awareness activities with NRHM in the District Health System.

Awareness about Symptoms of Cancers

Table 2 shows the knowledge of various symptoms of cancer among the people. It is observed that nearly

Table 1. Knowledge of Risk Factors Associated with Cancers in Selected States and Source of Information about Cancers' Risk Factors

	STATE						All
	Mizoram n=507	WB n=513	MP n=501	Kerala n=508	Raj n=523	Mah n=518	States n=3070
Knowledge of Risk Factors associated with Cancers:							
Smokeless tobacco	91.5	77.6	78.4	73.0	74.1	81.1	79.3
Smoking	92.3	78.9	74.5	85.3	73.2	70.8	79.2
Drinking Alcohol	69.0	63.9	43.7	78.5	50.3	47.3	58.8
Diet rich in animal fat	45.2	14.6	3.9	12.6	12.6	6.6	15.9
Industrial radiation/Pollution	40.8	23.6	7.6	23.6	7.3	3.9	17.8
Viruses and bacteria	32.7	17.5	2.6	7.3	2.3	8.1	11.8
Family history of cancer	49.1	21.6	6.4	9.1	1.3	2.5	15.0
Multiple Sexual Partners	26.2	14.4	4.6	10.2	1.1	1.9	9.7
Poor sexual/genital hygiene	33.1	10.5	2.0	6.1	1.0	1.9	9.1
Early Puberty	15.2	8.6	2.0	4.9	0.6	0.6	5.3
Young age at first sexual intercourse	23.9	10.3	1.8	2.2	7.3	1.7	7.9
Late age at marriage	11.4	7.2	1.4	2.0	3.6	1.4	4.5
Nulliparity	17.9	6.4	2.0	1.6	0.6	1.7	5.0
Late menopause	22.3	7.0	0.8	2.0	0.2	1.0	5.6
Inactivity & Over weight	18.7	4.3	1.0	1.2	0.2	0.6	4.3
Source of Information about Cancers' Risk Factors:							
Govt. Health Camps	0.8	1.6	0.4	41.0	0.4	0.4	7.4
Govt./Pvt. Doctor	10.9	6.7	8.4	2.2	5.9	3.1	6.2
News Paper	16.8	23.6	16.8	27.9	25.4	13.0	20.6
Radio	8.9	4.8	10.4	4.2	5.4	0.6	5.7
TV	30.6	42.3	43.0	41.0	42.5	46.5	41.0
Internet	0.8	1.2	0.8	0.2	0.2	0.3	0.6
NGO Personnel/	1.8	9.0	0.6	2.2	2.1	1.6	2.9
Friends/Relatives	75.3	46.2	24	52.7	44.5	23.5	44.4
Banners/Posters/Pamphlets/Wall Writing	3.2	1.8	8.4	2.2	15.3	2.4	5.6
Govt. Health Functionaries	1.4	1.4	0.8	2.6	2.3	0.8	1.6

one-fourth of people were aware that unusual bleeding (23.9) and lump of thickening of the lip (22.2%) as the main symptom of cancer, followed by change in breast size (18.5%), chronic ulcer (18.1%) and sore that doesn't heal (17.4%). Other serious symptoms like unexplained change in bowel (4.3%), unexplained weight loss (7.0), difficulty in swallowing (9.8%), rapid increase of size of mole (5.2%), nagging cough (8.0%), bad breadth (4.2%), persistent indigestion (5.2%) etc. were less known in all states.

From the Table 2, it can be concluded that people are not much aware of the even common symptoms of cancer, which is most important for early decision for diagnosis and treatment and may cause patients reaching to hospital late/last stage making treatment very expensive and low chances of survival.

Source of Knowledge of Symptoms of Cancer

Table 2 shows that TV (22.1%) emerged out as the main source, followed by friends and relatives (20.2%). This implies that role of other sources of information like Health Camps (6.5%), NGO's (2.1%), IEC material (6.6%), Govt. health functionaries (1.0%) etc. are very limited in spreading the awareness of symptoms of cancer as envisaged under NCCP. The information received from the friends and relatives need not be accurate and this often cause delay in seeking appropriate treatment at the early stage of cancer.

Perception about Curability of Cancers

Respondents from all states were quite aware of the fact that cancers can be cured if detected early (57.1%), whereas 26.4% believed that cancer cannot be treated fully (Figure 1). Kerala has the highest percentage of people agreeing this (75.2%) followed by Mizoram (66.3%), Maharashtra (54.2%), Rajasthan (54.1%), MP (48.9%). While West Bengal has least percentage of people (44.1%) agreeing to the fact that cancer can be cured, if detected early.

This implies that the awareness of people regarding early detection and treatment of cancer is low in the State except in Kerala and Mizoram.

Awareness about Availability of Cancer Diagnosis and Treatment Facilities

Table 3 reveals awareness about the health facilities where people generally go for cancer diagnosis and treatment in their respective areas. Government Medical Colleges/ Regional Cancer Centers (35.8%) are the most commonly known diagnostic and treatment centres in all the States, where as District hospital were known mainly
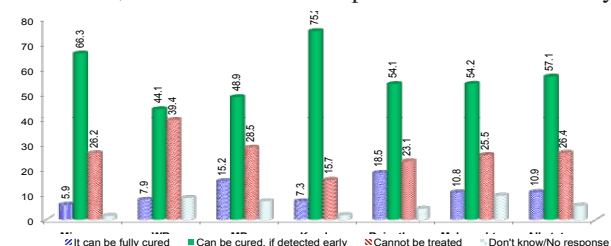

Figure 1. Opinion about Curability of Cancers.

Table 2. Knowledge of Symptoms of Cancers in Selected States and Source of Knowledge of Symptoms of Cancers

	STATE						All
	Mizoram n=507	WB n=513	MP n=501	Kerala n=508	Raj n=523	Mah n=518	States n=3070
Knowledge of Symptoms of Cancers:							
Unusual bleeding	33.9	37.0	17.8	19.9	17.2	17.6	23.9
Sore that doesn't heal	28.4	24.4	20.4	15.2	12.8	3.1	17.4
Chronic Ulcer	33.7	23.8	23.0	10.6	12.8	4.8	18.1
White or red patch	9.9	20.1	13.0	16.5	9.0	21.8	15.1
Difficulty in moving Jaw	5.5	16.6	14.8	22.6	28.9	6.2	15.8
Loose Teeth	4.1	21.6	2.2	3.5	9.2	8.7	8.2
Unexplained Change in bowel	10.8	4.5	2.8	4.1	2.7	0.8	4.3
Change in breast size	29.0	21.2	5.4	20.0	16.1	19.3	18.5
Lump or thickening on the lip	49.5	17.2	11.0	19.5	19.3	16.4	22.2
Nagging cough	17.4	14.0	4.6	7.3	3.3	1.2	8.0
Rapid increase of Size of mole	16.0	8.2	1.2	5.5	0	0.4	5.2
Persistent indigestion	18.9	9.7	1.6	0	0	0.8	5.2
Difficulty in swallowing	28.0	14.2	4.6	5.7	3.6	2.5	9.8
Difficulty in Breathing	14.8	15.2	4.0	15.2	7.6	0.4	9.5
Persistent fever	22.3	12.3	1.6	10.0	1.3	0.6	8.0
Constant stomach pain	29.0	16.6	3.2	15.6	2.1	1.2	11.3
Unexplained weight loss	9.9	13.8	4.4	11.0	1.1	1.5	7.0
Bad breath	3.7	13.5	1.2	1.4	4.4	0.8	4.2
Others	0	0	0	3.3	0.6	1.4	0.9
Source of Knowledge of Symptoms of Cancers:							
Govt. Health Camps	0.2	0.8	0.2	36.5	0.4	0.6	6.5
Govt./Pvt. Doctor	6.9	5.5	4.0	1.0	4.1	3.1	4.1
News Paper	5.1	15.8	7.8	6.6	2.1	2.7	6.7
Radio	3.2	1.0	4.0	1.6	3.4	0.2	2.2
TV	9.8	27.0	16.4	27.9	34.4	17.0	22.1
Internet	0.2	0.8	0.2	0.6	0.4	0	0.4
NGO Personnel/	0.4	5.9	0.4	4.4	1.7	0	2.1
Friends/Relatives	48.1	32.9	14.0	23.6	1.7	1.0	20.2
Banners/Posters/Wall writing etc.	1.0	0.8	3.8	2.6	30.3	0.8	6.6
Govt. Health Functionaries	0.2	0.8	0.6	2.4	1.7	0.2	1.0
Schools/College Programme	0.4	1.2	1.0	3.0	1.0	1.4	1.3
Others	2.0	1.8	0.2	1.6	0.4	4.9	1.8
Don't know/No response	34.6	36.2	44.0	0	37.7	73.0	37.6

in Mizoram and West Bengal. The awareness is also influenced by the availability of facility and its reputation among population in the state. Private hospitals for cancer treatment were mainly popular in Maharashtra, Kerala and MP. The above information is influenced by the availability of facility and its reputation among population in the state.

There implics need for further expansion of cancer treatment services in the government hospital.

Awareness about Cancer Diagnosis & Treatment Facility in the District

When asked about the Health facility inside and outside the district where people can get Screening/Investigation and Treatment for Cancer, majority of people (66.1%)
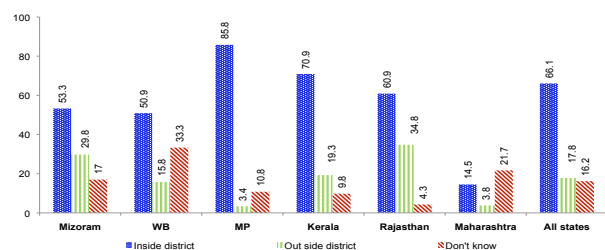

Figure 2. Availability of Cancer Diagnosis & Treatment Facility Inside the District

named the facility inside the district (Figure 2) across the states. This finding may be attributed to the fact that at least one districts selected was having RCC/Oncology wing. On the other hand, 66.7 percent of people of West Bengal and 83 percent in Mizoram were aware of such kind of facility inside or outside their district, indicating that awareness level of people regarding knowledge of facilities for cancer treatment inside the district is high. Further, 34.8 percent of people of Rajasthan and 29.8 percent from Mizoram mentioned that such facility is present outside their district which indicates need for strengthening facilities in districts in hilly or inaccessible areas.

Use of Tobacco & Alcohol

Question was asked to the respondents as anyone in the household using tobacco or alcohol. The overall data reveals that people in all states reported of Cigarettes smoking (23.7%), followed by pan with supari (18.6%). However, the habits of the people differ in states, like in Mizoram people consume Cigarette (67.3%) mostly followed by Scented Tobacco with Lime (36.9%).Table 8 shows the percentage of people in different states using/ consuming Tobacco products and alcohol.

Likewise in Madhya Pradesh and Rajasthan higher

Table 3. Awareness about the Place where Cancer Diagnosis & Treatment Facilities are available in selected States and Use of Tobacco & Alcohol by State

	STATE						All
	Mizoram n=507	WB n=513	MP n=501	Kerala n=508	Raj n=523	Mah n=518	States n=3070
Cancer Diagnosis & Treatment:							
Govt. Health Camps	1.0	3.7	1.4	0.2	0	1.7	1.3
NGO /Trust Hospital	2.4	7.2	0.8	0	0	0.2	1.8
CHC/PHC	4.7	9.4	2.6	8.2	1.1	1.0	4.5
Private Doctor	2.6	12.8	5.4	1.6	0	24.7	7.9
Dist. /Sub-Div. Hosp	60.2	29.0	12.0	13.4	4.4	6.9	21.0
Pvt. Hosp.	7.1	9.4	15.8	16.9	0.6	24.1	12.5
Medical College	0.4	5.3	15.0	16.0	0.2	4.4	6.6
Govt. MC/RCC	10.1	17.0	28.2	43.5	91.2	24.9	35.8
Others	9.5	2.3	13.8	0.2	1.0	3.1	5.0
Don't know	2.0	3.9	5.0	0	1.5	9.0	3.6
Use of Tobacco & Alcohol by State:							
Gutka	4.7	10.9	33.7	1.0	30.6	6.6	14.6
Pan with Supari	72.0	12.3	10.8	1.2	10.5	4.8	18.6
Scented Khani	30.8	13.6	1.4	0.6	9.6	1.7	9.6
Tobacco with Lime	36.9	6.4	12.4	1.8	9.9	20.3	14.6
Hukka	0	2.1	0.8	0.2	1.0	0.4	0.8
Cigarette	67.3	26.3	9.8	26.6	7.8	4.2	23.7
Beedi	6.1	21.4	27.3	10.8	17.6	1.7	14.2
Alcohol	25.6	12.3	13.6	25.6	4.2	6.8	14.7
Others	2.0	1.2	0.2	0	0.2	0.5	0.7
Stage of Cancer Detection of the Family Members/Relatives/Friends:							
0	4.8	5.7	1.2	0.8	8.8	0.7	4.0
I	7.5	11.3	7.0	10.2	11.8	9.0	8.9
II	13.4	6.6	10.5	9.4	4.9	22.4	10.2
III	18.2	34.9	16.3	6.4	6.8	16.4	16.5
IV	20.5	32.1	36.3	18.9	36.3	21.6	27.7
DK	35.6	9.4	28.7	54.3	31.4	29.9	32.7
Total	100	100	100	100	100	100	100

[Overlaid chart artifacts in the MP column: 100.0, 75.0, 50.0, 25.0, 0]
[Rotated overlaid labels: Newly diagnosed without treatment; Newly diagnosed with treatment; Persistence or recurrence; Remission; None]

percentage of people consuming Gutka (chewable scented tobacco) (33.7% and 30.6% respectively) followed by Beedi (cigarette filled with tobacco flake and wrapped in a tendu leaf) (27.3% and 17.6% respectively) but in Maharashtra high consumption was found for Tobacco with Lime (20.3%) followed by Alcohol (6.8%). The overall it can be concluded that about one sixth people consume tobacco and alcohol which may be reduced if proper awareness is spread against risk factors.

Awareness about Stages of Cancer

Table 3 shows the awareness about stage of cancer of the family members/relatives suffering from cancer. The respondents were asked about the stage of cancer detected in their family members/ relatives/ friends. The later stage i.e., stage IV was responded by maximum number of people in all the states (27.7%), whereas stage 0 was the least responded one (4.0%), followed by stage II (8.9%) and stage III (16.5%). Nearly 33 percent didn't know the stage of cancer. This can be related to the fact that due to low awareness of the symptoms of cancer, cancers are generally detected at the later stages and as a result of this the chances of survival decreases.

Discussion

Poor awareness towards the caner is considered to be an serious issue, which not only affects the public recognition towards disease but also delays the process of timely diagnosis and treatment. The study found that awareness is limited to oral, breast and lung cancers and low percentage of people are aware about rest of cancer like prostrate ,cervix, colon etc. Similar findings were reported in other studies done in Indian cities of Delhi and Chandigarh (Seth et al., 2005; Puri et al., 2010). It may be due to the fact that major sources of information are TV and Newspapers which give publicity of commonly occurring cancers but no structured and targeted IEC activities are promoted through programmatic efforts. These findings were in corroboration to the findings of other studies done in Delhi and Chandigarh (Seth et al., 2005; Puri et al., 2010). It is mainly due to the fact that major source of information are TV and newspaper which only discuss commonly occurring cancers and no structured and targeted IEC are promoted through programmatic efforts. These findings are similar to another study by Kumar et al (2011) at Mumbai. The media publicity and programmatic efforts highly concentrate on publicity against tobacco due to the 'Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003 (COTPA) prohibiting the consumption of cigarettes and other tobacco products, which are injurious to health (MOHFW, 2003). However, health education activities hardly publicize other important risk factors like consumption of alcohol and red meat,

industrial radiation, early child bearing, nulliparity, over weight etc. A pilot survey by Ray and Mandal (2005) in West Bengal reported smoking and tobacco chewing as the major risk factors. The use of tobacco products are common and about one sixth adult population is in the habit of consuming tobacco and tobacco products.

Regarding the awareness about early symptoms associated with cancer, it is observed that only 20-25% of people were aware about most common symptoms like unusual bleeding and lump of thickening of the lip, change in breast size, chronic ulcer and sore that doesn't heal. However, people are hardly aware of the other symptoms of cancer like nagging cough, bad breadth, persistent indigestion etc. As a result of the poor awareness about signs and symptoms people may not pay much attention to important but less known symptoms. Such a poor awareness may cause delay in detection of cancers. India is not exception to such findings which are consistent with those of a few studies in other developing countries (Ali and Khalil, 1996; San, 2005; Saha et al, 2011).

Respondents were even not aware about benefits of screening programme and early detection of cancer. There are myths about causes of cancer and stigma about the disease which shape decision to seek cancer care and its continuum. The cancers of the oral cavity, uterine cervix and female breast are very amenable to early detection. In 1970s the Government of India designed primary and secondary prevention strategies for the control of cancer. The major thrust area of cancer control programme included – public education, treatment, palliative care and training facilities for human resource development. Under the National Cancer Control Programme (NCCP) such efforts were envisaged to be carried out through the district cancer control projects for educating the people about the sign, symptoms and early identification of most common cancers. Findings of the study also reveal that only 10 % of the respondents are aware that cancer detection camps are organized under District Cancer Control Programme (DCCP). The, NCCP remained source of one time meager funding/ grant for purchasing equipments and related civil works to few Tertiary Hospitals. The DCCP could hardly make any impact due to its inflexible operational guidelines, limited coverage and vertical implementation (NIHFW, 2002: 2011).

In conclusion, analysis of this study revealed that knowledge of cancers other than the tobacco related cancers is very low among the community and there exist poor knowledge of warning sign and symptoms of cancers. However, this varies across states and may be related with literacy rates in the state. These evidences suggest that more rigorous efforts under the National Cancer Control Programme is needed to raise awareness level in the community.

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