Economics



ABSTRACT The growing concern over health emphasise to have an insight in to the diseases that cause for the death of human kind. Cancer is identified as one of the disease which have a greater impact on the whole life of the patients. This paper is an attempt to reveal some facts and figures on the prevalence of cancer which was retrieved from 71st NSSO and data from Indiastat.

INTRODUCTION

In economics the term growth is considered to be a positive phenomenon but in medical term growth is related to most dreadful disease called cancer. According to WHO, cancer is the second leading cause of death globally and was responsible for 8.8 million deaths in 2015. And it is found that nearly one in six deaths is due to cancer. About 6% of all deaths in India are due to cancers which contribute to 8% of global cancer mortality. The data on site specific cancer burden shows that in males the common cancer sites are lungs, prostate and stomach and for females it is breast and cervix.

LITERATURE REVIEW

Abt (1975) made an attempt to analyze the social costs of cancer and according to him the social cost of cancer may exceed the economic costs. He estimated the social cost on the basis of number and types of individuals suffering from cancer, identified sociological variables etc. The incorporation of social cost in the analysis of cancer treatment itself is found to be commendable.

Kneese and schulze (1977) in their paper "Environment, health and Economics" analysed the case of cancer as an outcome of environmental issues. Cancer is the second largest killer disease after heart disease in United States. They made an attempt to regress the environmental factors that lead to cancer mortality. Percapita beef consumption, per capita consumption of pork, cigarette consumption, NO2, SO2 are some of the variables they used in analysis. And they concluded by stating the growing concern over the disease cancer.

Abraham (2011) analysed the health risk caused out of the use of mobile phones. He pointed out that there are studies which give evidences that usage of mobile phones could possibly increase the risk of some brain cancer.

Mohanti, Mukhopadhyay, Das, Sharma (2011) attempted to estimate the cost of treatment borne by the cancer patients at an academic tertiary public hospital. The sample size was 432. The study estimates the expenditures borne by the surveyed patients for diagnosis and initial cancer directed treatment as direct or indirect costs.

OBJECTIVES

- To understand the prevalence of cancer in India and Kerala
- To understand the rural-urban divide in availing cancer treatment with respect to level of care, nature of treatment and major source of finance.

DATA SOURCE AND METHODOLOGY

The study mainly relied up on secondary sources. For fulfilling first objective the data available in indiastat (unstarred questions in parliament) and the $71^{\rm st}$ NSSO round Jan –June 2014 are employed. Second objective is realized exclusively on the basis of $71^{\rm st}$ NSSO data.

PREVALENCE OF CANCER IN INDIA AND KERALA

The main problem that faces in analyzing the prevalence of cancer is the non availability of data. There is no such data which gives ample scope to measure the trend of cancer cases. The available data is from the indiastat and it is based on the unstarred questions arises in the parliament. Within the limit the paper intends to trace the trend of cancer deaths and estimated number of cancer cases both for males and females in India and Kerala from 2012-2015.

Both for India and Kerala the estimated number of cancer cases and death are showing an increasing trend. The estimated number of cancer deaths in male increased from 224115 in 2012 to 241492 in 2015. And for Kerala it increased from 5744 in 2012 to 6271 in 2015. Considering the estimated number of cancer cases it also shows an increasing trend as it increases from 509355 in 2012 to 548844 in 2015. The major sites of cancer in males are lungs, mouth, prostate and stomach.

When analyzing the cancer trend for females, it also shows an increasing trend both in India and Kerala. The major site of female cancer is breast. In 2015 the estimated number of female death out of cancer is 263936 in India and 8040 in Kerala.

Prevalence of	2012		2013		2014		2015	
cancer	A	ΓA	A	ΡŢ	A	ΓA	A	ΓA
	DI	RAJ	DI	RAJ	DI	RAJ	DI	RAJ
	Z	KE	Z	KE	N	KE	Z	KE
Estimated	22411	5744	22975	5903	23554	6078	24149	6271
number of	5		2		2		2	
cancer								
deaths								
(male)								
Estimated	50935	13054	52216	13416	53532	13815	54884	14252
number of	5		4		4		4	
cancer cases								
(male)								
Estimated	24105	7208	24843	7460	25605	7737	26393	8040
number of	4		3		6		6	
cancer								
deaths(fema								
le)								
Estimated	54785	16381	56461	16956	58194	17585	59984	18272
number of	0		9		5		7	
cancer cases								
(female)								
Estimated	28194	79329	28544	79473	29343	82004	30166	84779
number	57		51		14		28	
cancer								
(total)								

Source: indiastat (unstarred question in parliament)

PREVALENCE OF CANCER AMONG SOCIAL GROUPS

The 71st NSSO data gives the prevalence of cancer on the basis of

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social groups. Accordingly the cancer is most prevalent in OBC group when compared to other social groups. In India the prevalence of cancer for SC is more in rural but contrary in the case of Kerala. Both for Sc and ST the prevalence of cancer staying in urban Kerala is more.

Prevalence of cancer among social groups	INDIA			KERALA			
SOCIAL GROUP	Rural	Urban	Total	Rural	Urban	Total	
ST	6.74	5.29	6.18	0.63	17.72	7.16	
SC	23.33	11.69	18.86	3.16	12.59	6.76	
OBC	47.1	37.4	43.38	79.3	67.35	74.73	
OTHERS	22.83	45.62	31.57	16.91	2.34	11.34	
TOTAL	100	100	100	100	100	100	

Source: unit level data, 71st NSSO round, 2014

RURAL-URBAN DIVIDE IN AVAILING CANCER TREATMENT WITH RESPECT TO LEVEL OF CARE, NATURE OF TREATMENT AND MAJOR SOURCE OF FINANCE

There is rural urban differences in availing the cancer treatment. The data shows the level of care that the cancer patients prefer in India and Kerala. In India 60% of the patients both in rural and urban visits

private hospital for their treatment. But in Kerala, the data reveals that the people approach public hospitals for their treatment

		INDIA		KERALA			
LEVEL OF	RURAL	URBAN	TOTAL	RURAL	URBAN	TOTAL	
CARE							
РНС	1.07	0.5	0.85				
PUBLIC	38.93	39.17	39.02	61.44	71.2	65.17	
HOSPITAL							
PRIVATE	60	60.33	60.13	38.56	28.8	38.83	

Source: unit level data, 71st NSSO round, 2014

NATURE OF	INDIA			KERALA		
TREATMENT	RURAL	URBAN	TOTAL	RURAL	URBAN	TOTAL
ALLOPATHY	99.66	99.7	99.68	100	97.8	99.16
INDIAN SYSTEM	0.11	-	0.07			
HOMEOPATHY	0.23	0.3	0.25		2.2	0.84

Source: unit level data, 71st NSSO round, 2014

Cancer being a dreadful disease, even though detected in the early stage the treatment through homeopathy and Indian system of medicine is not possible. Around 99% of the patients even in India as whole or in Kerala, rural or urban, they rely on the allopathy medicines.

MAJOR		INDIA			KERALA		
SOURCE OF	RURAL	URBAN	TOTAL	RURAL	URBAN	TOTAL	
FINANCE							
HH INCOME/	47.32	71.24	56.48	62.87	75.42	67.66	
SAVINGS							
BORROWINGS	41.9	22.1	34.31	36.64	17.78	29.44	
SALE OF	1.69	0.77	1.34				
PHYSICAL							
ASSET							
CONTRIBUTI	7.89	5.26	6.88	0.49	6.8	2.9	
ON FROM							
FRIENDS							
OTHERS	1.21	0.64	0.99				

Source: unit level data, 71st NSSO round, 2014

The financial burden out of the disease is high in the cases of cancer when compared to other diseases. The expenditure is high. And while

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considering the major source of finance for Cancer treatment the people meet it with the household income and saving and if it is not adequate they borrow. It shows the intensity of financial burden that the household bear if it has a cancer patient.

CONCLUSION

As our economy is transforming to a developed economy when the standard of living changes, the life style also changes. This leads to an increase in the non-communicable diseases which was common in developed nations. Analyzing the trend in the estimated number of cancer cases both for India and Kerala it shows an increasing trend. The early detected cancers are some how cured but it is not practical. Most of the cancer cases are detected during the last stage which results in economic burden as well as some psychological imbalances are created. The financial burden arising out of cancer treatment is high and for a poor it is found to be difficult to avail the basic treatment of cancer. The public health facilities are not adequate when considering the increase in the number of cancer patients. More case studies are to be undertaken to measure the economic burden of cancer treatment and the government should take necessary initiatives to provide reasonable treatment to the needy patients who suffer from cancer.

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