ORIGINAL RESEARCH PAPER

Economics

# SOCIO-ECONOMIC BURDEN OF CANCER ON URBAN HOUSEHOLDS - A COMPARATIVE STUDY BETWEEN GOVERNMENT AND PRIVATE HOSPITALS IN MYSURU CITY.

**KEY WORDS:** Global Burden, Urban Households, Cancer, Expenditure.

**Maheshnayaka S. N** Research Scholar, Department Of Economics, Sir. M.V.P.G.Centre, Tubinakere, Mandya, university Of Mysore.

**Dr. H. R. Uma*** Professor Of Economics, Sir.M.V.P.G. Centre, Tubinakere, Mandya, University Of Mysore. *Corresponding Author

**ABSTRACT**

Cancer is one of the chronic diseases in the world and also it is the second most causes of death throughout the world and accounts for nearly 13% of total global deaths. The vogue of cancer was conventionally more widely recorded in the developed countries but in the recent years it has increased substantially in the developing countries as well. In terms of Global Burden of Disease (GBD) about 70 percent of all cancer deaths are now concentrated among low- and middle-income countries(Rajpal et. al ,2018). According to GLOBOCAN Report 2018 ;Worldwide 95,55,027 deaths have occured due to Cancer Disease and 1,80,78,957 people are suffering from Cancer Disease and in India 11,57,294 people died due to cancer and 7,84,821 people are facing cancer disease in India. Now a day's cancer is a significant health concern in the world. It is adversely affecting the households and the economy. The important objective of this paper is to assess the treatment pattern and expenditure incurred by cancer patients undergoing treatment and to compare between government and private hospitals and also to test and prove that the treatment at government hospitals is more cost beneficial than the private hospitals. The present study is based on both primary and secondary data. The primary data have been collected from 100 cancer patients both from government and private hospitals in Mysore district with appropriate questionnaire and simple percentage, frequency and chi-square test was used to analysis the data. From the case study analysis we observed that majority of the cancer patients are suffering from financial burden due to high treatment expenditure and loan burden of cancer treatment. Some of the cancer patients spent more than one lakh for cancer treatment. Cancer has several consequences on individual and households not only does it lead to disability and health, its treatment costs and associated loss of income can quickly undermine family socio-economic conditions.

## INTRODUCTION:

Cancer is one of the chronic diseases in the world and also it is the second most cause of death throughout the world and accounts for nearly 13% of total global deaths. The vogue of cancer was conventionally more widely recorded in the developed countries but in the recent years it has increased substantially in the developing countries as well. In terms of Global Burden of Disease (GBD) about 70 percent of all cancer deaths are now concentrated among low- and middle-income countries(Rajpal et. al ,2018). According to GLOBOCAN Report 2018 ;Worldwide 95,55,027 deaths have occured due to Cancer Disease and 1,80,78,957 people are suffering from Cancer Disease and in India 11,57,294 people died due to cancer and 7,84,821 people are facing cancer disease in India. Now a day's cancer is a significant health concern in the world. It was adversely affected to the households and the economy.

## TYPES OF CANCER

Cancer refers to the abnormal growth of cell tissue. India ranks 3rd in cancer cases after China and the US. Cancer among woman in the country is estimated to be 0.7 million reported cases. Every year India reports more than a million new cancer cases. Among them, half million deaths happen due to the ignorance of the disease. One woman dies of cervical cancer in every 8 minutes in India. For every 2 women newly diagnosed with breast cancer, one woman dies of it in the country, accordingly to National Institute of Cancer Prevention Research (NICPR). Nearly one-third of the cancers are caused due to tobacco use. Alcohol and tobacco together pose higher risks of developing oral and other cancers. The most common cancers in India are breast cancer, cervical cancer, oral cancer & lung cancer.

## REVIEW OF LITERATURE

So many authors have tried to analyze the socio-economic burden of cancer patients in national and international level. Some studies are done on the economic burden of cancers on Indian households (Ajay Mahal and Anup Karan at all 2013), many studies are done on the financial impact of head and neck cancer caregiving: a qualitative study (Myles Balfe and Phyllis Butow at all 2016). Though a good number of studies are made about the socio-economic impact of cancer in developed countries not many are there in developing countries. Particularly no study has been made at state level. Thus, this is an attempt to study about the Socio-Economic Burden of Cancer on Urban Households - A Comparative Study between Government and Private Hospitals in Mysuru City.

## OBJECTIVE OF THE STUDY

The important objective of the study is

To assess the treatment pattern and expenditure incurred by cancer patients undergoing treatment and to compare between government and private hospitals.

## HYPOTHESES OF THE PRESENT STUDY

The following is the major hypotheses of the study

Cancer treatment at government hospital is more cost beneficial than the private hospital

## METHODOLOGY

The present study is based on both primary and secondary data. The primary data have been collected from 100 cancer patients both from government and private hospitals in Mysore district with appropriate questionnaire and simple percentage, frequency and chi-square test was used to analysis the data and The secondary data was collected from different sources such as reports of the health department, surveys of the government, Journals and so on.

## CASE STUDY ANALYSIS

**Table 1 Gender of the respondents**

| Gender | Frequency | | Percentage | |
|---|---|---|---|---|
| | government hospital | Private Hospital | government hospital | Private Hospital |
| Male | 29 | 27 | 58 | 54 |
| Female | 21 | 23 | 42 | 46 |
| total | 50 | 50 | 100 | 100 |

**Source: Primary data**

The above table 1 shows the gender classification of respondents in government and private hospital. Out of 50 respondents in government hospital 58 percent of the respondents are male and 42 percent of the respondents are female and in private hospital out of 50 respondents, 54 percent of the respondents are male and 46 percent of the respondents are female. Comparing to government private hospital more of the male respondents are suffering from cancer.

**Table 2 Occupation of the respondents**

| Type of Hospital | occupation | |
|---|---|---|
| | Employed | Unemployed |
| government hospital | 31 | 19 |
| Private Hospital | 40 | 10 |
| Total | 71 | 29 |

**Source: Primary data**

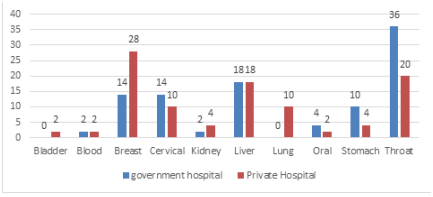
The above table 2 shows that out of 50 respondents in government hospital 31 respondents are employed in different sector, 19 respondents are unemployed and in private hospital out of 50 respondents, 40 cancer patients are employed and 10 respondents are unemployed. Comparing to the government and private hospital more of the respondents are unemployed in government hospital.

**Table 3 Type of Cancer**

| Type of Cancer | Frequency | | Percentage | |
|---|---|---|---|---|
| | government hospital | Private Hospital | government hospital | Private Hospital |
| Bladder | 0 | 1 | 0 | 2 |
| Blood | 1 | 1 | 2 | 2 |
| Breast | 7 | 14 | 14 | 28 |
| Cervical | 7 | 5 | 14 | 10 |
| Kidney | 1 | 2 | 2 | 4 |
| Liver | 9 | 9 | 18 | 18 |
| Lung | 0 | 5 | 0 | 10 |
| Oral | 2 | 1 | 4 | 2 |
| Stomach | 5 | 2 | 10 | 4 |
| Throat | 18 | 10 | 36 | 20 |
| Total | 50 | 50 | 100 | 100 |

**Source: Primary data**

**Chart 1 Type of cancer**




The above table 3 and chart 1 shows that out of 50 respondents in government hospital, 14 percent of the patients are facing breast cancer, 18 percent of the respondents are facing liver cancer, 36 percent of the respondents are suffering from throat cancer. In private hospital, 28 percent of the respondents are facing breast cancer, 18 percent of the respondents are facing liver cancer, 10 percent of the respondents are suffering from lung cancer and 20 percent of the respondents are suffering from throat cancer. Comparing to the government and private hospital more of the respondents are suffering from throat cancer in government hospital and majority of the respondents are facing breast cancer in private hospital.

**Table 4 Habits of the respondents**

| Habits | Frequency | | Percentage | |
|---|---|---|---|---|
| | government hospital | Private Hospital | government hospital | Private Hospital |
| Smoking | 12 | 14 | 24 | 28 |
| Drinking | 1 | 4 | 2 | 8 |
| Both | 13 | 15 | 26 | 30 |
| Tobacco | 0 | 1 | 0 | 2 |
| Nothing | 24 | 16 | 48 | 32 |
| Total | 50 | 50 | 100 | 100 |

**Source: Primary data**

The above table 4 shows that out of 50 respondents in government hospital, 24 percent of the respondents are smoking habits, 2 percent of the respondents are consuming tobacco and 26 percent of the respondent habits are both smoking and consuming alcohol. In private hospital 28 percent respondents have smoking habits, 8 percent of the respondents are consuming alcohol, 30 percent of the respondents habits are both smoking and drinking alcohol. Comparing to the government and private hospital, majority of the respondents habits are both smoking and drinking alcohol in private hospital.

**Table 5 Medicine Cost of the respondents**

| Medicine Cost | Type of hospital | | Percentage | |
|---|---|---|---|---|
| | Government Hospital | Private Hospital | government hospital | Private Hospital |
| 100 to 1000 | 27 | 5 | 54 | 10 |
| 1001 to 2000 | 8 | 5 | 16 | 10 |
| 2001 to 4000 | 14 | 34 | 28 | 68 |
| 4000 and above | 1 | 6 | 2 | 12 |
| Total | 50 | 50 | 100 | 100 |

**Source: Primary data**

The above table 5 shows the medicine cost of the respondents, majority of the respondents are spend 100 to 1000 rupees for medicine in government hospital and more of the respondents spend 2001 to 4000 rupees for medicine in private hospital. Out of 50 respondents in government hospital, 54 percent of the respondents are spend 100 to 1000 rupees, 16 percent of the respondents spend 1001 to 2000, 28 percent of the respondents are spend 2001 to 4000 and 2 percent of the respondents are spend above 4000. In private hospital 10 percent of the respondents are spend 1001 to 2000, 68 percent of the respondents are spend 2001 to 4000 and 12 percent of the respondents are spend above 4000 rupees in a month.

**Table 6 Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 27.722a | 3 | .000 |
| Likelihood Ratio | 29.878 | 3 | .000 |
| Linear-by-Linear Association | 27.040 | 1 | .000 |
| N of Valid Cases | 100 | | |
| a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 3.50. | | | |

The above table 6 shows that there is association between medicine cost and type of hospital. Comparing to medicine cost and type of hospital this indicates that medicine cost is more in private hospital.

**Table 7 Monthly expenditure in Hospital of the respondents**

| Monthly Expenditure in Hospital | Type of hospital | | Percentage | |
|---|---|---|---|---|
| | Government Hospital | Private Hospital | government hospital | Private Hospital |
| Nil | 37 | 24 | 74 | 48 |
| 1000 to 5000 | 13 | 11 | 26 | 22 |

| | | | | |
|---|---|---|---|---|
| 5001 to 10000 | 0 | 13 | 0 | 26 |
| 10001 to 15000 | 0 | 1 | 0 | 2 |
| 15001 and above | 0 | 1 | 0 | 2 |
| Total | 50 | 50 | 100 | 100 |

**Source: Primary data**

The above table 7 shows the monthly expenditure in hospital for cancer treatment. In government hospital out of 50 respondents, only 26 percent of the respondents are spend 1000 to 5000 rupees for cancer treatment and remaining 74 percent of the respondents are didn't spend any amount for cancer treatment. In private hospital out of 50 respondents, 26 percent of the respondents are spend 5001 to 10000 rupees, 2 percent of the respondents are spend above 15001 rupees for treatment. Comparing to the government and private hospital majority of the respondents are spend 5001 to 10000 rupees for cancer treatment in private hospital.

**Table 8 Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 15.318a | 4 | .004 |
| Likelihood Ratio | 20.746 | 4 | .000 |
| Linear-by-Linear Association | 11.922 | 1 | .001 |
| N of Valid Cases | 41 | | |
| a. 7 cells (70.0%) have expected count less than 5. The minimum expected count is .37. | | | |

The above chi-square tests table 8 shows that there is a significant association between treatment cost and type of hospital. Comparing to the hospital expenditure and type of hospital, it was found that hospital expenditure is high in private hospital.

**Table 9 Loans of the respondents**

| Loans for Cancer treatment | Type of hospital | | Percentage | |
|---|---|---|---|---|
| | Government Hospital | Private Hospital | government hospital | Private Hospital |
| **10000 to 50000** | 34 | 15 | 68 | 30 |
| **50001 to 100000** | 7 | 21 | 14 | 42 |
| **100001 and 200000** | 4 | 8 | 8 | 16 |
| **200001 and above** | 0 | 3 | 0 | 6 |
| **Nil** | 5 | 3 | 10 | 6 |
| **Total** | 50 | 50 | 100 | 100 |

**Source: Primary data**

The above table 9 shows the loans of the respondents. Out of 50 respondents in government hospital, 68 percent of respondents have 10000 to 50000 loans, 14 percent of the respondents have 50001 to 100000 rupees loans, 8 percent of the respondents have 100001 to 200000 rupees loans and in private hospital 30 percent of the respondents have 10000 to 50000 rupees loans, 42 percent of the respondents have 50001 to 100000 rupees loan, 16 percent of the respondents have 100001 to 200000 rupees loan and 6 percent of the respondents have above 200000 rupees loan. Comparing to the government and private hospital majority of the respondents are suffering from 10000 to 50000 loan burden after cancer disease in government hospital and more of the respondents are suffering from 50001 to 100000 rupees loan burden due to the cancer treatment in private hospital.

## MAJOR FINDINGS OF THE STUDY

Based on the analysis and discussion in the study of Socio-Economic Burden of Cancer on Urban Households - A Comparative Study between Government and Private Hospitals in Mysuru City. The following findings have been drawn.

- Majority of male respondents are suffering from cancer in both government and private hospital.
- Comparing to the government and private hospital more of respondents are illiterate in government hospital.
- Majority of the respondents are unemployed in government hospital.
- Comparing to the government and private hospital more of the respondents are suffering from throat cancer in government hospital and majority of the respondents are facing breast cancer in private hospital.
- Comparing to the government and private hospital, majority of the respondents habits are both smoking and drinking alcohol in private hospital.
- Majority of the respondents are living in rental and mortgaged houses in private hospital.
- Majority of the respondents are spend 100 to 1000 rupees for medicine in government hospital and more of the respondents spend 2001 to 4000 rupees for medicine in private hospital.
- Comparing to the government and private hospital majority of the respondents are spend 5001 to 10000 rupees for cancer treatment in private hospital.
- Comparing to the government and private hospital majority of the respondents are suffering from 10000 to 50000 loan burden after cancer disease in government hospital and more of the respondents are suffering from 50001 to 100000 rupees loan burden due to the cancer treatment in private hospital.

## SUGGESTIONS OF THE STUDY:

The present study carried out several a mixed pictures of success and failures based on the findings of this paper our recommendations are the following:

- Government should provide the awareness about cancer treatment because more of the respondents are illiterate.
- Government should provide financial assistance to the cancer patients because after onset of cancer disease more of the respondents are unemployed.
- Government should provide free medicine to the cancer patients because majority of respondents are spend 100 to 1000 rupees for medicine in government hospital and more of the respondents spend 2001 to 4000 rupees for medicine in private hospital.
- Government should implement the health insurance scheme for cancer treatment because majority of the respondents are spend 5001 to 10000 rupees for cancer treatment in private hospital.
- Government should provide subsidy and zero percent rate of interest loan facility to the cancer patients because majority of the respondents are suffering from informal source of loan burden due to the cancer treatment in both government and private hospital.

## CONCLUSION:

Cancer has a several consequences on individual and households not only does it lead to disability and health, its treatment costs and associated loss of income can quickly undermine family socio-economic conditions.

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