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RESEARCH ARTICLE

ECONOMIC DETERMINANTS OF CARDIOVASCULAR HEALTH CARE UTILIZATION IN RURAL BIST DOAB (PUNJAB)

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Corresponding Author*Anandvir Kaur Saini****Abstract**

This research paper examines the economic determinants of utilization of medical facilities related to cardiovascular diseases in rural Bist Doab region of the state. The objective is to find out the monthly expenditure on medicines of the sampled population, duration of medication, details of surgery performed and cost of surgery. The data was collected through interview schedule survey conducted in the study area. A sample size of 1.5% (100 cases) was selected out of the total 6796 cardiovascular deaths recorded in 2009. A detailed interview schedule was prepared and administered on the family members of the selected 100 deceased persons. The results show that out of the 100 sampled deceased persons, only 64 persons took medicines for the treatment of cardiovascular diseases. Among the total 64 persons in sample who were prescribed medication, almost 15% had to spend more than half of their total monthly household income on buying medicines for their treatment. The mean duration for which these 64 deceased persons in sample took medication was 5.36 years and 71% of them died within 6 years of medication. As far as surgical treatment is concerned, one-tenth of the total 100 persons in sample underwent some kind of surgery for the treatment of their cardiovascular disorders. The private sector plays a very big role in providing specialized cardiovascular health care services to the people of the study area and the cost of surgical treatment of cardiovascular diseases is very high.

*Copy Right, IJAR, 2015., All rights reserved***Introduction**

Utilization of health care provisions depends upon various factors like individual choices, cost of treatment, income, age, social class, race, gender and proximity to urban area (Mustard et al., 1998; Berkatis et al., 2000; Weinick et al., 2000; Raebel et al., 2004). In case of cardiovascular diseases, economic considerations are of utmost importance in the utilization of specialized health care services. Cardiovascular diseases have emerged as the single-leading cause of death in the state of Punjab, causing nearly half of the total deaths recorded in the state (Sample Registration Survey, 1999). This research paper examines the economic determinants of utilization of medical facilities related to cardiovascular diseases in rural Bist Doab region of Punjab. The objective was to find out the monthly expenditure on medicines of the sampled population, duration of medication, details of surgery performed and cost of surgery.

Data and Methods

The data on utilization of health care provisions related to cardiovascular diseases was collected through interview schedule survey conducted in the study area. A sample size of 1.5% (100 cases) was selected out of the total 6796 cardiovascular deaths recorded in 2009. A detailed interview schedule was prepared and administered on the family members of the selected 100 deceased persons. The sampling design was divided into two stages. At the

first stage around 20 villages were sampled from all the major hot spot clusters of villages recording high cardiovascular mortality using proportionate sampling (Saini, 2013). Bigger the hot spot, higher was the number of villages in sample. At the second stage snowball sampling was used to choose five deaths from each selected village with the help of the concerned village officials. Information was collected on the monthly expenditure on medicines of the sampled persons, duration of medication, details of surgery performed and cost of surgery. The share of household income spent on medication of the sampled deceased persons was calculated. The data was represented through statistical diagrams like bar diagram and line chart.

Utilization of Health Care Services

The results showed that among the 100 sampled deceased persons, 64 persons took medicines for the treatment of cardiovascular diseases. The average household income of these persons was Rs. 12589.84, while their monthly expenditure on medicines was Rs. 1869 (15% of income). Out of these 64 persons, 26 (40.63%) spent less than Rs. 500 per month on purchasing medicines and 17 persons (26.56%) had to spend Rs. 500-1000 on medicines per month (Fig 1). The number of persons having monthly expenditure of Rs. 1000 to 2000 on medicines was 6 (9.37%) and 3 persons (4.68%) had to spend Rs. 2000 to 4000 on buying medicines. Further, as many as 8 persons (12.5%) had to spend Rs. 4000 to 5000 on purchase of medicines and 4 persons (6.25%) had monthly expenditure of more than Rs. 5000 on medicines.

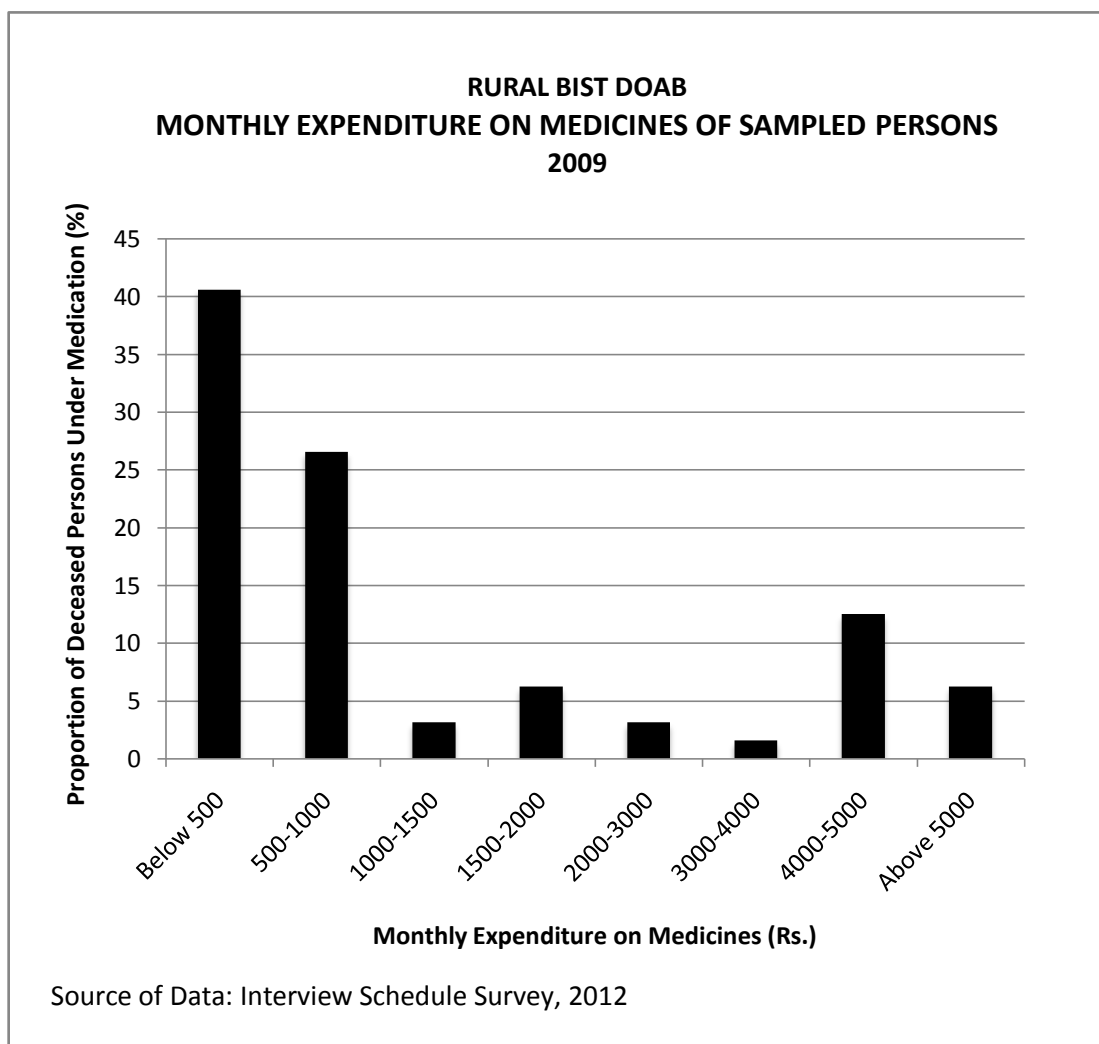


Fig 1 - Rural Bist Doab: Monthly Expenditure on Medicines of Sampled Persons

On an average, the sampled deceased persons under medication spent around 15% of their total household income on buying medicines. Out of the 64 persons, who took medication for the treatment of cardiovascular diseases, nearly 20% spent 1/5th to 1/2 of their household income on medicines per month and around 67% spent upto 20% of their income (Table 1). Approximately 14% deceased had to spend more than half of their total monthly household income on buying medicines for their treatment. Therefore, it has been found that the expenditure on buying medicines for treating cardiovascular diseases formed a substantial proportion of the total monthly household income of a majority of deceased persons.

Table 1
Rural Bist Doab: Share of Household Income Spent on Medication
by Sampled Persons (2009)

Expenditure on Medicines as Proportion of Household Income (%)	No. of Deceased Under Medication	Percent of Total Deceased Under Medication (%)
0 – 10	29	45.31
10 – 20	14	21.88
20 – 30	6	9.38
30 – 40	5	7.81
40 – 50	1	1.56
50 – 60	1	1.56
60 – 70	0	0.00
70 – 80	3	4.69
80 – 90	0	0.00
90 – 100	5	7.81
Total	64	100.00

Source: Interview Schedule Survey, 2012

The average duration for which these 64 deceased persons in sample took medication was 5.36 years. As many as 28 persons (43.75%) took medication upto 2 years and 13 (20.13%) took medicines for 2 to 4 years (Fig 2). Another 9 persons (14.06%) took medicines for 4 to 6 years. The number of deceased persons who took medicines for 6 to 10 years was 7 (10.93%), 3 persons (4.69%) were under medication for as long as 10 to 20 years and 4 persons (6.25%) were under medicines for even more than 20 years. A large majority (71%) of the deceased died within a maximum of 6 years of medication. Unfortunately a little below 44% died within only 2 years of taking medical treatment. The length of medication of about 11% of the deceased persons was very long, i.e. more than 10 years. They took medicines right from the time of detection of cardiovascular disorders till the time of their death. Such long medical treatment coupled with heavy expenditure on medicines definitely exerted a lot of financial strain on the economic resources of their households.

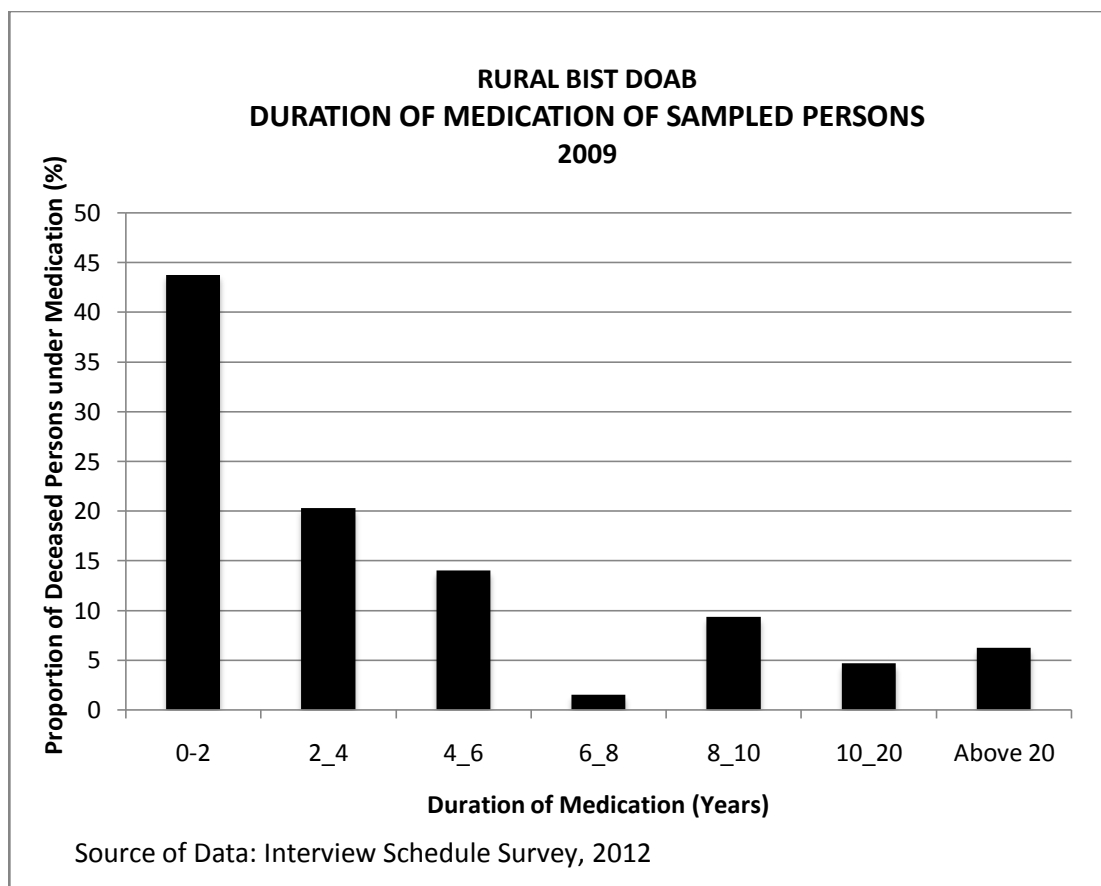


Fig 2 - Rural Bist Doab: Duration of Medication of Sampled Persons

The primary data collected on the cost and place of cardiovascular surgeries performed on the sampled persons revealed that one-tenth (10) of the total 100 persons underwent some kind of surgery for the treatment of their cardiovascular disorders. The households of these persons had to shell out huge sums of money for the operations. Amongst these, 50% had to spend Rs 4 lakh on their surgeries and another 30% had an expenditure between Rs. 5 to 10 lakh. The remaining 20% had to spend Rs. 2.50 lakh on their medical operations. These operations were performed for heart bypass surgery, blocked arteries (angioplasty) and stroke, apart from angiography tests. The destinations preferred by the sampled population for these operations were Oxford Hospital, Jalandhar (3 persons), Tagore Hospital, Jalandhar (2 persons), Dayanand Medical College and Hospital, Ludhiana (2 persons), Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh (2 persons) and SGL Kashmira Singh Hospital, Jalandhar (1 person). All these hospitals (except PGIMER, Chandigarh) belong to the private sector. Thus it has been found that the private sector plays a very big role in providing specialized cardiovascular health care services to the people of the study area and the cost of surgical treatment of cardiovascular diseases is very high. Thus there is an urgent need to strengthen public sector hospitals in this respect to provide specialized cardiovascular treatment at affordable prices to the segment of population having low levels of income.

Conclusion

The utilization of health care services in the study area shows that out of the 100 sampled deceased persons, only 64 persons took medicines for the treatment of cardiovascular diseases. Among the total 64 persons in sample who were prescribed medication, almost 15% had to spend more than half of their total monthly household income on buying medicines for their treatment. The mean duration for which these 64 deceased persons in sample took medication was 5.36 years and 71% of them died within 6 years of medication. As far as surgical treatment is concerned, one-tenth of the total 100 persons in sample underwent some kind of surgery for the treatment of their cardiovascular disorders. The households of these persons had to spend large amount of money (Rs. 2.5 to 10 lakh)

for the operations. These operations were performed for heart bypass surgery, blocked arteries (angioplasty) and stroke, apart from angiography tests. The destinations preferred by the sampled population for these operations were Oxford Hospital, Jalandhar; Tagore Hospital, Jalandhar; Dayanand Medical College and Hospital, Ludhiana; Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh and SGL Kashmira Singh Hospital, Jalandhar. Almost all (except one) of these institutions are in private sector. Therefore, the private sector plays a very big role in providing specialized cardiovascular health care services to the people of the study area and the cost of surgical treatment of cardiovascular diseases is very high. There is a need to upgrade and restructure the public sector hospitals to provide cardiovascular treatment at affordable prices.

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