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An Analysis of Burden of Health Care Expenditures in India

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Abstract

The level of expenditure on health care in India has been a major concern from the last few decades. To mitigate the growing burden of ill-health on the HHs, a number of initiatives have been made by the Government of India. National Rural Health Mission (NRHM) and *Rashtriya Swasthya Bima Yojna* (RSBY) are two such recent initiatives which implicitly aimed at increasing public health spending for about two to three per cent of GDP. This paper tries to assess and analyse the burden of health expenditure on HHs during the period 2005-06 and 2011-12 after initiation of NRHM. This study uses the data available from the consumer expenditure surveys of National Sample Survey Organisation (NSSO). The data on (HH) expenditure on out-patient care and for in-patient care have been analysed to draw inferences.

The results reveal that the expenditure on health as percentage of total consumption expenditure (per-capita basis) indeed declined among high-focus states such as HP, MP, Orissa and Rajasthan for out-patient care services during this period. On the other hand, expenditure on hospitalisation recorded high in most of the vulnerable states namely Bihar, Orissa and Uttar Pradesh. The results further reveal that hospitalization expenditure as percentage of total consumption expenditure has increased across income (expenditure) classes in India. But the increase has been much high for lower income group as compared to the higher income groups. It is heartening to note that the percentage of expenditure on out-patient care services increased for the lower income groups while it declined for higher income groups. The results reveal that the government initiatives are reached the higher income groups better when compared to the lower income groups. Therefore, the poorer sections have continued to experience an increased burden on account of minor ailments.

Keywords: Healthcare, Government, Initiatives, Expenditure, NSSO, Burden, Vulnerable, Ailments.

Introduction

Health care system in India consists of public, private and other service providers. Other providers include charitable organisations, non-government organisations as well as faith healers and less than fully qualified service providers. In terms of financing health, households' out-of-pocket expenditure and government financing account for more than 95 percent of total health expenditures in the country. Spending by household alone account for more than 70 percent of total health expenditures in India (GOI, 2009).

Health policies in India often focus on the public spending on health and its allocation, efficiency and related issues to set the agenda. In the economy as a whole, this public spending on health forms only a smaller proportion of the total spending on health, as the households or the out of pocket expenditures account for more than 70 per cent of total health expenditures. Such high out-of-pocket expenditures on health often lead to indebtedness of households.

A number of initiatives have been made by the Government of India to mitigate catastrophic impact on households on account of ill-health. One such major initiative in the recent past is the launch of National Rural Health Mission (NRHM) in 2005. One of the goals of NRHM was to reduce out-of-pocket expenditure in total health care expenditures. With this objective in the background, the Government of India allocated large sums of money through various national health programs since the initiation of NRHM. This paper tries to assess if the NRHM has succeeded in reducing the burden of OOP on households? If so, how far and who the beneficiaries are?

Financing Health Care - A Review

Budgetary allocation to the health sector has been reduced in all the major states of India since 1987-88, when the states faced severe fiscal constraints (Selvaraju, 2003). The initiation of the structural adjustment programmes in 1991 forced the Central Government to reduce the Central transfers to the states in order to contain the fiscal deficits (Tulasidhar (1993). The states were left with a reduced resource pool and they in turn were forced to reduce budgetary allocation to various sectors. In a situation like this, social sector has often been found to be one of the "soft targets" for downsizing budgetary allocations in many countries and the governments in India are of no exception to this.

The World Development Report 1993 (World Bank 1993) observed that recurrent expenditure for primary care inputs other than salaries is particularly vulnerable to budget cuts. This is true in the case of India, as the expenditure on salaries alone account for more than 70 per cent of the total health budget of most of the states, leaving very little for other components of health care. Since the expenditure on salaries cannot be downsized immediately, any reduction in the budget directly affects the expenditures on items like, drugs, medicines, maintenance, etc. As a result, the quality of the services rendered deteriorates in the public facilities. Studies often suggest that levy of user charges can generate additional resources to the extent of 10 to 20 per cent of total government spending for health (World Bank, 1993). Though user charges are often viewed as anti-poor, patients in practice often pay much more for supposedly free services. For instance, patients in India, Indonesia and Viet Nam had to pay 2 to 3 times the official fees for each visit in terms of indirect costs such as transport, the opportunity cost of time spent, etc., for availing the services as revealed in the World Development Report 1993. All these tend to suggest that decline in the public spending on health has increased the burden of the households' out of pocket expenditures on health. The World Development Report also observed that this may not hold true in the case of poorer countries, as there is no apparent link between the public and private shares of health expenditure and also the proportion of income devoted to health.

It is evident that household expenditures on health have remained substantially high around 70-80 per cent of the total health expenditures in India (GOI 2009). For example, nearly 74 per cent of health expenditures in Burkina Faso (Saurerborn et.al., 1995), about 55 per cent of the health expenditures in Egypt (Berman et.al., 1995) and about 75 per cent of the health expenditures in India (Bhat, 2000) are incurred by households. Further, rural households bear the maximum burden as they account for about 85 per cent of the total household expenditures in rural India (Sanyal 1996).

Studies by Waddington and Enyimayew (Waddington and Enyimayew, 1990) and Collins, et.al. (Collins, Quick, Musau, Kraushaar and Hussein, 1996) found that the level of utilisation of health services, particularly the curative services, by the poor decline drastically when user charges are introduced or revised upwards, in the short run but reach the level nearer to the previous one over time. But a number of evidences suggest that the levy of user charges significantly reduce the consumption of health services by the poor. For example, Gertler and van der Gaag (Gertler, and Gaag, 1990) found that the price elasticity of the poorest income quartile for hospital and clinical services was twice that of highest income quartile for different levels of prices and income in two developing countries. However, there are no conclusive evidences about the impact of levy of user charges on the level of utilisation of health services, especially by the poor.

Acharya, Carrin and Herrin (1993) based on their study in Nepal found that the poorest quintile spent about 10 per cent of their income on health where as richest quintile spent 6 per cent of their income. In Vietnam households spent about 7.1 per cent of their income on health whereas in Bangladesh, private health expenditures accounted for 3.1 per cent of the per-capita income (Sen, 1997). In India, in a tribal area of Madhya Pradesh, spending on health care accounted for 3.4 per cent of household income (Mishra, Pandey and Sinha 1993). In Gambia, the average household spending on health was around 6 per cent of household income and it ranged between 10.0 per cent to 3.4 per cent for low income and high income households respectively (Williams 1994). In Egypt, households spent an average of 10.8 per cent of per capita income on health care ranging from 8.7 per cent by the richest quintile and 14 per cent by the poorest quintile. In the case of India, households spend nearly 4.90 per cent of their income on curative health care. Further, it is the rural households which bear the largest burden to the extent of 5.28 per cent as compared to their urban counterparts i.e. 4.29 per cent (Shariff, 1995). A study of households with a dengue episode in Cambodia reveals that even a relatively short one such as dengue in a young child, frequently causes catastrophic health expenditure leading to debt in households with precarious livelihoods. Follow-up of the households which had taken loan to meet the treatment cost reveals that nearly 62 percent of households remained indebted even after one year of the episode (Damme et.al., 2004). A study on cost of illness based on a household survey in India reveals that median per-capita cost of illness is about 6 percent of per-capita income. This study further concludes that the cost of illness ranged between 38 percent and 128 percent of monthly per-capita income of households in the five sample states (Dror et.al., 2008). All these evidences suggest that the burden of health care costs is heavier on households across comparable countries as well as in India.

Objectives of this Study

Evidences tend to suggest that households bear a substantial burden on account of ill-health in

countries such as India. In this context, the present study attempts to analyse the burden of health care expenditure on households in the rural and urban sectors and also among selected states in India. Also makes an attempt to find out if the there is a change in the burden over the years.

Data Sources and Methods

The present study relies on the data available from the summary reports of Consumer Expenditure Surveys of the NSSO. Consumer expenditure surveys are carried out by the NSSO on regular basis for the Government's planning purpose. These surveys are conducted through household interviews, using a random sample of households covering nearly all the states and union territories of India. Information on all items of consumption, both food and non-food items by households are collected through these surveys. Consumption of health care and thereby its expenditures are also collected systematically from the households. Health care consumption is a non-food item and classified under two categories; out-patient and in-patient care services. While interviewing households for collecting data on health expenditures, the NSSO used a period of 30 days for out-patients care; and a period of one year for the in-patient care services as reference period for data collection.

The present study is based on the data available from two surveys of NSSO namely, consumer expenditure surveys of the 62nd round for the period 2005-06 and the 68th round for the period 2011-12. Information on expenditures incurred on account of ill-health by the households has also been collected during these surveys. Both the surveys covered the entire country across rural and urban sectors of India for data collection. Detailed discussions on sampling, methodology and coverage are available in the NSSO reports (GOI, 2008 and 2014).

In this study, burden of health expenditure is defined as the share of health care expenditure in total household consumption expenditure. NSSO has computed monthly per-capita consumption expenditure (MPCE) on various items of consumption by states and by rural and urban sectors. Further, based on total MPCE, households have been grouped into twelve MPCE groups representing poorest to the richest. Since there is no way of estimating the income of households reliably, NSSO has been treating household expenditures as proxies for household income. In order to assess the burden of health care expenditures, the above estimates have been made and compared across MPCE expenditure groups and also across selected states in this study and presented in the subsequent sections.

Results

Household expenditure on health care in India by economic groups categorised by monthly per-capita consumption expenditure (MPCE) for the year 2011-12 are presented in Table-1. The figures presented in the Table reveal that per-expenditures incurred on out-patient care by households are in fact higher than expenditures on in-patient care services. This is contrary to the widely held belief that burden of out-patient care services are much smaller than that of in-patient care services. While this is true for individual cases, the economy at large bears much larger financial burden on account of illnesses of out-patient nature.

A similar trend as witnessed above prevails among rural and urban sectors of India as well. Another important trend noticed in this context is that the magnitude of expenditure is higher in urban sector than the rural sector. The higher levels of expenditures in urban sector is possibly due to volume, quality and cost of services consumed by people in the urban areas. Also it is widely noticed that people in rural areas do not seek health care effectively even when they are ill due to factors such as financial and geographical barriers to accessing health care services. Hence the expenditures reported for rural sector usually remain lower than urban sector.

Table-1 Per-Capita Household Expenditure on Health in India - 2011-12 (Rs./month)

MPCE Groups	Rural		Urban	
	In-Patient	Out-Patient	In-Patient	Out-Patient
1	2.47	13.65	2.47	18.69
2	3.75	21.28	5.52	27.57
3	4.60	26.70	10.45	36.45
4	8.87	33.85	13.46	45.52
5	10.67	36.78	18.15	55.49
6	12.07	43.68	22.11	64.70
7	18.49	49.77	32.31	87.38
8	19.98	58.34	46.27	94.08
9	28.11	77.42	56.00	114.81
10	43.32	100.78	89.32	142.94
11	76.43	144.90	127.27	215.45
12	241.28	252.91	317.49	341.11
All India	30.81	64.37	51.44	94.27

Source: Government of India (2014), Household Consumption of Various Goods and Services in India-2011-12, 68th Round, Report No. 558, National Sample Survey Organisation, New Delhi.

Distribution of these expenditures across MPCE groups as presented in Charts-1 and 2 reveal that the median per-capita expenditure on health is skewed towards lower MPCE groups. This clearly suggests that a large number of households belonging to poorer segments are able to spend only smaller amounts on health care, in actual per-capita terms. These Charts also reveal that households of higher MPCE groups spend higher expenditure on health care as indicated through the skewed distribution beyond median point. Further the households belonging to highest MPCE group spend much larger on health care as indicated through the outliers which are outside the distribution parameters. The distribution parameters of health expenditures clearly reveal that per-capita expenditures are lower in rural areas than in urban areas for both in-patient care as well as out-patient care services.

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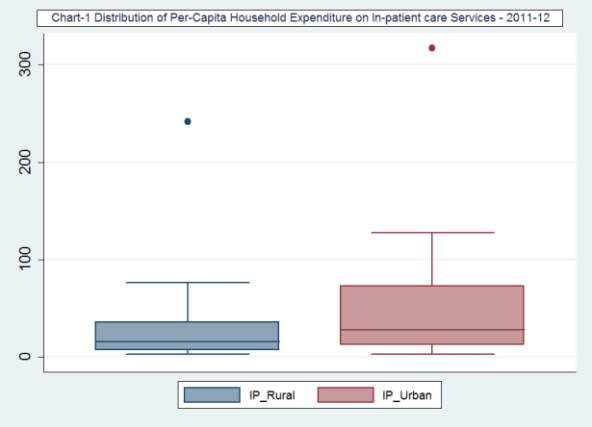
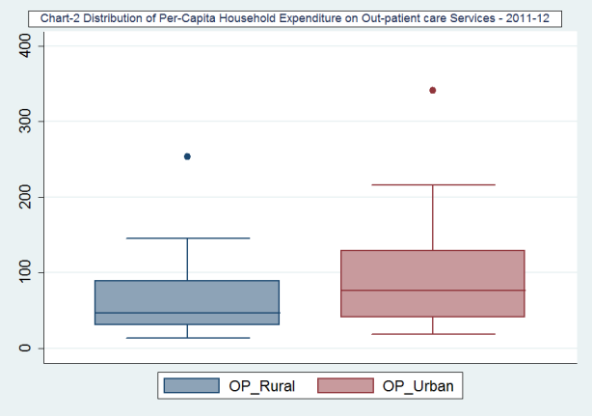
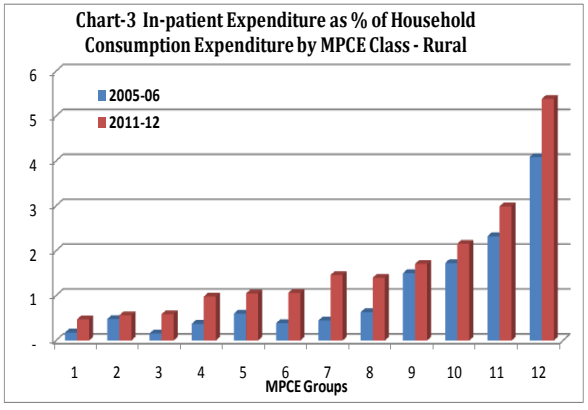
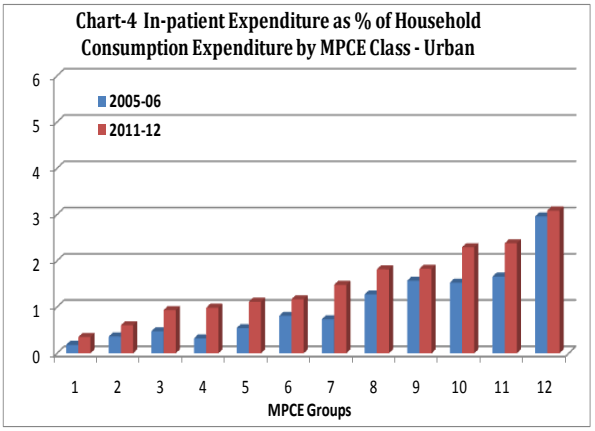


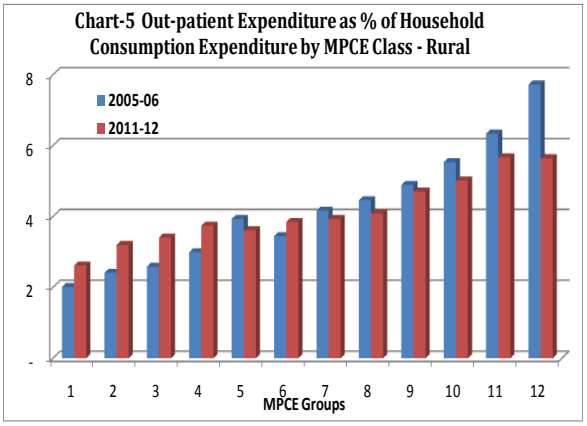


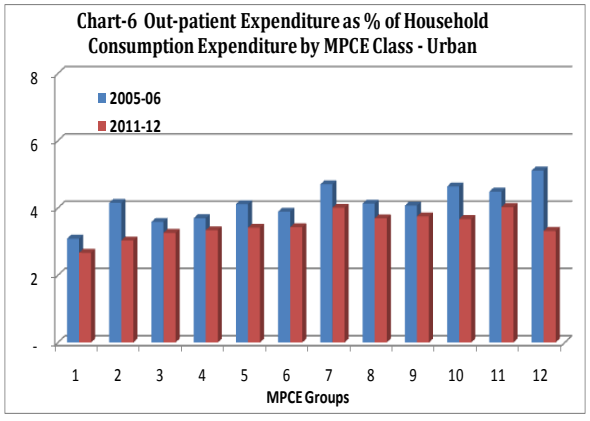
Burden of ill-health estimated as percentage of health care expenditure in total consumption expenditure are presented in the Charts below for rural and urban sectors for in-patient and out-patient care services by MPCE groups for the year 2005-06 and 2011-12. Charts 3 and 4 provide a comparative picture of changes in the burden of illness on account of in-patient care expenditures/ hospitalisation during 2005-06 and 2011-12. Overall, the burden of in-patient care services has increased for everyone irrespective of level of income of households as represented by MPCE groups. This is also true for rural and urban sectors. It is important to note that the burden of hospitalisation has increased disproportionately higher for the lower income groups than higher income groups both in rural and urban sector during the period under reference.





The burden of ill-health on account of out-patient care services on households during 2005-06 and 2011-12 are presented in Charts 5 and 6 for the rural and urban sector. The results reveal that the burden on account of seeking out-patients care services has declined, however marginally, for all households irrespective of level of income only in the urban sector. The results for rural sector depict a mixed trend (Chart-5). While the burden of out-patients care has increased for households of lower income groups, it has declined for households of higher income groups from 2005-06 to 2011-12. Further the decline is much higher for the households belonging to the highest income group in rural as well as urban sectors.





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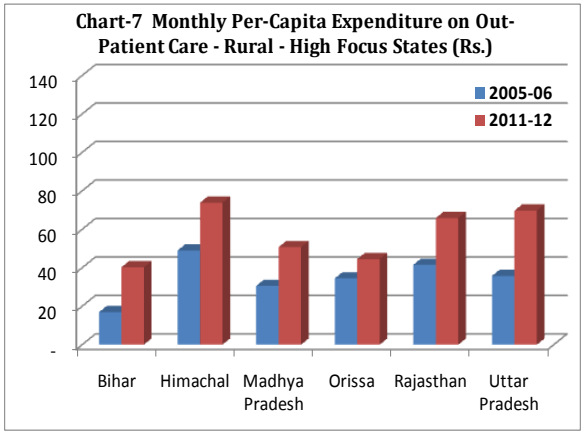
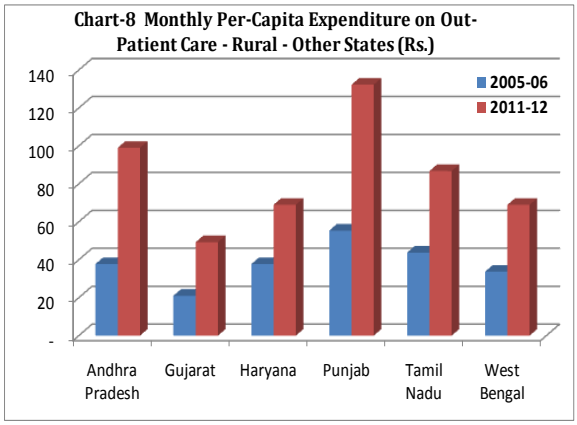
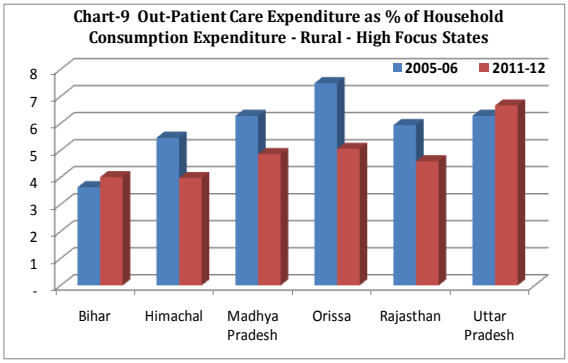
An attempt was to assess if the efforts of NRHM has made any impact on the out-of-pocket expenditures on health by the households. Since the focus of the NRHM as was primarily on rural areas and on primary and secondary care services, the analysis here has been confined to rural and out-patient care services to assess the impact of NRHM. Further, the NRHM focussed its efforts more on backward states grouping them under 'high focus states', comparisons have been attempted on select high focus states and other states to assess the impact on out-of-pocket expenditure on health.

Expenditures incurred by households on out-patient care services during 2005-06 and 2011-12 have been compared for this purpose and presented in Charts 7 and 8 below. The charts clearly reveal that the per-capita expenditures have registered an increase in nominal terms across all states during the time span. But it is interesting to note that increase in per-capita expenditure from 2005-06 to 2011-12 is less rapid among high focus states than the other states. This is possibly due to the increase in the allocation to health care by the governments through NRHM which has contained the increase in household spending. Increased government expenditure would have ensured the availability of doctors, medicines and other supplies in the public health system.







Another interesting result that emerges from this analysis is the declining burden of out-patient care expenditures on households in backward states such as Madhya Pradesh, Orissa and Rajasthan as seen in Chart-9. However, Bihar and Uttar Pradesh remained an exception to this with a marginal increase in the burden during the period under assessment. On the contrary, resulted presented in Chart-5 revealed an increase in the burden of out-patient care services on the poorer segments of the households in India. Therefore the results presented in Chart-5 in conjunction with the results in Chart-9 tend to suggest that even though the burden of out-patient care services have been contained in the poor states, poorer households in the country are faced with increasing burden in spite of the efforts through NRHM.

Summary and Conclusions

Health care expenditures of households have been increasing over the years placing larger burden on poor in the country. There are substantial differences between rural and urban households in the extent of spending on health care. In the rural areas, a large number of households are able to spend only smaller amount on health care as compared to households in the urban areas. Lack of access, both economic and physical access to health care services to the households of lower income groups is possibly one of the factors for this trend as evidenced through the NSSO data.

The burden of hospitalization care has increased both in rural and urban areas across income groups from 2005-06 to 2011-12. But the worrying concern is the increasing burden is higher on poorer segments of households than on higher segments. This only tends to suggest that poor will be further impoverished on account of instances of hospitalization, particularly in the rural areas.

In the case of out-patient care expenditures, the poor in rural areas are again in a disadvantageous position as the burden on poorer segments have increased while it declined for others in rural areas. On the other hand, the household burden of out-patient care among the backward/ poor states, excepting Bihar and UP, have witnessed a declining trend. But the results of all-India rural households in conjunction with those of backward states strongly suggest that the burden of out-patient care has

increased disproportionately for the poor in the poorer states during the period under study.

In sum, NRHM has achieved one of its purposes of strengthening the primary care services at the outset. The focused approach adopted by the NRHM has also helped the backward/ poorer states in reducing households' financial burden on account of primary care. The bigger question is, at what cost this has been achieved?. This elusive success would have fuelled the widening inequality in health, particularly in poorer states. Risk pooling schemes target largely the so called catastrophic hospitalization and related services. Nearly 75 percent of the households which incur out-patient care expenditures remain outside the purview of these schemes.

References

1. Acharya S, G.Carrin, A.Herrin (1993), *The Macro Economy and Health Sector Financing in Nepal: A Medium-term Perspective*, Health and Development Series No.11, World Health Organisation, Geneva.
2. Berman, P. (1997), National Health Accounts in Developing Countries, Appropriate Methods and Recent Applications, *Health Economics*, Vol. 6 (1), pp.11-30.
3. Bernam P, et.al. (1995), *Egypt: Strategies for Health Sector Change*, Data for Decision Making Project, USAID, Harvard.
4. Bhat, Ramesh (2000), *Health Care Financing: Goals of Health Care System*, Paper Presented at the Conference on Health Insurance held during March 18-19, 2000 at Indian Institute of Management, Ahmedabad.
5. Collins D., J.D.Quick, S.N.Musau, D.Kraushaar and M.Hussein, (1996), The Fall and Rise of Cost Sharing in Kenya: The Impact of Phased Implementation, *Health Policy and Planning*, Vol.11 (1), pp.52-63.
6. Damme W.V., et.al (2004), Out-of-pocket health expenditure and debt in poor households: evidence from Cambodia, Tropical Medicine and International Health, Vol.9 (2), pp. 273–280.
7. Ensor T, Bich S. Pham, (1996), *Health Charges and Exemptions in Vietnam, Bamako Initiative Operations Research Programme*, Research paper No.1, UNICEF, New York.
8. Gertler, P. and J.van der Gaag, (1990), *The Willingness to Pay for Medical Care: Evidence from Two Developing Countries*, Johns Hopkins University Press, Baltimore.
9. Government of India (2009), *National Health Accounts India: 2004-05*, Ministry of Health and Family Welfare, New Delhi.
10. Government of India (2008), *Household Consumer Expenditure in India-2005-06*, 62nd Round, Report No. 523, National Sample Survey Organisation, New Delhi.
11. Government of India (2014), *Household Consumption of Various Goods and Services in India-2011-12*, 68th Round, Report No. 558, National Sample Survey Organisation, New Delhi.
12. Hotchkiss, D.R. and A.Gordillo, (1999), Household Health Expenditures in Morocco: Implications for Health Care Reform, *International Journal of Health Planning and Management*, Vol.14 (3), July-August, pp.201-217.
13. Jimenez, Emmanuel, (1986), The Public Subsidization of Education and Health in Developing Countries: A Review of Equity and Efficiency, *World Bank Research Observer*, Vol. 1(1), January, pp.111-129.
14. Mishra, D, G.Pandey, P.Sinha (1993), Use of and Spending on Curative Health Care in a Tribal Block of Madhya Pradesh, in P.Berman, M.Khan (eds), *Paying for India's Health Care*, Sage Publications, New Delhi.
15. Reddy, K.N. and V.Selvaraju (1994), *Health Care Expenditure by Government in India*, Seven Hills Publications, New Delhi.
16. Sanyal, S.K, (1996), Household Financing of Health Care, *Economic and Political Weekly*, Vol.31 (20), May 18, pp.1216-1222.
17. Saurerborn, R, I.Ibrango, A.Nougtara, et.al. (1995), The Economic Costs of Illness for Rural Households in Burkina Faso, *Tropical Medical Parasitology*, Vol.46, pp.54-60.
18. Sen, B., (1997), *Health and Poverty in the Context of Country Development Strategy: A Case Study on Bangladesh*, Macroeconomics, Health and Development Series No.26, World Health Organisation, Geneva.
19. Shariff, A., (1995), *Differentials and Determinants of Morbidity in India: Disaggregated Analysis*, Working Paper No.57, NCAER, New Delhi.
20. Shariff, A., (1999), *India Human Development Report*, Oxford University Press, New Delhi.
21. Tulasidhar, V.B., (1993), Expenditure Compression and Health Sector Outlays, *Economic and Political Weekly*, Vol.28 (45), November 6, pp.2473-2477.
22. Vogel, R.J., (1988), *Cost recovery in the Health Care Sector: Selected Country Studies in West Africa*, World bank Technical Paper Number 82, The World Bank, Washington D.C.
23. Waddington, C. and K.Enyimayew, (1990), A Price to Pay – Part 2: The Impact of User Fees in the Volta Region, *International Journal of Health Planning and Management*, Vol.5, pp.287-312.
24. Williams, P., (1994), *The Use of Community based Household Data for Improved Health Planning in the Gambia*, Ministry of Health and Social Welfare, Banjul.
25. World Bank, (1993), *World Development Report 1993*, Oxford University Press, New York.