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CHAPTER 8
FINDINGS AND POLICY IMPLICATIONS

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8.1. Introduction

The present study attempted to analyse the nature of public and household expenditure on health in India and in Kerala. The present study observed that the health condition of population and health expenditure is correlated in India. In the context of demographic dividend, the importance of health-capital has enormously increased. The inter-state disparity with respect to household expenditure is diverse and uneven. More specifically, the disparity is obvious in expenditure on health with respect to gender, geography and income. Among the major states in India, the health condition of the population is satisfactory in Kerala. Needless to say, the expenditure of both household and government are high in Kerala. However, the morbidity rate is high in Kerala. Similarly, the cost of treatment is also high in Kerala. Moreover, there is widespread inequality in the affordability of quality of health care in the state. The role of household expenditure is crucial in determining the nature of morbidity and its treatment. Similarly, the insurance penetration is also has to be increased in the state. On the contrary, life expectancy is the highest in the state. The present study observed that the nature of household and public expenditure is high and unique in Kerala. The present study found that the findings in the area of household expenditure on health in Kerala require revision. In this context, the present study enquired the determinants of household expenditure on health in India as well as in Kerala. By keeping these factors in mind, the present study attempted to answer the research questions by formulating the following specific objectives.

Following are the specific objectives of the study:-

(1) To analyse the public expenditure on health in India and in Kerala;

(2) To compare the public and household expenditure on health in Kerala;

(3) To identify the determinants of household expenditure on health in Kerala; and

(4) To examine the major constraints of household health expenditure in Thrissur district.

In order to fulfil the objectives and answer research questions, the study has used both quantitative and qualitative methods to analyse the data. Based on the conceptual and empirical analysis, the study has found that the nature of public expenditure on health in India as well as in Kerala is diverse and unique. Further, the study identified some of the crucial determinants that would influence the household expenditure on health in Kerala. Moreover, the impact and constraints of households were also examined. The major findings of this study are as follows.

8.2. Findings of the Study

8.2.1. Expenditure on Health in India and in Kerala

The present study examined the public expenditure on education in the context of selected countries in the world and in India. There exist enormous variations in spending on health among various countries of similar income. Global public expenditure on health out of total global expenditure on health increased from 56 percent during 2000 to 60 percent during 2017. Public expenditure on health in India shows a marginally increasing trend. But the major chunk of the expenditure on health comes from the household sector. The revenue expenditure for Medical and Public Health increased from ₹664565 lakh during the period 1995-96 to ₹14620390 lakh during the period 2019-20. The CAGR of revenue expenditure for Medical and Public Health was 13.16 percent and 12.02 percent for Family Welfare for the period 1995-96 to 2019-20. The capital expenditure for Medical and Public Health increased from ₹30195 lakh during 1995-96 to ₹2188710 lakh during 2019-20. The capital expenditure for Family Welfare increased from ₹3507 lakh during 1995-96 to ₹53760 lakh during 2019-20. The CAGR of capital expenditure for Medical and Public Health was 18.68 percent and 11.53 percent for Family Welfare for the period 1995-96 to 2019-20. It is clear that revenue expenditure on health is greater than the capital expenditure in terms of money.

The central and state government spent large amounts of money on health. The central government expenditure increased from ₹5108.63 crores to ₹66498.88 crores and the state government expenditure from ₹19710.68 crores to ₹263158.30 crores for the period 1999-2000 to 2019-20. Public expenditure on health in India increased from ₹19710.68 crores during the period from 1999-2000 to ₹263158.30 crores during the period 2019-20 with a CAGR of 13.13 percent. There exist variations in growth rate in per-capita public expenditure on health. Per-capita public expenditure on health in India also shows an increasing trend. It increased from ₹197 in 1999-2000 to ₹1962 in 2019-20. The CAGR of per-capita public expenditure on health in India is 11.57 percent during the period from 1999-2000 to 2019-20. Out of the total plan investment outlay the total health investment increased from ₹65.3 in first plan to ₹140135 in eleventh plan. Percentage of plan allocation to health sector out of total plan investment outlay is the lowest in the third plan (2.9 percent) and the highest in the eleventh plan (6.5 percent).

There exists a wide variation in household expenditure on health among different countries in the world. As per the WHO estimates, globally, the percentage change in out-of-pocket expenditure per-capita is low when compared to government expenditure on health. The household expenditure on health in India increased from ₹5671 crores in 1985-86 to ₹537043 crores in 2018-19 with a CAGR of 14.32 percent. The per-capita household expenditure on health in India increased from ₹75 in 1985-86 to ₹4047 in 2018-19 with a CAGR of 12.45 percent. The percentage share of household expenditure on health in total expenditure on health (both public and private) decreased from 72.8 percent in 1999-2000 to 69.2 percent in 2018-19 in India. Out-of-pocket expenditure as a percentage of household expenditure on health decreased from 91.3 percent in 1995-96 to 89.2 percent in 2014. Out-of-pocket expenditure constitutes 67.0 percent of total expenditure on health in 1995-96 and it falls to 62.0 percent in 2014-15. The total expenditure on health (both public and private) in India increased from ₹72554.6 crores during 1999-2000 to ₹776494.5 crores during 2018-19 with a CAGR of 12.58 percent.

Among the various financing schemes, share of household out-of-pocket payment to the current health expenditure diminishes from 71.7 percent in 2000-01 to 65.33 percent in 2015-16. The contribution of government schemes and compulsory mode of contribution to health care financing schemes to the current health expenditure shows a marginal increase from 22.6 percent to 25.03 percent and

voluntary health care payment schemes also shows an increasing share from 5.7 percent to 9.6 percent to the current health expenditure for the same period. There is variability among the major states in relation to health status. The proportion of Ailing Persons (PAP) is the lowest in Meghalaya and the highest in Kerala both for rural and urban area during the period 2017-18. The PAP was the highest in urban than in rural area during 2014 and 2017-18. There is a decrease in PAP in India during the period 2017-18 as compared to 2014-15. Government expenditure on health was the highest in the case of Uttar Pradesh and Maharashtra during the period 2014-15 and 2015-16. The government spending on health was the lowest in Himachal Pradesh during the periods such as 2004-05, 2014-15 and 2015-16. During the period 2016-17, government expenditure on health was less in the case of Uttarakhand (₹1595 crores), Himachal Pradesh (₹1971 crores) and Jammu & Kashmir (₹1995 crores). Per-capita government health expenditure is the lowest in Bihar and the highest in Himachal Pradesh during the periods such as 2004-05, 2014-15, 2015-16 and 2016-17. Per-capita government health expenditure among various states shows an increasing trend during the period from 2004-05 to 2016-17.

Per-capita household expenditure on health is the highest in Kerala and the lowest in Assam during the periods such as 2014-15, 2015-16 and 2016-17. Out-of-pocket expenditure as percentage of GSDP is the lowest in Gujarat and the highest in Bihar during the periods such as 2014-15, 2015-16 and 2016-17. There was a decline in the out-of-pocket expenditure during the period from 2004-05 to 2016-17 among various states in India. Revenue expenditure on Medical and Public Health in Kerala increased from ₹58170 lakh during the period 2000-01 to ₹598411 lakh during the period 2017-18. Revenue expenditure on Family Welfare in Kerala increased from ₹9218 lakh during the period 2000-01 to ₹52081 lakh during the period 2017-18. Public expenditure on health (both revenue and capital expenditure on Medical and Public Health and Family Welfare) in Kerala increased from ₹41721 in 1995-1996 to ₹682671 in 2017-2018 with a CAGR of 12.92 percent.

8.2.2. Disparity on Household Expenditure on Health in Kerala

The present study examined the disparity of household expenditure on health with respect to geography, income, and nature of expenditure. The study found that the expenditure in rural area is low when compared to urban areas in Kerala. However, the intensity of disparity is high when considering the inter-state disparity

on expenditure on health in India. The inter-district disparity is obvious in Kerala. For instance, disparity in institutional medical expenditure varies from ₹14.77 in Wayanad to ₹110.4 in Idukki while rural non-institutional medical expenditure ranges from ₹35.46 in Wayanad to ₹133.57 in Pathanamthitta during the period 2009-10. Urban institutional medical expenditure is the highest in Alappuzha and the lowest in Wayanad. Urban non-institutional medical expenditure is the highest in Thiruvananthapuram and the lowest in Wayanad 2009-10. In Kerala, average total medical expenditure excluding childbirth is higher in rural area (₹17642) than in urban area (₹15465) during 2014. The amount of premium of Rashtriya Swasthya Bhima Yojana (RSBY/CHIS) increased from ₹51 crores in 2008-10 to ₹302.82 crores in 2018-19. The amount of claims paid under RSBY/CHIS and CHIS PLUS increased from ₹113.28 crores in 2010-11 to ₹448.29 crores in 2018-19. From the findings, it is clear that disparity is marginal in terms of expenditure on general population. But it is significant with respect to the households with low income. It implies that government expenditure should compensate the expenditure in rural areas especially on poor households in Kerala.

8.2.3. Determinants of Household Expenditure on Health in Kerala

The present study found that the following variables have a crucial role in determining the household health expenditure in India. They are:- (1) per-capita public expenditure in India (2) Gross Domestic Product of India (3) per-capita Gross Domestic Product of India, and (4) public expenditure on health in India. These independent variables are statistically significant in determining the household expenditure on health in India. The intensity of that the independent variables are different from another. However, it is observed that the impact of the public expenditure on health is comparatively high in determining the household expenditure on health in India. Similarly, Gross Domestic Product of India also can positively influence the household health expenditure in India. This study argues that the public expenditure and household expenditure are complimentary to each other. More specifically, there would be a positive relationship between the household expenditure on health and public expenditure on health in India. It implies that the government should spend on health in an equitable and efficient manner.

The bi-directional relationship between household expenditure on health and independent variables is also examined. The regression analysis indicates that

expenditure on health can positively influence Gross state domestic product of India. More specifically, the financial return is positive via the health capital formation. In other words, the Gross domestic product and per-capita income of India would be influenced by following independent variables: - (1) public health expenditure in India (2) household expenditure on health in India. The extent and degree of impact of household expenditure is significant in determining the aggregate as well as per-capita income in India. The impact of GDP of India would be high in positively influencing the health spending of the public and households. More specifically, health expenditure and financial return is positively associated and it is statistically significant. Based on the insights from the all-India analysis, this study identified the determinants of household expenditure on health in Kerala.

The study result indicates that following variables are significant:- (1) per-capita government expenditure on health in Kerala (2) Gross State Domestic Product in Kerala (3) remittances to Kerala and (4) medical institutions in Kerala. The regression result shows a marginal positive association between per-capita income and the per-capita household health expenditure in Kerala. Per-capita household expenditure on health also likely has a substantial positive association with per-capita public expenditure on health in Kerala. Medical institutions in Kerala would have a strong positive effect on household health expenditure. The regression analysis indicates that the per-capita public expenditure on health would have a pivotal role in determining the household health expenditure in Kerala when compared to other variables. The regression analysis evaluated the impact of health expenditure on financial income in Kerala. It is evident from the regression results of return on expenditure on health that public expenditure on health in Kerala would influence on Gross State Domestic Product and per-capita income of Kerala.

8.2.4. Nature and Constraints of Household Expenditure on Health

The expenditure at the aggregate level and its impact at the micro level is examined in Thrissur district of Kerala. The study found that the expenditure is different with respect to following factors such as religion, caste, geographical location of the household, occupation of the head of household, education and household income. For instance, there is significant difference between religion of households and average annual household health expenditure per-capita both in rural and urban areas. Average annual household health expenditure per-capita is the

highest for Hindu community (₹6616.9) followed by Muslim community (₹5554.9) and Christian community (₹4836) in rural areas of the district. In urban area, the religion-wise household health expenditure is the highest for Christian community (₹8563.6) followed by Hindu community (₹7015.3) and Muslim community (₹6889.2) during the study period. There is significant difference between average annual household health expenditure per-capita in urban and rural areas of the district.

There is significant difference with respect to income status and average annual household health expenditure per-capita in urban area. Average annual household health expenditure per-capita is high in urban area when compared to rural areas with respect to income status of the household. There is significant difference between household health expenditure and education level of head of household in rural area in the district. Education level of head of the household substantially influences the household health expenditure in rural area in the district. In urban area, there is significant difference between different occupation of the head of the household and average annual household health expenditure per-capita.

At the same time, there is no significant difference between gender of head of household (male and female) and average annual household health expenditure per-capita in rural and urban areas. Further, average annual household expenditure on health per-capita is high for joint family (₹6245.9) than in nuclear family (₹5803.2) in rural households when compared to urban households. Average annual household health expenditure per-capita is more in urban household than in rural household based on family size. There is only marginal difference between family sizes and average annual household health expenditure per-capita.

There exists significant variation between nature of diseases and household health expenditure. Households spend more for non-communicable diseases when compared to communicable diseases. There exists significant difference between household health expenditure and different type of treatment of households. Specialised health services are costlier than general health services. There exists significant difference between health expenditure and episodes of hospitalization of households. Higher the episodes of hospitalization higher would be financial burden of the households.

The average annual household health expenditure of rural households is significantly different from that of urban households. The average annual household health expenditure of rural households is lower than that of urban household. Average

annual household health expenditure of respondents corresponding to the categories of caste is not significantly different from that of the reference category (OBC). The household expenditure of poor families is low in the district. Similarly, the nature of diseases have substantially influenced on the household expenditure on health. The percentage of household budget allocated to health expenditure is also substantially influenced by the nature of diseases and income.

The major constraints related to household expenditure on health are as follows:- (1) inadequate saving of the households (2) poor cooperation of the head of household in health care (3) inadequate health consciousness (4) inadequate insurance participation (5) poor information on health care facilities of state government (6) inadequate support from the government in health care (monetary and non-monetary) (7) inadequate infrastructure and maintenance in government hospitals and primary health centres (8) inadequate financing options to health care and (9) poor collateral of poor households (10) high debt position of households and (11) inadequate insurance penetration. High debt position, inadequate saving and poor insurance penetration are the major obstacles of the household in health expenditure in rural and urban areas of the district.

8.3. Recommendations and Policy Implications

The analysis revealed major determinants and constraints of the public and household spending on health. Based on the findings, the study put forward the following policy implications.

1. The public expenditure on health should be increased to enhance the household expenditure on health in India. It will enhance the quantity and quality of health capital formation in India. More specifically, public expenditure should be enhanced on the marginalised sections of the society.
2. The government should make urgent measures to appoint a committee to examine the various types of disparity on health expenditure in India. The matters under consideration may be the disparity of expenditure on health in terms of geography, gender, religion, caste, and income.
3. Regional disparity in expenditure on health is obvious in the analysis. Therefore, central government should take urgent measures to compensate the problems of poor states and poor performers in health indicators. This aspect may be incorporated in the recommendations of finance commission. National health

expenditure policy should give special attention into the problems of government sector in the context of neo-liberal policies. Further, an effective mechanism is necessary to regulate the private health institutions in India.

4. Government expenditure is very important in determining the household expenditure on health. Both of these variables will enhance the monetary income in India as well as in Kerala. Therefore, Government should encourage household expenditure on health and regulate private medical institutions in India.
5. The study highlights the importance of mutual-coexistence of household and public expenditure on health in India as well as in Kerala.
6. Spending on health per-capita expenditure in very crucial in a populated country like India.
7. In Kerala, the government should support Non-Resident Indians (NRIs) through various measures such as health cards, pension schemes, and speedy processes for migration. It will positively influence the state income. Further, it will have positive spill-over effects and externalities in the health system of the state. However, state should measures to regulate the administration of private medical institutions which is funded by remittances.
8. At the micro level, household have faced various constraints. Among these constraints, inadequate health education is obvious. Health education is a prerequisite for good health. It will reduce gender inequality of the bottom most sections of the society. Effective incorporation of health education in the education system will produce healthy children.
9. The role of voluntary prepayment in expenditure on health is immense. Therefore, government should allocate more funds to the health insurance scheme of the poor families.
10. Government should take urgent initiatives to start various health schemes to improve the savings position of the households in the area of health expenditure.
11. Government should make some urgent measures to improve the quality and quantity of infrastructure in government hospitals in Kerala especially in the context of Covid-19.
12. Health-card to the poor patients in the private hospitals will be a viable option to converge the services of government and private medical institutions in the state.

13. Preventive-disease mechanisms such as nutritious food pattern, provision of clean drinking water, insurance-inclusion, free-check up and incentives to workout in households and workplaces would positively influence the health capital formation.
14. Environment has a critical role in determining the health of the population. Therefore government must take some urgent and mandatory measures to invest in waste management and environmental protection and up-gradation. The role of households in health capital will enhance through the effective incentive-framework of the regulatory bodies.

8.4. Area of Further Research

The determinants of household expenditure on health are limited to limited some variables due to the non-availability time series data and constraints of resources. The determinants of expenditure on health and returns from expenditure on health may be extended by incorporating more variables both at the all-India and state level. The impact of health expenditure on health is a multi-faceted and a timeless concept. Therefore, the non-monetary aspect of household expenditure as well as public expenditure on health is also may be incorporated in advanced research. An inter-state and intra-district analysis may be executed by incorporating elevated data sets and rigorous statistical tool based on both quantitative and qualitative data.

8.5. Concluding Observations

Public expenditure on health is the first and foremost variable in determining the human capital formation through improvement in health-capital. However, optimum-mixture of public and household expenditure on health is inevitable to improve the productivity of the population in an equitable and sustainable manner. Conceptually speaking, investment in health and education will lead to non-diminishing growth of a nation through technological advancement and elevated quality of human capital. In India, the public expenditure on health is comparatively low when compared to household expenditure on health. Among major states in India, Kerala is far ahead both in terms of expenditure on health and parameters of health. However, the morbidity rate is high in Kerala. Further, the inequality is visible in expenditure with respect to gender, geography, income, education and income. In this context, the present study attempts to analyze the determinants of household expenditure on health in Kerala.

The study has adopted a combination various statistical methods for the collection and analysis of data. The analysis indicates that the following variables can influence substantially in determining the household expenditure on health in India and Kerala. The determinants at the aggregate level are: (1) per-capita public expenditure in India (2) Gross Domestic Product of India (3) per-capita Gross Domestic Product of India (4) public expenditure on health in India (5) per-capita government expenditure on health in Kerala (6) GSDP of Kerala (7) remittances to Kerala and (8) medical institutions in Kerala. Apart from the determinants at the macro level, some of the deterrents are also observed which hinders the optimum household expenditure on health in Kerala.

The study found that household has faced various constraints with respect to expenditure on health. These constraints are categorized into following domains:- (1) inadequate saving of the households (2) poor cooperation of the head of household in health care (3) inadequate health consciousness (4) inadequate insurance participation (5) poor information on health care facilities of state government (6) inadequate support from the government in health care (monetary and non-monetary) (7) inadequate infrastructure and maintenance in government hospitals and primary health centers (8) inadequate financing options to health care and (9) poor collateral of poor households (10) high debt position of households and (11) inadequate insurance penetration. These constraints and determinants are very crucial to give insights for the policy formulation and addition into the stock of knowledge in the area of health economics in particular and human capital in general. Based on these findings the present study argues that policy execution both at the household and government levels are inevitable and urgent. Optimum level of public expenditure on health along with an equity concern will optimize the household health expenditure in an equitable and sustainable manner.