CHAPTER – III

REVIEW OF LITERATURE

The term ‘household health care expenditure’ is the percentage of household income spent on health care which includes preventive treatment, inpatient care, outpatient care, drugs etc. When the out-of-pocket payments (OOP) on health care exceeds a certain proportion of the household income or if it affects the level of food and non-food expenditure of the household, it leads to catastrophic health care payments which leads to impoverishment. The OOP expenditure remains the predominant source of financing health care in most of the countries; whereas in other countries the health care expenditures are backed by the insurance mechanism or government subsidized health care facilities. Several studies has been made with regard to the household health care expenditure pattern, their determinants and models of health care financing of various countries. Extensive studies have been made by countries to analyze and frame policies by which the health care industry serves at its best. Based on the existing literature, the researcher has drawn fundamental findings and has applied to the present study. A review of literature has been contemplated and is discussed in six sections namely, (i) out of pocket health care payments and impoverishment, (ii) determinants of household health care expenditure, (iii) financing health care, (iv) health insurance, (v) disease burden, health care seeking behaviour and health care delivery (vi) studies relating to Tamil Nadu.

3.1 OUT OF POCKET HEALTH CARE PAYMENTS AND IMPOVERISHMENT

Alam, Moneer and Tyagi (2009)\textsuperscript{51} have examined the private out-of-pocket expenditure by households after fragmenting it to medical services such as drugs and medicines. The study also closely examines the household’s ability to meet the food and non-food expenditure after meeting the medical expenditures. The study focuses few selected districts of two states- Uttar Pradesh and Rajasthan based on specific considerations as such higher poverty levels and a lower demographic status. More

\textsuperscript{51} Alam, Moneer and Tyagi. R.P., 2009 “A Study of Household Expenditure on Drugs and Medical Services – An Exploratory Analysis of UP, Rajasthan and Delhi.” Population Research Centre, Institute of Economic Growth, Delhi.
inclusively, the study analyses morbidity for short and long time periods under diversified socio-economic and ethnic settings. Particularly, the extent to which the health care expenditure pushes the households below the poverty line and the role of catastrophic health care payments in reducing the overall welfare of the households has also been closely examined. Also the share of expenditure on drugs in the medical expenditure was also analysed and the channels by which the households finance the health care expenditure was also given importance.

The result shows that, the OOP health payments play a significant role in stimulating the overall poverty level and creating a vulnerable situation among the rural and slum households. One major observation here is that the rural and slum households has very limited source to meet the medical expenses whereas the study shows that majority of the urban households have borrowed and are indebted to meet the medical expenses. It was found that even the households which accessed public health facilities were victims of catastrophic payments. This arises a question- which component of health expenditure pushes households to face catastrophe? It was found out that expenses over drugs turns out to be the major component which was around 90 per cent.

To find out whether the households has the potential to fall into the catastrophe owing to higher spending levels towards health expenses and its components, a probit analysis was performed. The model specification is as follows;

\[ Y_i^* = \beta_0 + \sum_{i=1}^{n} \beta_i X_{ij} + U_i \]

Where \( Y_i^* \) is a latent variable; whereas \( Y_i \) is observed dichotomous dummy variable.

\( Y_i = 1; \) if the \( i^{th} \) household suffers from an OOP induced catastrophic situation

\( 0 \) otherwise

\( X_{ij} = \) vector of socio- economic variables

The analysis result indicates that among the other factors, the per capita household consumption expenditure turned out to be the most significant correlate of
catastrophic spending. Even though household size was significant, the catastrophic payments are set to increase with the household size. From the study it was more evident that, better living conditions such as drinking water and sanitation facilities reduces the probability of facing catastrophic payments.

The existing literatures proves that out-of-pocket health care expenditures pushes the households to a vulnerable situation. But it is necessary to analyse the factors that actually makes them to face the catastrophe; OOP spending may not be the only direct reason, indeed OOP spending is high due to high health care costs and similar other factors.

Kamath and Anjali (2007)\textsuperscript{52} have studied the health problems, health care costs in the urban areas and the ways in which the people cope up with the unforeseen expenditure. The authors have stated that there is a common misconception in comparing the urban and rural poor is that the former has a better access to the health care facilities and easy to depend on the public health services. Whereas the actual scenario of the urban households is that the treatment and preventive health care costs in urban areas are rising and it is difficult to cope up with the unforeseen health care expenses owing to a high OOP spending creating a vulnerable environment.

The study aimed at understanding how people in peri-urban areas of the city of Pune cope up with health care costs. Particularly to understand whether the health problems and consequent health expenditures vary across income groups. Aspects like health expenditure for chronic illness, other ailments, disabilities, pregnancies, current illness was given more weightage. Finally, scenarios of health emergencies and accidents and how the households finance for them and any disinvestments, borrowings or sale of assets associated was of major interest in the study. The results shows that out of the 681 households 130 households are in vulnerable situation due to current illness and the cost of treatment per person is Rs. 429 where majority of the households income falls below Rs. 5000. With regard to chronic illness 271 individuals were affected by chronic diseases and the range of expenditure for this

was around Rs. 20 – Rs. 5000 per month including drugs, tests and doctor consultation.

It is important to note that 39.8 per cent of the households borrow money from friends and relatives to meet the health emergencies whereas 7.2 per cent borrows from money lenders and only 4.3 per cent sold their assets. The conclusion was that households living in peri-urban areas spend about 5-6 per cent of their monthly income on health expenditures. The lower income groups spend more on current ailments and the expenditure of households with chronic illness increases with respective to the income levels. It was found out that the health care cost is a burden to both vulnerable and non-vulnerable groups but the vulnerable groups are the most affected and highly susceptible to ailments.

A health care expenditure without any prepayment mechanism where the households spend out of their pocket over a period of time is said to face catastrophe when it affects the other expenditure of the household. Su et al. (2006) have quantified the catastrophic household health care expenditure and the factors responsible for it. The authors have collected survey from 800 households in Nouna District, Burkina Faso. WHO estimates that families who spend 50 per cent or more of their non-food expenditure on health care are likely to be impoverished. Different threshold levels were created to analyse the factors that influence the households’ catastrophic health spending. The study also examines how much do households spend on health care; percentage of households affected by health care spending and the factors that led to catastrophic health expenditure.

Logit model was developed to analyse the households’ chance of facing catastrophe. The explanatory variables included type of illness (captured on age basis), treatment pattern, choice of health services, household characteristics such as, literacy levels and gender of the households’ head, household size and the economic status of households where the households are classified to groups. The results of the study shows that most of the households had at least one illness episode. Catastrophic

---

expenditure among the households were observed under four threshold levels such as equal to or greater than 20 per cent, 30 per cent, 40 per cent and 60 per cent of non-food expenditure. It was observed that 6-15 per cent of the households had catastrophic expenses even with modest health expenditure levels. It is seen that economic status and illness among the members and chronic illness among the old members were the key factors to influence catastrophic expenditure. The authors have suggested a community based health insurance for the district to overcome this catastrophe.

Empirical research shows that households in the developing countries are unable to maintain the current levels of consumption during and after the incidence of illness owing to high medical expenditure. Such instances causes adverse impacts on the nutritional and educational status of the households. Similar vulnerabilities are highly prevalent in households with elderly, disabled, female headed and rural households. Dhanaraj (2016)\textsuperscript{54} has studied the determinants of economic vulnerability to health shocks and asses the effect of the state insurance scheme in Andhra Pradesh on reducing the welfare loss and likelihood of adopting costly strategies. The Andhra Pradesh government launched a public health insurance scheme Rajiv Arogyasri (RAS) funded solely by the state revenues. It gives insurance coverage to 68 million people through identified network of private and public hospitals. Therefore the investigates the factors that are responsible for welfare loss; likelihood of adopting risk-coping strategies such as borrowing, selling assets, reducing consumption levels and the effectives of the state’s insurance scheme in reducing the welfare loss from health shocks. The study used a logit model to analyse the shocks faced by households and the coping strategies used which includes variables for analyses such as household head characteristics, demographic, socio-economic and community characteristics.

The results highlights that the health shocks increases likely with the age of the household head, in the case of female-headed household. Completion of primary education and regular salaried household head had negative influence over health shocks. Households belonging to the lower income groups were vulnerable to health

shocks. With regard to the coping strategies, households with elderly heads depended on borrowing, work extra, reducing consumption expenditure; households with middle aged heads dissave and households in upper income quartiles save more to combat health shocks. Moreover RAS health insurance scheme doesn’t have a significant effect in reducing the welfare loss from health shock and coping strategy since only 3.76 per cent of the eligible households accessed the benefits. The main reasons for these are - the scheme provides assistance to only in-patient care; major diseases were not under the preview of the insurance scheme and the health care facility utilization rates were higher only in districts where there was good access to hospitals.

Out-of-pocket payments is the principal source of finance which has intense consequences in the household living standards. Ghosh (2011)\textsuperscript{55} in his study measures the catastrophic health payment and impoverishment due to OOP health payments using the NSS data on consumption expenditure for the years 1993-94 to 2004-05. The macroeconomic adjustments of the 1990s induced continuous policy shifts in the health sector such as the introduction of user fees, decline of the government spending in the health sector, introduction of the new Drug Price Control Order (DPCO). These policies in the health sector pushes up the OOP health payments both in the public and private facilities and also affects the overall health and health care utilization. Similar to the other literature the author in the study defines the OOP payments as catastrophic when the payment exceeds the threshold level as a fraction of the total non-food consumption expenditure of the household.

The result indicates that the mean share of households OOP payments in relation to monthly consumption expenditure rose from 4.39 per cent to 5.51 per cent through the study period. Drugs and medicines were the most important component of OOP expenditure. The distribution of OOP expenditure varied among the states with highest drug spending of 79-85 per cent in the less developing states such as Orissa, UP and Assam; while the better off states such as Maharashtra, Kerala, Gujarat, Karnataka and Punjab spent a lower 60-67 per cent. There was also a positive relationship between the share of OOP health payments and the level of economic

development of states. The catastrophic healthcare expenditure increased between two

time periods at 5%, 10%, 15% and 25% thresholds. The main reasons owing to the

increase in the share of varied OOP payments across the states is that in high in come

states, the prevalence of communicable diseases seems to be higher and the

mechanism of health care financing is a significant factor apart from the income and

the availability of health facilities. Finally the highlights that the lower and the middle

income households were the main victims of the healthcare reforms. Therefore risk

pooling, limiting OOP and increasing financial assistance is much needed to reduce

impoverishment among the households.

In a similar study by Berman et al. (2010)\textsuperscript{56} the impoverishing effect of health care

payments were measured by calculating the households below the poverty line before

and after health care payments. This new study uses the financial coping mechanism

to measure the impoverishing effects more accurately. The result shows that the non-

hospital expenditure has greater impact on impoverishment than the expenditure on

hospitalization. The analysis of NSSO data shows that around 6.2 per cent of total

households fell below the poverty line in 2004 comprising of 6.6 per cent in rural

areas and 5 per cent in urban areas. Impoverishment occurred even in the lowest

income quintile. The study also indicated the government’s interest in setting up new

schemes to reduce the ill effects. The authors suggest the usual main policy strategy

of offering subsidized health care facilities were no longer successful in achieving the

desired results rather the government should focus much on the health insurance

mechanism.

A discussion on how the problems of catastrophic health expenditure are faced by

population and by the sub-groups in Vietnam was studied by Lofgren (2014)\textsuperscript{57}. The

problems of catastrophic health expenditure is vicious in Vietnam leading to

catastrophic payments leading the population to impoverishment and vulnerable

situation. In order to control such instances, the Vietnamese government has launched

---

\textsuperscript{56} Berman, Peter, Rajeev Ahuja and Laveesh Bhadari, 2010. “The Impoverishing Effect of Healthcare

Payments in India: New Methodology and Findings”, Economic & Political Weekly, Vol. XLV (16),

pp. 65-71.

\textsuperscript{57} Lofgren, Curt 2014. “Catastrophic Health Expenditure in Vietnam: Studies of Problems and

Solutions”, Umea University Medical Dissertations, Series No: 1673.
a series of social health insurance reforms to increase prepayment system. This will in
turn act as a financial risk protection for the households. How catastrophic health
payments affects the households and the important aspects of health insurance as a
key to reduce the problem were analysed in the study. A closer approach of the study
includes assessing the catastrophic situation of the rural households and the elderly
group was focused. The insight of the study was that expanding the health insurance
coverage appeared to be more difficult than to include the population that is not
covered. It was easy to find and cover new population than to expand services
because the insured consume more of both inpatient and outpatient services.
Therefore this highlights the fact that, the expansion of insurance coverage may not
bring about a reduction in the OOP spending but it will increase the health services
utilization. The result shows that even though the number of households in
vulnerability has come down considerably, still an alarming level of households
remain vulnerable in Vietnam particularly with the elderly group. The rural
households seem to be in a better position than the rural households because they do
not use the health care facilities extensively; even in the event of accessing the health
care facilities they mobilize finance through various informal sources.

The **first section** explained how the OOP health care spending affects the
consumption pattern of the households. It depicts how the OOP health spending leads
to catastrophe and pushes the households to face economic vulnerability.

### 3.2 DETERMINANTS OF HOUSEHOLD HEALTH CARE EXPENDITURE

Most of the researchers have modeled the determinants of health care expenditure or
family budget data of developing countries. **Okunade et al. (2009)** in his study have
debated and highlighted the defects that he found out with the existing literature.
Firstly, it is appropriate to include permanent resources/income rather than the current
income. Secondly, researchers do not classify households by income groups, family
size and run separate regressions to quantify the elasticity variations across the

---

Relevance of Permanent Resources and Other Correlates”, ResearchGate, Health Economics Vol.19
pp. 365-376.
groups. Thirdly, ‘wealth’ or ‘asset’ has been omitted as a major determinant, which is a predominant factor for relaxing households’ budget constraint in the developing countries and also helps the poor households to liquidate assets thus reducing the debts incurred with respect to out-of-pocket health expenditures.

The author has studied the determinants of health care in Thailand by taking 98632 household data observations from selected years in all 76 provinces of Thailand. The variables included for the study were socioeconomic, demographic and one-time economic shock as determinants of variances in household health expenditure across income groups and households classified based on size. The dependent variable household OOP healthcare expenditure include private spending on medical supplies, outpatient and inpatient medical services at public and private health facilities.

Double hurdle modeling framework assuming that a household’s decision to participate in OOP healthcare spending may be governed by the expenditure level was created. The results of the tests were that the college-educated household heads proved to reduce the probability of spending more for health care. Household healthcare expenditure is said to rise significantly with the income levels and large households. This shows that there is a variation in healthcare expenditure owing to the size of the households and income and hence counting them together for analysis as in other existing studies would be biased. Also, the high statistical significance for both current income and assets shows that theoretically it is more appropriate for permanent income or total household resources in the specification and estimation of household healthcare expenditure models in a developing economy.

A similar study by Fazaeli et al. (2015) discusses the main factors on catastrophic health expenditures in Iranian households. Bayesian logit model was used to evaluate the catastrophic health expenditure using household budget data for the year 2010. The authors along with the OOP expenditures introduces the term Capacity to Pay (CTP) which is defined as the household’s total revenue in excess of expenses of the minimum wage, to estimate whether the households have been facing catastrophe or otherwise. According to the World Health Organization, catastrophic health

---

expenditure is considered if the financial contribution for health service is more than 40 per cent of income remaining after subsistence needs have been met. It is necessary to identify households with potential catastrophic health expenditures on the basis of their socio-economic parameters. Therefore variables such as sex, education, marital status, household size, insurance status, employment were included in the model. The dependent variable scored 1 if the household is facing catastrophic health payment and 0 otherwise.

The findings of the study was categorized as groups based on the proportions that the households paid for health expenditures based on their capacity. The result shows that 80.5 per cent of households paid 0-10 percentage of their capacity for health expenditure, 11 per cent of households paid 10-30 percentage, 6 per cent of households paid 30-40 percentage and 2.5 per cent were the households that faced catastrophic health expenditures which is said to be more than 40 per cent of their earnings. Mainly catastrophic health expenditures are faced by households with rural background, households with elderly members (over 65 years of age), unemployed members and illiterate household heads. In this regard, health insurance did not have a significant effect on catastrophic health expenditure.

In a study conducted by Hotchkiss et al. (1988) attempted to study the role of households about the present working of the health sector inorder to create a new government design and implement household policies. The data was collected from the Nepal Living Standards Survey (NLSS) of 3338 households in 275 communities. The survey included questions related to economic, demographic and health related behaviours of each member of the household. NLSS included topics such as demographic characteristics, access to facilities, housing, migration, food expenses agricultural production etc. To evaluate the role of households in financing health care the expenditures by the government, households, donors and private companies were closely examined. It was found that a total of 11.45 billion was spent on health care which is 5.45 per cent of the GDP for the year 1994-95. It is very crucial to note that majority of the expenditure was actually spent by the private households whereas the government, donors and private companies contributed only at smaller levels.

---

It is observed that, the individuals spend around Rs. 505 per year on health. The urban households tend to spend more on health and related goods and services than the rural households. But this scenario changes when the determinants of health expenditure is analysed. While controlling the income per capita variable it was found out that the rural households tend to spend more than the urban households as the incidence of illness seem to be high in the rural households. The incidence of illness depended on the geographical location of the households and also the age factor of the members of the households.

Health care utilization is another important factor determining the health expenditure pattern. The supply of the health care facilities in Nepal is privatized. The government has providing a more flexible environment with numerous provisions for the private health care industry to work efficiently. This is another reason why the health care facilities are more in the urban areas than rural areas. Apart from the public facilities, there are number of health care facilities that are run by NGOs, World Health Organization etc. It is more interesting to note that even with this level of public-private disparity, the people tend to rely more on the public practitioners for treatment, inclusive of the wealthy households due the variation in the cost of treatment. Therefore it is evident that user fees is more substantial in determining the choice of health facilities. The price elasticity is a very crucial aspect which has regressive effects. The authors suggest that, a community based health insurance would be much uplifting in the health status of the households when they are already spending a more than reasonable amount over the same.

In a study by Basar et al. (2012) the catastrophic OOP health expenditure of the households in Turkey and the factors and risks associated with it were analysed. Information relating to household assets, expenditure on consumption, socio-economic information of the individual such as age, gender, education, nature of employment, income and information on health care expenditure including expenditure on medicine, pharmacy, treatment, laboratory services etc. were included for the analysis. The OOP health expenditure in Turkey in 2008 was relatively high

---

accounting for 17.4 per cent of total expenditure on health care. The study was of importance since the Turkish health care system has been restructured with the Health Transformation Programme (HTP) in order to improve access to private health care facilities through various health insurance schemes provided in contract with the private health care facilities. Whether the households faced catastrophic health payments or not was evaluated by the probit model. Catastrophic health expenditure is defined at five threshold levels 2.5, 5, 10, 15, 20 per cents respectively. If the dependent variable takes the value 1 then the households health expenditure is said to be above the threshold level and 0 otherwise. The main observations of the results shows that the poor households are less likely to incur catastrophic health expenditure that the non-poor households due to the fact that poor households do not seek health care like the non-poor households across all threshold levels. Also the choice of private health services for treatment is yet another factor that increases the health expenditure among the non-poor households. The age composition and members with illness or disability were the main factors of influence. The result also indicates the fact that a risk factor resulting in higher chance of seeking treatment does not necessarily lead to a higher probability of experiencing catastrophic health expenditure.

Sghari (2013) evaluated the magnitude of the impact of the demographic changes on the total consumption of health care. The study is conducted based on the data of the OECD countries. It is assumed that the people of age group 0-3 years twice more care that of the age group 4-64 years and people who are over 65 years requires thrice the care. To capture the effects, regression analysis was performed on the variables explaining the amount of health care per capita. In order to address the purchasing power differential between countries, the purchasing power parity (PPP) measured in US$ and a measure of technical progress (which includes rates of treatments including kidney dialysis, heart transplants) were introduced in the model. But the analysis result shows that the technological factor does not cause poor health performance particularly in France with that of countries like UK. The author states that the quality of health care provided depends on other factors like lifestyle, the nature of the

---

economy including the degree of concentration of national income rather that the technological factor alone.

A panel OLS model with individual fixed effect, to find the volume of health care per capita was estimated. This was done to capture in temporary effects, which resulted to be insignificant as by large the technological factor was largely depended on the business cycle which is not absorbed in the short run. The price elasticity showed a possible substitutability between the income effect and the effect on technological progress. A notable drawback of the study is that, it takes into consideration only the technological aspects and its influence over health care ignoring the structural aspects of the country.

Yang et al. (2001)\(^\text{63}\) examines the health care consumption pattern of Korean households to capture the effects after the economic crisis. An important consideration is that the impact of the economic crisis may not be the same across all social groups. The study focused to examine the changes in overall health care consumption after the crisis; the price and income effects of the economic crisis on level of service utilization; shifts in consumer demand among health care providers and the distributional implications of the crisis in the area of health care consumption. The main reasons for these effects were- due to the depreciation of the Korean currency, the prices of the drugs and health services increased resulting in lesser health care utilization. This could be avoided if there existed a proper insurance mechanism to absorb the increase in prices. The impact of income reduction on the utilization of health care services was observed by seeing the health insurance claims data. The result showed that the total number of insurance claims by all providers of both in-patient and out-patient services increased after the crisis which indicates that as health care is a necessity, the utilization increased but the rate of increase was much lesser due to reduced disposable income. There has been a demand shift away from private health services to public health services. The role of public health services have emerged vastly after the crisis and thus the Korean government expanded its role in delivering health care by allocating more resources to the health sector. The scope of the study was largely confined to health care consumption alone.

---

whereas the effects on morbidity, mortality of the population and the gaps in it were not considered.

The second section deals in analyzing the factors responsible for influencing the household health care expenditure. Various studies have discussed the socio-economic factors that were responsible for increased health care expenditure. Studies have also attempted to analyse the best models as how to define the catastrophic health care payments and its determinants.

3.3 FINANCING HEALTH CARE

To understand the behavior of public expenditure on health, Bhat and Nishant (2004) in their study have analysed the role of public expenditure on health using the state level data. There has been a continuous thrust on the government to increase their contribution to the social sector; in particular the government is expected to contribute 3 per cent of the GDP towards the health sector. With these demands, there arises questions – whether this goal is possible and within what time frame? The authors have used real per capita state public health care expenditure (GSDP) to represent income and real per capita state public health expenditure (PHCE) on health of 14 states in India to estimate the relationship between income and public health care expenditure.

The findings of the study indicate that at the state level, governments have target of allocating about 0.43 per cent of SDGP to health and medical care which does not include allocation received under the family welfare scheme sponsored by the central government. The study also suggests that the elasticity of health expenditure with respect to the change in SGDP is 0.68. In this case, allocating 3 per cent of GDP towards health care seems to be a target hard to achieve. The study also highlights that the private participation and contribution to the health care sector seems to be much higher than the public participation. The obvious effect of this situation is increase in the out-of-pocket expenditure by the households.

---

Hooda\textsuperscript{65} provided a detailed background of the implications of the changing pattern of government health expenditure in India for the period 1987-88 to 2011-12. When observing the World Health Reports, it is evident that the health indicators in India remained far from satisfactory and lagged behind the targets of the Millennium Development Goals (MDGs). It therefore becomes important to question the adequacy of public funds on health and whether it is properly channelized. A comparison with the other developing countries will be mindful to make the required provision of basic health services. The public expenditure on health in India is lowest among the South East Asian Countries and also lower even to the low per capita nation such as Sri Lanka. The policy implications and changes was also of main consideration in the study. Particularly in the period of financial crisis and liberated economy how the existing policies work was noted closely. The macroeconomic conditions and health policy changes were examined by studying the trends, growth and variation in health expenditure in India across the states. It was noted that the contribution to health expenditure as a portion of GDP was almost constant during the study period and it was around only one per cent, which was not sufficient to provide the basic health care facilities. Therefore the government took an initiative to contribute 2-3 per cent of GDP through a focused channel and hence established the National Rural Health Mission (NRHM). After the implementation of National Rural Health Mission, the public expenditure on health started increasing marginally but the government could not achieve the promised 2-3 per cent of GDP towards the health sector.

The study also shows that even though the funds were dispersed to the states, they were not effectively utilized. To mention a few, the amount released by the GOI as a ratio of commitment under NRHM was 103.4 but the unspent amount by the state was only 4.7 per cent whereas in Andhra Pradesh the ratio was 81.3 and 29.1 respectively and there were also states which has absorbed the entire funds allocated. Therefore the author suggests that, spending more is a necessary but not a sufficient condition to achieve better health outcomes rather a proper mechanism to effectively allocate and utilize funds is mandatory.

Another study by Hooda (2015)\(^{66}\) shows that there is a high contrast in inter-state public expenditure on health across the states in India. The study examines the degree to which this discrepancy is explained by income and the socio-economic and demographic factors. More deeply, the study examines crucial factors such as – does health expenditure grow along state’s income; do states with similar income levels have same health expenditure pattern; does fiscal capacity of states influence the health expenditure and what could be the possible factors that influence the growth of health expenditure. To estimates these, the study closely analyses the trends and variation on the proportion of government expenditure on health and the factors that influenced the expenditure on health across the major states in India between the period 1987-88 to 2011-12.

A panel regression analysis with ‘between effects’, ‘fixed effects’ and ‘random effects’ were estimated. The results indicated that there exists a high variation in the inter-state public expenditure on health which ranged from 0.55 to 0.64 over the study period. Income played a significant role in influencing the public expenditure on health in the states. The co-efficient of income value turned to be less than one indicating that health care is a ‘necessary’ good in India. Also the government expenditure on health increases with the fiscal capacity of the states. Another factor that turned out to be significant is the people’s participation in state’s political activities and the health policy reforms initiated in 2005 also stimulated the government’s contribution. However the demographic factors were less likely to influence the government’s health expenditure.

Duggal (2012)\(^{67}\) explains that learning to finance health care is a move closer towards the universal access to health care. The author highlights that in order to achieve this, the governments need to spend over 15 per cent of their budget or 4 – 5 per cent of the country’s GDP for health care. Notably, the OECD countries spend about 5 – 8 per cent of the GDP and US spends about 9 per cent of its GDP on health but still 50 million people are deprived of adequate access to health care. The reason responsible


for this is the way health care is financed; health care is predominantly insurance based in these countries. Most of the middle income countries also thrive to achieve universal access to health care but lag behind a concrete model/approach. One of the main element for financing health care is about the fiscal space in public budget. The other important postulates were increasing the GDP ratio to health care by way of progressive taxation; health care should be recognized as a public good; tax evasions should be reduced and tax base should be increased. Even in India, the tax- GDP ratio was 15 per cent in 2010-11 and the revenue forgone was 81 per cent of the net taxes of the central government; but the public health expenditure for centre and states combined was 1.1 per cent or 3.7 per cent of total government expenditure. This reflects that our tax base is small and tax evasions are high; further our movement for the right to health care is very less.

Health care financing is a crucial aspect for reducing the gaps and eliminating the flaws in the health care system. The public provided health services partially meets the needs of the rural households alone neglecting the urban poor. **Acharya and Kent (2005)** approaches community-based health insurance (CBHI) as the alternative for financing health expenditure. The rising expenditure on health and the lack of protection mechanism for the vulnerable sections makes it necessary to find the alternative sources of financing health care. The concept of user fees did not produce any significant result and it appeared to burden the poor more and owes a negative equity impact. Microfinance and micro-insurance programmes have also been operated mostly by NGOs to provide financial assistance. Whereas Community-based health insurance (CBHI) acts as a way of pooling resources to cover the future health expenditure of the poor households and to reduce the burden of catastrophic health payments. The CBHI focuses on the targeted community based on their requirements and affordability. The authors analyses four of the CBHI schemes in Gujarat, which has prepayment mechanism collected at regular intervals and covering inpatient care. The four CBHI schemes includes the ‘Self-Employed Women Association’, ‘Tribhuvandas Foundation’, ‘Aga Khan Health Services’ and ‘Navsarjan’. The SEWA provides a comprehensive insurance package which includes life, health and asset

---

insurance to the spouses and their children. This scheme has been extended to other states also. The insurance was jointly managed by SEWA and United India Insurance Company initially and since 2001 it purchased medical insurance from GIC subsidiary, National Insurance Scheme and also introduced the private player ICICI Lombard. The enrolment and the claim rates were steadily increasing. The Tribhuvandas Foundation (TF) renders primary health care through its infrastructure initially and recognized the need for health insurance scheme that would cover inpatient care. Under this scheme three paisa per litre of milk deposited and Rs.26 per year were collected as premium for each household. The Aga Khan Health Services, India (AKHS,I) is a non-profit health care system in the developing world active in Kenya, Tanzania, India and Pakistan. The scheme first known as cooperative health financing tied up with a dairy cooperative and deducts three to five paisa per litre of milk and in return providea Rs.30,000 to AKHS,I. The second scheme known as community health fund (CHF), Rs.200 is collected as premium from each family who are not members in the dairy cooperatives. The members are entitled to pay only Rs.2 as registration fee and Rs.5 as medical examination fees, 20 per cent discounts in medical tests and members above 35 years of age are provided with free medical checkup. This scheme had little impact, due to low population coverage and low level of service utilization. Finally the Navsarjan scheme focuses the dalit community to uproot the atrocities and fight against them by providing legal assistance to the Dalits. It claimed the ‘mediclaim’ policy from New India Assurance and the premium was Rs.175 per member and it covered upto Rs.15,000 of the expense. While implementing this programme, it was realized that the scale of operation was large and the main focus is to provide social security rather than providing medical facilities. This study gives a clear picture as how the different types of CBHI schemes focuses and render facilities to the targeted audience matching their requirements.

Sakthivel and Anup (2012) studies the impact of publicly-financed health insurance schemes on providing financial risk protection for the health sector in India. The study analyses the overall impacts of Central government’s Rashtriya Swasthya Bima Yojana (RSBY), Andhra Pradesh Government’s Rajiv Aarogyasri scheme

---

(2007), the Tamil Nadu Insurance Scheme for Life Saving Treatment (2009) and Karnataka’s Vajpayee Aarogyasri scheme (2011). The study involves a pre-insurance and post-insurance approach and a case-control approach was used to examine the real impact of districts that have rolled out the health insurance programmes. The publicly-funded health insurance schemes are intended to reduce the OOP expenditure and thereby provide financial risk protection. The study shows that all the present schemes covered only hospitalization expenses and not the outpatient care- which comprises if a larger proportion of poor and vulnerable groups bearing a higher burden of expenditure on outpatient care. Before the existence of the insurance schemes, the OOP expenditure by all categories (inpatient, outpatient and drugs) were higher in the intervention districts but the hospitalization expenses continued to rise in both intervention and non-intervention districts. There was a decline in catastrophic headcount ratio with reduced outpatient expenses particularly in drug spending. There is a sharp difference between the way NRHM is financed and these publicly-funded schemes are financed. NRHM relies on the supply-side financing performed through integrated financing and provisioning functions whereas the demand-side financing largely depends on contribution from government/ employees/ insurers/ financing intermediaries, health care is actually purchased from the intermediaries from both the public and private players. The authors highlights the intrinsic market failure of these schemes due to supplier-induced demand and asymmetric information. But it is important to note that this study provides only early evidence of the impact of the publicly-funded insurance schemes where the real impact will be realized only years later.

Newhouse (1977)\textsuperscript{70} studied what quantity of resources should the country devote to medical-care? He examined it by analyzing the relationship between country’s medical-care expenditure and income. The author has observed private and government medical-care expenditures per capita and percentage of gross national product spent on personal health care services of 13 countries. He found that the income elasticity of health care expenditure is greater than 1; this gave rise to a debate whether health care is luxury or necessity. Such a result may be consistent with the

developed countries. Even though there is per capita income difference among countries, each country will find methods to provide services in par with its income.

The share of GDP towards health expenditure is more in the developed countries than the developing countries. Therefore as the level of development increases health expenditure also increases. Mehrara et al. (2016)\textsuperscript{71} have examined the stationary and co-integration between health expenditure and GDP based on panel co-integration analysis. The authors have taken data of 13 Middle East and North African (MENA) countries for the time period 1995-2005. The results showed that health expenditure and GDP are non-stationary, even though they are integrated in the long run. It was found that the share of expenditure devoted to health care of total GDP decreases with GDP. Also the long run income elasticity result which is 0.94 indicates that health care is not a luxury good for MENA countries. This study stands in contrast of the study by Newhouse (1977) where the health care was a luxury good in the OECD countries.

Khan et al. (2016)\textsuperscript{72} have attempted to model the determinants of health care expenditures and investigated the short-run, long-run equilibrium dynamic causal relationship between health care and income per capita for Malaysia using time series data. The study showed that the elasticity for health care expenditure was 0.99, indicating health care was a necessity.

Another study by Zhike, (2014)\textsuperscript{73} estimated the relationship between health care expenditure and GDP for the 42 African countries using panel data. The study shows that the income elasticity is between 0.71 to 0.78 indicating that health care is a necessary good. It also focuses how the various health indicators is affected by the health care expenditure. The findings indicate that IMR has a negative effect on health


expenditures. The relationship between income growth and health spending growth for countries at different levels of development was analysed. This study explains the fact that elasticity of income for health spending is varied by the level of GDP.

In a study by Musgrove et al. (2002)74 the spending on health and the way by which it is financed was analysed. For the study the authors have used the national health accounts estimates of 191 WHO member states for the year 1997. The components of finance included out-of-pocket spending, social insurance contributions, financing from government general revenues and voluntary and employment related private insurance. The countries were grouped by WHO region and the health expenditure and GDP relationship was estimated. The results were found that the total health spending rose to 2-3 per cent of GDP at low incomes: 8-9 per cent at high income. It is unfortunate to find that the poor countries who desperately need protection from financial catastrophe are the least protected as compared with the high income countries. The low income countries lacked any system of financial risk protection or prepayment methods. Generally the high cost spending should be covered by prepayment procedures in order to avoid vulnerable situation; but the study shows that at low incomes, the average out-of-pocket share is high and varies from 20-80 per cent of the total health spending.

The authors also shares the situation in India, that health needs often pushes families to sell their assets and borrow money for meeting the health needs which paves way to face catastrophe even among the upper-income groups. Prepayment mechanism which helps to avoid such a situation is done in three ways- private insurance, social health insurance contributions and taxes. Such a mechanism is said to work best for countries where the contribution from GDP to health spending is less and the OOP spending by households is vast. The study also puts forth a vivid debate on the needs versus the actual spending by the countries on health care. It highlights that the countries might spend on health care according to the tastes and preferences and degree of risk aversion the people are willing to adopt. The relation between the actual total spending and actual public spending is opposite for needs and the difference between them narrows as the income rises. The study throws light on the

---

fact that the task for the poorer countries is not spending more on health but to spend more equitably by increasing prepayment for avoid vulnerabilities.

Development is not a process of increasing per capita alone but a process of improving the quality of all aspects of human life. Growth in national output would increase the health expenditure and vice versa. Rajeshkumar and Nalraj (2014) have thus examined the causal relationship between health care expenditure and economic growth on four states of India for the time period 1991-2010. Net Domestic Product (NDP) of India measured at constant prices have been increasing in India; such a rise should trigger the health expenditure too. India’s public health care expenditure is just above 1 per cent of GDP whereas this should be 2 per cent at the least for developed countries according to the UN classification. This gap has adverse effects over the health sector in India leading to poor infrastructure facilities, unregulated health care market, inadequate staffing etc. In such a scenario, the direction of causality between economic growth and health expenditure remains unclear. Therefore attempts have made to investigate empirically the relationship between health care expenditure and economic growth in Madhya Pradesh, Orissa, Kerala, Tamil Nadu. Cointegration test was done and the result showed that health expenditure and economic growth are cointegrated in all the four states at significant levels.

Poor health leads to impoverishment among the households in low and middle income countries (LMICs). As the existing literature suggests poor health leads to increased spending for health care services, if not backed by proper pre-payment facilities leads the households to face catastrophe due to high OOP spending. Alam and Ajay (2014) in their study have reviewed the existing literature on measuring the economic impacts of health shocks on households. Studies that have examined the effects such as OOP health expenditure burden, non-medical consumption and labour supply responses were the key factors. It is stated that even if households avoid OOP health expenditure by not taking treatment, still the household which faces illness may

---


forgo earnings if workdays are lost due to illness. From the policy perspective any adverse economic outcomes of health shocks of households hinder the progress on development goals such as poverty reduction and economic growth. Higher dependence on OOP expenditure might ration the health care services from the less well-off households to those with ability to pay, creating inequality in health care. The study provides an insight about the ways by which the households are affected by the health shocks. First, households are at the risk of incurring catastrophic expenditure if they seek treatment which exceeds above the threshold level of a household’s income or its capacity to pay. But the extent to which the spending becomes catastrophic depends upon the social protection mechanism that exists in the country. If the health care facilities are accessible at a fairly subsidized rate then the OOP spending will be less. Second, households which faces the incidence of illness is said to face loss in productivity and pay which reduces the well-being. This incidence can be reduced if the population works in an informal sector.

The result of the study shows that in the LMICs in Asia, OOP payments were 30 per cent of total health care expenditure which is associated with catastrophic expenditure and impoverishment by the households. Observations of 116 countries shows that there are variation is the catastrophic spending between countries ranging from 0 to 34 per cent; moreover 100 million people are pushed to poverty and 150 million people exceeding the threshold level of capacity to pay. OOP expenditure highly depends upon whether the households accesses the health care facilities and also the type of health care facility they seek. The literature shows that the households that has member with non-communicable diseases are likely to incur higher OOP expenditure. The study does not look into the role of health insurance mechanism more explicitly. But there is evidence of health insurance reducing the OOP spending in few cases with cross country variations and in few cases the OOP spending remains unchanged in spite of health insurance mechanisms.

An altogether different approach to the previous reviews is the study made by Lancaster et al. (2008)\textsuperscript{77} where the authors have investigated the existence and the

nature of gender bias in the intra household allocation of expenditure of selected Indian states. The model was estimated by establishing an extended version of collective household model where welfare weights were measured for each gender. The welfare weights depends upon factors variables like household income, prices, distribution on income, bargaining strength. The study relied upon two different data sets – first is Survey of Living Conditions (SLC) of Uttar Pradesh and Bihar; second is National Sample Survey (NSS) of states across India has been used extensively. The result shows that gender bias actually starts in the allocation of funds for education between girls and boys of age group 11-16 years. Also the bargaining power of males is weaker in more affluent households and stronger in larger households. The results of the study reveals a sharp regional differences in nature and existence of gender bias across various age groups. The authors state that even though there are exceptions in the case of few states, they are of higher importance from the policy perspective and in the efficient formation of human capital.

The third section explained how studies have explained the crucial aspects of health care financing. Studies highlight that understanding how to finance health care is the most crucial aspect to attain universal health coverage. Researchers have proved that there exists a causal relationship between health care financing, GDP and economic status.

3.4 STUDIES RELATED TO HEALTH INSURANCE

Wiesmann and Jutting (2000)78 explains the importance of the health status of its population and its relation with the country’s economic development. Low and unstable tax revenues set back the goal of providing health care for free in the Sub-Saharan African countries and caused the different health care financing models to fail. In order to mobilize additional resources for health care provision, public facilities and NGO run hospitals started implementing cost recovery strategies by collecting user fees which was highly criticized. In contrast to this, health insurance would have acted as a better option of risk sharing and also reduces unforeseen and

unaffordable health care costs. But only the formal sector is covered under both public and private health insurance and the coverage rate is not more than 10 per cent in Africa.

The principle of insurance is pooling resources and sharing and reducing risks. This practice holds good for developed countries. Even universal health coverage is possible only for such countries whereas this type of health insurance is not feasible in a country where its population is predominantly informal or self-employed workers. Therefore community based health insurance schemes were formed in Africa with voluntary membership that are initiated by health facilities, NGOs, local communities or cooperatives and are free to be owned and run by any of these organizations.

The efficiency of the working of community based health insurance schemes was questioned as to evaluate whether the scheme has improved access to health care and thereby contributed to better health outcomes and has the scheme stabilized incomes and helped to preserve the assets. But there is evidence to technically answer these questions due to methodological constraints and data constraints. Though estimation of the benefits were not possible, still the outcomes of the study shows that community based health insurance scheme works well due to the fact that it adapts to the local conditions and better serves the needs of the people at lower cost. However the implementation of the community based health insurance scheme has mixed results where success and feasibility depending upon factors such as community participation, regulations by the provider, quality of service, socio-economic and cultural factors.

Gustaffson-Wright (2011) examines the relationship between health shocks, insurance status and health seeking behavior in Namibia. The Namibian population suffers from three major communicable diseases- HIV/AIDS, tuberculosis and malaria with a wide inequality in access to health facilities. The country had one of the total expenditure on health of 5.4 per cent of GDP and only 33 per cent of the total health expenditure is private expenditure. OOP expenditure of 16 per cent of the

private expenditure is the lowest among the African countries. Even though the insurance rate of 43 per cent is said to be higher, there are vast discrepancies across socio-economic categories. Only 5 per cent of the poor consumption quintile were enrolled in medical aid whereas 70 per cent of the individuals in the rich quintile have medical aid facilities. Households who works for the government or defence are said to be highly insured; 65 per cent of households who worked in services were uninsured. It is observed that this uneven participation in the health insurance facility is due to the lack of financial literacy among the households. Moreover the insurance premiums are expensive and unaffordable. But if provided with a low insurance product with limited benefits inclusive of treatment for HIV, individuals in the poorest three income quintiles would be still willing to pay between 5 – 12 per cent of mean per capita income per month per person for insurance. Examining differences across quintiles, it was found that chronic disease increases systematically with income in both the insured and uninsured groups. The study also shows that there is a strong positive correlation between insurance and health care seeking behavior. The OOP expenditure of the uninsured appeared to be quite high than the insured. Inorder to cover more people under insurance, the government took up innovative tools such as subsidization of private insurance which acts as a donor supported insurance scheme to provide assistance to those who are in need of the facility.

Extending financial protection/ coverage to the informal sector is a challenge to universal coverage through contributory health insurance schemes. A mandatory National Health insurance system was established in Ghana to provide financial protection to both formal and informal sectors through a combinations of tax and One-time Premium Payments (OTPP). Abiiro and McIntyre (2013) have assessed the feasibility of the proposed policy by exploring the understandings of the policy by stakeholders, their interests and concerns, power and influences and the general prospects and challenges for its implementation. The stakeholders felt that the OTPP would be unaffordable by many people in Ghana; if the OTPP results in an amount that is significantly higher than the current premium. Whereas the government argued that OTPP is just a registration fee and not a burdensome premium. But this gave rise

---

to series of questions on the potential impact on population coverage, equity in access to health care, how this system would be financed, sustained and operated efficiently. The authors have highlighted that people usually understand insurance as a mechanism that is operated on the basis of renewable premium payments however insurance does not necessarily mean the existence of an insurance scheme that people make direct payments. In reality, OTPP was intended to be a single payment of net present value of all future premiums which appears to be a strange concept which lacks real time implementation evidence. Evidence exists that insurance through tax funding is the fastest way for universal coverage and countries like Thailand, Kyrgyzstan and Moldova have implemented this strategy of achieving universal health coverage.

Enrolment in community-based health insurance (CBHI) schemes in rural Bihar and Uttar Pradesh offered by the women’s self-help groups (SHGs) was assessed in a study by Panda et al. (2014)\(^{81}\). The study examined the driving factors behind enrolling for insurance, the degree of inclusive practices and the influence of health status on enrolment. In order to carry out the study, households with at least one woman registered as a member of an SHG was targeted. The implementation of CBHI included activities such as creating awareness, insurance education and premium pricing. Following insurance education, the SHG members participate in benefit-package design in the form of a simulation game CHAT (Choosing Health-plans All Together). These activities targeted women who would spread information within the household and thereby lead to enroll of all household members in the scheme as insurance is provided for everyone in the family but only few enroll.

The study shows that initially 39 per cent of the targeted households had at least one household member who was enrolled in the scheme. In order to examine the enrolment influencing factors, both household level and individual level specification was considered. Socio-economic factors and households divided into quintiles based on their monthly per capita consumption expenditure (mpce) was examined. The result shows that out of the four areas, two sites had households with the second and third quintile more likely enrolled (18-22 percentage points) as against the lowest quintile.

In the remaining two sites, there was no evidence that the poor quintiles were less likely to enroll for insurance. Household head’s primary education showed a positive effect on enrollment whereas the occupational status did not show any influence on enrollment. Incidence of past illness and hospitalization and households with children were more likely insured. At the individual level, insurance coverage was more prioritized, with household heads, spouse of the household head and their children are more likely to be insured. A more positive result was that providing insurance through women’s SHGs mitigated concerns over inclusiveness and sustainability of the CBHI schemes.

Government intervention in health care is necessary but whether it should health care directly or empower the private players or enter into public-private partnership with hospitals and insurance agencies is an open question. The study by Rajasekhar et al. (2011) examines the implementation and sustainability of the Rashtriya Swasthya Bima Yojana (RSBY) in Karnataka. RSBY is an ambitious health insurance scheme by the government for the poor which aims to improve the quality of health services by making it attractive for private and public hospitals to provide health care. The government has made the scheme nearly free for the users by subsidizing the annual premium and the hospitals bill the insurance company for the cost of treatment rendered to the poor. The scheme provides an annual cover of Rs.30000 per household for hospitalization, treatment, tests, consultations and medicines and also pre-hospitalisation and post-hospitalisation expenses. The focus of the study is how RSBY was planned and implemented and to what extent this plan was successfully implemented.

The study showed that 85 per cent of the eligible households were aware of the scheme whereas 68 per cent of the eligible households have registered for RSBY. The remaining households were not able to register due to lack of information about the registration, no clear below poverty line (BPL) list for validating the eligibility of households. Even after six months of registration, due to the extreme delays in the issue of smart cards, 38 per cent of the eligible households did not get smart cards which made the households inaccessible to the health services. The other problems in

the formulating the scheme included the payment of registration fees. Only 74 per cent of the enrolled households paid the actual Rs.30 as registration fees, whereas the remaining households paid a lower to a higher additional amount ranging from Rs.5 to Rs.250 as commission to the middlemen. This led to a very lower utilization of the scheme, only 10 out of the total 3647 sample households had utilized the health facilities under the scheme. These are the problems under the scheme from the demand side. From the supply side, the hospitals were reluctant to provide services. This is due to the main policy of RSBY which is, providing cashless treatment but the hospitals found it difficult to claim from the government. It is seen that RSBY has a great potential to enhance the lives of the poor with its attractive features. But lack of coordination between the various departments, late empaneling of hospitals, misaligned incentives to the insurance agencies and inefficient smart card technology made RSBY to lag behind. The government has a major role to play in correcting these discrepancies and make the programme more efficient.

Sodhi and Atif (2014)\(^83\) have discussed the practical viability of insurance based model for achieving the universal health access in India. Attainment of universal health care is the main target of the Indian Health care system. In order to achieve this target an insurance based model of facilitating health services was adopted. As an initiative the government in 2008 launched the Rashtriya Swasthya Bima Yojana (RSBY), a national health insurance scheme to cover all the households below the poverty line. Such government-funded insurance scheme was vital in the country where the health sector was highly privatized and unregulated along with declining investment in the public health services. The focus of the insurance based model particularly RSBY is not to improve the public health care facilities for better access, but to pave way for people to utilize the private facilities too thereby removing the affordability constraint. This mechanism highlighted that strengthening the public and primary healthcare network is necessary along with the tax-funded insurance to attain universal health coverage. The authors also highlights the US and Cuban health care delivery models where the former is an insurance-based system of access in health

care market and the latter has a strong public health delivery infrastructure providing universal coverage. Comparing the US and Cuban health delivery system, it is interesting to note that the health outcomes were more promising and efficient in Cuba than US. This is because the US model relied more on private facilities and public facilities were provided to elderly and low income groups; whereas the middle income country Cuba relied more on an equitable distribution of health facilities but spent only 5 per cent of the US has spent in the year 2011. Therefore, in India even if we propagate insurance as the mechanism for universalizing health access, strengthening regulatory systems is mandatory.

The **fourth section** dealt how the burden from the catastrophic OOP health care payments can be reduced by providing health insurance. Studies showed that not all health insurance schemes turn out to be successful unless and until health insurance is provided according to the society’s need. It also depicted examples of health insurance schemes of various countries and how successful they were in solving the purpose. Studies have highlighted how community-based health insurance schemes better saves the people from catastrophic OOP payments.

### 3.5 DISEASE BURDEN, HEALTH CARE SEEKING BEHAVIOUR AND HEALTH CARE DELIVERY

Htet *et al* (2014)\(^{84}\) have assessed the household’s economic burden on two chronic conditions- angina and asthma among the households in Myanmar. Noticeably the authors have used Propensity Score Matching (PSM) and Coarsened Exact Matching (CEM) techniques to compare the OOP spending, catastrophic payments, impoverishment effects, reliance on borrowing or selling assets to finance health care payments and employment among households reporting a member with angina/asthma to match households with and without adjusting for comorbidities. The result of the analysis shows that chronic conditions are associated with a significantly higher economic burden on affected households relative to a set of closely matched controlled households. Economic burden associated with such chronic conditions

---

faces OOP spending on out-patient care rather than the hospitalization charges. Payments for medicine accounted for about 38 – 60 per cent of the OOP spending. Households without health insurance largely depended on borrowing, selling assets to finance the health expenditure. Hence the authors highlights the importance of government’s support for financing health care in Myanmar.

Using health care services by the households in developing countries experience a high OOP payments in spite of the free health care services provided by the government. This incurs a substantial loss of their income leading to impoverishment. Most of the studies concentrate on access to health care and about the OOP spending but it is important to study the way the OOP spending is financed. Adhikari et al. (2009) in their study has taken the case of Nepal to study the impacts on households paying for hospital-based care of Kala-azar (KA) by analyzing the catastrophic impoverishments and economic consequences of the coping strategies. The study examines the consequences of financing in two aspects such as – what is the impact of OOP payments on households and what are the consequences of the method of OOP financing on the future household economy. The study assesses the impacts of appending for KA on the affected households using primary data collected from two of the 12 KA affected districts in Nepal. The survey captured the socio-economic characteristics of both the individual KA patients and the KA households, along the costs borne by the households for the treatment of KA, the cost of hospital-based medical care, travel costs, food costs were also included. The authors have used three different measures to evaluate economic burden and the consequences of health care payments in three different ways – catastrophic payments are captured in the share of total household income spent on treatment in excess of the given threshold; impoverishment due to OOP payment- quantifies the difference between the poverty difference before and after deducting the health care payments from income; the economic consequences is measured as an assessment of possible poverty dynamics in terms of the intensity and severity of poverty after deducting the loan repayment out of the individual’s income in successive years.

The results indicate that the average total cost of treating the KA episode is NRs. 7076 which constitutes 17.5 per cent of average household income. The medical cost constitute the largest share of 66.5 per cent, followed by food 22.6 per cent, travel 8.9 per cent and other costs 1.9 per cent. 75 per cent of households spend at least 5 per cent of their income for treating KA and 31 per cent spend at least 15 per cent of their income. Also the health payment gap is highest at the lower threshold level which is at 5 per cent; in other words the health payment gap declines with the increase in the threshold level. According to the results, 67 per cent of the KA affect households are vulnerable the post-payment incidence of medical, medical and travel and total direct costs were 87 per cent, 89 per cent and 93 per cent respectively subsequent to the poverty impact of 20 per cent, 21 per cent and 26 per cent respectively.

With respect to the economic consequences 85 per cent of the households that borrows for treatment were poor and a maximum of 94 per cent of the poor households depend on moneylenders for loans. This shows that the OOP spending and the mode of finance for the OOP spending is the root cause for impoverishment among the households. The study suggests two possible alternatives to reduce vulnerability among households- heavy public investments in curative services and the most required community based health insurance facility would protect the households from vulnerability improve the status of these KA affected households in Nepal.

In another study by Gotsadze et al. (2005) the pattern of health seeking behavior and the extent of OOP payments have been examined based on the household survey in Tbilisi, Georgia. The state faced an economic crisis in 1995 which lowered the public expenditure for health to less than US$ 1 per capita. Therefore the government introduced a new model of health care financing, cumulating social insurance, tax revenues and OOP payments. Apart from this the state financed essential hospital care also. Health services were offered through a public funded primary care network whereas the key facilities was retained purely by the public to ensure access in remote areas and to specialized services. This model seemed to be away from a state-funded and input-based financing model to a purchaser-provider model.

The result for health-care seeking behavior was that out of the ill-cases, 32.5 per cent approached a health provider and 67.5 per cent self-treated. The richest were almost five times more likely to seek health care than the poorest quintile. Education, gender or size of the household did not have any significant influence over seeking health care. With regard to the payments for health care, 30 per cent of those who sought health care stated that they were unable to meet health care costs as compared with 11.6 per cent in the richest quintile. The most sought after way to finance health care was borrowing from friend or relative was adopted by 70 per cent of the households, selling valuables was adopted by 10 per cent and selling household goods was followed by 10 per cent. The authors have found out that self-treatment and bypassing primary health providers and seeking specialists give rise to negative implications for the efficiency of the health care system and owes to significant public health issues. Whereas borrowing money or selling assets have a significant impact on the economic well-being of the households.

The findings provide four deep insights for framing policy- the government should redefine the Basic Benefit Package to improve the targeting the subsidies to the poor quintiles; the quality of primary care should be improved to increase the utilization rate by the people; the government should investigate drug use practices to control the self-treatment practices and the government to mobilize and reduce the OOP payments by providing community-based insurance schemes.

The World Health Organisation (2001), stated that better health care is the key to improve health as well as economic growth in poor countries. Banarjee et al. (2004)87 in their study have attempted to find out if there exists any relationship between health care and health status. The study reports a survey in poor rural area in Rajasthan. The data was collected from Udaipur which had four components: a village survey, description of the structure of the village, list of health facilities available and the list of health facilities used by the village. The study estimates that the average per capita household expenditure (PCE) is 470 and more than 40 per cent of the households are officially below the poverty line. With regard to the pattern of health care use, the adults visited the health facility 0.51 times a month on average,

---

whereas the people in households in the bottom third of the PCE (average Rs.219 per month) visited the facility 0.43 times a month; an adult in the middle third of the PCE distribution (average Rs.361) visited the facility 0.54 times a month as compared with an adult in the highest group (average PCE Rs.770) visited the facility 0.55 times a month. This shows that the rich have significantly more visits to a public facility than the poor. The majority of the remaining people visit private facilities and the rest to ‘bhopas’, who are traditional healers. The average household spends 7 per cent of its budget on health, while the poor spends less in absolute amounts. The study shows that the rich spend a significantly larger fraction of their health expenditure on public facilities than the poor. The characteristics of the public health facility as observed is largely operated as a trained nurse (ANM), primary health centres (PHCs) or community health centers (CHCs) with extremely less workforce and large absenteeism. Whereas the main source of health care in the system are private practitioners with poor qualification. Given this scenario it is interesting to note that people do not make use of the public health system but rely on private health care and bhopas, because of the fact the households were almost no one is really rich and the poor is extremely poor. Thus the study shows that the quality of health services may affect health but does not seem to influence people’s perception on health and health care.

Even though the health care facilities in India has been expanded continuously, it is evident from the reports and literature that the mortality rates are quite high and deaths from chronic diseases are increasing. There also exists a vast inequity in the distribution of ill health across region and socio-economic strata. Failing to achieve the desired health outcomes or lagging behind the Millennium Development Goals were the results of lower standards of health care and inequity in the distribution of health care services. Powell-Jackson et al. (2013)\textsuperscript{88} have assessed the provision of primary health care in India besides the major steps taken by the government such as universal health coverage and RSBY. The study measures the quality of care using secondary data and analyses the availability and functioning of inputs required for health care provision. Quality of care is analysed by the indicators on availability of

inputs (i.e.) availability of services, clinical staff in position, training, basic infrastructure, equipment and drugs. The result shows that there is a significant difference in the quality of care between the high and low performing states; similar results with regard to essential drugs. PHCs operating in the southern districts of the country have better quality than the districts in the northern part. There were also significant differences in the quality of care between the NGO managed and government managed primary health care providers and also between the well managed and poorly manages primary centres. Hence the study suggests that management practices are crucial factors determining the quality of primary care.

The fifth section explain how disease burden increases the OOP spending and how the health care seeking behaviour is influenced by the disease burden among the people. The studies clearly shows that there is a notable relationship between disease burden, health care utilization and the economic status of the households. When provided with the public and private health care facilities, the rural and the poor households appeared to have used the facilities more than the urban and non-poor households.

3.6 STUDIES RELATED TO TAMIL NADU

Selvavinayagam and Vijayakumar (2012) have given an overview of the health insurance model in Tamil Nadu. The Government of Tamil Nadu launched the Chief Minister Kalaignar Insurance Scheme for life-saving treatments on 2009 with experience from similar other implemented schemes such as ‘Aarogyasri’ and ‘RSBY’. The scheme was targeted for families earning less than Rs. 72,000 per annum. The eligible families are insured for Rs. 1 lakh for a period of four years with an annual premium of Rs. 469 per family. The analysis of the study shows that 153,410 patients were benefittedted and Rs.415 crores claims, with the claim ratio of 73 per cent have been made in the first year itself. This scheme appeared to be very promising and it is very sustainable with regard to the administration and the acceptance of the scheme by the people. The annual expenditure by the government towards this scheme was Rs. 750 crores.

Purohit (2016) studied the efficiency of health care sector in Tamil Nadu. The utilization of health care and their relative performance in different districts was measured with data envelopment analysis and principal component analysis was used to analyse the low correlation variables. Infant Mortality rate was used as the output variable and total beds in ESI (Employees State Insurance Scheme), population per doctor of Public Health and Preventive Medicine (PHPM) and full vaccination were the other variables for analysis. Efficiency and CCR (Constant Returns to Scale) scores were also predicted. The results shows that Chennai, Pudukottai and Virudhunagar recorded an efficiency score 1. With regard to the CCR score Chennai and Virudhunagar were the top performers and the least performing district was Kancheepuram. There existed these differentials among the districts in Tamil Nadu due the availability of services. Kancheepuram performed low due to high population accompanied by lower supply of health inputs. Among the other explanatory variables including households with electricity, improved source of drinking water, type of house, use of LPG, use of BPL card only three variables turned out to be significant which were: living in pucca house, improved source of water and having BPL card.

Public health services and environment health together constitute pure public good and form a basic part of a country’s developmental infrastructure. The central government’s public health intervention is highly focused on selected things like specific disease control, maternal and child health services, disease surveillance etc. which does not cover the developments required in public health. Das Gupta et al. (2010) analysed the possibilities of strengthening the public health system by focusing the health system in Tamil Nadu. The study highlights that the central government’s policies have de-emphasized public health services through various policies. The first policy change came through the Bhore Committee of 1946 recommending the amalgamation of medical and public health services which eroded the career incentives for the public health services. The other policy changes included

---


single focus programmes that gave a lesser role to the public health systems; separation of public health engineering from health services.

The study lists out the strengths of the Tamil Nadu public health system owing to the following factors: there exists a separate directorate for public health, medical services and medical education, which has their own budgets and workforce which helps in proactive planning and effective disaster management; a dedicated funding; a legislative and regulatory Public Health Act which provides the legislative basis for planning and implementation of Directorate of Public Health; workforce training, incentives and responsibilities of public health managers are clearly defined. Apart from these, the state is able to respond proactively to avoid potential threats and responds quicker with regard to disaster management. The state also has a good intersectoral coordination and support to local bodies in environmental sanitation work. Even though there were many pros in the Tamil Nadu health system, the study highlights the areas that the health system needs strengthening such as: training and engaging the health inspectors in environmental health duties; work programming and supervision. The study highlights the organizational principles for making the public health systems more effective by learning from Tamil Nadu which can be made replicable to other states in the country. Finally the authors suggest four possible things the central government could consider to support the state’s health budgets as-enacting state Public Health Acts, establishing separate public health directorates, revitalizing the public health workforce at managerial and grassroot level and coordination of health department in assuring municipal public health.

The last section projects the working of the health care system in Tamil Nadu. The studies showed that health care system in Tamil Nadu is well administered and the health insurance scheme in Tamil Nadu was a great success and have benefitted large masses than the other states owing to good health care delivery system and high levels of health care utilization.