Chapter II

Theoretical Frame Work and Empirical Evidence
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THEORETICAL FRAME WORK AND EMPIRICAL EVIDENCE

In the previous chapter, we have discussed the importance of health, healthcare facilities and public and private healthcare expenditure in India, systems of medicine, source of financing for healthcare services, need for the study, objectives and methodology followed.

To understand the issues involved in the study a theoretical framework is needed and it is discussed in this chapter in Section One. Since our study is aimed at examining the choice of healthcare services and household expenditure on healthcare services, previous works related to this area and methodological issues in choice and expenditure for healthcare are examined in Section Two.

2.1 Theoretical Framework

The broad theoretical framework of the study is Becker’s “New Theory of Household Economics”. It is an outgrowth of Becker’s Human Capital Theory. Some of the special features of the New Theory of Household Economics are worth considering here.

Economic theory of household tries to capture the complex structures of households and their behaviour. Information on demographic structure, decision-making process, resource allocation, income earning mechanisms and gender division is a prerequisite for understanding the efforts of public or private sector interventions as well as their macro level consequences.

The conventional consumer theory defines consumption as the use of goods and services to satisfy immediate needs. The theory assumes that utility resides in the goods and services themselves. Mathematically, a consumer’s utility function is said to be a function of goods and services. It is this function that consumer, subject to his/her income
resources, tries to maximise. The consumer, as a rational individual, ranks the appropriate consumption bundle according to his preferences, and trying to identify the best alternative, chooses the bundle with highest ranking.

Becker’s theory of household production function clearly explains aspects of the theory of comparative advantage, specialisation and human capital. At the beginning of 1960s, according to Becker (1965), economists started to view the household as a small production unit. In the household production function, time plus market goods and services combine to produce the so-called basic commodities like health, education, etc. A household chooses the best combination of these commodities, i.e., a combination which will maximise the household utility function.

Gary Becker’s theory, so-called New Household Economic theory, is most complete of the unitary model of household behaviour and builds on the traditional consumers theory. It introduces new insights for the analysis of households. Utilising an economic approach to human behaviour, Becker takes the tools normally applied in market behaviour analysis to explain household behaviour.

It is easy to overlook the challenging problem posed by households and their economic and social operations by reviewing the problem through traditional approaches, like the consumer choice theory and other abstract models.

An improvement of household and family well-being need not depend on the application of market economy principles only. People continue to search for non-market institutions to improve their welfare. Human welfare is based on structure and operation of households, as well as on other institutions of the society. If households operate poorly or inefficiently the whole society is adversely affected. When a household malfunctions and cannot satisfy the need of its members, it is the responsibility of the society and government body to take action for the support of the household.
2.2 Choice for Health Services

The demand for healthcare treatment in response to a particular episode of illness or injury can be modelled in terms of the provider choice between opting for different kinds of care; for example, the choice can be among public, private and no care. Primarily such an analysis is more relevant for the case of curative care. Empirical specification for such a model starts from a behavioural model of utility maximisation, where utility depends on health and the consumption of other goods, besides medical care. On experiencing an illness, an individual is hypothesised to choose among various treatment alternatives (including the no treatment alternative) so as to maximise total utility subject to his/her budget constraint. The utility derived by an individual from an increase in his/her health status was modelled as a function of the options available to the individual and a vector of individual characteristics. This body of work brought into focus the role played by several different factors in determining the efficacy of medical care, or its potential impact. These factors included the impact of both monetary outlays and non-monetary costs such as travel time and waiting time in accessing health facilities, which were seen as defining the quality of a particular facility or provider option.

Initial attempts at modelling demand for health had used a Multinomial Logit (MNL) framework for modelling demand functions. The MNL model assumes that the stochastic portions of the conditional utility functions are uncorrelated across alternatives. McFadden (1981) shows that, given a reasonable distributional assumption on the behaviour of the disturbance term, these demand functions take on a nested multinomial logit (NMNL) form, where it is first decided whether to seek care or not, and then conditional on seeking care deciding from which provider to seek care. The NMNL is more general than the more commonly used Multinomial Logit (MNL) specification, which assumes that the decision to seek care between any two alternatives does not depend upon the characteristics of any other available alternative. This is the Independence of Irrelevant
Assumption (IIA), which says that the conditional utility functions are uncorrelated across alternatives, and that cross-price elasticities are the same across alternatives. Allowing for the interplay of price and income effects in the specification of the utility function was also a significant improvement in the conventional literature on the subject.

2.2.1 Economic Framework

Economic framework provided by Grossman (1972) helps to understand the demand for health. A more elaborate framework provided by Becker (1974) helps to understand the household decision-making for healthcare. Becker model uses household product, which is an extension of the standard utility maximising framework. This framework is the economic analogue to the proximate model of health proposed by Mosely and Chen (1984).

Under this framework, the household or family utility depends upon the stock of health (H) and a composite consumption commodity (C). The utility function may be specified as:

\[ U = U(H,C) \]  

(1)

The stock of health, like a durable good, provides both consumption and investment benefits. That is, good health is valued as an end in itself and thus enhances welfare whereas sickness or morbidity reduces utility. As an investment good health raises market and non-market productivity.

Health, unlike other economic goods, cannot be purchased totally as a commodity in the markets and use it. Rather, it is produced at home using market purchased goods, X (nutritious diet, medical care etc.), curative care, M (exercise, physician visits and so on) and individual’s TH time. The production function for health may be written as:

\[ H = H(X, M, T_H, H_{t-1}, E) \]  

(2)

Where \( H_{t-1} \) is the health stock in the previous period, E is the household environment.
The households are assumed to maximise utility function (1) subject to the health production function (2) and the time and resource constraints (3 and 4).

\[ Y = P_h H + P_C C \]
\[ T = T_m + T_H + T_l \]

Where \( Y \) is the household income which is sum of wage earnings of all members (W) and non-labour income (V) of the household. \( T \) is the total time available and \( T_i \) (i=market (m), health activities (H) and leisure and other activities (l)) is time spent in the \( i^{th} \) activity.

The optimisation process leads to a set of demand functions for the arguments in the utility function (H and C) and derived demand functions for time inputs to the health production function. It can be shown that the demand for health or health inputs depends upon prices, incomes and a set of variables that control the health endowments and environment. Thus the reduced form health demand (H) and healthcare (M) functions can be written as:

\[ H = f(P_H, P_C, V, E) \]
\[ M = f(P_H, P_C, V, B) \]

Depending on the availability of data one can estimate the health production function or reduced form demand function or mixture of both. Rosenzweig and Schultz (1983) were the first to fully empirically implement the economic framework to analyse child health. Many studies use the reduced form approach and include both demand and production function variables to analyse the determinants of health. Reviews of such studies are provided in the second part of this chapter. Due to data constraints and absence of adequate identifying instruments the reduced form approach is adopted to estimate health demand function.
2.22 Econometric Specification and Estimation

The reduced form health demand function (5) can be specified as

\[ H_i^* = \alpha_1 + \alpha_2 P_i + \alpha_3 V_i + \alpha_4 E_i + u_i, \quad i = 1, 2, ..., N \text{ individuals} \tag{7} \]

Where \( H^* \) is the health status of an individual which is unobservable. When the health status of individual falls below a threshold level (Z), the person is reported as being ill. What we can observe is a health indicator, which takes the value of 1 if the person reported to being ill during the reference period and 0 otherwise. That is

\[ H = 1 \text{ if } H^* < Z \text{ and } \]
\[ H = 0 \text{ otherwise.} \]

Seeking depends upon the sickness tolerance level, which varies from person to person. Similarly, the type of care demand also depends upon the severity of the illness.

The conditional demand for curative care (one of the inputs in the health production function (6)) can be specified as

\[ [M_i/H_i = 1] = \beta_1 P_i + \beta_2 V_i + \beta_3 B_i + e_i, \quad i = 1, 2, ..., m \text{ sick persons.} \tag{8} \]

Where \( M = 0 \) if no treatment

- \( = 1 \) if self treatment and other care (other than public and private)
- \( = 2 \) if private health facilities are used for treatment
- \( = 3 \) if public health facilities are used for treatment

Equation (7) is a binary choice model, which can be estimated using binary probit or logit methods. The condition demand for curative care (equation (8)) is also a discrete choice model involving four choices and hence estimated using appropriate multinomial logit methods. The sick person first decides whether to seek a treatment or not and then decides what type of treatment to take. In this case a nested multinominal (NMNL) would be more appropriate.
2.2.3 Framework for Household Healthcare Expenditure Function

Household economics assumes that households derive satisfaction from the non-marketable goods and service provided by the household by combining the market purchased goods and services with the time of members and household technology. In this approach households are treated as both consuming and producing and the objective function of the household is maximisation of welfare of the members within the constraint of full income which constitute the market and non-market income and time of the household members. In this model, the head of the household is considered as a decision maker making an altruistic approach keeping one's interest in mind. In order to maintain good health status member resources are allocated with constraints of time and monetary resources. In order to consume health, households produce by combining market purchased goods and healthcare services and household members' time. In this sense, the utilisation of health services is assumed to be a derived demand from production of health. It could be formulated through a simplified household utility function and assumes that households derive utility from overall consumption and health, which is controlled by the household composition (i.e., demographic factors) and constrained by its social and economic context (socio-economic characteristics). In fact, the derived demand for healthcare is a function of the level of income of the households, prices and preferences for health relative to other items of consumption. It is important to note that price is considered a vital variable for estimating demand or expenditure functions. However, the price variable was considered unobservable in most empirical research studies on expenditure function (Deaton 1987, Deaton et al. 1989). In this context, budget share equation has been used as an alternative approach in determining the expenditure functions instead of estimating demand equations for healthcare. Parker and Wong (1997) propose another approach using expenditures and quantities to derive the estimates of prices. It is important to recognise that the prices of healthcare are mostly unobserved. This is because in principle, healthcare services in India are offered free of
charge through public healthcare system. The available data present severe limitations because of lack of price information and quantities of health services availed of and hence it is only possible to approximate an expenditure function for healthcare demand among the rural households through socio-economic and demographic factor.

A regression equation for household expenditure could be formulated as follows:

\[ \ln (\text{hh_exp})_i^* = \alpha + \delta z_i + e_i \]

Where,

- \((\text{hh_exp})_i^*\) are the Total household healthcare Expenditure
- \(z_i\) represents a vector of other household socio-economic and demographic characteristics
- \(e_i\) is a random error term.

It is assumed that \((\text{hh_exp})_i^*\) is the unobserved desired level of expenditures by households. It only observes \((\text{hh_exp})\) when it is positive beyond a certain threshold, otherwise it is zero.

2.2.4 Experiments in Demand Modelling: Applications to Less Developed Countries (LDCs)

The objectives of estimating the model for provider choice in healthcare and finding the price elasticities of demand can be listed as: (a) to investigate the implications for cost recovery (i.e. financing of healthcare), (b) to find the levels of utilisation under different methods of financing and (c) to find the welfare consequences of various user fees policies. The demand functions can be estimated from household survey data, provided there is sufficient variation in prices. But most of the government financed healthcare systems are characterised by prices, which are zero or much below marginal costs. The interpretation of prices in a broader sense, i.e. as the cost of obtaining medical
care which, along with the fee paid to the doctor, also includes the opportunity cost of
time spent in travelling and queuing at the hospital or clinic, can facilitate the estimation
of the demand relationship. Thus, variations in individual's costs of obtaining medical
care enables estimation of price responses even when money prices are zero. These
responses allow for calculation of the welfare consequences. Observations on current
patterns of consumption of medical care can be used to quantify the effect of such
variables as income, price (including for example travel time), education and family size,
among other things. These demand equations can be used to calculate price elasticities
that show how price sensitive consumers are and how price sensitivity differs among
consumer groups.

Complications in modelling the demand for healthcare arise because existing
prices show little variation across regions, and are usually zero for government provided
services. Also, people take discrete decisions regarding healthcare utilisation unlike
normal commodities, which are provided on an almost continuous scale, making the
distributional assumptions of the models critical. The decision to choose between
different healthcare providers involves evaluating the cost and quality of care in each of
the options available. It has been observed that higher-priced options, such as treatment
in the private sector, are usually associated with a higher quality of healthcare. Thus, not
controlling for variations in the quality of care means that the parameter estimates of the
coefficients on prices would be biased, and these would not represent the actual price
effects on the choice of the healthcare provider. Studies, which take into account the
effect of quality on decision-making typically, treat quality of care as an unobservable
and designate different options of healthcare as different levels of the quality of care
(Ellis and Mwabu 1991, Lavy and Quigley 1991, Gertler and van der Gaag 1990,
Alderman and Gertler 1989). Lavy and Germain (1995), on the other hand, explicitly
measure the sensitivity of consumer demand to various quality characteristics of provider
choices taking a general conditional utility function that is stable with consistent utility maximisation, and empirically model the effect of quality of healthcare on household decision-making (Mwabu, Ainsworth and Nyamete 1993). They estimate the model using a nested multinomial logit model (NMNL), using individual and community-level data from the Ghana Living Standards Survey. The quality characteristics of various healthcare providers were grouped under five broad categories -- drug availability, number of medical staff, infrastructure, immunisation and other services and the presence or absence of an operating room. The individual level price factors were grouped into distance to the facility chosen, measured in terms of travel costs, and the fees charged for consultations; and individual characteristics by age, gender, years of schooling and whether the head of the household was educated or not. Using the estimated model, they simulate the impact of improving various quality variables (like drug availability, presence of a qualified doctor, reducing the distance, i.e. improving accessibility etc.) and increasing or decreasing user fees in the public sector.

Gertler and van der Gaag (1988) provided a methodology for the *ex-ante* evaluation of the welfare effects of proposals to use user fees to finance improved access to social services. Their analysis was based on the estimation of willingness to pay for improved access to medical services where willingness to pay is the maximum price that can be charged without reducing the individual’s welfare. An important offshoot of their analysis was the demonstration of how variation in individual’s (private) time prices could be used to identify the parameters of the demand function. This is of special relevance in the context of LDCs where the public sector provides medical services at little or zero price to the consumer, making it difficult to meaningfully estimate the demand function. Using data from Cote d’ Ivoire, their model yields results similar to the case of Peru.
A study on low-income households in Ghana (Lavy and Quigley, 1993) came to the conclusion that household income is an important determinant of the demand for the quality and intensity of medical care sought in response to an illness or injury. The price of medical care is a less important factor. Of more relevance to the typical Less Developed Countries (LDC) situation is the confirmation of the hypothesis that it is the availability and accessibility of treatment choices which is much more important than prices in determining decisions about medical care.

2.3 Review of Selected Studies

There are a number of studies which made Economic approach to demand for healthcare. Review of some such important studies would reveal the similarity or difference of this study with earlier ones. We shall review which of them are closely related to our study. Let us discuss the available such reviews closer in the field. Among scholars who have done good review on healthcare are Lee and Mill. We shall discuss it first and then we shall review the recent studies.

In the assessment of Lee and Mill (1985) the first systematic survey designed to obtain a relatively comprehensive accounting of all major sources of finance and expenditure on health services, including developing countries, was questionnaire-based survey by Abel-Smith for WHO (Abel-smith 1963). The survey covered six countries, the developing ones being Sri Lanka and Chile. A second study was designed covering 29 countries using a revised version of questionnaire (Abel-Smith 1967). Of the countries surveyed, 21 were developed countries. Both these studies attempted to define the various constituent components of the health services, to list the main source of finance, and to lay down a standard classification of expenditures including avoidance of double counting. This approach was an important methodological departure from previous attempts, which concentrated on the analysis of non-standardized existing data.
There were five important results. First, it was not possible to make valid international comparisons of health service financing and expenditure. These raised many fundamental questions about the differences between countries, and their significance in terms of the value for money achieved by different levels of spending, and by different systems of financing and strategies of expenditure. Secondly, a major impetus was given to repeat and extend such comparisons and to improve the methodology (Simanis 1973, Kaser 1976; IEDES 1976; Poullier 1977, Abel-Smith and Maynard 1978, 1973, Kasu 1976, IEDES 1976, Bar and Richan 1979, Hauser and Koch 1980, Maxwell 1981). Though most of these comparative studies concentrated wholly on developed countries, they provided new and useful methodological insights of general relevance. Thirdly, these results were of considerable help in a parallel effort to define and classify health expenditures in the development of a uniform system of national accounts. Progress in this field is well illustrated in a review of Maxwell’s study (Deering 1981). The reviewer, using only routine data on health expenditures from the United Nations Statistical Year Book of National Accounts, and the International Monetary Fund’s Government Financial Statistical Year book, arrived at estimates of total health expenditure as a percentage of GDP identical or very close to those calculated by Maxwell, but concedes that comparability problems arise when break-up of the total was attempted.Fourthly, developing countries were shown that health service expenditures involve many more sources and services than had been previously accounted for, and represented a markedly higher percentage of GDP. Fifthly, and very importantly, it was shown that such surveys could be done relatively quickly, with limited means and should even be feasible in developing countries.

A WHO assisted study by Cumper, Chia and Tarantale (1978) showed that in Korea, 87 per cent of health expenditures came from private urban curative spending on curative services, with almost four-fifths of this going on drugs. Private urban curative spending alone slightly exceeded all government spending. Overall per capita expenditure
was about three times higher in urban than in rural areas, but the difference was only 2:1 for private spending per capita whereas it was 14:1 for government spending, half of which went on urban curative services. It found that 57 per cent of total expenditures and 68 per cent of private expenditures went on only six disease groups (gastrointestinal diseases, skin diseases, influenza and upper respiratory infections, peptic ulcers and related conditions, nutritional diseases, and incidents).

Both these studies demonstrate vividly the enormous dependence on private expenditures. They also show that these very considerable amounts of private spending were spent largely on primary care and drugs (Lee and Mills 1985).

Studies on demand for healthcare can be reviewed under three broad themes.
1. Choice, Utilisation and Seeking Behaviour of Healthcare Services,
2. The Cost and Expenditure of Healthcare Services
3. Healthcare Financing, Health Insurance and Willingness to Pay for Health Insurance

However some studies do not fall only under one of these themes. In other words, scope and coverage touch more than one of the themes we have adopted here.

2.3.1 Choice, Utilisation and Seeking Behaviour of Healthcare Services

Health promotion programmes worldwide have long been premised on the idea that providing knowledge about causes of ill health and choices available will go a long way towards promoting a change in individual behaviour, towards more beneficial health seeking behaviour. However, there is growing recognition, in both developed and developing countries, that providing education and knowledge at the individual level is not sufficient in itself to promote a change in behaviour. An abundance of descriptive studies on health seeking behaviour, highlighting similar and unique factors, demonstrates the complexity of influences on an individual’s behaviour at a given time and place.
However, they focus almost exclusively on the individual as a purposive and decisive agent, and elsewhere there is a growing concern that factors promoting 'good' health seeking behaviours are not rooted solely in the individual, they also have a more dynamic, collective, interactive element. Academics have therefore started to explore the way in which the local dynamics of communities have an influence over the well-being of the inhabitants. This reflects a growing interest across the social sciences in the contested concept of social capital. The fact that health seeking behaviour is 'not even mentioned' in widely used medical textbooks (Steen and Mazonde, 1999), perhaps reflects that many health seeking behaviour studies are presented in a manner which delivers no effective route forward. This results in an unfortunate loss for medical practice and health systems development programmes, as proper understanding of health seeking behaviour could reduce delay to diagnosis, improve treatment compliance and improve health promotion strategies in a variety of contexts.

In the recent times, studies on new household behaviour have assumed greater importance among researchers in the field of health economics (Pollack and Wales, 1981; Russo et al. 1993; Deaton, 1987; Deaton et al. 1989; Parker and Wong, 1997). Seeking healthcare depends mainly on various demand and supply side factors. From the perspective of society, both the cost of obtaining healthcare services and cost of producing services are important. It implies that the demand side of health services utilisation is as pertinent as the supply side (Mathiyazhagan, 1999). The user behaviour is an important factor in learning about the household cost pattern. Individuals, on their part, try to minimise the cost of healthcare by using the scarce resources effectively, thereby revealing the household costs on health.

The decision to choose between different healthcare providers involves evaluating the cost and quality of care in each of the options available. It has been observed that
higher priced options, such as treatment in the private sector, are usually associated with a higher quality of healthcare. Studies, which take into account the effect of quality on decision – making typically, treat quality of care as an unobservable and designate different options of healthcare at different levels of the quality of care (Ellis and Mwabu, 1991, Gertler and Van der Gaag, 1990, Alderman and Gertler 1989). Lavy and Germain (1995), on the other hand, explicitly measure the sensitivity of consumer demand to various quality characteristics of provider choices taking a general conditional utility function that is stable with consistent utility maximization, and empirically model the effect of quality of healthcare on household decision-making. They estimate the model using a Nested Multinomial Logit model (NMNL), using individual and community-level data from the Ghana Living Standards Survey. The quality characteristics of various healthcare providers were grouped under five broad categories – drug availability, number of medical staff, infrastructure, immunization and other services and the presence or absence of an operating room. The individual level price factors were grouped into distance to facility chosen, measured in terms of travel costs, and the fees charged for consultations; and individual characteristics by age, gender, years of schooling and whether the head of the household was educated or not. Using the estimated model, they stimulate the impact of improving various quality variables and increasing or decreasing user fees in the public sector.

A work in Bolivia (Masako Ii, 1996) examined the determinants of demand for medical services in urban areas of Bolivia. Exploring the trade-offs between cost recovery and the use of health services for different age, sex, ethnic and income groups, the paper puts forward the argument that the low price elasticities of demand could be used as a cover to raise revenues by charging user fees, although the demand for outpatient medical care is found to be price elastic with its subsequent adverse welfare implications for the lower income groups.
Dow’s study (1996) estimated both conditional and unconditional demand elasticities for case of Cote d’ Ivoire. The methodology-based arguments are discussed in greater detail in this study, while modelling the most appropriate demand functions for the Indian scenario.

Mathiyazhagan (2001) had analysed the choice of healthcare in India in a paper entitled “People’s choice of healthcare provider: Policy options for rural India” examined the people’s choice of healthcare provider in rural India, and policy concerns it engenders. The people’s choice of healthcare provider was estimated through Logit Model by using the rural household survey on health in Karnataka State in India. The study also explores the heuristic approach through observation and informal discussions with rural people about their opinion on existing healthcare services. The analysis showed that the private healthcare provider has emerged as the people’s choice. However, the choice was significantly linked with socio-economic conditions of the rural people. The discussion suggested that policy makers in India should take serious note of the growing popularity of the private sector in providing healthcare services in India, and that it would be advisable to opt for regulatory and supportive policy interventions.

Feenberg and Skinner (1994) in their study measured the time-series property of catastrophic medical costs facing the elderly. Despite existing coverage provided by Medicare, Medicaid, and private health insurance, the risk of catastrophic medical expenses is estimated to be roughly 18 per cent of the average per capita income for the elderly. The 1970 tax data indicated 12.5 per cent of elderly families spent more than 12.5 per cent of their income on out-of-pocket medical expenses. The equivalent calculation using 1988 tax data indicated that percentage had risen to 15.3. Medical expenses for female-headed households were about 10 per cent higher, and expenses for married couples roughly 40 per cent higher, than in single male-headed households (Scitovsky, 1984).
A number of studies (Gwatkin, 1983; Andreano and Helm,iniak, 1988 and Strauss 1985) have examined the utilisation pattern of healthcare services and its determinants. Some of these studies have also analysed the household health expenditure data obtained through surveys. The findings from reports show that people generally prefer private healthcare facilities and that their spending on healthcare as a proportion of total consumption is quite significant. The data also showed that government expenditure in the health sector is small in proportion to what is being spent by the household sector. The findings show that people generally prefer private healthcare and that their spending on healthcare as a proportion of total consumption is quite significant.

A study on diarrhoea in rural India (Vishwanathan and Tohde, 1990), found that more than 80 per cent of patients seek care from private practitioners while only 10 per cent go to government health facilities. In a study on utilisation of health services in Tumkur district of Karnataka, Ramachandran and Sastry (1983) observed that the maximum number of people seeking healthcare got treatment from cities in the hope of receiving high quality services. Kumar and Sundhakar (1985) examined the question of geographic access to health facilities of Medak district in Andhra Pradesh for 1971 and 1981. The average distance that a villager had to travel to the nearest medical institution was more than 27 kilometers.

A study by Duggal and Amin (1989) analysed the socio-economic-demographic determinants of utilisation of facilities by 590 households in Jalgaon district of Maharastra. For over three fourths (77 per cent) of the illness episodes, the patients chose private practitioners and hospitals. The patients utilised government-run facilities in only 13 per cent of the episodes. Further, during 1986-87, the per capita private expenditure on health was Rs.182.49 a year as compared to Rs.13.83 per capita per annum in Maharashtra state on public expenditure in 1985-86. Health expenditure was
7.64 per cent of total consumption expenditure and 9.78 per cent of reported income. 7 to 9 per cent of annual consumption was spent on meeting healthcare expenditures. Since most of the public facilities are free of cost, most of these resources flow into the private sector. The average cost of each illness episode in the sample population was estimated to be Rs.102.14. Of this, 68.5 per cent was spent on doctor’s fees and medicines, and 10.9 per cent on hospitalisation and surgery. Diagnostic tests accounted for 5 per cent, transportation 7.3 per cent, et al. 8.5 per cent. Enquires into the financing mechanisms used by households to support the health services showed that only 4.11 per cent of total health expenditure (Rs.7.5 per capita a year) was reimbursed by employers in Jalgaon. The study also observed that people borrowed about Rs.28.52 per capita a year to finance their health expenditures. In some individual cases borrowing was as high as annual incomes. Duggal concluded that the private doctor and hospital were the biggest provider of health services in India. This was because firstly, government health facilities are on an average more dispersed (or at a greater distance) than private facilities. Secondly, if one manages to reach the government health institution then the waiting period is very long. So there is loss of wages that keeps the poor or even the middle classes from using government facilities.

A number of factors are associated with the use of curative healthcare by individuals. Morbidity surveys have shown the relationship between disease and poverty and low social status (Rao et al., 1971). Other socio-economic factors such as literacy, income and accessibility also determine the extent to which people use health facilities (Rao et al., 1973; Mishra et al., 1988). The Regional Medical Research Centre undertook a project entitled ‘Economic Aspects of Healthcare’ for Tribal Health (ICMR), Jabalpur, (MP) during 1987-88. Tribals are socially and economically backward communities. It has been observed that 90 per cent of the scheduled caste / scheduled tribe population of Madhya Pradesh lives below the poverty line (Shrivastava, 1985). Also, a majority of this population is illiterate.
The data was analysed by Mishra, Pandey and Sinha (1988) to study the effect of literacy on curative healthcare behaviour. The probability of getting treatment is higher for the head of the household than any other person in the household (by about 10 per cent). This bias is present regardless of the income of the household. Household heads, who were literate took treatment more often than illiterate heads belonging to the same income groups. The percentage of treated cases in both groups increased with household income. Patients belonging to households with a literate adult have a greater probability of being treated than those without. The study also reveals that while the number of episodes of sickness was more in July to October, the percentage of treatment was least. Poverty is one of the significant factors affecting curative healthcare behaviour, while high illiteracy and inhospitable terrain are also important factors influencing their decision – making. In general, families give first priority to treating the illness of earning members.

Reddy and Sekhar (1995) in their study "Utilisation of Medical Services in Andhra Pradesh", analysed the results for hospitalised households and non-hospitalised households separately and dealt with various aspects of utilisation of medical services in rural and urban areas of Andhra Pradesh. The main objective of the study was to present the basic results on the utilisation of medical services. The important aspects covered were source of treatment, system of medicine, type of ward, payment category, amount paid per hospital per illness episode, and total expenditure incurred per illness episode. The study used the forty second round National Sample Survey data conducted during July 1986 and June 1987. The percentage of rural households admitted in public hospitals was much less than the percentage of urban households admitted in public hospitals.

The study reveals that higher levels of education and the usage of private medical care facilities are positively related. Majority of households belonging to self-employed
category and salaried/wage earners category utilised private medical facilities whereas majority of the households belonging to causal labour category et al. used government medical facilities. The study further revealed that 45.8 percentage of rural households and 47.2 per cent of urban households utilised government hospitals. Majority of households, both in rural and urban areas, used Allopathy as the system of medicine. None of the other systems is used by more the 1 per cent of the households. On an average, 97.4 per cent of rural households and 98.6 per cent of urban households used allopathy. About 43 per cent of rural households and 46 per cent of urban households availed of medical facilities free of cost.

Under non-hospitalised healthcare treatment, 81 per cent of rural ailing or injured males and 71 per cent of females were treated. This reflects the negligence of health of women in rural areas. The usage of private hospital or private doctor was high in the case of non-hospitalised households compared to hospitalised households. About 71 per cent of rural households and 77 per cent of urban households utilised private hospitals/doctors for treatment compared to 55 per cent and 47 per cent respectively for hospitalised households. The average total expenditure incurred in private hospital is more than twice the amount spent in government hospitals.

In another study, Yesudian (1990) surveyed the utilisation of health facilities by two-slum communities-Deonar and Naigaum – in Bombay. The slum communities were not found to have any significant difference in the utilisation pattern despite the fact that Naigaum had more municipal health facilities. Both communities were found using more private sector than public facilities for short-term and minor ailments. It is only in acute case of illnesses requiring hospitalisation that they used public facilities. The study suggests that the reason for using public facilities for hospitalization cases primarily reflects cost rather than quality or other considerations.
The study by Rajaratnam, Duraisamy and John conducted in the K.V. Kuppam Block, North Arcot Ambedkar District, Tamil Nadu was a cross-sectional study, interviewing respondents from 300 households, from 3 panchayats using a multistage sampling technique. Information relating to 1440 persons was collected. During 1990-91, 57.3 per cent of the sample did not suffer from any illness. Sex had no bearing on the number of incidents of illnesses. Of the 60 children less than 2 years of age, 70 per cent had one or two incidents of illness. During the period, prevalence of infective and parasitic diseases was found to be 21.9 per cent with an average of 3 episodes. Services rendered by private practitioners (registered, non-registered and indigenous) were utilised by 59 per cent of the households and 79 per cent of the households had used allopathic treatment at some point of time. The average per capita per annum health expenditure was Rs.9 (Rs 449 per household). This increased significantly with increase in the household size (p<001) and per capita income (p<0.01). The authors suggested that health-seeking behaviour of this population can be changed if efficient services are rendered through government primary health centres and sub-centres. This would allow the existing voluntary agency to withdraw without much change in the per capita health expenditure. (Rajaratnam et. al. 1996).

Shenoy K T, (1999) in his study explained the utilisation pattern and factors determining the utilisation of private and public healthcare services, and patterns of expenditure. Totally 1001 households (504 from rural and 497 from urban areas) from 5 Panchayats of Thiruvananthapuram district were studied. Out of 2237 sick persons, 1552 utilised healthcare services (private 1044 and public 508). Logistic regression showed that people in the age group of 45-49 were significantly less prone to use private services compared to adults in the age group of 14-44 years. The lower socio-economic groups were significantly less wont to use private services than higher socio-economic groups. Patients with chronic illness were significantly less likely to use private services.
compared to those with acute illness. Patients who travelled long distances (more than 5 km) were significantly less likely to use private services compared to those who travelled short distances, Private services were more used than the public services. Strategies to improve public healthcare services need to be planned for better access and utilisation.

The study “Factors Determining Health of Home-Based Women Weavers” was conducted among women weavers in Karur district in Tamil Nadu by Vijaya (1997). With respect to utilisation of services, the type of treatment sought is dependent upon the severity of the illness. For minor ailments like fever, headache, stomach ache etc., treatment is through self-medication on the advice of elders. Sometimes pharmacists are consulted for prescriptions as well. When the illness really interferes with their work and affects their earnings, they go to the government hospital or to the private clinics. However, because of long waiting time in the government hospitals, they prefer private hospitals for treatment. Despite the difficulties and problems with the government hospitals, 70 per cent depend on them largely because they are unable to afford the cost of private healthcare for each episode of illness. The study reveals that one third of their earning is spent on food and a major chunk of 15-20 per cent is spent on medical expenses, which includes direct and indirect costs.

The study “Utilisation and Impact of Private Healthcare Services in Rajasthan” by Finch B. Cedric and Rajesh Misra (1999) evaluated the changing pattern of the hospitals and the economic burden on the families due to healthcare expenses. A total of 313 patients were surveyed. The main reason they went to the private hospital was the better healthcare services there and non-availability of Government health services. It was found that 74.1 per cent visited the private hospital directly to receive healthcare services. Only 21.7 per cent were found to go to public hospitals.
Nandraj et al. (1998) studied morbidity, utilisation and expenditure on healthcare in the households of the Mumbai city. The sample consisted of 430 households. In terms of utilisation the study revealed that 32.5 per cent of the illness episodes were not treated. The study found a very high utilisation, of the private health services and the limited role played by the public sector in the city of Mumbai for provision of healthcare. 85 per cent of the illness episodes approached the private facility, with public facility accounting for only 10 per cent. Public facilities were mainly utilised by the people in slum areas.

Madhiwalla et al. (1999) find the differences in morbidity, utilisation of healthcare services and expenditure on healthcare based on differences in the social position of women. The study covered 1193 households in rural areas of Maharashtra state. The findings of the study revealed that the utilisation of healthcare by women was quite low. The use of informal care was an important part of women's health seeking. It was found that while the use of home remedies constituted 15 per cent of the services utilised, the use of self-medication accounted for 11 per cent of the total services used. On the use of formal public facilities in the rural and urban areas - it was found that 24.2 per cent of all the facilities utilised and 30.3 per cent of the formal facilities utilised by rural women were government facilities or home based care provided by government paramedics. In the urban areas, 10 per cent of the total facilities and 17.3 per cent of the formal facilities used were public sector services. The rate of hospitalisation was significantly higher among rural women as compared to urban women. It was found that financial problems were the cause for not seeking treatment. Care was not sought for 12.4 per cent of the untreated episodes because the health facilities were not accessible or adequate.

Desai Kalpana (1997) in her unpublished Ph.D thesis focuses on problems faced by people from low-income families, their relationship with the family environment and its influence on health perception and behaviour. This study was conducted in a
resettlement colony in South Delhi. A very high percentage of the study households (95-97 per cent) expressed satisfaction with private clinics. The proportion of households, which found alternate systems of medicine satisfying, was high in all three settlements. The study suggested the need to develop management and reporting systems for specific diseases for which people turn for treatment to the private sector.

The study “Modernization of Fish Economy and Its Impact on the Well Being of Fishermen” (Pepin, 1986) examines the well-being of fishermen in relation to the basic needs viz. Nutrition, health, education and related services, the availability of and accessibility to health services provided by the government and other agencies. The study was conducted among 149 households in a village in Kanyakumari district in Tamil Nadu. The section on accessibility to and utilisation of health services shows a plurality in provisioning. The study revealed that for common fevers about 73 per cent of them used allopathic medicine, while 27 per cent used indigenous medicine. For other diseases they used allopathic medicine. The utilisation of private hospitals was less when compared to the 'non profit' institutions, followed by government hospitals. The type of facility chosen varied according to the nature of illness and even for a given condition the individual might resort to several healers.

Garg Renu (1995) in her study “Improving the Performance of Reference Health Center : A Case Study of Urban Health Center, Dharavi, Bombay”, assessed the role of the Dharavi Urban Health Center (UHC), in providing primary health services to the residents of Dharavi. Around 2,018 households were surveyed using multistage sampling technique. The overall utilisation of the UHC is low for all the services. The UHC is bypassed by the catchment population, as most people prefer to use private sources for minor ailments and rely on the teaching hospital close by for major illnesses. Private practitioners are preferred especially for the treatment of minor ailments. Private practitioners are in the vicinity and they offer quick cure and provide personalized treatment.
The poor who are daily wage earners find the timings of private practitioners suitable. The other factors responsible for the low utilisation of the UHC are inconvenient timings, non-availability of medicines and the feeling that the services provided by private practitioners and the teaching hospital are better. Although most of the people utilize private practitioners for minor illnesses, they depend on public facilities for major illnesses. More than half of the [55 per cent] private practitioners referred patients to the teaching hospital, while 15 per cent of them referred their patients to other private practitioners.

The study, “The Development of Public Health Services and their Utilisation” by Kakade Narendra (1998) had explored the distribution of health services in the urban slums of Bombay. The study adopted a qualitative research design in which extensive secondary data was gathered mainly from reports of Public Health Department and the administration of Bombay Municipal Corporation. The findings of the study are that there was an overall decrease in the expenditure on health by Bombay Municipal Corporation (BMC). The major part of the expenditure is on big hospitals i.e. teaching hospitals rather than dispensaries and healthcare centres. Of this, a large proportion is spent on establishment rather than on diet or other equipments for patients. BMC pays more attention to the curative services than preventive care. The sharp growth of the private health sector towards the end of the sixties was prompted by several factors: the falling state-spending for health, the increasing numbers of medical personnel, who could not find adequate employment in the health institutions, a growing middle class dissatisfaction with public sector and willingness to pay to the private sector. It is the poor who are the major public hospital users who show a preference for private providers in the first instance and come to public hospital only when their conditions get serious or their finances are low. Therefore, they accept whatever care they get. This leads to the dubious money making practices of private hospitals like unnecessary investigations and irrational therapies.
Nanda and Baru, (1993) had studied the utilisation of Private Nursing Homes in Delhi. It discerned the factors that influence the choice of healthcare. A total of 68 nursing homes from upper income, middle class colonies and resettlement colonies were covered. The study focussed on trends in utilisation among residents from resettlement colonies. For initial treatment the preference was to the private practitioner and 60 per cent of the people interviewed in the resettlement colony opted for it. However, when it came to major complaints requiring hospitalisation, a high 80 per cent opted for government hospitals. This study also highlights the utilisation of Ayurveda and homeopathy along with allopathic services. The interviews at the government hospital show that for minor treatment both the lower and middle income groups use these services. The lower income groups use of the private sector is very little. The usage of private nursing homes increases with income levels. This study provides insights into the heterogeneity in provisioning of services and plurality in utilisation patterns. The heterogeneity and haphazard growth of the private sector clearly points to the need for some planning, which would include registration and regulation. The utilisation of medical care shows that a high percentage of people resort to the individual private practitioner for initial treatment. However, for minor and major ailments people use the government and municipal hospitals. Although more poor people use the government hospitals, the middle and higher income groups also use them for major ailments. These trends have implications for policy since high utilisation for outpatient services in the private sector must not be equated with high utilisation for inpatient treatment as well. Secondly, a fairly high percentage do use the public sector.

Performance and choice of Public and Private Sector Sources of Inpatient Care was studied by Homan and Thankappan (1999). The study collected relevant data from 29 public hospitals and 9 private hospitals. Patients from the public sector reported lower levels of satisfaction with the care received than the level of satisfaction of the patients.
from the private sector facilities. The poor and somewhat poor tended to be more neutral about the care received, and the better off were more likely to be at one extreme or other. The reported behaviour of clinical staff appeared to improve with the socio-economic status of the patient. The key perceived problems with government hospitals were that they were too far away (57 per cent agreed), added to lack of attention from caregivers (54 per cent), bad behaviour of staff (40 per cent), and lack of hygiene (30 per cent). Geographic accessibility was not a cause for concern while choosing a private facility. The study suggested that the demand for hospital care among private sector patients may be fairly inelastic. The hidden cost of care associated with care in public hospitals was greater for the poor. This was indicative of the longer lengths of stay or more chronic nature of diseases faced by them in public hospitals. Both at secondary and tertiary level care, inpatient charges as a fraction of total out of pocket expenditure was predominant. It was about 75 per cent at the tertiary level; at the secondary level, it was 42 per cent in public sector and 71 per cent in private sector.

Deepti and Gupta (1997) had studied the preferences of the people regarding the choice of healthcare provider in relation to their socio-economic background. The study was conducted in the rural areas of five major states namely Gujarat, Maharashtra, Karnataka, Uttar Pradesh and Rajasthan. The study has revealed that the people with incomes higher than Rs.10,000/- preferred seeking private treatment, whereas people with lower assets or no assets preferred not to take any treatment. Caste was an important factor in determining the choice of treatment. However, no treatment was dependent on consideration. The study concluded that the utilisation pattern of health services is determined by many factors such as cost, quality of services, their availability, etc. The quality of services plays a dominant role in people's decision about seeking medical help. The study shows that due to the inefficiency of Public Health Centres people prefer seeking treatment from private practitioners. Economic factors such as poverty restricted
the people from seeking modern scientific healthcare. Another fact is that there is no gender bias as far as the morbidity or treatment seeking behaviour is concerned. Factors such as caste class etc. are still dominant and are important in determining the type of healthcare sought.

Ramamani Sundar (1991) in his study, "Household Survey of Medical Care", revealed remarkable sex differentials in the prevalence rate of medically treated illness and the cost of treatment. Similarly, the survey found evidence of disparities in the morbidity rate, type of treatment, type of illness and the cost of treatment among households belonging to different income groups. Some differences were also observed between the rural and urban households, especially in the distance travelled to seek medical aid for the diseases.

Another survey conducted by the Council (NCAER, 1991) in the villages under the Command Area of Indira Nagar Project also reported a lower prevalence rate of illness for female children. Hospital and clinic attendance records also corroborated these results, especially for in-patients, which always showed lower morbidity among girls. The prevalence rate of illness by income class of the households showed that the rate comes down as we moved from low to high income category. This is contrary to the finding of Cost of Healthcare Survey conducted in Jalgaon district of Maharashtra in 1986-87 (Duuggal and Amin, 1989), which showed that low income and consumption expenditure levels go with lower prevalence rates of treated illness because of lower purchasing power in determining the morbidity. The NCAER launched a second round of the survey in 1993 (MISH, 1993) drawing on the experience gained from the first survey. The second survey collected data on morbidity, healthcare utilisation and health expenditure in greater detail.

The study on Demand for healthcare in rural India choosing between private, public and no care by Gupta and Dasgupta (2001), examined the choice of healthcare facilities. The study used data collected by the National Council of Applied Economic
Research (NCAER), New Delhi. According to Gupta and Dasgupta, in India one finds an array of healthcare providers, who are accessed by people from varied socio-economic categories. At one end of the spectrum there is a large informal sector, comprising providers such as faith healers, or religious healers, who dispense certain forms of indigenous medicines. The non-allopathic streams such as homeopathic and ayurvedic medicines were also extremely popular, and in fact often found a place within the formal set-up such as government organizations. About 70 per cent of the healthcare spending came from out-of-pocket expenditures by the households. Despite a large and extensive public healthcare system, even low income rural communities have a wide choice of non-government healthcare providers, and there is indirect evidence that they often prefer local fee-based private facilities to government funded ones.

Shariff (2001) studied the issues associated with the demand and supply of maternal healthcare services and provided an econometric analysis of the determinants of the use of reproductive healthcare services associated with pregnancy and child delivery by women in rural Indian households. This study uses data from the cross-sectional rural household survey conducted by the National Council of Applied Economic Research in 1994 to prepare a human development profile in India, in many states based on number of demographic groups. A two stage stratified sampling design was used to sample about 32,000 families from 1765 villages across all parts of India. The study examined the relative importance of demographic and economic factors in determining the utilisation rates of maternal care services. The utilisation of reproductive healthcare services in India is significantly affected by the mother’s education and family composition. The husband’s education is also significantly correlated with healthcare utilisation, though the magnitude of this effect declines after controlling household income. Women’s exposure to information through the radio, television and newspapers also significantly increases the utilisation rates for all services. Economic factors such as
wages and income are important only for child delivery services. Access to locally available health services significantly increases maternity care. However, the interactions between education and access to healthcare facilities are insignificant except for the complementary relationship between higher education and access to healthcare facilities. These results point to the avenues through which policy makers can influence the utilisation of healthcare.

A study conducted by Duraisamy (2001) revealed that the household level factors such as income, education, health habits, household health environment such as toilet, cooking facilities, sources of drinking water and so on, and community level health infrastructure namely access to medical facilities etc., are significantly related to the probability of being ill. A related issue is the decision to take treatment and choice of provider, in the event of a person falling ill. The study used NCART-HDI survey data collected in 1994. The study findings indicate that 80 per cent of ailing persons sought treatment, of whom, 49 per cent went to private health services, 22 per cent received treatment from public providers and the rest (9 per cent) resorted to self-treatment. Primary level education is positively related to choice of private healthcare. The higher the level of income the more the preference for private healthcare. The SC/STs and Hindus are more likely to choose treatment from government sources. The econometric estimates of the choice of healthcare provider reveal that the choice reduces to the one between private and other in rural India. The choice of private healthcare is significantly influenced by individual's education, household income and caste.

Samrasinghe and Akin (1994) show that 31 per cent of all episodes of illness were self-treated without medical consultation. Of those people who seek treatment, only 42 per cent were treated at the closest facility either a predominantly private or government hospital. The authors find that the bypassed public facilities had fewer
doctors, nurses, and services and less equipment than public facilities that were not bypassed. In contrast, the private western facilities that were bypassed had more doctors, nurses, and services and higher levels of care. Although this result might seem paradoxical, it is consistent with sophisticated health-seeking behaviour. Because prices tend to be lower in the public facilities, patients tend to bypass high-quality, but expensive, private facilities in favour of public ones when their condition is not serious or quality is not important. For serious conditions, however, or when quality of service is important, individuals are willing to pay in terms of both time and fees for higher-quality care.

A study of health centers in Indonesia also found low usage of public facilities. Annual caseloads were low even for facilities located near large local populations (World Bank 1994). On the basis of detailed case studies, this study identified two principal reasons for the low usage. First, many public facilities were short of equipment, drugs, and appropriate health workers. Second, and more important, detailed assessments on the way public health clinics operated showed that poor functioning facilities contributed to patients’ decisions to seek medical care elsewhere. Respondents in one case study made it clear that they could get considerate and unrushed care in a pleasant and informal setting in the private practice of doctors and nurses” (World Bank 1994).

Joanna Armstrong Schellenberg et al. (2003) in their article entitled “Inequities Among the Very Poor: Healthcare for Children in Rural Southern Tanzania” had assessed the inequities in healthcare by sex and socio-economic status for young children living in a poor rural area of southern Tanzania. The study was based on the baseline household survey in Tanzania early in the implementation phase of integrated management of childhood illness (IMCI). It included cluster samples of 2006 children younger than 5 years in four rural districts. The study used principal components analysis to develop a relative index of household socioeconomic status, with weighted scores of information on
income sources, education of the household head, and household assets. It concluded that 1026 (52 per cent) out of 1968 children reported having been ill. Caretakers of 415 (41 per cent) of these children had sought care first from an appropriate provider. Interpretation Care-seeking behaviour was worse in poorer than in relatively richer families, even within a rural society that might easily be assumed to be uniformly poor.

David E. Sahn, Stephen D. Younger and Garance Genicot (2002), in their paper “The Demand for Healthcare Services in Rural Tanzania” examined the pattern of healthcare demand in rural Tanzania. The study used data from the 1993 Human Resources Development Survey (HRDS) to model the healthcare choices that individuals in Tanzania make when sick or injured. Beyond price and quality effects, the study examined how a series of other characteristics of the household and individuals affect their healthcare choices. The role of education, age, duration of illness, and so forth, provide important insights into the potential opportunities and limitations of public policy to affect patterns of demand. It has estimated a nested multinomial Logit model of healthcare demand for Tanzania.

Daniele Fabbri and Chiara Monfardini (2002) in their paper “Public vs. Private Healthcare Services Demand in Italy”, study the process of the demand for health services as a key to a better assessment of the forces that increase healthcare expenditure. The Grossman model and the agency perspective on patient-physician relationship provide different, despite complementary views on this process. In the Grossman tradition, as far as the demand for healthcare was essentially seen as the result of patients' inter temporal utility maximisation; utilisation is the product of individual preferences. In the agency approach, physicians play an active role in assessing the amount of services that patients should consume. Therefore in the analysis of health services consumption the role played by different types of provider cannot be ignored. The importance of such an issue has been largely neglected in the literature.
2.3.2 The Cost and Expenditure of Healthcare Services

In his study, Selvaraju (2001) made an attempt to estimate the healthcare expenditures incurred by governments and households in the rural sectors of 15 major states. Based on the NCAER-HDI survey and the budget documents of the respective states, the study found that households in the rural sector spent a much larger share of their income as compared to the governments (less than 1.5 per cent) during 1993-94. Also in comparison with other developing countries, the present level of government spending in these states is highly inadequate. Of the total healthcare expenditures, households account for more than 75 per cent and the rest 25 per cent is financed by the governments through their budgets. Often it is suggested that user charges need to be levied and/or raised to mobilize resources for health sector as the governments are already under fiscal strain and unable to allocate additional resources. Under these circumstances, any attempt to levy and/or raise the user charges will only aggravate further the burden of the households.

The analysis of the composition of healthcare expenditures revealed that salaries alone account for more than 60 per cent of the total government health expenditure leaving a very small proportion for drugs, equipments, etc., which are equally important for efficient delivery of services. Households on the other hand spent primarily towards medicines, clinical charges, etc., suggesting that household and government expenditures are complementary in nature. The role of insurance in healthcare is very limited or negligible in the rural sectors of the states at present. Households in many states spend significantly a larger amount even to avail of the services through employer provided insurance and hence any attempt to expand the scope of the existing or new insurance schemes need to be analysed in detail in terms of their efficiency and viability.

The study by Nandraj et al. (1998) revealed that the average expenditure incurred per capita per episode was Rs. 95.45 working out to Rs. 415.68 per year. In terms of
gender difference per episode cost worked out to Rs. 148.56 for males and Rs. 78.59 for females. In 90 per cent of all the illness episodes, the combined expenditure was incurred on the fees paid to the doctor and the purchase of medicines. The expenditure incurred is much higher than what is spent by the government which is just Rs.250 per person in Mumbai city and very much less than the national per capita expenditure of Rs.90. The strong gender bias is very much evident right across the findings of the whole study. Women receive a raw deal both in terms of utilisation and the expenditure incurred on their illness and non-illness events. One finds that irrespective of the age, education, occupation, earning status, location of the households there was a wide difference among men and women in terms of utilisation. In both slum and non-slum areas households were spending less on women's health. The study has brought out these and many other important issues related to women's health, which require proper attention and corrective action. This study throws up the issue of non-utilisation of health services by especially women who suffer from various illnesses and for deliveries even in a premier city such as Mumbai that has more public health facilities compared to other parts of the country. This raises the question that though the services may be available, the access to them is determined by factors operating within the household and outside.

Madhiwalla et al. (1999) find the that the expenditure per capita and per facility in the rural areas was higher than in the urban areas. However, due to more frequent hospitalisation among rural households, the overall expenditure on healthcare in the form of doctors' fees, the cost of medicines and injections was high. It was found that the expenditure highly correlated with the duration of illness. The longer the duration of the episode, the higher the expenditure on it. When medicines alone were dispensed, the per-facility expenditure was Rs.24. However, when injections were administered, the expenditure rose to Rs.77. This indicated the economics behind the overuse of injections in the private sector. There was a considerable difference in the expenditure incurred on men and women in each facility.
The major source of curative services in the urban as well as rural areas was the private sector. It was found that the poor households had extremely poor access to formal services and resorted to the use of informal services. They were totally dependent on the private services. There is an undeniable need to strengthen the public services in the urban areas as well as to make them more accessible to the poor. There is also a need to rethink the strategies used for primary healthcare for the cities, where the services are physically abundant and, yet, completely inaccessible. The problems of the public sector services can be remedied by stricter implementation of guidelines and reorganisation. The fact remains that the government funding for health needs to be increased in order to meet the needs of the rural and urban areas.

Nitcher (1980) surveyed the household health expenditure of 82 poor rural families in the South district of Karnataka. Household expenditure on health was about 7 per cent of average family income. This amounted to about Rs.270 per family a year of which 60 per cent was spent on allopathic consultations and drugs. In another group of 20 families living within a radius of 5kms of a primary health center, health expenditure was not significantly different (Khan et al., 1982). The study estimated a per capita annual health expenditure of Rs.82 and Rs.121 in the eastern and western districts of Uttar Pradesh. Government expenditure in the state at the time was Rs.11.7 per capita a year.

A Report submitted to the UNICEF, Chennai, (1999) by Muraleedharan and Saradha Suresh, (Health status, Socio-economic Conditions and Expenses for Delivery: A Household-level Analysis of Pregnant Women in Dindugal Slum Areas) tracked 1273 pregnant women in 61 slums in Dindugal town (Tamil Nadu State) during the period May 1998-September 1999. The study finds that the mean expenditures per delivery at Home and MMH were Rs.295, and Rs.238, respectively. But the difference in mean expenditure per normal delivery between General Hospital (GH) (Rs.485) and
MMH (Rs.238) was substantial. It should be noted that most of those that had delivered at Home, GH or MMH belonged to higher poverty-risk groups. On an average, a slum woman spent Rs.1895 for a normal delivery, compared to Rs.8774 for a caesarean section delivery in a private hospital, whereas in GH, it worked out to Rs.485 and Rs.2410, respectively, for normal and caesarean section delivery. The difference is quite substantial indeed.

The study “Changes in the Health Status of Kerala : 1987 and 1995” revealed that the average expenses for a delivery in a government hospital were Rs.2025. It was Rs.2870 in a private hospital. In private hospitals, the average expense for a normal delivery was Rs.2456, while for a caesarean delivery it was Rs.4944. In the case of a government hospital, it was Rs1670 and Rs.2864, respectively. The medical expenditure per morbid person per episode increased from Rs.16.5 to Rs.165.2 during the decade, an increase of nearly 900 per cent. The per capita medical expenditure rose from Rs.88.92 to Rs.548.8 during the period, an increase of about 520 per cent.

The study by NCAER (1992) revealed that the average household expenditure for treatment of illness worked out to Rs.142.60 per illness episode in urban areas, and Rs.151.81 per episode in the rural areas. Fees and medicine category account for nearly two thirds of the total household expenditure on the treatment of illness. The average expenditure goes up from Rs.122.55 for low-income household to Rs.225.85 for the high-income households in urban India. In the case of rural India, the average goes up from Rs.138.55 to Rs.194.59 per illness episode when we go from the low to the high-income category.

The study “A Study of Household Health Expenditure in Madhya Pradesh” by George Alex, Ila Shah and Sunil Nandraj (1993) had estimated the household level expenditures on healthcare and documented the components of health expenditure and its differentials by variables such as class, social geography, etc. The study was conducted in
two districts of Madhya Pradesh. The study had covered 770 households covering a population of 5202. It was found by the study that the annual per capita health expenditure was Rs.299.16, which formed 8.44 per cent of overall consumption expenditure. There was a steady increase in the annual per capita health expenditure between the classes. It was Rs.28.16 in the lowest class, which went as high as Rs. 563.94 in the highest class. The difference between the lowest and the highest class was as high as 339.79 per cent. The per episode cost for healthcare was much higher than the per capita figures. It was as high as Rs.134.23 for a one-month recall period for the whole sample. The corresponding figures for the lowest class was Rs.71.91, and for the highest class, Rs.243.60. The intra-rural and intra-urban difference in per capita and per episode expenditures was wide. Within the rural areas, the annual per capita expenditure was the highest (Rs.314.16) in the PHC villages, but monthly per episode expenditure was the lowest, as against remote villages, where it was the opposite (viz. Rs. 219.96 and Rs. 145.63). Within urban areas, the annual per capita and monthly per episode costs were higher in district headquarters (Rs.322.44, Rs. 134.7) than in small towns (Rs.280.92 and Rs. 116.86). The utilisation of the private sector for healthcare was found to be as high as 69.05 per cent. Only 15.52 per cent of the episodes sought public healthcare, out of which 6.14 per cent utilised government /civil hospitals, and 6.88 per cent utilised the PHC / government dispensaries, while Sub Centers were used only by 1.73 per cent. In 85.39 per cent of the episodes, the patient received medicines, or medicines with injections alone.

The study by Muraleedharan (1997) covered 377 women (285 from Madras city, and 92 from Chidambaram/Cuddalore region) who were delivered of babies either in government or private hospitals. Average charges for clinical test, ECG and x-ray in private hospitals in Madras city are Rs.56, Rs.67 and Rs.75, respectively. Average charge for ultrasound (maternity related): Rs.202 (max:350; min:50). Average charge for
labour room per delivery: Rs.306 (max: 500; min: 125) Average charge for anesthetist
(per procedure for delivery): Rs342 (max: 600; min: 150). Average charge for OT
per delivery: Rs.533.

Balambal et al. (1997) have estimated the total costs attributable to TB on
patients. The overall average direct costs observed were Rs.1443 and for rural patients it
was Rs.1338. There was no gender differential. Patients going to private facilities spent
8 times more than those going to General Hospitals. Direct medical expenditure for
consultation was Rs.613/-, for investigations Rs.149/- and for drugs Rs.591/-. The direct
expenditure was least for patients going to General Hospitals, 1.5 times more for those
attending NGO hospitals and 5 times more for those going to private hospitals.
The average non-medical costs (Rs.353/-) were more or less the same for all patients,
irrespective of type of facilities. The rural patients had an average indirect cost of
Rs.3610, whereas urban patients suffered an indirect cost of Rs.4100/-. The average
workdays lost were 83-82 for males and 85 for females. Out of 83 days, 48 were lost
during pre-treatment period and the remaining during treatment period. There was no
relationship between the loss of workdays and the type of occupation or the type of health
facility attended. The study concludes that there is need to reduce the direct and indirect
costs on patients attending government facilities.

Duggal R and Amin S (1989) had analysed the various aspects of household
health expenditure. The study was conducted in six villages of Jalgaon district in
Maharashtra and six wards. The study brought out the fact that the perception of illness
depended on the purchasing power and the income level of the people. The lowest class
had the highest non-utilisation rate, the lowest private facility utilisation rate and the
highest public facility utilisation rate. The per capita annual expenditure incurred by the
household on health worked out to Rs.182.49. This was 7.64 per cent of the total
consumption expenditure, and 9.78 per cent of the reported income.
Cost of treatment in government and Private hospitals was studied by Suresh Balakrishnan and Anjana Iyer (1997). The study covered a sample of 361 citizens drawn from 12,896 economically weaker households scattered across 65 locations in and around Bangalore city. The inpatient sample covered 108 users of government hospitals, 46 users of Municipal Corporation Hospitals, 63 users of Mission and Charity Hospitals, and 63 users of Private Hospitals. The study covered 81 out-patients, of which 47 were from government hospitals, and 34 from Mission and Charity hospitals. The study used a purposive selection of three government and three private hospitals. Thirty one per cent of patients from government hospitals gave clear positive ratings, while only 20 per cent from Corporation hospitals did so. In contrast, 57 per cent of the users in Mission and private hospitals gave positive ratings. Only 30 per cent of the users of government and corporation hospitals made the choice primarily for inexpensive treatment. But only 10 per cent of the users of government hospitals reported satisfaction with free treatment. Around 50 per cent of users in government hospitals and 80 per cent of those in corporation hospitals reported spending amounts from Rs.100/- to Rs.800/- for treatment. Costs of treatment in Mission and Private hospitals were much higher. But a significant portion of what the poor spent was on speed money (un-billed charges). Around 51 per cent of users in government hospitals and 87 per cent of users in corporation hospitals reported paying speed money. In contrast, this figure was 29 per cent in Mission hospitals and 22 per cent in private hospitals. This study observes that this difference in the practice of accepting speed money existed though there was no major difference in the staff salaries across private and public hospitals.

A study by Medico Friend Circle (1993) has aimed to understand patient's views on the present healthcare system to look at their experiences with the various health systems, and studied their perception on various aspects of present healthcare systems. Nearly seventy-seven per cent of the total episodes of 208 reported approached private
Among these, 69.7 per cent suffered from acute illness, 5.3 per cent received GP care, followed by 34.6 per cent of the episodes, which received consultant care. With regard to waiting period nearly, 61.1 per cent of the episodes felt it was unreasonable. They had to wait for more than 20 minutes. According to information provided on figures, 40.9 per cent of the episodes were not informed and 25.5 per cent were informed only partially. With reference to information on side effects, 53.4 per cent of the episodes reported that they were not given any information. Questioned on the reasonability of charges, 44.2 per cent felt the charges were unreasonable. An equal number, 45.2 per cent of the episodes, felt the charges were reasonable. Of them 58.7 per cent were not given any receipt for the payment made and 64.9 per cent of the respondents felt that there should be standardization of fees. The main expenditure per acute episode for non-hospital cases was Rs.182.

Bhide et al. (1991) in their study have examined the health status of people and expenditure for healthcare services in the command area of Indira Gandhi Nahar Project (IGNP) in Rajasthan. The study is based on sample surveys of 839 households in the region. It revealed that the per capita monthly expenditure incurred by the households of different occupation groups indicated highest of Rs.16.48 for agricultural labour and lowest for other labour (Rs.6.67) for total command. The average monthly expenditure was Rs.10.81 per capita of 4.3 per cent of average monthly per capita income. The expenditure is significantly greater in Ganganagar than the other two districts. The break-up of expenditure on treatment explained that the bulk of expenditure is on fees and medicine (50.3 per cent), followed by transport (15.7 per cent). The other items of expenditure amount to less than 5 per cent each of the total.

In a study by Tendler and Freedheim (1994), it was revealed that the existing allocation of health expenditures toward curative care in secondary and tertiary facilities,
such as hospitals and clinics to which patients are referred, is inappropriate and that a reorientation of government efforts toward primary healthcare would bring both health gains and cost savings.

2.3.3 Healthcare Financing, Health Insurance and Willingness to Pay for Health Insurance

Operations Research Group (1989) in a study reviewed the rules and regulations of private sector participation in healthcare, and assessed the functioning of the ESIC, GIC, and hospital health insurance schemes. The study revealed that the GIC scheme operates in towns with population above 5,000. The policy holders are government employees and professionals, with incomes above Rs.3,000/- except in Bihar where the cited income was Rs.1,500-3,000. Private nursing homes and practitioners are the main providers of healthcare, except for government hospitals in Rajasthan. The monthly healthcare expenditure per family is cited as Rs.100-200, but below Rs.100 in Uttar Pradesh. The beneficiaries expressed dissatisfaction with cumbersome claims processes, delays in settlement, and lack of coverage for minor ailments like flu, malaria, etc. The financial viability of the scheme is not a concern because the claim ratio is low. The state-level coverage and infrastructure of ESIC scheme is reviewed. All four states incurred lower per capita expenditure than the national ESIC average. The findings are in the form of observations, and large scale evaluation, based on sound sample design and it is suggestion especially to the ESIC scheme.

Jajoo (1991) had made an attempt to find alternative financing for Primary Healthcare particularly to provide health insurance for the rural population in the Sevagram village. A private trust 'Kasturba Health Society' runs the hospital and it had introduced a health insurance scheme for the poor in the village. The hospital offers free inpatient treatment for the unexpected illness to a person who is part of the scheme. For the expected health related episodes 75 per cent subsidy is provided. The non-members
are also allowed to avail themselves of the hospital facilities but only at full charges. The villagers have become aware of the services they get since they pay for it. Since the health team has gained credibility over the years, their advice is often sought by the villagers in other related issues, such as irrigation, dairy development, etc. The insurance scheme at Sevagram is based on the principle of capacity to pay and has proved to be extremely successful. It is people-oriented and has provided an alternative mechanism of health financing.

Duggal (1993) had analysed the medical benefits provided to employees of public as well as private sector companies. Out of a total of 1872 companies having a sales turnover of more than Rs. 50 million, 775 companies were randomly selected for the study.

The details of statutory benefits (compensation paid due to deaths or injuries, maternity benefits, the benefits paid under the mine labour welfare fund, ESI scheme) were not provided by most of the private companies. They were often merged into total medical benefits. Only a few employees were covered under the Employee State Insurance Scheme. This was due to the fact that ESIC benefits are paid only to those workers whose incomes are below rupees 1600 per month. In the sample, the mean income per employee was Rupees 2445, which was much higher than the minimum limit for the ESIC. Most of the companies were paying claims against bills with upper limits. The percentage of the private sector companies paying for such claims was 61. In the public sector, the percentage was 77. Thirty seven per cent of the companies owned hospitals or clinics, while 27 per cent of the companies were paying compensation through the group insurance scheme. Lump sum payments were made by 15 per cent of the companies. In the case of lump sum scheme, 6 per cent of the public sector and 12 per cent of the private sector companies paid the benefits whereas 4 per cent of the public sector and 11 per cent of the private sector companies paid benefits under the group insurance scheme.
The pattern also differed for the managerial staff and workers. The total medical care and related expenditure was 755.53 million rupees. That is, 5.64 million per company and 1648.58 per employee per year. If the average family size is assumed to be 4.5 persons per family then the expenditure by the corporate sector comes to Rs. 366 per capita per year. There was a major difference in the public and private sector in the medical care expenditure. On an average, a public sector company paid 13.56 million rupees per year as against 3.25 million paid by the private sector. This amounted to Rs. 2251.10 per employee per annum for the public sector as against Rs 1225.46 per year for the private sector.

Indrani (2000) had examined the willingness and ability of individuals to participate in private health insurance programmes in her paper entitled “Willingness to Participate in Health Insurance”. The study was a primary one, of 504 households in Delhi. The study results revealed that the willingness to participate in health insurance schemes differed according to the extent, nature and period of their coverage, premium for adults and children, withdrawal amounts and whether unused funds would be returned in future. Most low and many middle income households considered the premium beyond their reach, while lower income households were wary of private schemes and trusted government schemes. Those in the middle-income group have been unwilling to consider coverage outside what they had at the time of this study (mostly government health schemes). They thought that there was no need for such schemes as they had no major illness. Moreover, they could always borrow when needed. Those who were in favour of the insurance schemes, consider it a good investment, that returns with interest. They also thought that such schemes were not only good for serious illnesses but also for better treatment.
Willingness to Pay for Rural Health Insurance through Community Participation in India was studied by Mathiyazhagan (1998). The study had examined the willingness to pay for a viable rural health insurance scheme through community participation in India. Willingness to pay was estimated through Contingent Valuation approach (Logit model) by using rural household survey on health in Karnataka state. In the 36 villages 1000 households were covered for the study. The results show that the insurance / savings schemes were popular in rural areas. People have relatively good knowledge especially of life insurance schemes. Most people stated that they were willing to join and pay for the proposed rural health insurance scheme. The main reasons for joining the proposed scheme were (a) poor quality of existing government services and (b) inaccessible and ineffective services in the government sector. The local bodies (Panchayats) have potential for participating in health insurance schemes. If such schemes are followed at Panchayat level, people will have a greater choice of health care services. The study also validated the use of Contingent Valuation approach using binary responses on willingness to pay for rural health insurance scheme.

In this chapter we have given the theoretical framework of the study and reviewed the studies relevant to our study. In the following chapter the development of healthcare services in India and Tamil Nadu is discussed.