Chapter II

AN OVERVIEW OF LITERATURE

The earliest works in medical geography dates back to the latter half of the nineteenth and early twentieth centuries, and were concerned with the distribution and study of diseases on a descriptive basis. A review of literature regarding geographical aspects of health, and contemporary issues in geography of health care has been presented by various authors in India and abroad, e.g. (Learmonth 1961, 1988, Akhtar 1982, Ramesh 1983, Howe and Phillips 1983, Phillips 1981, 1990, Whitelegg 1986, Pyle 1983, McGlashan and Blundan 1983). These studies bring out that there are two clear research traditions within medical geography. Historically, the subject has concerned with the cause and spread of diseases, and more recently attention has been drawn to include the provision and utilization of health care facilities.

The specific purpose of the present chapter is to provide a review of both existing research and current trends in the study of the provision and utilization of health care facilities, within the framework of the present study. The review is necessarily selective as it primarily incorporates the studies on different aspects of availability, accessibility and utilization of health-care services. Here, in the first section, the studies related to availability of health care facilities
have been reviewed. The second section deals with the aspects of accessibility of these facilities. The third section reviews the studies related to factors affecting utilization of health care facilities.

II.1 Availability of Health Care Facilities:

A geographical study of health care delivery in India has been taken up mainly during the 1970's. Although, the health conditions and availability of HCFs in the country as a whole, was studied by Health Survey and Development Committee, popularly known as Bhore Committee, as far back in 1943, in pre-independence India (Report of HSDC, 1946). The recommendations of the Committee were accepted as the blueprint for the development of health and medical services in independent India. In independent India, the earliest study in the distribution of rural health care facilities was by a non-geographer (Dutt, 1962) who focussed on the issue of inequality in its distribution. In this study, the author has examined the state-wise distribution of health personnel and the number of dispensaries. It showed that the highest concentration of doctors were in West Bengal (586 doctors per million population), as compared to 15 and 37 in Jammu and Kashmir and Rajasthan respectively in 1956. It also indicated that there were not more than 25 to 30 per cent of sanctioned doctors in rural areas. The author indicated that the number of sanctioned staff itself was low, and out of it only 25 per cent were there, and as a whole only 2 per cent of the
villages had a doctor of modern medicine. The author also discussed the role of primary health centres, and argued that only PHCs can provide a solid foundation on which the whole edifice of preventive and promotive health care can be built.

In a South Indian state of Tamil Nadu, Strassburge (1973) studied the availability of HCFs. He visited 75 primary health centres. In his study, he indicated that the problem of health care in the state was because of inefficiency of health centres in terms of staff, medical equipments and medicinal drugs as well as inadequate training in rural health problems. He also indicated the over-emphasis on family planning programme as an isolated aspect of service.

The availability of health care facilities in Rajasthan was studied by Akhtar (1978) in a different way. He studied the spatial distribution in availability of HCF (per lakh of population) over two points of time, 1960 and 1970. He also compared the variations in the growth of HCFs with the growth of population during 1960 and 1970. Through this exercise, the author has indicated the areas where positive and negative relationship emerged and where future HCFs may be provided.

Shinde (1980) portrays the regional disparities in the medical facilities available in Maharashtra. Data source and methodology used for this study are: medical and demographic sources; coverage of medical facilities in terms of actual and
theoretical coverage. He has worked out the 'work-load factor' in order to determine the relationship between demand and supply of health care facilities in the state. Zurbrigg (1984) studied inequality in Indian health care system by taking distribution of health resources between the rural and urban areas, which shows that distribution of health resources is heavily weighted in favour of the urban sector. Inequality in the distribution of health care in India, as a whole has been studied by Akhtar and Izhar, (1985). This study also deals with the urban bias in the availability of health services such as hospitals, health centres, beds, doctors and other health personnel. It indicates that the present structure of health facilities is a legacy of the colonial India. The colonial masters believed in selective development in order to serve their own purpose. The inequalities in the distribution of health care in India is also examined by per capita expenditure on health and family welfare in the different states of India. Distance between settlements and health facilities, distribution of hospital facilities, distribution of bed facilities, all these factors have been analysed. Moreover, hospital-population and bed-population ratios have been computed in order to study the pattern of health care delivery by states in rural as well as in urban areas. The study suggests the necessity of sufficient health services in rural areas.

Unequal distribution of health services in Indian states
has been analysed by Chatterjee (1988) by taking differential mortality levels. She argues that mortality differentials point to what has been achieved in health in one area or group, but denied in another. The persistence of differentials or even their widening over time, despite the decline in general mortality, makes them important indicators of health. She point out that inequalities are not removed, rather created and perpetuated by past and present health policies. e.g., in 1978, the crude death rate of 14.2 per 1000 population consisted of a rural mortality rate of 15.3 and an urban rate of 9.4 per thousand population, indicating a difference of 63 per cent which was the lowest rural-urban differential in the 70s decade. It indicated that the rural-urban differentials persisted throughout the states and union-territories. It was 100 per cent higher in rural Rajasthan and Himachal Pradesh compared with the urban areas of those states, whereas the difference was only 25 per cent in Kerala (1981).

Inequality in the availability of health care facilities, as a product of various political factors shaping health care delivery system, has been studied and presented by many social scientists (Panikar 1975, Jeffery 1988, Banerjee 1983, 1985; Qadeer 1983). They have emphasised that the greater emphasis should be given to preventive measures in the health care delivery system, alongwith higher priority to the provision of medical care in rural areas.
The existing literature on the availability of HCFs in India reveals that it has been studied by taking either the quality of existing health facilities or their unequal distribution in rural and urban areas. Some others have tried to focus on the issue by taking some indirect and sensitive indicators like unequal distribution of health sector expenditure in rural and urban areas, and mortality differentials etc. Some, however, studied availability in terms of ratios, like facility per lakh of population etc. The factors shaping health care delivery system and unequal distribution as a result to the socio-political factors have also been examined by other social scientists.

In the present study, the issue of availability of health care facilities has been examined by adopting an interdisciplinary approach. It tries to examine the structural organisation of HCFs and thereby its availability in terms of its spatial distribution vis-a-vis the distribution of population in the state and also variations in its growth, with the growth of population over a period of 24 years. The availability of HCFs has been analysed not only in terms of infrastructural and manpower availability, but also in terms of quality of health services i.e. availability of drugs, medical equipments and other such facilities. The implications of the uneven distribution and availability has been discussed in its unequal accessibility and utilization.
II.2 Accessibility of Health Care Facilities:

The availability and supply of health care facilities do not guarantee their use. The services must be accessible. Accessibility has spatial and social dimensions. Spatial accessibility refers to the physical proximity of physicians, hospitals, clinics, primary health centres and so on. Therefore, the spatial maldistribution of health care services brings into the element of accessibility. In other words, the location of health care facilities also suggest that in order to avail these services, the patients have to travel long distances which has a significant bearing on the coverage and its utilization. Geographical location of medical provision has been examined extensively in developed countries. Shannon and Dever (1975) applied central-place theory to explore the efficiency of hospitals. Some geographers (e.g. Okafor, 1982) contend that central place theory should not be used at all for this purpose. They criticize the theory's claim that market forces should dictate thresholds and ranges for each level of service and argue that social welfare issues should override issues of economic efficiency. In Indian context, physical proximity or distance of health services has been considered an important factor in its accessibility. Krishnan (1975) and Nair (1980) showed that the infant mortality rates of different regions in Kerala were positively correlated with the size of the "catchment areas" of
health centres. Studying infant mortality rates between 1971 and 1977, Nair (1980) pointed out that infant mortality was lowest in the 'lowlands' and 'midlands', and higher in 'highland'. Nair attributed these variations largely to differences in physical access to health care facilities which are apparently poor in the hilly and mountaneous terrain. Barriers in utilization of are HCFs more than just physical distance.

Social accessibility refers to whether the facility is socially or financially available or whether it is open at convenient times, whether similar types of consultation are available at all etc. Social accessibility, therefore, depends on the nature and quality of medical practice and the social and economic constraints acting on individuals needing health care. These aspects have been researched by Banerjee (1981) and Qadeer (1983) by using behavioural parameters. Benerjee (1981) has shown that the PHC network, like all other welfare services, is inaccessible to poor. According to his Harijan respondents, "the nurse is a memsab and charged money for her services. She visits rich people and spends considerable time in their houses. The personnel of the PHC are closer to the 'elite' who not only provide them with 'hospitality' and 'rewards' but also put in a good word for them with the higher ups". Likewise, Qadeer analyses that the rural PHCs are not equally accessible to all the rural population. In the tribal district of Madhya Pradesh, for the poorer section of the village, the PHC as such remained
distant dream for them as this was not accessible. After the introduction of CHW's scheme, they were now using the CHW services in the hope for a better treatment, but PHC services were still not accessible as there was no link between the CHW's work and PHC network. A study conducted by Government of India (GOI, 1974, quoted in Qadeer, 1983) shows that not more than 11 per cent of home deliveries in rural areas are attended to by any kind of trained person, even though 93 per cent of the deliveries are conducted at home. She argues that these 18 per cent are undoubtedly the rural elites or the higher up to have the services of a trained personnel during childbirth.

Accessibility of health care services has also been examined by Zurbrigg (1984). The study reveals that 'free' Government health care services are 'ruinously' expensive for the rural poor. The author describes this through uneven distribution of health care resources between rural and urban sectors. Making use of services located in urban areas means lost wages to the rural poor or common labouring family in the village. She also argued that it is not only poverty and ruralness which make adequate health services inaccessible. The organisation of the health system itself prescribes additional barriers. The unspoken assumption behind the present hospital system is that the poor have unlimited spare time, and they can afford many days for diagnosis and treatment. She argued that a villager's time is of critical importance because it essentially means work, and
therefore, food and survival. In addition to this, she argued that "by closing the out-patient departments in the early/mid-mornings and by requiring many days for simple investigations to be done, the system ensures that even the small portion (30 per cent) of doctors working in the public sector are much more out of reach". Among the deprived, it is the women who are most deprived. Ramalingaswamy (1987) studied the women's access to health care in Paderu block of Visakhapatnam district in Andhra Pradesh. In this block, six villages, at a distance of 2, 4, 6, 8 and 10 kms respectively from Paderu town were selected. It was found that there was marked difference in the outreach of the Government health care programmes. People living in difficult terrain and far from the district headquarters do not reap the benefits of the programme (even though the programme do exist).

The question of accessibility is analysed by Akhtar and Izhar (1986) in a different way. They pointed out that in India, 80 per cent of the total population are in villages but a very small proportion of population have the access to the formal health care provision. They take the example of the higher-level specialised hospitals, such as open-heart surgery. Out of 18 hospitals offering this specialisation, seven were located in Maharastra state (5 in Bombay alone), the small state of Kerala having two such hospitals, Uttar Pradesh having 16 per cent of total population has only one hospital, whereas none existed in
Bihar. While showing accessibility problems, many of the researchers suggest dispersal of these facilities as an important solution. Whereas, White (1979) suggests that criterion of interlinkages or agglomeration reflecting locational interdependence, must be incorporated and given equal consideration.

In the present study, while analysing accessibility pattern of rural health services in Haryana, pattern of interlinkages among various HCFs have also been studied.

II.3 Utilization of Health Care Facilities:

Research into the patterns and determinants of utilization of health services, as Giggs (1979) points out, is a fairly well-developed facet of medical geography. Until the mid 1970s, the work was almost exclusively confined to the United States. Many of these recognised distance, physical accessibility or location as a major determinant of use of facilities (Shannon 1969, Morill 1970, Shannon and Dever 1974). During this period, "the current methods were limited primarily to linear analysis of distance and more recently to two dimensional (vector) measures of distance and direction". Shannon and Others (1974) have also showed the importance of distance and transportation facility as major variables in the accessibility and utilization of health services. Later on, a number of complex and often interrelated variables appeared to exert influence on the
utilization of health services. Eyles and Woods (1983) Phillips (1981) and Joseph and Phillips (1984) have pointed out that utilization, like accessibility, is influenced not only by the relative location of facilities and potential patients, but also by characteristics such as patients' age, sex, marital status, class, income, and religion. These variables can constrain accessibility that may result in differential utilization rates and patterns. Although, the effects of discrete variables can be remarkably difficult to ascertain. The utilization of health services has also been understood through theoretical models. A review of these models has been presented by Philips (1990). The earlier models tended to include fewer factors, whereas, later on models introduced more variables and stressed the importance of different factors. Perhaps, the greatest value of the models is in making the researcher aware of the great range of potential influences on utilization which may operate in any given circumstances. Though the concept of 'centerism' in which it is assumed that the nearest facility offering a given service will be used, now increasingly being challenged by researchers in the developed countries. Many authors have also stressed the importance of economic factor (prices, costs and income) on utilization decisions (Dutton, 1986). In economic studies, low household income has often been identified as a barrier to the use of modern health services, even when these are publicly provided. This has been researched and found to be true in developing countries such as, the Phillipines (Akin, Griffin and
others, 1985) and Kenya (Mwabu 1986). In addition, variables suggesting attitudes to quality of services as major influence on utilization have also been identified. Annis (1981) in case of Guatemala and Chile suggests that improved quality of care and presentation of care seems to be more important than improving both economic and physical accessibility. Another study in Grenada, West Indies, (Taylor, Hayes and others, 1990) shows that home environment may act as a socio-geographic focus on both disease transmission and of earned health behaviour. Baily and Philips (1990) point out that though these variables may be important in the study of utilization of health services, but none of these variables can be said important with any degree of confidence in case of developing countries as the services, in these countries, are numerous and patchy. Moreover, the importance of accessibility and physical distance are needed to study, as underdeveloped countries suffer with dual drawbacks of limited facilities and low personal mobility.

In India, utilization of health care services has started picking up since last decade or say 1980's. There are rather limited number of studies conducted by various social scientists. Some of these are reviewed here. Kroeger (1983) notes that accessibility in rural India is a dominant factor affecting use, although the strength of distance-decay varied from one type of facility to another. A health centre attracted 75 per cent of its patients from within 2.9 miles, traditional practioners 2 to
5 miles and qualified allopathic practitioners had a larger catchment of 7.5 miles. Long distances and waiting times were cited as major reasons for not using allopathic dispensaries in New Delhi and in rural Punjab, accessibility was a major factor in choice among therapies offered. Ramchandran and Shastri (1983) found little variations between socio-economic groups in the distances travelled to western medical facilities in rural India. However, they explained this by the fact that the available medical facilities were few, so the choice was limited. Large-scale farmers did, nevertheless, have a tendency to travel farther for treatment than artisans, who tended to seek treatment within the village. There was, therefore, some indication in their findings that differential 'social accessibility' existed even in these circumstances and that the actual places of visits for treatment did differ among the various socio-economic groups in a status-conscious population. In the highest status and income group over one-third were treated by private practitioners, compared with only 3 per cent in the poorer groups. This would naturally influence the distance that would have to be travelled for specific source of care.

Kothari and others (1982), in two different defined rural areas (one tribal and other non-tribal) of Madhya Pradesh in Jabalpur district, have studied the nature and extent of utilization of available public health services for children. Analysis revealed that utilization of Government health
facilities was significantly influenced by factors such as distance of health facility from home, influence of relations and neighbours, number of children, parental income and parental education, parent's concept of cause of illness, nature of disease, availability of supplies, fear of hospitals, and also whether the family was tribal or non-tribal. Educated parents' felt needs and suggestions for improving health facilities in their areas, brought out diverse views and opinions even though half the tribal and a quarter non-tribal parents had no suggestions to offer. Better rapport with and improved doctor-patient relationship ranked high as a felt need of non-tribal parents. Tribal parents suggested improvement in transport and communication.

In another study conducted in Nagpur (Pathak and others, 1981) shows that utilization of health services was affected significantly by factors like age, literacy, type of occupation nature of illness and accessibility of health services. A study by Nag (1983) underlines the importance of Kerala's higher literacy rate in the better performance in utilization of HCFs and in reducing its mortality.

Khan, Anker and Ghosh (1989) investigated the accessibility of health services and reasons for under-utilization of these in rural Uttar Pradesh. It used indepth information collected by social scientists using anthropo-logical techniques. The study concludes that even though over time the
health and family planning infrastructure in rural U.P. has increased significantly, its accessibility to and utilization by rural masses have remained limited. The PHCs, sub-centres and dispensaries were found to be ill-equipped, supplies of medicines were far less than required, and to make situation even worse, the staff of these services did not function properly. The late arrival or non-availability of doctors, and other functionaries at the health centres was a common occurrence. Poor transport facilities further reduced the accessibility and utilization of primary health centres by the rural masses. In short, the credibility of Government health services in rural U.P. is fairly low. Village health practitioners, though unqualified, were found to be reasonably effective in treating common ailments. Their easy accessibility to rural people, their understanding of the cultural values, make them reasonably effective as well as acceptable. Thus, it showed that the public health services in rural U.P. were not widely utilized, the treatment of common diseases was taken care of by the largely unqualified village practitioners. These private village practitioners were not effective in the treatment of serious or chronic diseases, and also in preventive measures such as provision of pre and post-natal care, protection of children against infections diseases, and, provision of family planning measures.

In another study, in a tribal area of Bihar, the reasons for under-utilization of health services have been analysed (Khan
and others, 1983). To understand the health seeking behaviour of people and their interaction with public and private health personnel, a large scale household survey was conducted. The efficiency or working of PHC was also studied. It showed that the doctors were busy in private practice rather than attending PHC work. The absence of lady doctor was a factor preventing women to seek help in maternity and gynaecological problems. Supply of medicines were not adequate and many of the immunisation vaccines were always in short supply. In addition to these, the high population per health worker, inadequate knowledge and training of workers, lack of transportation facilities, bad communication network, and complete lack of motivation on the part of workers for performing their jobs were some of the factors contributing to the underutilization of health and family welfare services.

Panikar (1984) argues that the health consciousness of the public is an important factor in the utilization of health programmes. Though, the availability of health services is an important aspect, but he argues that proportion of rural hospitals is almost same in the states of Kerala, Orissa and Tamil Nadu. But in the states of Tamil Nadu and Orissa, the death rates are nearly double as compared to Kerala. Panikar suggests that the general literacy and education of females have contributed most in the improvement of the health of infants and children in the utilization of health services in Kerala. In a
different setting of Maharastra, Sanjeevanee Mulay (1990) investigates the factors associated with utilization of MCH services provided through PHCs. The paper shows that the level of immunisation depends on (i) the health consciousness of the people/users' and (ii) the efficiency of the health staff in delivering these services. The study indicates that inaccessibility of the health centre, a low level of health consciousness, and the lack of efficiency in providing the services are the main hindrances in increasing the immunisation coverage. For immunisation of pregnant women, motivation is more important, while for immunisation of children accessibility becomes more important.

Socio-economic conditions and utilization of health services in rural India has been taken up very scantily. Nevertheless, infant and child mortality and morbidity pattern which are considered an important and sensitive indirect indicators of utilization of health services, has been researched by many social scientists (Kamble 1984, Dutta 1972). In these studies, social and economic conditions are linked with the morbidity patterns in the rural areas. There is also some reflection on how different social and economic conditions enable them to utilize or not to utilize the health care facilities.

In an urban setting of Madras city, health services utilization has been analysed by Yesudian (1988). In order to study the utilization of health services, he divides the sample
households into different social classes. Social class includes income, education and occupation of the head of household. On the basis of these three aspects, he divided the social class into 4 categories. High social class where the households had high ranks in all the 3 criteria of education, occupation and income. Likewise, middle class, low class and very low class, where these three aspects were comparatively weak. This study confirmed the basic assumption that higher the social class, better would be the utilization of health services. It concludes that almost every health need was better tackled by the high and middle classes than the low and very low classes. Ramesh (1990) however, discussed the methodological issues and approaches in obtaining any data regarding utilization of HCFs, which should be tackled carefully, while studying such issues.

A brief review of the studies related to health services utilization in India indicated that two aspects have been studied more elaborately. One is the functioning and efficiency of health centres and another various socio-psychological variables affecting the use of these services. In the present study, the issue of accessibility, location and physical distance has been studied along with efficiency of health centres and also the socio-economic variables which are determinants in the utilization of these services. The present study, therefore, presents a inter-disciplinary approach in studying the patterns of utilization of HCFs in rural Haryana.