CHAPTER I
INTRODUCTION, SCOPE AND METHODOLOGY

Introduction

Health, as defined by World Health Organization (WHO 1948), is a state of complete physical, mental and social well-being and not merely the absence of a disease or infirmity to lead a socially and economically productive life. WHO proclaimed health as a fundamental right of every individual and society. Good health is a prerequisite for one’s active participation in varied domains of life. Health, being a wider concept, embraces the impact of diverse types of health services ranging from preventive to the curative in nature.

Health is influenced by a number of factors such as adequate food, basic sanitation, life styles, genetic factors, environmental hazards, and communicable diseases. Thus, health care embraces a multitude of services provided to individuals or communities for promoting, maintaining, monitoring or restoring health.

Primary health care has been defined as a dynamic approach which integrates at the community level; an approach that is effective, accessible, comprehensive, acceptable, and at low cost. An effective primary health service delivery would be one that is responsive to the needs of consumers. Its association with the traditional forms of health care and its cultural acceptability is also desirable. The WHO’s 21 targets included the statement “By the year 2010 people in a given region of a community should have much better access to family and community oriented primary health care, supported by a flexible and responsive hospital system.”

According to the vedic benediction, Sarve Bhavanthu Sukhinah, Sarve Santhu Niramaya i.e. May All Human Be Happy, May All Be Without Disease. ‘Adam never had measles, appendicitis……never took an analgesic, nor swallowed the decoctions of a quack’ – E. Shirk Cole (1905). In India the concept of health is as old as the Vedas (6000 BC). Historically, examples of richness of Indian health traditions can be seen in ruins of Mohenjodro and Harappa or in ancient texts like Charaka or Sushruta. Since time immemorial, health systems have been developed extensively to handle the needs of populations. Different patterns of population settlement call for different patterns of health care.
Health planning in India is an integral part of national socio-economic planning. The guidelines for national health planning were provided by committees appointed by the Government of India. The main ones were Bhore Committee 1946, Mudaliar Committee 1962, Chadha Committee 1963, Mukherji Committee 1965 & 1968, Kartar Singh Committee 1973, and Shrivastava Committee 1975.4

India was the first country in the world to start with National Family Welfare Programme in 1951.5 Government of India, under the Ministry of Health and Family Welfare started National Malaria Control Programme in 1953, Malaria Eradication Programme in 1958, National Filaria Control Programme in the same year, National Tuberculosis Control Programme in 1962, and Rural Health Scheme 1977.

There have been a series of legislations related to health. Some important enactments are the Indian Medical Council Act 1933, Madras Public Health Act 1939, and Employees State Insurance Act 1948. The Central Council of Health and Planning was constituted in 1952 to facilitate co-ordination of health policies between the central and the state governments. In the same year the First Five Year Plan was presented to the Parliament by the Prime Minister and the Community Development Programme was started in the country thereafter.

Under the Constitution of India, states are largely independent in matters relating to the delivery of health care of their people. Each state has developed its own system of health care which is independent of the Central Government. The Centre makes the policies, plans guidelines and assists and coordinates the activities of state health ministries.6 Thus, health is a state subject and each state has developed its own pattern to suit its policy and convenience. The people at large receive health care through public sector, private sector, indigenous system of medicines, voluntary health agencies, and vertical health programmes. The policies, plans, programmes, and budgets of the government sector hospitals are approved and allocated by the State Health Directorate and the State Health Department.

In India, primary health centres were started as part of the Community Development Programme in 1952 replacing the traditional dispensaries and hospitals in rural areas. Dispensaries are to serve a population of 30,000 in the plains and 20,000 in hilly and tribal areas. Sub centres were established to bring the health facilities closer to the rural population. One sub centre serves a population of 10,000. A referral hospital called a community health centre is to be set up for 1.0-1.2 lakh
population with the facility of 30 indoor beds, X rays, and other investigative facilities.

The Minimum Needs Programme in the Ninth Plan included rural health, rural water supply, rural housing, electrification, rural roads, and environmental improvement of urban slums. Basic health care services identified were 100% coverage of primary health facilities in rural and urban areas by providing basic health and family welfare services to the population within 1-2 kilometres of their dwellings.

Dr. Mahler, Director General of WHO remarked that “Once more you hear everywhere, solar energy, wind energy but everybody seems to be overlooking the fact that without human energy, there would be no kind of progress, either socially or economically. The greatest strength of any health care organization lies in the quality of its human resources.

In India, disastrous consequences like disease, death, loss, or damage of property, disorganization of public services resulting from natural calamities like floods, cyclones, earthquakes and frequent droughts indicated the inadequacy of preparedness and activation of rapid response in crises situations. The resources allocated to the health sector form an important determinant of health services in the country. Various international organizations and United Nations provide significant material and technical assistance to health and family welfare programmes in India.

Health care includes availability of health facilities, availability of needed drugs, equipment, manpower, and health services at various levels. Health services should be easily accessible and available especially to the under privileged sections of society. From the consumer perspective, acceptability is preceded by a perceived need for service and a positive perception of the value of using the service. This relates to the availability of appropriate services, the cost to the consumer in terms of money and time, and a positive attitude towards the services provided.

Acceptability is also greatly influenced by the provider’s rapport with and attitude towards the consumer. The Indian systems of medicine such as Ayurveda, Sidha, Unani, and drugless therapies like Yoga and Naturopathy have been widely accepted in India for centuries. Homeopathy originated in Germany but is widely accepted and practiced in India. These systems offer a range of safe, pure, cost effective, preventive, and curative therapies.

During illness there are various factors that influence the way a person behaves towards his illness. The factors may be personal, environmental or social, and
in a way reflect the health behaviour utilization of people. Actual utilization of health services or the expressed demand for services by the consumers provides the proof of accessibility and acceptability of health services. Expressed demand for health services has been measured by utilization of available services, or the acceptance of services, particularly when the service system has the capacity to meet the expressed demand. Very little information existed regarding the health care sought, the determinants of choice for a particular service, the acceptability of services, and constraints involved.

The health infrastructure in developing countries has been inadequate because of poor surveillance, lack of manpower, and funds. In India, there is a strong disparity between the availability and utilization of health services in the organized and the unorganized sector. Health care costs force the underprivileged to do without health care, delayed or incomplete treatment, self-medication, and dependence on informal and ineffective sources of care. For 80% of the population in India “primary health care” is synonymous with traditional medicine.

Health services in India are provided by the government, the private sector, and voluntary organizations. The health care sector in our country includes health care providers ranging from well qualified doctors of the allopathic system, homeopathy, ayurveda, and unani systems to untrained providers of medical aid, herbalist, and magico-religious practitioners. Various reasons for preferring the type of health facility noted by Khokhar (2003) in his study were easy availability, effective treatment, low-cost, better service, faith in the system, and cordial behaviour.

The inability to pay for high cost of health services affect health seeking behaviour. In urban health care systems, the middle and upper classes have access to both governmental and non-governmental sectors for the best services while the lower class seeks services from the mismanaged and non-organized sector in various ways. According to WHO, poor are given less choice of service from providers and offered lower quality amenities.

The governments of developing countries are unable to deliver free health services as the basic right of the citizen in a holistic manner. To make provision for basic health care to all the people is a difficult task for administrators in a country like India because of its large and diverse geographical terrain, size of the population, and its ethnic and cultural variations. To fill the gap indigenous health care systems
attempt to meet the needs of the people by working with the community. Further, for supplementing the efforts of the government NGOs or voluntary organizations need to be involved in various health and family welfare programmes. Thus, these organizations can help in bringing changes in social and personal attitudes, perceptions, and behaviour; they bridge the communication gap between the people and the government.

A policy is a system which provides the logical framework and rationality of decision making for the achievement of intended objectives. It sets priorities and guides resource allocation. It may be formulated by heads of government, legislature, and regulatory agencies. A good health policy should ideally be one which is framed on the basis of scientific analysis of the status of community health.

According to Bose (1982) the aim of health policy is to secure a fundamental change in health status of the people to help break the circle of poverty encircling the masses in the developing world and to liberate the population to secure the change that they have chosen, in which they participate.

Public health policy aims at the improvement of conditions in which people live e.g. livelihood, lifestyles, environment, and necessary health services. A recent landmark in the development of health policy was the Alma Ata Declaration (1978) and world wide adoption of the goal of “Health for All” by 2000 AD. This was echoed in the Government of India’s National Health Policy in 1983. A National Committee was set up to attain the goal of “Health for All” by 2000 AD.


The Government from time to time declared deadlines for achievement of goals in health and various related areas. Some of the important goals to be achieved by 2000-2015 are reduction of mortality by 50% on account of TB, Malaria and other vector borne diseases, reduction of IMR (Infant Mortality Rate) to 30/1000 live births,
reduction of MMR (Maternal Mortality Rate) to 100/100,000 live births, to increase utilization of public health facilities from current level of <20 to >75%, and to establish a system of surveillance, national health accounts and health statistics.19

Some of the specific objectives of the Ninth Five Year Plan (1997-2002) included provision of basic minimum services of safe drinking water, primary health care facilities, and shelter.20

The major objectives of the National Health Policy 2002 were:21

- to ensure equitable access to health services across the social and geographical expanse of the country,
- to increase access to the public health system by establishing and upgrading infrastructure in existing institutions,
- to enable contribution of private sector in providing health services for the population group which can afford to pay for these services,
- to increase access to tried and tested systems of traditional medicine.

The major objectives of the Tenth Five Year Plan (2002-2007) have emphasized on reduction of IMR and MMR22 as

<table>
<thead>
<tr>
<th></th>
<th>Reduction by 2007</th>
<th>Reduction by 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMR</td>
<td>45 / 1000 live births</td>
<td>28 / 1000 live births</td>
</tr>
<tr>
<td>MMR</td>
<td>2 / 1000 live births</td>
<td>1 / 1000 live births</td>
</tr>
</tbody>
</table>

It was thus felt that the availability of varied services in a community needed to be assessed to know the health services availability, to provide better community based care, and to develop more effective health systems. Further, implementation of a holistic national health programme would require an assessment of the available health systems.23

**Review of Literature**

A large host of literature covering government documents, research papers, books, journals and theses were reviewed. The literature reviewed was organized and presented in six sections. A chronological order has been observed within each section. They are

I. The concept of health care
II. Budgetary allocations and utilization for health care
III. Availability of health care services and facilities
   a) Manpower
   b) Infrastructure, equipment and supply
   c) Indigenous health services
   d) Alternative agencies

IV. Utilization of health care services and facilities

V. Availability of health care services and facilities in Chandigarh

VI. Achievement of health targets in India

I. The Concept of Health Care

   The International Conference at Alma Ata USSR (1978) led to the formulation of the concept of primary health care. The National Health Policy in the year 1983 declared the goal of “Health for All” by the year 2000 AD through the universal provision of comprehensive primary health care systems. It was reported that countries such as Japan, Germany and Sweden had less developed primary health care systems while countries like Denmark, Netherlands and United Kingdom had well developed primary health care system.

   The Supreme Court of India, in its various judgments, had declared that under Article 21 of the Indian Constitution, health care was a public right and it was the responsibility of the government to provide this care to all in equal measures.

   Sunder (2000) found no uniform model of district health organization in India.

   Article 25 of the Universal Declaration of Human Rights unequivocally stated that health care for the preservation and promotion of health was one of the most basic human rights.

II. Budgetary Allocations and Utilization for Health Care

   Gupta (1996) investigated the misutilization of National Welfare Award money (Rs. 12.5 crore) for the period of 1982-1987 in Punjab state for the construction of the building of the Directorate of Health Services, Punjab at Chandigarh. The investigator also pointed out inadequate funds allocation for expanding family planning programme which was to reach 50 lakh married couples.

   The Reproductive and Child Health Programme with a budget of Rs. 5,111 crore was one of the biggest programmes started in the Ninth Plan. According to
another study, it was found that nearly 60-70 percent of the government expenditure on health goes towards the salary of the staff leaving a limited scope for improvement of logistics and essential equipment. To ensure quality care, it further recommended the accreditation, application of Consumer Protection Act, periodic monitoring of facilities and services, periodic training, and continuing education programmes in private institutions.

Financial assistance to the voluntary organizations were made available under various schemes for improvement of medical services, running hospitals, dispensaries in rural as well as urban areas, family welfare, primary health care, promoting concept of maternal child health care, immunization, family planning, and communication. National AIDS Control Organization (NACO) funded some of the NGOs to implement various projects throughout the country.

The governments of developing countries are unable to deliver free health services as the basic right of the citizen in a holistic manner. A study among the households living in 'Jhuggi-Jhompri' colonies of Delhi showed that a household spent Rs. 424.87 per capita per annum as direct health care expenditure and Rs. 240.55 per capita per annum as indirect health care expenditure. Nearly 24% of households borrowed money from various sources or sold their belongings to meet the health care costs. National Health Policy 2002 had set an allocation of 55% of the total public investment for the primary health sector, 35% for secondary, and 10% for tertiary health care services.

Kapadia (2002) identified that only 15% of the public budget was spent on dispensaries, health posts, and maternity homes which provided first level health care services. Inadequate financing and inefficient resource management by the government had led to worsening the quality of care provided by health agencies in India. Kapadia (2002) identified that only 15% of the public budget was spent on dispensaries, health posts, and maternity homes which provided first level health care services.³⁴ Inadequate financing and inefficient resource management by the government had led to worsening the quality of care provided by health agencies in India.³⁵ ³⁶

Sengupta (2002) reported that 50% of people who lived below the poverty line spent 1/5th of their per capita income on health care alone. Waggstaff (2002) reported that the poor received less of the government subsidies coming to the health sector.

The government granted aid of Rs. 22.50 crore to 340 voluntary organizations during the year of 2000-01. Sankar and Kathuria (2003) explained that the total expenditure of all health departments taken together accounted for only 1.64% of total expenditure in the actual figures of budget 2001-2002. Out of this 35% was for the
department of health, 59% for the family welfare programmes, and only 2% was for the Indian system of medicine and homeopathy. It was further added that the increased allocation was mainly limited to family welfare departments. The 2003-2004 budget showed an infinitesimal increase in the budget for health departments to 1.74%. The allocations for rural family welfare services declined from the budgeted Rs.1,718 crore to Rs. 1,538 crore in that year. It was also mentioned that public health spending accounted for less than 1/5th of the total expenditure on health. Seventy five percent of total expenditure was spent on secondary and tertiary health care agencies located in urban areas. The rural areas were ignored.

III. Availability of Health Care Services and Facilities

According to Suchman, a direct relationship is retained between a social group structure and the medical services. Health services and facilities are inadequate in developing countries like India because of poor surveillance, lack of manpower, equipment, and funds.

Balaram (1981) placed private organization as equivalent to government agencies in terms of manpower, resources, and equipment. He further suggested that their working could be categorized as preventive, promotive, and rehabilitative and integrated with the curative function already in existence.

a) Manpower

India is a developing country with a large and diverse geographical terrain, huge population with a number of ethnic and cultural variations. It has a variety of health care providers (manpower) ranging from well qualified doctors of allopathic system, homeopathic, ayurvedic, registered medical practitioners to untrained providers of medical aid, herbalists, and magico-religious practitioners involved in providing health care to the people.

According to Bshore Committee recommendation, a primary health care centre should have 2 medical officers, 4 public health nurses, 4 midwives, 4 trained dais, 2 sanitary inspectors, 2 health assistants, 1 pharmacist, and 15 other class IV employees. Mukherji Committee (1966) recommended additional staff for various agencies like primary health centres, district health organization, district hospital, and urban areas. Shrivastava Committee (1975) recommended primary health care within
the community through trained workers to keep the health of the people in the hands of the people.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Categories of Personnel</th>
<th>Suggested Norms</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Doctors</td>
<td>1/3,500 population</td>
</tr>
<tr>
<td>2</td>
<td>Nurses</td>
<td>1/5,000 population</td>
</tr>
<tr>
<td>3</td>
<td>Health workers (male)</td>
<td>1/5,000 population</td>
</tr>
<tr>
<td>4</td>
<td>Trained <em>Dai</em></td>
<td>1/Village or 1/1,000 population</td>
</tr>
<tr>
<td>5</td>
<td>Pharmacists</td>
<td>1/10,000 population</td>
</tr>
<tr>
<td>6</td>
<td>Lab. Technicians</td>
<td>1/10,000 population</td>
</tr>
</tbody>
</table>

Nurse to population ratio was 1:24340 in 1947 and improved to 1:11714 in 1997. Singh’s (1990) study revealed the shortage of staff, limitations of funds, non availability of senior doctors, and missing records and medicines in General Hospital, Chandigarh. The study was secondary data based and its main focus was on the Management Information Systems for hospitals in Chandigarh.

Aggarwal’s (1994) study of the urban area of Varanasi noted that one auxiliary nurse midwife was available for 1,0991 population, and one health officer for 2,1982 population. Biswas (1995) pointed out regional imbalance in the availability of trained medical manpower in rural and urban areas. Gupta (1996) found that the number of multipurpose health workers (female) available in sub centres of Rupnagar were 1/5000 population. On an average working day, they had less than five minutes available per family per visit.

According to ICMR study (1996) it was reported that either the doctor was not there in the primary health centre or if she/he was there the only thing that the patient was given was a piece of paper. In the same study it was noted that the private sector in India had emerged to play a significant role in the health care delivery system. There was demand for expansion of the private health care system. About 78% of doctors in India worked in the private sector. Out of these 78%, only 3% had a MBBS degree. Similar results were reported by Sharma and Duggal (1990).

Various authors reported non availability of health manpower in rural and urban areas (Biswas 1996, Singh 1990, Joshi 2002).
Narang’s (1997) micro study identified the existing categories of health care providers and activities performed by them in a rural area under a primary health centre of Haryana. A total of 46 health care providers were identified of which only 15 health care providers were from the government sector. This included two medical officers, two health assistants, and five health workers who were providing health care services in the study village. In the study village it was also noticed that a class IV employee was routinely distributing medicines and doing dressings, though not authorized to do so officially. The medical officers were MBBS qualified with 2-3 years of experience. In-patient and laboratory services were not provided to the patients and 87.5% of the all female workers had received training in the last five years. He noted that *dais* were the main providers of antenatal and postnatal care. It was further observed that besides dispensing medicine, the pharmacist also examined patients and gave treatment on the days when the medical officer was on leave or absent. The *anganwadi* worker had undergone basic integrated child development scheme training but had no refresher training.

Private sector in India is both large and varied. In Madhya Pradesh, the private practitioner to population ratio was found to be 0.24/1,000 and in rural West Bengal 1.12/1,000. Lamb (1912) observed that at the outbreak of World War I India had a total of 748 doctors. In 1951 the doctor to population ratio was 1:6000 and in 1985 ratio was 1:3000 population.

Non availability of health personnel and large number of vacancies of specialists were also found in primary health care agencies (Gupta 1999). A study by Anandhi (1999) in Haryana revealed that 43% of the 31 practitioners available for a population of 30,000 practiced ayurvedic medicine. Majority had an average case load of around 30 patients in a day and 60.8% gave a combination of allopathic and ayurvedic medicine.

Surveys conducted in India showed 32% of doctors in rural areas serving 80% of that population. There was lack of manpower in the categories of auxiliary nurse midwives, health workers, doctors, laboratory technicians, and specialists in rural health institutions of the 15 states covered in the study (Gupta 1999). It was found that non availability of health personnel, large number of vacancies of specialists, and rude behaviour of staff accounted for non-utilization of government health facilities.
Availability of manpower in various rural health institutions of various states of India as reviewed by Gupta was as given in Table 1.2.

<table>
<thead>
<tr>
<th>S. No</th>
<th>State</th>
<th>% Sub Centres without Auxiliary Nurse Midwives</th>
<th>% Sub Centres without Health Worker</th>
<th>% Vacancies of Doctors in Primary Health Centre</th>
<th>% Shortfall of Lab. Technicians in Primary Health Centre</th>
<th>% Shortfall of Specialists in Community Health Centre</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kerala</td>
<td>23.50</td>
<td>23.50</td>
<td>Nil</td>
<td>79.10</td>
<td>32.40</td>
</tr>
<tr>
<td>2</td>
<td>Tamil Nadu</td>
<td>1.60</td>
<td>54.10</td>
<td>12.60</td>
<td>37.70</td>
<td>30.90</td>
</tr>
<tr>
<td>3</td>
<td>Andhra Pradesh</td>
<td>24.6</td>
<td>60.10</td>
<td>9.50</td>
<td>43.90</td>
<td>58.70</td>
</tr>
<tr>
<td>4</td>
<td>Karnataka</td>
<td>8.60</td>
<td>13.00</td>
<td>14.40</td>
<td>70.40</td>
<td>78.70</td>
</tr>
<tr>
<td>5</td>
<td>Maharashtra</td>
<td>5.30</td>
<td>38.40</td>
<td>20.80</td>
<td>74.80</td>
<td>79.30</td>
</tr>
<tr>
<td>6</td>
<td>Punjab</td>
<td>Nil</td>
<td>14.30</td>
<td>12.40</td>
<td>29.40</td>
<td>25.00</td>
</tr>
<tr>
<td>7</td>
<td>West Bengal</td>
<td>Nil</td>
<td>2.60</td>
<td>16.00</td>
<td>79.30</td>
<td>62.60</td>
</tr>
<tr>
<td>8</td>
<td>Gujarat</td>
<td>8.0</td>
<td>36.40</td>
<td>15.70</td>
<td>48.20</td>
<td>87.20</td>
</tr>
<tr>
<td>9</td>
<td>Orissa</td>
<td>0.60</td>
<td>94.31</td>
<td>10.80</td>
<td>72.10</td>
<td>30.70</td>
</tr>
<tr>
<td>10</td>
<td>Assam</td>
<td>26.00</td>
<td>100</td>
<td>Nil</td>
<td>64.80</td>
<td>97.10</td>
</tr>
<tr>
<td>11</td>
<td>Haryana</td>
<td>6.50</td>
<td>6.0</td>
<td>30.00</td>
<td>67.00</td>
<td>87.30</td>
</tr>
<tr>
<td>12</td>
<td>Bihar</td>
<td>5.20</td>
<td>88.10</td>
<td>Nil</td>
<td>73.00</td>
<td>100%</td>
</tr>
<tr>
<td>13</td>
<td>Rajasthan</td>
<td>2.20</td>
<td>49.50</td>
<td>11.40</td>
<td>28.60</td>
<td>81.60</td>
</tr>
<tr>
<td>14</td>
<td>Madhya Pradesh</td>
<td>1.50</td>
<td>26.80</td>
<td>16.50</td>
<td>21.40</td>
<td>71.10</td>
</tr>
<tr>
<td>15</td>
<td>Uttar Pradesh</td>
<td>Nil</td>
<td>100</td>
<td>40.20</td>
<td>78.40</td>
<td>76.20</td>
</tr>
</tbody>
</table>

Manpower training was nonexistent in various states of India like Kerala, Uttar Pradesh, and Himachal Pradesh. According to the findings of the Operation Research Group, Uttar Pradesh, there were 90% home deliveries and 80% were attended by untrained persons. Similar findings were also reported in Orissa - 88% home deliveries mostly attended by untrained persons.

Kumar’s (2000) study, a survey to see effects of continuing training on practices of traditional birth attendants, found that 83.5% pregnant women respondents took advice untrained traditional birth attendants to increase food intake. Sinha (2001) found that 38.1% deliveries were conducted by untrained personnel in West Bengal.

As per Census 2001 of India, there was one doctor for 2640 people, a total 3,35,485 auxiliary nurses midwives, 6,01,261 trained dais, 3,23,208 health guides,
and 1,37,291 multipurpose health workers (male and female). Sukanya (2001) noted that the share of health care providers in health care delivery system of India had increased over a period.

Lal (2001), while describing the coverage of health services stated that a functional centre is one having full staff and essential equipment, materials, and supplies available in that unit.

The status of availability of manpower as studied by Gupta (1999), Park (2000), Gandhi (2000), and Joshi (2000) is summarized in Table 1.3

<table>
<thead>
<tr>
<th>Health manpower and facilities</th>
<th>Norms given</th>
<th>Current Status as per Norms/Total number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctors</td>
<td>1/35,000 population</td>
<td>1/6000 population (1951)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1/3000 population (1981)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1/2460 population (2001)</td>
</tr>
<tr>
<td>Nurses/midwives</td>
<td>1/5000 population</td>
<td>1,16172 (1993)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3,35,485 (2001)</td>
</tr>
<tr>
<td>Trained Dai</td>
<td>1/1000 population or per village</td>
<td>6,01,261</td>
</tr>
<tr>
<td>Anganwadis</td>
<td>-</td>
<td>5,92,571</td>
</tr>
<tr>
<td>Village Health Guides</td>
<td>1/1000 population</td>
<td>3,23,208</td>
</tr>
</tbody>
</table>

Table 1.3
Summary of Studies of Health Manpower

There were six lakh practitioners in Indian system of medicine and homeopathy in India. Most of these served in remote rural areas or urban slums. There was lack of essential staff and infrastructure in such institutions. Joshi (2002) reported the estimates of the Health Ministry; there was a huge difference in the availability of doctors in urban areas (approx 73.6%), and rural areas (as low as 26.4%).

It was reported by Kapadia (2002) that Maharashtra, a state with the highest number of slum dwellers, did not have voluntary health workers in most of the urban areas. Further, health posts in urban Maharashtra were far fewer than the current requirement.

National Health Policy (2002) advocated expanding the pool of medical practitioners to include a cadre of licentiates of medical practice, practitioners of
Indian system of medicine, and homeopathy. It further added that different categories of medical manpower like paramedical workers, and practitioners of the Indian system of medicine can be permitted after adequate training. With the objective of ensuring quality care recommendations were made for accreditation, application of Consumer Protection Act, periodic monitoring of facilities, and services, periodic training, and continuing education programmes in private institutions.

Narayana (2003) discussed that in terms of number of doctors, the size of the private sector was larger than the public sector in all towns of Andhra Pradesh. Out of all the registered doctors in allopathic system with the Medical Council of India, only 20% were employed in government agencies. Further, 85% of government doctors in all towns had a private practice which accounted for 32% of private clinics. Few trained nurses and paramedical personnel were found in private sector in Andhra Pradesh. On an average 40% of doctors were found to be postgraduates in all the towns of Andhra Pradesh. There were 18,000 to 20,000 nurses being trained per year in India. Even so most of the hospitals had one nurse for more than 50 patients which was against the norms laid down by union government (nurse-patient ratio for special wards 1:4 and 1:6 for general wards). India has a strong disparity between the availability and utilization of health services and facilities in the organized and the unorganized sector.

In Chandigarh, as per census of 2001, there were a total of 200 qualified ayurvedic doctors, i.e. 1 ayurvedic doctor for 4504 population.

b) Infrastructure, Equipment and Supply

Bhore Committee Report (1946) recommended that a government primary health centre should be a focal point for providing comprehensive, curative, and preventive services in rural areas. It should serve a population of 40,000. The Kartar Singh Committee (1973) recommended one PHC for 16 sub centres covering 50,000 people and one sub centre for 3,000-3,500 people. The International Conference on primary health care proposed a module for semi rural areas of 15,000-50,000 population. This module included a health centre with beds, complemented by a network of rural health posts, and an adequate health centre team.

The Sixth Five Year Plan pointed out that the availability of sub centre, primary health centre, and rural hospitals touched only a fraction of the rural
ICMR Task Force Study (1991) on primary health centres in the country showed requisite ratio of one primary health centre per 30,000 population.\textsuperscript{84}

The International Hospital Federation states that a health centre should have sphygmomanometer, X-ray apparatus, microscope, sterilizing instruments and apparatus, vehicles, and specific purpose rooms.\textsuperscript{85} Inadequate services were observed by Dhaulta (1984, 1986) in district hospitals of Rajasthan\textsuperscript{86} and Himachal Pradesh.\textsuperscript{87}

Gupta (1991) conducted a study in district hospitals of North India and inferred that there was an acute shortage of basic equipment like thermometers, disinfectants, dressing materials, and antiseptic lotions.\textsuperscript{88} The Sixth Five Year Plan pointed out that infrastructure of sub centres, primary health centres, and rural hospitals touched only a fraction of the rural population.\textsuperscript{89}

Bombay city nursing homes did not have the facility for critical care in emergencies, as noted by Biswas (1995).\textsuperscript{90} Population Research Centre, in a study in Punjab in the year 2000, noted that the governmental health institutions made family planning services more available as compared to private institutions.

Kapil (1994), while evaluating a programme for maternal and child health, revealed that 55.5\% of rural and 32\% of urban respondents had to wait less than an hour at their family planning centres for guidance.\textsuperscript{91} Among 127 sub centres in Rupnagar district of Punjab, Gupta (1996) found a greater lack of transport facilities in Kharar than in Anandpur Sahib block.\textsuperscript{92} Similarly, lack of transport facilities was reported by an ICMR Study (1996).\textsuperscript{93}

However, a large number of studies by different authors cited lack of availability of infrastructure and equipment in health care institutions which included buildings, treatment rooms, waiting rooms, sitting/waiting places, basic equipment like syringes, thermometers, B.P. apparatuses, bed pans, urinals, drugs, soaps, antiseptics, oxygen facilities, emergency services, laboratory facilities, public health facilities, drinking water etc. (Table 1.4).

In Delhi out of 2000 private nursing homes over 1,500 were found to be unlicensed.\textsuperscript{94} World Health Organization (1996) suggested that necessary supplies and equipment must be available at each level of health care to ensure quality care.\textsuperscript{95} However, majority of health centres had no facility for routine check up, weight record, blood pressure measurement or haemoglobin estimation.\textsuperscript{96}
<table>
<thead>
<tr>
<th>Study Year</th>
<th>Researcher</th>
<th>Study Area</th>
<th>Availability Of Health Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1983</td>
<td>Klinoubel K. 97</td>
<td>Lampang Province of Thailand</td>
<td>Health care centres lacked sanitation facilities, water supply, and disposal of wastes.</td>
</tr>
<tr>
<td>1991</td>
<td>Gupta 98</td>
<td>Distt. Hospitals of North India.</td>
<td>73.8% respondents reported lack of basic equipment like syringes, thermometers, B.P. apparatus, bed pans, urinals, basins, buckets, drugs, soaps, antiseptics, and stationary. One oxygen cylinder was present for 25-50 beds. No call bell and staff canteen were found in all the hospitals.</td>
</tr>
<tr>
<td>1995</td>
<td>Biswas 99</td>
<td>Nursing homes in Bombay</td>
<td>Facility for critical care emergency was lacking.</td>
</tr>
<tr>
<td>1996</td>
<td>Narang S. 100</td>
<td>Rural Area of Haryana</td>
<td>Lab. facilities in 19% centres and IUD Insertion facilities in 14.7% was present</td>
</tr>
<tr>
<td>1996</td>
<td>Gupta Suresh 101</td>
<td>Sub centres in Rupnagar, Punjab</td>
<td>Availability of buildings were present in 34.6% sub centres</td>
</tr>
<tr>
<td>1999</td>
<td>Satesh &amp; Gururaj 102</td>
<td>Hospitals in Bangalore</td>
<td>Oxygen facility present in 80%</td>
</tr>
<tr>
<td>1999</td>
<td>Gupta Jayashree 103</td>
<td>Rural Health Institution in India</td>
<td>Presence of Electricity 46%</td>
</tr>
<tr>
<td>1999</td>
<td>Chawla Sudesh 104</td>
<td>Primary Health Centres, Himachal Pradesh</td>
<td>Buildings present in 70%</td>
</tr>
<tr>
<td>2001</td>
<td>Nair KS. 105</td>
<td>Unorganized Sector in Delhi.</td>
<td>Lack of medicines and diagnostic facility reported by 18.90% subjects.</td>
</tr>
<tr>
<td>2001</td>
<td>Aggarwal 106</td>
<td>Primary Health Centres, Haryana</td>
<td>Drinking water 100%</td>
</tr>
</tbody>
</table>

It was observed that lack of essential services affected the services of health centres in various states of India. In Kerala 50% of primary health centres could not keep indoor patients or use their operation theatres due to lack of proper water supply. In Uttar Pradesh, sub centres were either located outside the village (52%)
or on the periphery (17%) and 15% of them got water logged during monsoons which made them unapproachable. It was further added that 90% of sub centres in U.P. did not have electricity, 7% had no water supply, and 20% of sub centres were being used for other activities. It was also noted that 20% of sub centres were difficult to access in Himachal Pradesh. Manpower training was nonexistent in all these states.

Satesh and Gururaj (1999) reported that 58% of hospitals in Bangalore reported lack of services at the hospital causality department and the number of patients who attended it varied from 8-150. Inadequate equipment, poor availability of medicines along with non-availability of health personnel were reported in most of the states of India as per findings of the Operation Research Group.

In a survey conducted by Chawla (1999) it was indicated that residential accommodation for medical officers was provided only in 80% of health care centres. Jain’s (1999) survey revealed that a large number of practitioners had a single room in which everything was dumped. Public health facilities were lacking in health care centres according to Kolinoubel (1983), Chawla (1999) and Gupta. Jaya Shree (1999). Aggarwal’s (2001) study revealed that only 20% of centres in Haryana had separate rooms for consultation and examination, and toilet facilities were present only in 1/3 of the centres.

Charles (2000) concluded that private health agencies offered services whose efficacy was uncertain and in some cases inappropriate. It was estimated by Kapilashrami (2000) that in India about 57% of hospitals, and 32% of total beds were in the private sector.

According to Nair (2001) lack of medicines and diagnostic facilities in health centres were reported by 18.90% respondents, lack of personal attention by 29.10%, poor quality of treatment by 27.28%, and unfriendly attitude of hospital staff by 20.15% of the respondents. He also reported that 65.04% of respondents preferred private clinics. Further, it was noted that 27.8% respondents reported inconvenient locations of health centres that led to non-utilization of these health care agencies.

The status of health facilities as studied by various authors (Gupta 1999, Park 2000, Kishore 2000, Gandhi 2002, Joshi 2002) was summarized in Table 1.5.
Table 1.5
Summary of Studies of Health Facilities

<table>
<thead>
<tr>
<th>Health facilities</th>
<th>Norms given</th>
<th>Current Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total number</td>
<td>Population covered by each unit</td>
</tr>
<tr>
<td>Sub Centre (SC) (Hilly/Tribal areas)</td>
<td>1/5000 population</td>
<td>1,32,730 (1996)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,37,292 (2001)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4,737 (1996)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4,579 (2001)</td>
</tr>
<tr>
<td>Primary Health Centre (PHC) (Hilly/Tribal areas)</td>
<td>1/30,000 population</td>
<td>21,854 (1996)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>22,807 (2001)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>28,768 (1996)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>27,634 (2001)</td>
</tr>
<tr>
<td>Community Health Centre i.e. upgraded PHC (Hilly/Tribal areas)</td>
<td>1/lakh population</td>
<td>2,424 (1996)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3,027 (2001)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.6 lakhs</td>
</tr>
<tr>
<td>Hospitals</td>
<td></td>
<td>13,692 (1997)</td>
</tr>
<tr>
<td>Dispensaries</td>
<td></td>
<td>22,708</td>
</tr>
<tr>
<td>Anganwadis</td>
<td></td>
<td>5,92,571</td>
</tr>
<tr>
<td>Average No. of SCs per PHC</td>
<td></td>
<td>5.68</td>
</tr>
<tr>
<td>Average No. of PHC per CHC</td>
<td></td>
<td>8.48</td>
</tr>
</tbody>
</table>

In the Tenth Five Year Plan, improvement of accessibility of family welfare and nutritional services, especially to the underserved and underprivileged sections of population, were the main areas of concern. A study revealed that only 60% of the population of developing countries had easy access to only one modern method of contraception.

One of the WHO’s 21 targets states that “By the year 2010, people in the given region of a community should have much better access to family and community oriented primary health care, supported by a flexible and responsive hospital system.” Dr. Groharm Brundt, the Director General of WHO when reviewing the ‘Health for All’ goals (2000) and highlighting the challenges for the next 10 years emphasised that “…there is need to develop a more effective health system.”

As per Census 2001, there were 1,37,291 sub centres (one per 4579 average rural population), 22,807 primary health care centres (one per 27,634 population) and 3,027 community health centres (one per 2.6 lakh population). Kishore (2002)
further reported that the basic health care services identified under the Minimum Needs Programme in the Ninth Plan were targeted for 100% coverage of primary health care facilities in the rural and urban areas.

Dobe (2002) found farness and expensive transportation in Mirjapur village of West Bengal as a reason for 100% home deliveries.\textsuperscript{130}

In Chandigarh, under homeopathic system of medicine, there were 25 beds in the Homeopathic Medical College in the private sector and homeopathic dispensaries under Chandigarh Administration. As per Census 2001, a total of 200 qualified ayurvedic doctors were present in Chandigarh i.e. 1 ayurvedic doctor for 4504 population.\textsuperscript{131} Health care infrastructure under Indian system of medicine and homeopathy in India consisted of 2,854 hospitals, 22,732 dispensaries, and 9,496 pharmacies.\textsuperscript{132}

It was noted by Narayana (2003) that the available diagnostic facilities were 78% in private sector in Andhra Pradesh but with few trained nurses and paramedical personnel.\textsuperscript{133} There were 3,151 private hospitals and 46,550 beds in the private sector according to a survey done by government of Andhra Pradesh in 1992-93. It was further reported that 70% of in-patients in rural and 62% in urban areas were in the private sector during 1980s, which was the highest in the country. Further, private sector accounted for 58% of hospitalized births in 1998-1999. The distribution of beds among various sectors showed that 59% of hospital beds were in private sector, 35% in public sector, and 6% in voluntary sector. Also 80% of hospital beds were in urban areas and urban population was more in public (86%) and voluntary sectors (93%).

As per WHO estimates, 80% of all diseases in developing countries including India were related to unsafe drinking water and poor sanitation.\textsuperscript{134} According to the 1991 Census of India 628 million people (i.e. 74%) of the total population inhabited villages i.e. 6.34 lakh villages with 15.1 crore rural households.\textsuperscript{135} 70% of the rural population lived in semi permanent or temporary houses, 56% households could afford facility for safe drinking water, 10% had toilet facilities, 31% had power supply, and 31% were totally deprived of the above facilities. According to Basu (2000) half of the population of Andhra Pradesh, Madhya Pradesh, Bihar, a quarter of population in Gujarat, Rajasthan, and Maharashtra entered their dwelling units by bending or crawling.\textsuperscript{136} It was further added that in Bihar (40%), M.P. (36%), Rajasthan (44%), and A.P. (7%) houses shared the living room with cattle. Further findings showed that 70% population of Nagaland and 68% of Arunachal Pradesh had
piped water for drinking, and 46% of households in Meghalaya did not have sanitation facility.

Inadequacy of public health facilities were reported by Sankar (2003)\textsuperscript{137} and problem of overcrowding in district and teaching hospital was mentioned by Naryana (2003).\textsuperscript{138} Existing status of public health facilities in urban and rural areas in India as studied by Kishore (2002)\textsuperscript{139} is produced in Table 1.6.

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|c|}
\hline
\textbf{Parameter} & \textbf{Urban} & \textbf{Rural} & \textbf{Total} \\
\hline
Piped drinking water & 74.5 & 25.0 & 61.0 \\
Sanitation facilities (flush latrines) & 63.9 & 8.8 & 36.0 \\
Availability of electricity & 91.3 & 48.1 & 60.0 \\
Children full vaccinated (12–13 months) & 61.0 & 37.0 & 42.0 \\
Women with anaemia (%) & 45.7 & 53.9 & 52.0 \\
Children with anaemia (6 – 30 months %) & 78.8 & 75.3 & 74.0 \\
Under weight children & 38.4 & 49.6 & 47.0 \\
Tuberculosis/1000 population & 23.9 & 60. & - \\
Proportion below poverty line (SRS 2001) & 26.6 & 27.1 & - \\
Standard of living index (% low) & 14.3 & 44.7 & - \\
\hline
\end{tabular}
\caption{Comparative Status of Urban and Rural Public Health Facilities in the Country}
\end{table}

c) Indigenous Health Services

Each society responds to the challenge of sickness with its own beliefs and practices.\textsuperscript{140} For 80% of the Indian population, primary health care is synonymous with traditional medicine. Traditional healers formed the nucleus of primary health care in up to 90% of rural population.\textsuperscript{141}

Hoff (1992) identified traditional healers as important resources to be employed to provide health care.\textsuperscript{142} They included herbalists, divine healers, spiritual faith healers, traditional midwives, shamans, traditional Chinese doctors, and bonesetters among others.

There were over six lakh health practitioners of the Indian system of medicine in India.\textsuperscript{143} Most of these served in rural areas or urban slums. There was a lack of essential staff and infrastructure in such institutions. The indigenous agencies provided low cost or no cost health care. The inability to pay for high cost of health
services affected health seeking behaviour. According to WHO, poor were given less choice of service from providers, and offered lower quality amenities. Cost of health agencies did not matter so much to high socio-economic societies for health care whereas it affected lower income societies to a greater extent who couldn’t afford even essential commodities like food.

In developing countries, the basic care provided by herbalists, healers, and ethno medicine practitioners formed the nucleus of primary care in up to 90% of the rural population. The doctors, nurses, herbalists, local workers, and midwives collaborated to provide a culturally holistic approach to illness. Gupta (1996) showed that 47.5% of rural and 24.5% of urban respondents believed in the myth that a child is a “Gift of God” and that this resulted in problems in implementation of family planning programmes. Claims have been made by the practitioners of traditional medicine for the management of diabetes mellitus and rheumatoid arthritis. Various categories of manpower that were found by Narang (1997) in the study village of Haryana were 4 magico-religious practitioners, two traditional healers, one bonesetter, and priests in the village. They claimed to cure a number of health problems like tuberculosis, managing fractures, infertility, curing swollen glands, and suggesting measures for conception of a male child. He noted that dais were the main providers of antenatal and post natal care in Haryana villages and pointed out that 83.5% of traditional birth attendants advised pregnant women to increase food intake.

The common man believes that miracle cures where sophisticated technologies fail. Various magico-religious and traditional agencies did jhara, read mantras, removed effect of nazar, treated infertility, and gave medicine to have a male child in study village of Haryana. Priests in the study claimed to have cured TB patients, a bone setter managed fractures and dislocations and gave massage to correct the position of uterus and tubes in case of infertility in woman, and a Kumhar treated swollen gland with “Mitti”.

Chawla (1999) found that majority of the people (88.9%) contacted village health guides, 76.7% contacted the health worker (female), 73.3% contacted untrained dais, 48.9% contacted local private practitioners, and chelas were contacted by 21.1% of the respondents for health care. It was also found that 82.2% respondents were satisfied with the services provided by local birth attendants.
Mishra (2000) stated that people rely on the science of the local medicine man. The practitioner of indigenous health agencies relied mainly on medicinal plants and herbs for the preparation of therapeutic substances. Similarly, basic care providers in indigenous health care agencies were herbalists, faith healers, and ethno medicine practitioners who formed the nucleus of primary care in up to 90% of rural population in developing countries. Though these agencies were observed to be primarily providing curative services but techniques of healing varied according to style and practice of the healer and included meditation and relaxation, induction of trances, rituals involving dancing, prayers, sacrifices, and the application of herbal and other remedies of animal and mineral origin. The authority of the traditional healer might be derived solely from his recognition by the community in terms of his competence to provide health care or from his qualification in an elaborate formal system such as ayurveda. Most observers had been impressed by the personal style of healers. Their dress, calmness, authoritative air, and other personal qualities all contributed to treatment. Indigenous agencies took care of therapeutic services rather than preventive and promotive.

Kumar (2000) pointed out that 83.5% pregnant women took advice of traditional birth attendants to increase food intake. Basu (2000) observed the harmful practices in rural and tribal illiterate mothers. These were discarding colostrums, giving pre lacteal feed, delayed weaning, inadequate vaccination, and immunization because of extreme of magico-religious beliefs and taboos. Das (2001) correlated diarrhoea in under-five of an Indian rural community and the treatment given to them and noted that 37% children were given drugs and remedies according to various customs prevalent locally or from indigenous agencies.

Azad (2001) noted that 70% of sicknesses were treated by some home remedy or herbal remedy. Sinha (2001) found 38.1% of deliveries by untrained personnel and only 18% births attended by trained birth attendants. Kaur (2001), in her study in a rehabilitated colony of Chandigarh, identified active involvement of indigenous agencies in health care and found 60.8% care providers from indigenous health care system. Jha (2001) recommended the evaluation of the traditional system for therapeutic significance, cost benefit ratio, and their socio-cultural importance because these were the bases for evaluation of their use in primary health care.

One of the important goals to be achieved by 2000-2015 is to increase utilization of public health facilities from current level of <20 to >75% and to
establish a system of surveillance. National Population Policy 2000 recommended the involvement and utilization of Indian System of Medicine and Homeopathy to expand the availability of health care agencies and to promote low cost health care.\textsuperscript{162}

It was hypothesized in the present study that private agencies, especially indigenous health agencies, are most used by all communities and people from all socioeconomic groups as compared to government health care agencies.

d) Alternative Agencies

Non Governmental Organizations (NGOs) or Voluntary health agencies were recognized as autonomous organizations. The main voluntary health agencies identified were the Indian Red Cross Society (1920), All India Women’s Conference (1926), Tuberculosis Association of India (1939), Kasturba Memorial Fund (1944), All India Blind Relief Society (1946), Family Planning Association of India (1949), Hind Kusht Nivaran Sangh (1950), Indian Council of Child Welfare (1952), Bharat Sevak Samaj (1952), Central Social Welfare Board (1953), and Professional Bodies like Indian Medical Association, All India Licentiates Association, All India Dental Association, and Trained Nurses Association of India.\textsuperscript{163}

Planning Commission, Government of India mentioned NGOs as supplementary to the government’s efforts in various health and family welfare programmes.\textsuperscript{164} The NGOs and the local bodies were recognized as an important resource to be adequately tapped and integrated with the planning process.

NGOs and voluntary organizations were mainly involved in the improvement of medical services especially in rural areas.\textsuperscript{165} These organizations helped in promotion and development of voluntary blood donations, surveillance, education and treatment of diseases like malaria, leprosy, tuberculosis, Blindness, AIDS control, early detection of cancer, and promotion of de-addiction programmes.

Ved (1997), while studying private voluntary organizations, noted that in rural traditional societies most felt comfortable receiving services from other women. Hence women were seen as primary providers of health care for children.

Kapilashrami (2000) categorized non government organizations (NGOs) as private non-profit organisations in the health care sector.\textsuperscript{166} It was suggested that the interested NGOs should be allocated specific areas for specific services considering the local requirements of the health system. In a review of present health status of India, Kapilashrami (2000) recommended the decentralization in health and
development planning under the Panchayati Raj Act to provide an opportunity for community participation in the health care programme. Further, it was suggested that private and corporate sectors should be encouraged through incentives and concessions to involve them in health and family welfare services.

It was reported by Kapadia (2002) that Maharashtra, a state with the highest number of slum dwellers, did not have voluntary health workers in most of the urban areas. Further, health posts in urban Maharashtra were far fewer than the current requirement.

Workshop for NGOs working on HIV/AIDS in New Delhi in January, 1998 recommended encouraging the NGOs participation at all levels including policy planning, programme development, monitoring, and evaluation. Recommendations were also made to survey the potentialities of interested NGOs and local bodies for community based organizations to maximize their response.

iv. Utilization of Health Care Services and Facilities

According to Suchman, a direct relationship is retained between a social group structure and the medical services. Different patterns of population settlement call for different patterns of health care. The usual demand was for specific terms of technical, curative, and preventive care. Various reasons for preferring the type of health facility noted by Khokhar (2003) in his study were easy availability, effective treatment, low-cost, better service, faith in the system, and cordial behaviour. The basic organization of health care services should aim at providing primary health care to all inhabitants of a place.

Orem (1971) described the patient’s health care system as the mix of health services, relations among the services, individuals, and combined contributions of the service to the patients’ health and well being.

In India, there is a strong disparity between the availability and utilization of health services and facilities in the organized and the unorganized sector. Actual utilization of health services or the expressed demand for services by the consumers provides the proof of accessibility and acceptability of health services. Expressed demand for health services is measured by utilization of available services, or the acceptance of services, particularly when the service system has the capacity to meet the expressed demand.
Utilization of health services means acceptability which is preceded by a perceived need for the service and positive perception of the value of using the service. Oyaya (1996) while discussing the phenomenon of intra-urban inequalities in the provision of the health care in Kenya stated that the dispensaries were the lowest category of health facilities followed by health centres that were middle order facilities in the hierarchy of the health care system.\textsuperscript{174}

A study done by Gupta (1996) in 127 sub centres in Rupnagar district of Punjab revealed that 55.5% of rural and 32% of urban respondent had to wait about an hour at their family planning centres for guidance.\textsuperscript{175} He showed that 47.5% of rural and 24.5% of urban respondents believed in the myth that a child is a “Gift of God” that resulted in problems in implementation of Family Planning Programmes and lower utilization. He further found lack of transport facilities especially in Kharar and Anandpur Sahib Blocks. According to ICMR’s study (1996) patients had to walk up to a primary health centre to find out the presence of the doctor; or if he/she was there the only thing was that the patients were given was a piece of paper.

There has been demand led expansion of the private health care system and in India 78% doctors work in the private sectors.\textsuperscript{176} Narang’s study in a village of Haryana found that health care providers in private sector were more than double the number of providers in the governmental sector.\textsuperscript{177} Narang identified only 15 health care providers from the government sector and rest were from the non governmental sector. Further, in Haryana health care providers in the private sector were more than double the number in the governmental sector. In the same study the utilization and acceptance of health services was reported from various indigenous agencies. There were four magico-religious healers and two traditional healers who did Jhara, read \textit{mantras}, removed effects of evil eye, treated infertility, and gave medicine to ensure a male child. Priests in the study claimed to have cured tuberculosis patients; a bonesetter managed fractures and dislocation and gave massage to correct the position of uterus and tubes in case of infertility in women; and a \textit{kumhar} treated swollen glands with “\textit{Mitti}.”

Although indigenous health agencies lacked essential staff, infrastructure, and training, still people relied on the services of local medicine men. Management of diabetes mellitus and rheumatoid arthritis had also been claimed by traditional health
workers. It was seen that most of the traditional workers served in remote rural areas or urban slums.

Ved (1997), while studying private voluntary organizations, noted that in rural traditional societies most felt comfortable receiving services from other women. Hence, women were seen as primary health care providers of health care for children.

Leper’s (1998) study had revealed that out of 100 people who fell sick 77 utilized private sectors, only 13 went to government hospitals, while the rest resorted to home remedies.

According to the findings of the Operation Research Group Uttar Pradesh, utilization of the services provided by a government health agency was only 58.2% as compared to the awareness regarding the availability of these services that was as high as 81%. Further, some of the reasons mentioned for non-utilization of government health agencies were non availability of health personnel, inadequate equipment, poor availability of medicines, and rude behaviour of staff. For similar reasons it was also found that 90% of child deliveries were home deliveries and 80% were attended by untrained persons. Similar findings were also reported in Orissa with 88% home deliveries mostly attended by untrained persons.

Chawla (1999) investigated that majority of the people (88.9%) utilized the health services from health guides, 76.7% contacted health worker (female), 73.3% approached untrained dais, 48.9% contacted local private practitioners and chelas were contacted by 21.1% of the respondents. It was also found that 82.2% respondents were satisfied with the services provided by trained birth attendants.

Satesh and Gururaj (1999) reported no utilization of casualty services at the public health care agency because of lack of services. Similarly the reason for non utilization of government health agencies in Utter Pradesh were their location outside the village (52%) or the periphery (17%), and getting water logged during monsoons (15%) which made them unapproachable.

It was mentioned by Misra (2000) that most of the people relied on services of local medicine men and thus a large number of practitioners being employed in national health programmes were overlooked. Out of the 78% regarded as doctors only 3% had MBBS degree as found by Kapilashrami (2000). Sinha (2001) reported that people utilized services from untrained personnel for 38.1% of deliveries. Similarly, 83.5% pregnant women sought advice for food intake from traditional birth attendants, and 37% of children were given drugs and remedies.
according to locally prevalent customs. In another study, 70% of the sickness was treated by home remedies and herbal remedies as reported by Azad 2001.

Lal (2001), in a study done in six slum areas of Patna, showed that out of 84.6% families reported to have suffered from illness, 84% utilized allopathic treatment, 0.3% utilized homeopathic, 0.3% took household remedies, and 44% of the families used the services of exorcists (those who claimed that the illnesses were inflictions by some supernatural forces). Majority of the slum families (92.6%) were forced to rely upon health centres located far away. According to another study, it was also noted that 20% of sub centres were difficult to access in Himachal Pradesh.

The inability to pay for high cost of health services affects health seeking behaviour. According to WHO, poor are given less choice of service from providers and offered lower quality amenities. As per Nair (2001), the kind of health care selected depended on the financial status of the patient. A middle class person will go to a general medical practitioner, the wealthy will go to the specialist and the illiterate will search for a vaidya or a ‘quack’. According to Nair 27.8% respondents reported inconvenient locations of government health centres as the reason for non utilization of their services. He further found that 29.10% respondents cited lack of personal attention, and 20.15% respondents cited unfriendly attitude of hospital staff that led 65.04% respondents to opt for private clinics. It was further reported by 34.96% of respondents that for 1-2 days after symptoms appeared home remedies were preferred. Rude behaviour of staff was cited as one of the factors in the findings of the Operation Research Group, Uttar Pradesh which was responsible for 58.2% utilization of services of a health post as compared to the awareness which was as high as 81%.

Dobe (2002) found 100% home deliveries in Mirjapur village of West Bengal because of famine and expensive transportation. Kapadia (2002) discussed the constraints in the existing urban health care delivery system which had led to lower utilization of antenatal care services. He reported that out of 8,575 women interviewed from slum and non slum area of Maharashtra, utilization of antenatal services was found more in non slum women than slum women. It was also noted that among urban and rural areas, urban women reported remarkably high utilization (Table 1.7).
Table 1.7
Utilization of Antenatal Services by Women

<table>
<thead>
<tr>
<th>Antenatal services</th>
<th>Slums</th>
<th>Non-Slums</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd dose of TT</td>
<td>84</td>
<td>93</td>
<td>83</td>
<td>81</td>
</tr>
<tr>
<td>3 or &gt;3 antenatal checkups</td>
<td>55</td>
<td>74</td>
<td>59</td>
<td>49</td>
</tr>
<tr>
<td>Folic acid full dose</td>
<td>58</td>
<td>63</td>
<td>63</td>
<td>31</td>
</tr>
<tr>
<td>Birth interval &gt;30 months</td>
<td>34</td>
<td>51</td>
<td>44</td>
<td>21</td>
</tr>
</tbody>
</table>

Instead of higher prevalence of diarrhoea, the use of oral rehydration therapy was lower in poor children.\textsuperscript{199} It was estimated by Sankar (2003) that only <20% of the population sought out-patient department services and <45% sought indoor treatment because of inadequacy of public health facilities.\textsuperscript{200} Similarly, Narayana (2003) mentioned the problem of overcrowding in the district and teaching hospitals.\textsuperscript{201}

In the Tenth Five Year Plan, improvement of utilization and accessibility of health, family welfare, and nutritional service especially to underserved and underprivileged sections of population were the main areas of concern.\textsuperscript{202}

The utilization of the public health care agencies had been reported as low as <20%.\textsuperscript{203} One of the important goals to be achieved by 2000-2015 was to increase utilization of public health facilities from current level of <20% to >75% and to establish a system of surveillance. As far as the type of health care agency most utilized was concerned, it was seen that government health care agencies were less utilized by people of the higher socioeconomic group.

v. Availability of Health Care Services and Facilities in Chandigarh

According to 2001 Census of India 72.22% of its population lived in rural and 27.75% lived in urban areas.\textsuperscript{204} In Chandigarh, urban population constituted 89.77% of the total population (9,00,635) which included 13.3% in urban slums. 92120 people (10.2%) of the total population inhabited villages with 22580 households in the rural areas.\textsuperscript{205}

Health infrastructure in January, 2005 was as per information obtained from the Poly Clinic Sector 22, Indian Medical Association, Sector 35, and Social Welfare Department Sector 17 Chandigarh, was –
1. Hospitals - 04
2. Community Health Centres (CHC) - 01
3. Health Sub centres (Under CHC) - 13
4. The Rural Dispensaries - 05
5. Ayurvedic Dispensaries - 06
6. Homeopathic Dispensaries - 05
7. Allopathic Dispensaries - 23
8. Mini Family Welfare Centre - 05
9. Dispensaries of Other Organizations - 12
10. MTP Centres (Registered) (Private) - 46
11. Primary Nursing Homes/Hospitals under the PNDT (Pre-Natal Diagnostic Techniques) Act (Private) - 68
12. Shri Dhanwantri Ayurvedic College and Pandit Kedarnath Memorial Ayurvedic Hospital, Sector 46 (Private) - 01
13. Homeopathic Medical College & Hospital, Sector 26 (Private) - 01

There were three main agencies which provided health services in India, the same pattern existed in Chandigarh too i.e. government, private, and voluntary. Further, all systems of medicine were practiced in Chandigarh. There were some NGOs which were receiving grants from the Social Welfare Department of Chandigarh for providing some basic health facilities and awareness. Some of these were Sewa Bharti, Lion Club, Rotary Clubs, and SOSVA (Society of Services to Voluntary Agencies).

The health services also had a strong link with the beliefs, customs, attitudes, knowledge, and practices of a given community. Hence, this study was planned to identify the utilization of health care agencies in different communities of Chandigarh.

vi. Achievement of Health Targets in India

The Sixth Five Year Plan pointed out that the infrastructure of sub centres, primary health centres, and rural hospitals touched only a fraction of the rural
The achievement in health indicators during the Ninth National Health Plan (1997-2002) were reviewed by Kishore (2002) as follows:

<table>
<thead>
<tr>
<th>Health Indicators</th>
<th>Goals</th>
<th>Current Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMR / 1000 live births</td>
<td>56-50</td>
<td>70</td>
</tr>
<tr>
<td>MMR / 1000 live births</td>
<td>&lt;2</td>
<td>4</td>
</tr>
<tr>
<td>Crude birth rate / 1000 population</td>
<td>24 / 23</td>
<td>26.1</td>
</tr>
<tr>
<td>Effective couple protection rate</td>
<td>9</td>
<td>8.7</td>
</tr>
<tr>
<td>Immunization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• T.T.( pregnant/children)</td>
<td>95</td>
<td>79.0</td>
</tr>
<tr>
<td>• D. P. T.</td>
<td>100</td>
<td>92.8</td>
</tr>
<tr>
<td>• Polio</td>
<td>100</td>
<td>93.4</td>
</tr>
<tr>
<td>• B. C. G</td>
<td>100</td>
<td>99.1</td>
</tr>
<tr>
<td>• Measles</td>
<td>100</td>
<td>87.0</td>
</tr>
</tbody>
</table>

Joshi (2002) reported 1,345 polio cases in India during the year 2002 which accounted for 68% of the global polio cases with 855 cases from U.P. itself. Tuberculosis killed 1,000 people in a day in spite of the revised National Tuberculosis Programme started in 1992 in which treatment on 4.7 lakh tuberculosis patients was started. Similarly, the target of reducing IMR from 30/1,000 to 100/1,00,000 in Health Policy 2002 showed no improvement. In 1996, the immunization coverage was 56.3%. In Bihar, one in every 14 children died within the first year of their lives and under five mortality was over 105/1,000 children. The low immunization coverage can be treated as an indicator of the low level of reach of health services.

According to Health Ministry estimations, while there were only 48 doctors per one lakh population there was a huge difference in the availability of doctors in urban areas (73.6%) and rural areas (26.4%). Kapadia (2002) observed the recommendation of the National Health Policy 2001 for establishment of one PHC per 1,00,000 population was a step backwards from the Krishisan Committee report which recommended one health post for a population of 50,000.

Health achievements between rural and urban population in India were as reported (Kishore 2002, Gandhi 2002) in Table 1.8.
Table 1.8

<table>
<thead>
<tr>
<th>Country</th>
<th>% Population n=BPL (%)</th>
<th>IMR/1,000 Live Births</th>
<th>MMR/Lakh</th>
<th>Mortality/1,000</th>
<th>Under Weight Children &lt;3 yrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>26.1</td>
<td>70</td>
<td>408</td>
<td>94.9</td>
<td>47</td>
</tr>
<tr>
<td>Rural</td>
<td>27.09</td>
<td>75</td>
<td>-</td>
<td>103.7</td>
<td>49.6</td>
</tr>
<tr>
<td>Urban</td>
<td>23.62</td>
<td>44</td>
<td>-</td>
<td>63</td>
<td>38.4</td>
</tr>
</tbody>
</table>

Kishore (2002) reported that basic health services identified under the Minimum Needs Programme in the Ninth Plan were 100% coverage of primary health care facilities. He emphasized evaluation of health systems and programmes by collection and analysis of information to determine their performance and to assess the need for funding.\textsuperscript{213} He further mentioned the tools of evaluation by case studies, qualitative studies, and surveys.

Difference in achievements in important health indicators in selected countries studied by Gandhi (2002)\textsuperscript{214} have been tabulated in Table 1.9.

Table 1.9

<table>
<thead>
<tr>
<th>Countries</th>
<th>% Population Income with &lt;1 Day</th>
<th>IMR</th>
<th>% Health Expenditure to GDP</th>
<th>% Public Expenditure to Health of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>44.2</td>
<td>70</td>
<td>5.2</td>
<td>17.3</td>
</tr>
<tr>
<td>China</td>
<td>18.5</td>
<td>3.1</td>
<td>2.7</td>
<td>24.9</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>6.6</td>
<td>16</td>
<td>3</td>
<td>45.4</td>
</tr>
<tr>
<td>U.K.</td>
<td>-</td>
<td>6</td>
<td>58</td>
<td>96.9</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>-</td>
<td>7</td>
<td>13.7</td>
<td>44.1</td>
</tr>
</tbody>
</table>

Inadequacy of preparedness and activation of rapid response mechanism in crisis situations had been indicated by observing the consequences resulting from floods in West Bengal and Assam, cyclone in Orissa and A.P., earthquakes in Maharashtra and Gujarat and frequent drought for prolonged periods in the states of Orissa, Rajasthan, Bihar, Gujarat etc. Implementation of a realistic national health programme needed an assessment of the available health system.\textsuperscript{215}

The Alma Ata deliberation (1978) stated that the “time has come for a thorough appraisal of the existing health care system.”\textsuperscript{216} India, despite being a
signatory to the Alma Ata declaration (1978), which aimed at “Health for All By 2000 A.D.”, was still lagging far behind even in the year 2005.

**Inferences Drawn From Review of Literature**

1. The literature reviewed showed that health in India was influenced and affected by various factors
   - socio-cultural situations like traditional beliefs, practices, attitudes, social class, and life styles among others;
   - Infrastructure like availability and accessibility to health care agencies, user fee, types of services provided; and
   - Physical situations like rural areas, urban areas, and slums.

2. The literature revealed that India had a large stock of health manpower comprising of practitioners in many systems of medicine e.g. Ayurveda, Homeopathy, Sidha, Unani, Yoga etc., which had not so far been adequately utilized. It was also found that the practitioners of these systems enjoyed high local acceptance, respect, and exerted influence on health beliefs and practices.

3. Literature was deficient in identifying practices/malpractices being carried out by traditional dais.
   The studies also recognized that existing health infrastructure and ongoing national health programmes had failed to provide adequate and quality health care to meet the needs of the people.
   The literature revealed non utilization or very poor utilization of public health facilities (up to <20%). The main factors responsible were lack or non availability of staff, essential materials, drugs, provision for water supply, and sanitation facilities in the health care centres.
   The literature showed the need for periodic evaluation and review of the health care services through availability, accessibility, utilization, and quality of services so as to measure the progress towards the targets.

**Scope and Significance of Study**

In developing countries like India, there was a strong disparity between the availability and utilization of health services in the organized and unorganized sector.
Health care costs forced the underprivileged to, in many cases, do without health care; to suffer delayed or incomplete treatment, self medication, or then to rely on informal, and ineffective sources of care. Implementation of a realistic national health programme needs an assessment of the available health system and its utilization.

Studies in different parts of the country largely dealt with qualitative analysis of health services but only a few were conducted exclusively on availability and utilization of health services. The present study was an effort to gain knowledge of different health care agencies by exploring them in different communities. Further, it has sought to study various aspects of the utilization of health services which may be helpful for finding out some of the reasons why the goal of “health for all” was not achieved and the utilization of public health care services was as low as <20%. These situations/factors needed to be identified to find out risk groups or target groups so as to provide better health services within the limits of existing resources.

This was a study of availability and utilization of health services in the Union Territory of Chandigarh. The health services were explored in different identified health care agencies in four selected study areas one each from the urban, rural, slum, and the rehabilitated sector.

The different aspects of availability and utilization of health services taken up were

- Identification of availability of different health care agencies;
- Analysis of health care facilities and services present in identified health care agencies in study areas;
- Assessment of the utilization of health care services and facilities; and
- Relating socio-demographic characteristics of consumers, and utilization of health services of different health care agencies in study areas.

Further, information about traditional care providers regarding their availability, role, qualifications and training, services provided, and their utilization was collected.

The study was significant in that it studied the above mentioned aspects of health care which were hitherto unexplored as per the existing literature.

**Objectives of the Study**

- To identify the presence of different types of health care agencies;
➢ To study the availability of health services provided by the identified health care agencies;
➢ To assess the infrastructure, equipment, and public health facilities in health care agencies;
➢ To study the utilization of health care services;
➢ To study the consumer perception of health care agencies and services provided by these health agencies;
➢ To suggest ways to improve health services.

Hypotheses
1. There are a variety of health care agencies belonging to various health care systems.
   a. Majority of the health agencies are in the private sector.
   b. There is inadequate availability of health care agencies with regard to population.
2. Each health care agency provides only a limited scope of health services.
   a. Government health care agencies provide preventive, promotive, curative, and rehabilitative services.
   b. Indigenous health care agencies provide only curative services.
   c. Maternal child health services are mainly provided by untrained dais in rural and slum areas.
   d. Presence of NGOs working to deliver health services is negligible.
3. Health Care agencies do not have adequate manpower, infrastructure, equipment and supplies, public health facilities, and funding essential to deliver health care services.
   a. Government agencies face the problem of shortage of staff.
   b. The qualification and training of many of the private and indigenous health care providers is questionable.
   c. Health care agencies have inadequate outdoor and indoor facilities.
   d. Health care agencies have inadequate equipment and supplies.
   e. Health care agencies do not have satisfactory public health facilities.
   f. Indigenous health care agencies do not have adequate infrastructure.
   g. Private and indigenous health agencies face a problem of funding.
4. There is a difference in utilization of different health care agencies across different geographical areas and socio-economic communities.
   a. The utilization of a particular type of health agency by consumers depends upon their socio demographic characteristics.
   b. The utilization of government health care agencies is low in all socio-economic communities.
   c. Private health services and indigenous health services are most used by all the communities and all socio-economic groups.
   d. Indigenous health agencies are widely accepted and utilized in groups with a lower socio-economic status.
   e. Less educated people prefer to utilize indigenous health care agencies.

5. Health care agencies are not easily accessible in terms of distance, transportation facility, and cost.
   a. Consumers are not satisfied with health care agencies in terms of accessibility, transport facilities, cost, staff availability, time consumption, staff attitude, infrastructure, and health care facilities.
   b. Government health care agencies are far from the place of residence.
   c. People in the rehabilitated and the slum sectors have inadequate transport facilities to access government health agencies.
   d. Attitude of the staff in government health care agencies is not consumer friendly.
   e. Time spent to avail government health services is more as compared to private and indigenous health services.
   f. Adequate infrastructure and diagnostic facilities are lacking in all the agencies.
   g. Indigenous health agencies are cost effective.

Research Methodology

Methods of Data Collection

The study used both primary and secondary data as detailed below.

1. Primary Data was collected through
   - structured interview schedule
   - observation checklist and

35
periodic visits to the study areas and health care agencies to gather the information through observation, formal and informal interviews.

2. Secondary Data was collected from government documents, books, journals, available records, bibliographies, unpublished dissertations, internet and by visits to various offices of the Health Department, Chandigarh and voluntary organizations to gather the information from available records.

Sample Design

The study was conducted through a cross sectional survey of geographical areas of the urban sector (Sector 35), the rural sector (Badheri Village), the slum Sector (Kumhar Colony Sector 25) and the rehabilitated sector (Dadu Majra Colony Sector 38) in Chandigarh.

Selection of Communities

Chandigarh could be seen to broadly have four types of communities: urban, rural, slum and rehabilitated. There were 55 units in terms of sectors in the urban area, 22 units in terms of villages in the rural area, 25 units in terms of colonies of slum dwellers and 2 units in terms of rehabilitated colonies. For the purpose of study, the researcher divided Chandigarh into 4 geographical divisions of which one (north-western) was randomly selected. Further, one unit of each community was selected from the north-western division of Chandigarh - Sector 35 (urban), Badheri village (rural), Dadu Majra Colony (rehabilitated), and Kumhar Colony, Sector 25 (slum) were taken for study.

Selection of Health Care Agencies

Within the defined geographical boundaries of the study areas all the available health care agencies i.e. governmental, private and voluntary were identified. These were identified through a physical survey of study areas and informal interviews with caregivers, and whosoever volunteered the knowledge of presence of health care agencies and health care providers in the study areas. A total of 216 health agencies were identified in all study areas and taken for the study. These included 54 from the urban sector, 30 from the rural, 35 from the slum, and 97 from the rehabilitated sector.
There were 30 government (including anganwadis and day care crèches), 178 private, and 8 voluntary health agencies in all study areas.

**Sample Selection**

Systematic random sampling was used in the urban, rural and rehabilitated sectors. Beginning with a random start every 20th house was taken as a sampling unit in the urban and rehabilitated sectors, whereas in the rural sector every 3rd house was taken as a sampling unit. In case the house was found locked, the next house was taken. As there was no systematic numbering of houses in the slum area, it was divided into 4 sub-areas. Four clusters each of 8 to 10 houses from each of these sub-areas were taken for sampling. All the houses in these clusters were taken as sampling units. In case a particular house was found locked, it was excluded from the study.

In all the areas whichever person was available who could respond to the questionnaire was taken as study subject. Total 600 people (as consumers) i.e. 150 subjects from each study area were taken as the sample for the study. Two houses in the urban, 4 houses in the rural, 14 houses in the slum, and 45 houses in the rehabilitated sector were found locked. There was one house in the rural sector, 4 in the slum sector, and 9 in the rehabilitated sector where children in the age of 5-9 yrs. were present who could not answer and were thus excluded from the study. Various health agencies and health care providers were identified in the study areas through direct observation and informal interviews with caregivers and whosoever had the knowledge of presence of health care agencies, and health care providers in study areas. The total sample is summarized in Table 1.10.

All the health care staff available in all the identified health care agencies in study areas formed the study subjects. Hence, this census included 64 subjects from government health agencies and 324 subjects from private health agencies. Of 64 subjects from government health care agencies, 14 were from the urban sector, 20 from the rural, 3 from the slum, and 27 from the rehabilitated sector. Of 324 subjects from private health care agencies, 60 were from the urban sector, 35 from the rural, 29 from the slum, and 200 from the rehabilitated sector.
### Table 1.10
Sample Selection

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Category of Sample</th>
<th>Study Sectors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Urban</td>
</tr>
<tr>
<td>A. Health Care Agencies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Government</td>
<td>3</td>
</tr>
<tr>
<td>2.</td>
<td>Private</td>
<td>49</td>
</tr>
<tr>
<td>3.</td>
<td>Voluntary</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>54</td>
</tr>
<tr>
<td>B. Staff in Health Care Agencies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Government</td>
<td>14</td>
</tr>
<tr>
<td>2.</td>
<td>Private</td>
<td>60</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>74</td>
</tr>
<tr>
<td>C. Consumers</td>
<td></td>
<td>150</td>
</tr>
</tbody>
</table>

### Development of Research Instruments

The source for the development of the instruments used for data collection was review of literature, previous theses, internet, consultation, and opinion of experts from the fields of public administration, nursing, psychology, and community medicine.

**Research Instruments** - An interview schedule and observation checklist for collection of data in the study areas was developed.

**Interview schedule** - The interview schedule consisted of both open ended and multiple choice questions. It was divided into two parts.

**Part I** included information regarding identification and availability of health care agencies and health care services of identified health agencies. This part was used to gather information by observation as well by formal and informal interviews from the health care staff working in the health care agencies. Information was gathered regarding type of agency, registration status, number of years of existence of agency, number of people working in the agency, their qualification, their participation in health programmes, opening hours of health care agencies, number of patients attended per day, funding and type of services provided by the health agency.
Part II included information regarding utilization of health care agencies and health care services. This part was prepared to gather information by formal and informal interviews from the consumers in study areas for age, sex, educational status, occupation, number of family members, monthly income of the family, nearest agency and its type, distance of nearest agency, type of health agency most often used and reasons for most often used agency.

**Observation checklist** – The observation checklist was used to see the availability of health agencies, their services and technology used in health care. It was divided into three parts (part iii-v) to observe the health services in various health agencies. Part iii and iv had stem statements followed by dichotomous (yes/no) responses. Provision for remarks was made. Part v consisted of multiple choice questions.

**Part III** was used to assess the availability of basic infrastructure, staffing, equipment and supplies like physical assessment articles, dressing articles, laboratory facilities, and basic records in formal agencies i.e. government/private health agencies.

As a standard criterion was not available to analyse status of health agencies on the basis of infrastructural facilities, and equipment and supplies, a checklist of basic infrastructure and equipment essential for health care in health agencies was prepared. The checklist for the availability of infrastructural facilities consisted of 14 basic facilities, and that for equipment and supplies consisted of 26 basic items of equipment and supplies. The health agencies were accorded a rating on the basis of availability of basic infrastructural facilities and basic equipment and supplies; this was done against a standard worked out by the researcher for the check-listed items. Accordingly they were rated as very poor, poor, average, good, very good, and excellent as shown in Table 1.11.

**Part IV** was used to assess basic infrastructure, staffing, equipment, and basic technology used in health care in informal or indigenous health care agencies.

**Part V** Observation check list for study areas was used to gather information about status of houses, status of streets, sanitation, and garbage disposal.

A pilot study was conducted in three health care agencies one each in urban, rural, slum, and rehabilitated sectors to test the reliability of the tool.
Table 1.11
Rating of Health Care Agencies

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Infrastructural Facilities (N=14)</th>
<th>Equipment and Supplies (N=26)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Poor</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Poor</td>
<td>1-3</td>
<td>1-6</td>
</tr>
<tr>
<td>Average</td>
<td>4-6</td>
<td>7-12</td>
</tr>
<tr>
<td>Good</td>
<td>7-9</td>
<td>13-18</td>
</tr>
<tr>
<td>Very Good</td>
<td>10-12</td>
<td>19-24</td>
</tr>
<tr>
<td>Excellent</td>
<td>&gt;13</td>
<td>&gt;24</td>
</tr>
</tbody>
</table>

Ethical Considerations

The subjects were free to participate or refuse to participate in the study; an informal consent was taken from all those who participated. Respondents were ensured of confidentiality of the obtained data.

Data Processing

Data collected was edited, coded, classified and tabulated to make it amenable for analysis. Data was analyzed through statistical computations with the use of Statistical Package for Social Sciences (SPSS). The tests applied for testing hypotheses and drawing inferences were percentage and test of significance i.e. Pearson’s chi square test. Pearson’s chi square test was applied to compare two variables to find out dependence/independence of variables as the data collected was in the form of frequencies or dichotomous responses i.e. ordinal and nominal data.

Chapterisation

The thesis has been presented in six chapters. Chapter-1 includes introduction, review of literature, scope and methodology; Chapter-2 describes the availability of health care agencies and health services; Chapter 3 analyses availability of health care facilities; Chapter 4 examines the utilization of health care services and facilities; Chapter 5 discusses the consumer vis-à-vis health care agencies; Chapter 6 presents conclusions and recommendations of the study.
Limitations

The limitations experienced during the course of the study were:

1. Health services available were limited to government, private, and voluntary health care agencies which were identified within the geographical boundary of selected study areas. Family members who may act as health care providers were not included in the study.

2. Health care agencies which fell outside the geographical boundary of study areas stood excluded.

3. Only adults were considered as the source for identification of health care agencies.

4. Veterinary care providers, chemists and schools were excluded from the scope of the study.

5. Health care providers who were not present at the time of visit to health agencies were excluded from the study.

6. The study was only limited to the subjects available at sampling unit and could answer the questions.

7. The subjects were limited to > nine years of age.

8. The study was limited to only residents of study areas; non-residents who may be the users of health services of health care agencies in the study areas were excluded from the study.

9. Limitations were experienced during data analysis due to the nominal and ordinal nature of collected data.

References:


5 Ibid.

7 J. Kishore, National Health Programmes of India (Century Publications 2002) 229-230.


10 Ibid.


12 R.H. Bannerman, loc cit.

13 A. Khokhar et al, loc cit.


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