CHAPTER I

INTRODUCTION

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CHAPTER I

INTRODUCTION

From time immemorial man has been interested in trying to control diseases. The common man, the priest, the herbalist and the magician, all adopted various ways to cure man’s disease and to bring relief to the sick. It has been truly said that health is not everything, but everything else is nothing without health. The explosion of knowledge during the 20th century has made medicine more complex, the treatment more costly, but the benefits of modern medicine have not yet penetrated the social periphery in many countries, creating a chasm between rural and urban areas, between the rich and poor.

1.1. Context of the study

India is the second most populous country in the world and has changing socio-political, demographic and morbidity patterns that have been drawing global attention in recent years. Despite several growth-oriented policies adopted by the government, the widening economic, regional and gender disparities are posing challenges for the health sector. As per 2001 census, India’s total population is 1,028 million and 72 per cent of this belongs to rural community. It is estimated that more than seventy per cent of the health infrastructure and health resources are concentrated in urban areas, where only 28 per cent of the population lives.
A paradigm shift from the current bio-medical model to a socio-cultural model capable of bridging the gap and improving the quality of rural life is the need of the hour.

A healthy body is the work place of a healthy mind. It is the right of a human being to be healthy. The health of a nation is the sum-total of the health of its citizens. India has a comprehensive system for its socio-economic development and health is a major segment of social development. All matters related to health fall within the jurisdiction of state governments. However, the Centre has its areas of responsibility for the health of people. Since the study focuses on primary health care in Kerala and role of village level health workers, it is essential to know the nature of health planning in India and the concept of primary health care.

1.1.1 Health Planning in India

Health planning in India is an integral part of national socio-economic planning. The guidelines for national health planning were formulated by a number of committees. These committees were appointed by the government of India from time to time to review the existing health situation and to recommend measures for further action.

Serious attempts to organize the health care delivery system in the country were initiated in the pre-independent era itself. The report of the Health Survey and Development Committee (Bhore committee) in 1946
assessed the health scenario in colonial India and presented a vivid picture of the health needs that existed in rural areas at that time. The Committee proposed integration of preventive and curative services at all levels and visualized the development of primary health centres as a strategy to meet the health needs of rural population. The Committee suggested the establishment of one primary health centre for a population of 40,000 as a short term measure to meet the health care needs of rural community. Thus, as early as 1946, the report brought out the concept of primary health centre as an institution providing primary health care at the doorstep of the community.

Over a period of time the health services both at the centre and states have undergone tremendous transformation. Health was a priority in post-independent India, and the Five Year Plans had given priority for health. In 1959, the Government of India appointed another committee; Health Survey and Planning Committee (Mudaliar committee). The committee surveyed the progress made in the field of health since the submission of the Bhore committee report. Some of the salient recommendations of the committee were about primary health care in the country. The committee recommended that a primary health centre need not serve more than 40,000 population. They also pointed out the need for improving the quality of health care services provided through primary health centres.
The Government of India constituted another committee in 1972, known as ‘The Committee on Multipurpose Workers’ under Health and Family Planning’ (Kartar Singh committee). Based on the recommendations of the committee, a new cadre of ‘Multipurpose Health Workers’ was created in all the states. The committee also recommended that each primary health centre should be divided into sub-centers and each sub-centre should cover a population in the range of 3,000-5,000 depending on the topography and means of communication. Each sub-centre was to be staffed by a team of one male and one female health worker. The committee also specified the need for male supervisors and female supervisors in the ratio of 1:4 to supervise the health workers. The doctor in charge of the primary health centre should have the overall charge of the supervisors and health workers in the area.

In 1974, Government of India set up a ‘Group on Medical Education and Support Manpower’ (Shrivastav committee) to devise a suitable curriculum for training cadres of health assistants so that they could serve as a link between the qualified medical practitioners and the multipurpose workers. The committee recommended two cadres of health workers, namely multi-purpose health workers and health assistants. The committee also suggested that one male and female health worker should be available for every 5000 population. The Government of India accepted the basic recommendations of Shrivastav Committee in 1977, which led to the
launching of the Rural Health Scheme. The programme of training of community health workers was introduced during 1977-1978.

1.1.2 Health For All (HFA) and Primary Health Care

In 1977 it was decided in the World Health Assembly to launch a movement known as ‘Health for All by the Year 2000’. The fundamental principle of HFA strategy is equity, that is, equal health status for people and countries, ensured by an equitable distribution of health resources. The member countries of WHO at the 30th World Health Assembly defined Health For All as “attainment of a level of health that will enable every individual to lead a socially and economically productive life” (Park, 2007).

A new approach to health care came into existence in 1978, following an International Conference at Alma-Ata (Kazakhstan). This is known as “primary health care”. The Alma-Ata International Conference defined primary health care as follows:

“Primary health care is essential health care made universally accessible to individuals and acceptable to them, through their full participation and at a cost the community and country can afford”.

The Alma-Ata conference called on all governments to formulate national policies, strategies and plans of action to launch and sustain primary health care as part of the national health system. In India the Bhore
Committee (1946) had recommended primary health centres as the means to attain equity of health care services, and country was on its way in implementing it. All countries have accepted the concept of primary health care as the key to the attainment of health for all and as an integral part of the health system of each country.

1.1.3. Elements of Primary Health Care

Although specific services provided would vary between different countries and communities, the Alma-Ata declaration has outlined eight essential elements of primary health care as follows:

1) Education concerning prevailing health problems and the methods of controlling and preventing them.
2) Promotion of food supply and proper nutrition.
3) Adequate supply of safe water and basic sanitation.
4) Maternal and child health care including family planning.
5) Immunization against major infectious diseases.
6) Prevention and control of locally endemic diseases.
7) Appropriate treatment of common diseases and injuries.
8) Provision of essential drugs.

The concept of primary health care is based on the principles of equitable distribution, community participation, intersectoral co-ordination
and appropriate technology. Primary health care is qualitatively a different approach to deal with the health problems of the community and it goes beyond the conventional health services.

1.1.4. Primary Health Care in India

As a signatory to the Alma-Ata declaration in 1978, the Government of India was committed to take steps to provide ‘Health For All’ to its citizens. A working group on health was created by the National Planning Commission in 1980 to identify and outline the programmes for ‘Health For All’ through the Sixth Five Year Plan (1980-1985). The Government of India evolved a National Health Policy in 1983 and laid down a plan of action for re-orienting and shaping the existing rural infrastructure as described below.

1) Village level: The key principle of primary health care is universal coverage and equitable distribution of health resources, i.e., health care must penetrate into farthest reaches of rural areas; however, only few schemes were implemented. They were the Village Health Guide Scheme, Local Dais Scheme and Integrated Child Development Service (ICDS) scheme.

2) Sub-centre: The sub-centre or the Family Welfare Centre (FWC) is the peripheral outpost of the existing health delivery system in rural areas. They are being established on the basis of one sub-centre for
every 5,000 population in plain areas and one for every 3,000 population in hilly, tribal and backward areas. Each sub-centre is manned by a male health worker and a female health worker. Functions of a sub-centre are general health, maternal health, child health, family planning, immunization, control of communicable and non-communicable diseases.

3) Primary health centre: The functions of primary health centre cover all the eight essential elements of primary health care. Alma-Ata conference recommended one PHC for a population of 20,000-30,000 and should have a medical officer, pharmacist, laboratory technician, nurses, male and female health assistants, health workers, clerks and class IV employees. It acts as a referral unit for six sub-centres with out-patient facilities and six observation beds.

4) Community health centre: Each community health centre should serve a population ranging between 80,000 and 120,000 and acts as a referral unit for four primary health centres. The Community health centre should have in-patient facilities with thirty beds and specialist services.

It is essential to strengthen the grass root level health services and a proper referral system can improve the health status of any country. According to the severity of the illness, patients should be referred to
district hospital, teaching hospital or specialist hospital. India’s Public health care system can be depicted as follows:

![Figure 1. Public Health Care System in India](image)

1.1.5. National Health Policy

The Ministry of Health and Family Welfare formulated a National Health Policy in 1983 keeping in view the national commitment to attain the goal of HFA. The policy laid stress on the preventive, promotive,
public health and rehabilitative aspects. The health strategies included restructuring the health infrastructure, developing health manpower, research and development.

There have been significant changes in the determinant factors relating to the health sectors, necessitating revision of the policy and a new National Health Policy-2002 (Appendix-1) was evolved. The main objective of the policy is to achieve an acceptable standard of good health among the general population. The approach would be to increase access to decentralized public health system by establishing new infrastructure in the existing institutions. The policy is focused on those diseases that are mainly contributing to disease burden such as Tuberculosis, Malaria, Blindness, and HIV/AIDS.

1.1.6. The Millennium Development Goals

In September 2000, representatives from 189 countries met at the Millennium Summit in New York, to adopt United Nations Millennium declaration. The goals in the area of development and poverty eradication are now widely referred to as “Millennium Development Goals” (MDGs). They are the integral part of the roadmap towards the implementation of the UN Millennium Declaration. There are eight goals to be achieved by 2015 as given below, of which three are directly related to health.
Goal 1- Eradicate extreme poverty and hunger

Goal 2- Achieve universal primary education

Goal 3- Promote gender equality and empower women

Goal 4- Reduce child mortality

Goal 5- Improve maternal health

Goal 6- Combat HIV/AIDS, malaria and other communicable diseases

Goal 7- Ensure environmental sustainability

Goal 8- Develop a global partnership for development

1.1.7. National Rural Health Mission

Recognizing the importance of health in the process of economic and social development and to improve the quality of life of its citizens, the Government of India launched National Rural Health Mission (NRHM) on 5th April 2005. It is for a period of seven years from 2005 to 2012. The mission seeks to improve rural health care delivery system. The main aim of NRHM is to provide accessible, affordable, accountable, effective and reliable primary health care and to bridge the gap in rural health care through creation of a new cadre of health care workers.

Goals

1) Reduction in infant mortality rate

2) Reduction in maternal mortality ratio
3) Universal access to public health services such as women’s health, child health, immunization, nutrition and sanitation.

4) Prevention and control of communicable and non communicable diseases including locally endemic diseases.

5) Universal access to integrated comprehensive primary health care.

6) Population stabilization, gender and demographic balance.

7) Revitalizing local health tradition and mainstreaming AYUSH (Ayurveda, Yoga &naturopathy, Unani, Siddha and Homeopathy).

8) Promotion of healthy life style.

**Major activities under NRHM**

In order to strengthen the rural health sector NRHM undertook various activities as listed below;

1) Creation of a cadre of Accredited Social Health Activist (ASHA), who will work as a link between village level health workers and community.

2) Strengthening sub-centres by supply of essential drugs both allopathic and AYUSH; appointing of multi-purpose workers wherever needed; sanction of new sub-centres as per 2001 census; strengthening of the sub-centres with a fund of Rs. 10,000 per annum.
3) Strengthening primary health centres with adequate supply of drugs, provision of 24-hour service by including AYUSH practitioners.

4) Strengthening community health centres as 24-hour referral units and promoting ‘Rogi Kalyan Samti’ for hospital management.

Indian Public Health Standards (IPHS) are prescribed by the Government of India in 2006 to provide quality health care to the community through sub-centres, primary health centres and community health centres. These standards would help to monitor and improve the functioning of the health centres. The government should implement the basic facilities and manpower requirements as per the standards and conduct periodical performance audits of these health centres.

1.1.8. Primary Health Care in Kerala

Community level health workers were part of vertical national health programmes in Kerala. They had different designations that were programme-specific like malaria worker, leprosy inspector etc. and their duties and responsibilities varied accordingly. All health workers visited individual households separately, causing inconveniences to the households. Recognizing this inconvenience, Kartar Singh Committee’s recommendation of multi-purpose health worker scheme was implemented in the State.
Directorate of Health Services (DHS) under the Department of Health and Family Welfare takes care of preventive, promotive and curative services in the State. Kerala Health Services is the single largest employer of medical manpower in the state. It employs more than 55,000 personnel of various categories. The largest number of these categories is employed in primary health centres and sub-centres. In Kerala, the key institutions for the delivery of primary health care are the primary health centres and the sub-centres. The primary health centres are staffed with medical officers, paramedical and field staff. They usually cater to the health care needs of about 30,000 to 50,000 individuals living in a designated area. Both curative as well as preventive services are rendered through primary health centers.

The preventive services mainly focus on Reproductive Child Health (RCH) programme through which services are provided to women during pregnancy, childbirth, services to children and adolescent group and family planning services to eligible couples. Primary health centres also give priority to control of communicable and non-communicable diseases in their respective area. These activities are carried out through the multi-purpose health workers at the sub-centre level under the supervision of middle level supervisors and medical officer. The number of sub-centres functioning under each primary
health centre varies according to the population coverage of the primary health centre.

A sub-centre should cater to the health needs of a smaller population ranging between 3,000 and 5,000. A sub-centre is the first level of contact of the community in the health care system. A multi-purpose health worker (MPW) is the principal functionary at the sub-centre. The grass root level multi-purpose workers in Primary health care in Kerala are the Junior Public Health Nurses (JPHNs) and Junior Health Inspectors (JHIs). The JPHN and JHI should conduct house visits, identify the health needs of the community and render need based services as per their job description. Though the national recommended pattern is to have one male worker and one female worker at the sub-centre level, in Kerala a good number of JHIs are females, thus having only female workers in some of the sub-centres.

The supervisory cadre includes Public Health Nurse (previously designated as Lady Health Inspector), Health Inspector, Public Health Nurse Supervisor (previously designated as Lady Health Supervisor), Health Supervisor and Medical Officer. Job responsibilities of these grass root level workers and their supervisors had been redefined in 2003. The organizational pattern of primary health care workers is given in figure-2.
DHS is the premier establishment in Kerala looking after the basic health needs of the State at the grass root level. The national pattern of primary health care system is not followed in the State. As the population increased, some of the primary health centres are upgraded as Block Primary Health Centres (BPHC) with mini PHCs and sub-centres functioning under each BPHC. The community health centres also have mini PHCs and sub-centres serving a designated community. Hence a proper referral system is not followed in the State. There are 245 community health centres, 839 primary health centres (including the
BPHCs and mini PHCs), and 5094 sub-centres in Kerala (Source: DHS, Kerala, 2009).

The public health system has played a major role in making health as a social goal and an important determinant of the quality of community life. Achievements in health sector can be quantified in terms of health indicators as depicted in Table-1.

Table 1

*Basic health indicators of Kerala and India during 2008-2009*

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Health Indicators</th>
<th>Kerala</th>
<th>India</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Birth rate (per 1000 population)</td>
<td>14.7</td>
<td>23.1</td>
</tr>
<tr>
<td>2</td>
<td>Death rate (per 1000 population)</td>
<td>6.8</td>
<td>7.4</td>
</tr>
<tr>
<td>3</td>
<td>Infant mortality rate (per 1000 population)</td>
<td>13</td>
<td>55</td>
</tr>
<tr>
<td>4</td>
<td>Child mortality rate (per 1000 population)</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>5</td>
<td>Maternal mortality rate (per lakh live birth)</td>
<td>1.7</td>
<td>2.9</td>
</tr>
<tr>
<td>6</td>
<td>Total fertility rate (children per woman)</td>
<td>48.28</td>
<td>46.6</td>
</tr>
<tr>
<td>7</td>
<td>Couple protection rate (in percent)</td>
<td>48.28</td>
<td>46.6</td>
</tr>
<tr>
<td>8</td>
<td>Life at birth</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>76.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>73.8</td>
</tr>
</tbody>
</table>

1.1.9. National Rural Health Mission in Kerala

Though NRHM was started in 2005, it was implemented in Kerala much later, in August 2006 in its rechristened form ‘Arogya Keralam’. The goals and strategies of the Arogya Keralam project are the same as that of NRHM. The projects undertaken in Kerala to strengthen the rural health sector are as follows:

1. Implementation of ASHA (Accredited Social Health Activist) scheme to bridge the gap between health team and rural population on an honorarium basis. This was implemented in Kerala in 2006 selecting one activist for 1000 population. Training was given on basic concepts of maternal health, child health, family planning, nutrition, communicable diseases and life-style disease management. They work in collaboration with health workers at the sub-centre and the anganwadi workers.

2. Granting Rs. 20 lakhs to each community health centre to strengthen the infrastructure and basic facilities.

3. Sanctioning Rs.50,000 to each primary health centre for its maintenance and Rs. 25,000 as untied fund.

4. Granting Rs.10,000 to each sub-centre for the maintenance and another 10,000 as untied fund.
5. Sanctioning Rs.10,000 to each ward for ward level sanitation and development.

6. Janani Suraksha Yojana (JSY) by which the Below Poverty Line (BPL) women can avail up to Rs.1000 per delivery for the first two child births.

7. Appointing additional doctors and nurses to community health centres and primary health centres.

8. Appointing additional health workers to selected schools for adolescent health care.

9. Allocation of fund for the purchase of essential drugs to local self-governments.

10. Strengthening Ayurveda, Homeopathy and other systems of medicine.

1.1.10. ICDS scheme and Anganwadi workers

Integrated Child Development Service (ICDS) scheme was initiated in the country in 1975 to improve the maternal and child health. Under the ICDS scheme, there is one Anganwadi worker for 1000 population. There are about 100 such workers in each ICDS project. Anganwadi worker is selected from the same community. She undergoes training for a period of four months on basic concepts of health. She is a part-time worker and paid an honorarium. The beneficiaries are women and children below six years. Though the Anganwadi workers are under the Ministry of Social Welfare,
they act as the primary link between the rural community and health care workers.

ASHA works in collaboration with Anganwadi workers conduct health programmes for the community. ASHA supports the Anganwadi workers in mobilizing pregnant and lactating women and infants for nutrition supplements. They will also mobilize beneficiaries for the nutrition day, which is organized once in a month in Anganwadis. JPHN/JHI will arrange health awareness programmes for women and adolescent girls. ASHA would also take initiative in bringing pregnant women and children on the days of immunization and health checkups to Anganwadis or sub-centres, which is organized by JPHN and JHI of the area.

1.2. Need and significance of the study

The delivery of primary health care services is the foundation of the rural health care system and forms an integral part of the national health care system. The present concern in both developed and developing countries is not only to reach the whole population with adequate health care services, but also to secure an acceptable level of HFA through the application of primary health care programmes. The investigator tried to review the research and non-research literature related to the topic.

The Expanded Programme of Immunization (EPI) was started in India in 1978 following the eradication of small pox. Immunization is a
large scale, cost efficient way of protecting the lives of the most vulnerable group, mothers and children. While most countries including India have accepted the strategy of primary health care, it is essential to have proper monitoring of the implementation of immunization programme (Ghosh, 1990).

Agrawal, Tandan and Srivastav (1994) assessed the delivery pattern of Maternal and Child Health (MCH) services in Varanasi, India. Five hundred beneficiaries were selected through systematic random sampling technique from the family register. Findings revealed that only 26.2% of the beneficiaries had knowledge of MCH centres and 25% of the beneficiaries had utilized them. The various health care providers such as medical officers, public health nurses, and other health workers were not fulfilling the responsibilities and were unable to provide optimal services to the beneficiaries.

Studies have been carried out to assess the status of Auxiliary Nurse Midwives (ANMs) in health service. The sample consisted of 138 ANMs from selected PHCs of Maharashtra. The findings revealed that deficient and inadequate training; grossly inadequate facilities and supervision limit the scope and efficiency of their work, affecting their relationship with both the district health bureaucracy and the community (Iyer, 1995).
Improvement of health in India has a long way to go. The problem of lack of education in general and that of hygiene in particular is vast. A number of people in rural area are suffering from nutritional deficiencies and medical help. The authorities adopted step-motherly attitude towards the health of nation and allotted only a meagre portion of funds towards it. Public health for prevention of diseases, provision of safe water supply, enough food with nutritive values is lacking. Public health is invariably a political activity all over the world and Indian politicians have neglected the importance of public health (Patel, 2001).

The report of the committee to define or redefine the job responsibilities of various categories of employees under Kerala Health Services (2002) revealed the following findings: 1) There is lack of uniformity in duty hours of the primary health care workforce. 2) Majority of the workforce did not posses any documents or government orders describing the job responsibilities 3). More than 50% of all cadres of employees and members of the community were strongly in favour of redefining the job responsibilities. 4) Majority of the workforce was found to be ill-equipped to take up the responsibilities, as in-service training was inadequate. 5) The mean population served by a Junior Public Health Nurse and Junior Health Inspector was 6000 and 9000 respectively. The committee recommended the appointment of more health workers and uniform training for both the group of workers. The committee also recommended to set up a Directorate for Public Health in the State and the
evolution of suitable mechanisms for standardization of health service institutions. The committee also suggested having “performance audit” of all levels of workforce and adoption of measures that might improve the primary health care scenario in the State. Based on these suggestions, job responsibilities of primary health care workers were redefined, but no separate Public Health Directorate was formed.

Panchayats in Kerala allocated a lower proportion of resources to health than that allocated by the state government prior to decentralization, while the Panchayat’s resources grew at an annual rate of 30.7%, health resources grew at 7.9%. PHC’s were funded to the extent of only 0.7-2% of the total cost. It was found that decentralization brought no significant change to the health sector (Var atharajan, Thankappan and Jayapalan, 2004).

Suchitra (2005) reported that in the period from March 2003 to March 2004, there had been four maternal deaths in 603 births that had taken place in Attapadi block of Palakkadu district, Kerala. When 13 children die in every thousand births in the mainstream of Kerala, infant mortality including stillborn was 66 for Attapadi which is above the national average. Eighty percent of the newborn babies were under the normal weight of 2.5Kg. The high incidence of infant deaths is due to malnourishment and this in turn is due to poverty, inefficiency and ineffectiveness of the health services provided by the Government.
In India, fertility, mortality and morbidity remain unacceptably high, both compared to countries in the region and those that are at similar income levels. India’s primary health care system is based on the primary health centres which are not spared from issues such as inadequate physical facilities, incompetent health professionals and insufficient medicine supply. The current PHC structure is extremely rigid, making it unable to respond effectively to local realities and needs. The government health departments are focused on implementing norms, paying salaries, ensuring minimum facilities rather than measuring health system performance or health outcomes (Patel, 2005).

The National Family Health Survey (NFHS-3) report revealed that anemia is a major health problem in Kerala, especially in women and children. Among children between the ages of six and 59 months, 45% are anaemic. Boys and girls are equally suffering from anaemia. One third of women (33%) in Kerala are anaemic, and this is particularly prevalent among low education groups and scheduled tribes. The report also shows a decline in immunization coverage of children from 79.7% (1998-1999) to 75.3% (2005-2006).

Although there have been successes in improving the health of women and children worldwide, there remain an unfinished agenda of unnecessary, preventable deaths, illness and disability that disproportionately affects poor
women and children especially in the rural area of developing regions of the world (Nagdeve, 2007). Most health care systems have failed to make health care accessible and acceptable to the people who need it. For delivery of primary health care among rural population, simple preventive measures could be undertaken by a local village health worker such as giving oral vitamin A and deworming (Mathur and Kumar, 2007).

The world will fail to reach Millennium Development Goals unless countries like India improve their record on health and child protection. UNICEF, the UN children's agency, says India is failing to provide basic healthcare for its poorest children, despite robust economic growth. The divide between rich and poor is rising at a troubling rate in the region and leaving vast numbers of mothers and children at risk of increasing relative poverty (UNICEF, 2008).

Tuberculosis is a disease of the poor as it is widely found in developing countries like India, Bangladesh etc. It was also reported that India alone contributes one fifth of the world TB cases. The World Health Organization released a regional report on TB control, which estimates that South-East Asia registered 2.2 million TB patients in 2009. National TB programmes in the region face several challenges like poverty, rapid urbanization and huge population displacements (WHO, 2009).
Two reasons attributed to the return of many epidemics to Kerala are the erosion of the grass root level public health care systems that thrive on Government support and dysfunctional municipal systems that do not deal effectively with waste disposal (Chekkutty, 2007). The decline has been attributed to the erosion of primary health centres as the focus has shifted to specialty hospitals and referral centres. Kerala is a state that had achieved developed country status in all major human development indices like life expectancy and infant mortality; this is now being seriously challenged.

A series of epidemic outbreaks have occurred in Kerala since 1980s. Only new diseases catch media attention. Each time the Government was caught unawares and the health system was unprepared. A state with nearly 100 percent literacy cannot afford to be ill-prepared for such outbreaks. The health system must always keep a close watch on diseases. Early signals of clustering should be picked up immediately, diagnosed, investigated and interpreted before they spread widely. This is the core function of any public health system (John, 2007).

Globalization is putting the social cohesion of many countries under stress, and health systems are not clearly performing as they could and should. People are increasingly impatient with the inability of health services to deliver quality care. Health system need to respond better and
faster to the challenges of a faster changing world, only primary health care can improve the situation (WHO, 2008).

There has been a sharp increase in the number of elderly population in India between 1991 and 2001 and it has been projected that by the year 2050, it would rise to about 324 million. Census India, 2001 revealed that aged population above 60 years is about 77 million and 75 per cent of elderly persons are living in rural areas. One-third was reported to be living below poverty line without adequate food, clothing and shelter. Kerala also demonstrated an increase in elderly population from one million in 1961 to 3.1 million in 2001. In the district of Kottayam, 12.8% of the total population is above 60 years of age.

Das Gupta, Shukla, Somanathan and Datta (2009) suggested that the central government should consider linking its fiscal support to States with phased progress in four areas to strengthen India’s public health system. a) The enactment of State Public Health Acts. b) Establishment of separate public health directorate by State governments. c) Revitalization of grass root level public health workers. d) Ensuring municipal public health system.

Even though Kerala’s key health indicators have always been way ahead of the national average, in recent times it has been unable to either improve or even sustain its indicators, while many other States have made significant gains on the health front. There had been 48 deaths in Kerala
due to leptospirosis out of the 1044 cases reported from January to December 2009. There were 6958 confirmed cases of viral hepatitis in the State during the same period and seven deaths were reported. There were 13,138 TB patients in the State and 140 deaths occurred in 2009 (Source: DHS, Kerala, 2010).

Since the study was undertaken in Kottayam district, the researcher tried to get the information on health parameters of the district. There had been 160 cases of dengue fever in Kottayam district from January 2009 to December 2009, and two deaths were reported during this period. There were 75 cases of leptospirosis and ten deaths were reported in the district during the same period. It is also notable that 642 cases of viral hepatitis were reported in Kottayam district and seven deaths occurred. Out of the 1200 TB cases reported in the district in 2009, eleven died (Source: Integrated Disease Surveillance Project, Kottayam unit, 2010).

Compared to other states in India, Kerala’s health care delivery system is facing newer and different types of problems. Increased life expectancy, life-style diseases and changing morbidity pattern are challenges. Epidemiologic and demographic transitions occurring in the State increases the public health burden. The researchers had continuously cautioned Kerala against being smug about its health care and demographic
achievements and advised it to be concerned about its embarrassing failures in public health (Krishnakumar, 2009).

The investigator being a community health nursing specialist, from her professional experience, critical reflective thoughts and also from review of related literature felt the need to conduct a scientific study to identify the various aspects of primary health care available in the State.

The researcher’s association with the public health field started in 1991, as part of the employment in Kerala health service. Since then, the investigator has been in close contact with village level health workers, observing the services provided to individuals and families in the community. At the same time, the researcher realized that majority of the general population are unaware of the grass root level health team, which is operating in their area. This prompted the researcher to dig deeper in to the problems and issues related to the delivery of primary health care at the grass root level.

Very few studies have been conducted to identify the problems and issues related to health care delivery at the village level in Kerala. The investigator did not come across such studies particularly after the implementation of 2003 job description of primary health care workers. Hence the investigator intends to assess the performance of health workers at the village level and identify the problems and issues related to the
delivery of primary health care at the grass root level. This has particular relevance in the context of the policies of globalization and structural adjustment whose burden is most acutely felt by the poor. The effectiveness of the rural public health system has implications for improving the ability of the poorer sections of the society to cope with the ill-effects of the economic reforms.

1.3. Statement of the problem

Primary health care plays a pivotal role in health care delivery and its principal aim is to bring health care to the doorstep of the community at a low cost in a community-responsive fashion. In Kerala, the key institutions for the delivery of primary health care are the primary health centres and the sub-centres. Considering the magnitude of the public health problems in Kerala, it is essential to analyse the actual problems in the delivery of primary health care at the grass root level. Kottayam district, having the highest literacy status, is not free from any of the public health problems. Hence, a comprehensive assessment of the situation covering the health workers and beneficiaries is highly essential.

The research problem is stated as ‘A critical analysis on the role of village level health workers in the delivery of primary health care in Kottayam district, Kerala’.
1.4. **Objectives of the study**

1. To assess the work performance of village level health workers as per the job description.

2. To determine the services received by households from the village level health workers.

3. To assess the facilities of the selected sub-centres.

4. To analyze the work performance of village level health workers with respect to selected variables such as age, sex, work experience and population coverage.

5. To identify the problems and issues related to the delivery of primary health care at the village level.

1.5. **Operational definitions**

For the purpose of clarity, operational definitions of some of the important terms used in the study are given below:

1. **Primary health care**: In the present study, primary health care refers to the essential health care services rendered to the beneficiaries through village level health workers, covering major areas such as maternal health, child health, family planning services, control of communicable and non-communicable diseases.

2. **Village level health workers**: Health workers, Junior Public Health Nurse (JPHN) and Junior Health Inspector (JHI) who render primary health care services at the village level.
4. **Junior Public Health Nurse (JPHN):** is a grass root level female health worker employed by Government of Kerala to render services to a designated population.

5. **Junior Health Inspector (JHI):** is a male or female village level health worker employed by Government of Kerala to render services to a designated population.

6. **Household:** Family residing in the study area for more than six months.

7. **Sub-centre:** is the office of the village level health worker from where the beneficiaries can avail services.

8. **Role:** Duties and responsibilities performed by the village level health workers.

9. **Work performance:** Role performed by JPHN and JHI, as measured through a self-administered rating scale based on the job description.

9. **Job description:** Redefined job responsibilities of multi-purpose health workers in primary health care institutions as per order GO (P) NO; 254/2003/H&FWD, Thiruvananthapuram, Dated 9th December 2003 (Appendix-XIV).
1.6. **Hypotheses**

The following hypotheses were formulated for the present study:

1. There is significant difference between the work performance of JPHN and JHI.

2. There is significant difference in the work performance of JPHN with respect to selected variables such as age, work experience and population coverage.

3. There is significant difference in the work performance of JHI with respect to selected variables such as age, sex, work experience and population coverage.

1.7 **Conceptual frame work of the study**

A conceptual frame work deals with the abstracts that are assembled by virtue of their relevance to a common theme. It provides a logical thinking for systematic observation and interpreting the observed data.

The conceptual model of this study is based on the General System Theory (GST) proposed by Ludwig von Beratanffy (1968). General System Theory serves as a model for viewing people as interacting with the environment. It focuses on the arrangement and relations between the parts which connect them into a whole. Systems are composed of both structural and functional components. All systems are open and there is a contextual
exchange of matter, energy and information from the environment. The system concepts include input, throughput, output and feedback.

Input is any form of energy, information or matter that enters into the system through its boundaries. In this study the village level health worker’s age, sex, experience, population coverage, training, supervision, motivation, teamwork, promotion and sub-centre facilities forms the input of the system.

Throughput is the process that occurs at some point between input and output. It enables the input to be transformed into output in such a way it can be readily used by the system. The village level health worker will be able to provide quality health care to the community only if they have adequate inputs.

Output of the system is the result of the services rendered by the village level health worker. The health care of the community can be improved through adequate inputs and adopting proper process.

Any system requires evaluation by which the adequacy of input and process is assessed. Through feed back corrections can be made if necessary, for better outcome. In this study the investigator is making an attempt to assess the input and process and thereby necessary changes can be suggested in the system. Conceptual framework of the study is given in figure -3.
Conceptual framework of the study based on General System Theory

Village level health workers (JPHN and JHI)
- Age
- Sex
- Experience
- Population coverage
- Training
- Supervision
- Motivation
- Teamwork
- Promotion
- Sub-centre facilities

Village level health worker renders primary health care to the community

Healthy community

Input

Throughput

Output

Feedback

Figure-3

Conceptual framework of the study based on General System Theory
1.8. **Methodology in brief**

The present study is aimed at assessing the performance of village level health workers (JPHN and JHI), analyzing the facilities of sub-centres and identifying the problems and issues related to the delivery of primary health care. A descriptive survey design was adopted for the study. There are 14 districts in Kerala and one district, Kottayam was selected for the study. The selection of Kottayam district was guided by the following considerations. The district has considerable geographic and socio-economic diversity and 85 per cent of the population lives in rural community as per the 2001 census report. The structure of the public health care system throughout the State of Kerala is the same and most findings would equally apply to the State as a whole.

Formal permission was obtained from the Directorate of Health Services. The researcher obtained the list of primary health centres and sub-centres functioning in Kottayam district. A multi-stage random sampling technique was adopted and thirty-two sub-centers were selected by simple random method. The Government order describing the job responsibilities of JPHN and JHI was obtained from the Directorate of Health Services. Based on the job description, the investigator developed the tools through which the objectives of the study could be achieved. Interviews were conducted with households residing in the study area. Households from the study area were selected by systematic random
sampling from the family survey register available at the sub-centre. Focus group discussions were conducted with JPHNs, JHIs, Accredited Social Health Activists (ASHA) and Aganwadi workers. In-depth interviews were also conducted with selected JPHNs, JHIs, supervisors and medical officers. Facilities of the sub-centres were assessed with the help of a checklist. The data collected were analyzed using descriptive and inferential statistics.

1.9. Scope of the study

In the current scenario, even after thirty years of HFA movement, most of the developing countries have not achieved the target. The rural-urban difference and the rich-poor gap are widening. There is considerable challenge for optimizing rural health infrastructure throughout the country. It is doubtful whether the health services of the country are geared sufficiently to meet the various health needs. Though Kerala’s health indicators have always been ahead of the national level and has achieved developed country status in all human development indices, in recent times, it has been unable to improve or sustain its status.

The changing priorities of the public health sector, a fragmented health infrastructure, and the mushrooming of private hospitals, all contributed to the downfall of the State’s public health system. This study aims to analyse the job descriptions of grass root level health workers and assess their performance in the delivery of primary health care. The study
is also expected to identify the problems and issues related to the delivery of primary health care at the grass root level. The exploratory nature of the study can yield solutions and recommendations for further improvement.

1.10. Delimitations

The study is delimited to one district of Kerala and the investigator does not claim that the findings can be generalized to the rest of Kerala. Considering the wide range of activities performed by the health workers, it was difficult to make direct observations. Hence the performance of JPHNs and JHIs was assessed with the help of a self-administered rating scale, which was developed by the investigator based on the job description. In addition, this rating was compared with beneficiary’s assessment.

1.11. Outline of the report

Further report of the study follows in six chapters.

The second chapter deals with review of the relevant literature. The third chapter deals with the research methodology. Analysis and interpretation of the quantitative data is given in the fourth chapter, and the fifth chapter deals with the qualitative research findings. Chapter six consists of summary of the study, findings, discussion, conclusions, implications and recommendations.