CHAPTER 1

INTRODUCTION, METHODOLOGY AND DESIGN OF THE STUDY

1.1. Introduction

1.1.1. Significance of health

"Health is not everything in life. But life is nothing without health."

(Peter Sweifel)

Health of the people is really the foundation upon which all their happiness and all their power as a state depend. Health is a component of what is known as welfare and it is man’s most precious possession. Good health and long life have therefore traditionally been the most prized goals of mankind. Good health is considered as a pre-requisite for economic development and social welfare. A healthy community is the infrastructure upon which an economically viable society can be built up as unhealthy people can hardly be expected to make any valid contribution. Thus, health is considered as highly valued asset. It is even claimed that health is the only thing that counts in life.

This was recognized by our sages. Charaka, the renowned Ayurvedic physician who lived 2500 years ago, had said that health is critical for the realization of the four fold aims of life- the ethical, artistic, materialistic and spiritual. "Dharmarhta kama moksham, Arogyam moolamuthamam" (Parthasarathy, 1992).
Buddha, the enlightened one, had propounded the noble percept, Arogyam Parama Labha (Of all gains, the gains of health are the highest and the best) (Goel, 1984). The constitution of the World Health Organization had stated that “Enjoyment of the highest standard of health is one of the fundamental rights of every human being without any distinction of race, religion, political belief, economic and social condition”.

Sreenivasan (1984) regarded health as one of the fundamental rights of the people and a universally cherished goal. Goel (1984) in his work on public health administration gave priority to promotion of health for national progress. According to him nothing could be of greater significance than the health of the people in terms of resources for socio-economic development. Dodzie (1979), United Nations Director General for Development and International Economic Co-operation in his article has rightly said that “promotion and protection of the health of the people is essential to sustained economic and social development and contributes to a better quality of life and to world peace”.

Thierry (1969) in his article, “Laying foundation”, succinctly remarked that “Health is man’s precious possession: it influences all his activities, it shapes the destinies of the people. Without it, there can be no solid foundation for man’s happiness”. Thus, it is clear that there can be no two opinions that health is basic to national progress and in terms of resources for economic development nothing could be of greater significance than the health of the people. Good health must be a primary objective of national development programmes. It is a precursor to improving the quality of life for a major portion of mankind.
The National Planning Committee in the Interim Report of its subcommittee on Health, highlighted the need to have a state controlled free health system. Health of the people was seen as the responsibility of the State.

Jean Dreece and Amarthya Sen (1996) viewed health from two aspects—"health is wealth and also health creates wealth. The maxim that health is wealth highlights the increasing importance of health. Health is valued on its own; it is perhaps the supreme element of economic development". Now, health has been accepted as a universal social goal. Since 1960s the social development movement, and from the beginning of 1990s, Human development Report of United Nations Development Programs (Darshsni Mahadeva, 2000) have emphasized improvement in the health status of population as one of the important goals of development. Thus it is increasingly being recognized that good health is an important contributor to productivity and economic growth, but it is first and foremost, an end in itself. In a country like India, where the only asset most people have is their bodies, health assumes even greater significance.

Public health programs thus play a very significant role in the physical and mental well being of every nation. It consists of a wide spectrum of services such as primary health care including provision of preventive and curative services, health education, protection of mother and children, family welfare, and control of environmental hazards and communicable diseases. The provision of these services will improve the physical and mental development of the human beings.
1.1.2. Primary Health Care: Changing Concepts. (Conceptual Framework)

One of the great difficulties in delivering health care to the common man in the developing countries is that it does not percolate into the grass root levels in the villages. With political independence, there was a national commitment to improve health in developing countries. Against this background different approaches to providing health care came into existence. They are:

1. Comprehensive health care: The term 'comprehensive health care' was first used by the Bhore committee in 1946. By comprehensive services, the Bhore Committee meant provision of integrated preventive, curative and promotive health services from "womb to tomb" to every individual residing in a defined geographic area. The Bhore Committee suggested that comprehensive health care should replace the policy of providing more medical care. This concept formed the basis of national health planning in India and led to the establishment of a net work of primary health centers and sub centers.

2. Basic health services: In 1965, the term “basic health services” was used by UNICEF / WHO in their joint health policy. Basic health services is understood to be a net work of coordinated, peripheral and intermediate health units capable of performing effectively a selected group of functions essential to the health of an area and assuring the availability of competent professional and auxiliary personnel to perform these functions.
3. Primary healthcare: A new approach to healthcare came into existence in 1978, following an international conference at Alma-Ata (USSR). This is known as “primary health care”. It has all the hallmarks of primary health care delivery, first proposed by the Bhore Committee in 1946 and espoused worldwide by international agencies and national governments.

Before Alma-Ata, primary health care was regarded as synonymous with “basic health services” “easily accessible care”, “Services provided by generalists” etc. The Alma-Ata international conference gave primary healthcare a wider meaning. The Alma-Ata Conference defined primary healthcare as “essential health care made universally accessible to individuals and acceptable to them, through their full participation and at a cost the community could afford”

1.1.3. Background

In the early 1950s, many developing countries were concentrating their efforts on the eradication of diseases through mass campaign run outside the main structure of their health services. As early as 1953, WHO was stressing the need to strengthen basic health services to meet the urgent problems affecting large sections of the population. During the 1960s, a number of developing countries integrated their special programs with their basic health services. Progress in developing basic health services – particularly in rural health services – had been slow and uneven. A joint UNICEF/WHO study reported in 1975 that despite great efforts, the basic needs of vast number of people throughout the world were still unmet. Too often the pattern of health services has been modeled on those in industrialized countries- relatively sophisticated services
staffed by highly qualified personnel. These services, which have been concentrated in cities and towns, have been predominantly curative and have catered to only a small minority of the population. In other words, many stopped to believing in an instantaneous trickle down effect of economic growth. It has not proved possible to expand effective access to services of this type to anything like the entire population. Several world health assemblies have stressed that an alternative approach can be practicable and relatively successful if,

1. Promotion of their own health and welfare is an essential ingredient of primary health care.
2. Intersectoral coordination. The emphasis is switched from urban to rural population and to the under privileged.
3. Services are integrated, combining both curative and preventive strategies as part of wider socio economic development.
4. The importance for the health of sanitation, housing, nutrition, education and communication is given full recognition.
5. The use of services is promoted where local population takes a major responsibility for them both in providing manpower facilities and in participating in decision on local health policies.
6. Locally restricted primary health care workers, supported by their communities, can form the front line of the health care system.
7. The work of indigenous healers is given full recognition.

In 1977, the World Health Assembly decided that the main social target of government and WHO should be “the attainment by all the citizens of the world by the year 2000 of a level of health that will permit them to lead a
socially and economically productive life”. The concept of primary health care came into lime light in 1978 following an international conference in Alma-Ata USSR which declared that primary health care was the key to attaining health for all.

The primary health care approach is based on principles of social equity, nation wide coverage, self-reliance inter sectoral co-ordination, and people’s involvement in the planning and implementation of health programs in pursuit of common health goals. This approach has been described as “Health by the people” and placing people’s health in people’s hand. Primary health care was accepted by the member countries of WHO as the key to attaining the goal of health for all by the year 2000 A.D. As stated in the reports of the Alma-Ata International Conference on primary health care, the following eight elements are considered essential.

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

In 1979, the World Health Assembly invited the member states of WHO to formulate national, regional and global strategies, a health strategy having been described by the WHO Executive Board as “the broad lines of action
required in all sectors to give effect to health policy. The global strategy published in 1981, started from country strategies and was built up through regions to the world level. It is a synthesis of ideas derived from national and regional strategies. The main thrust of the strategy is

1. Primary health care to deliver programmes that reach the whole population.
2. Action to be taken by individuals, families and communities as well as by health services and health related services in other sectors
3. Technology that is appropriate, scientifically sound, adaptable, acceptable, to users, and with in the capacity of the country to afford.
4. Higher degree of community involvement.
5. International action to support national action.

1.1.4. Significance of Primary Health Care

The emphasis on primary health care originated from five underlying ideas. The first was recognition of the importance of inter-sectoral action for health development. This grew out of the discussion of development from the middle 1960s, which recognized that economic growth did not necessarily 'trickle down' to the poor as economists had too readily assumed, and that the central problem of development was how to meet the basic needs of poor. Economic and social developments were not separate but closely interrelated. The second reason was the recognition based on experience of earlier programmes, that the key infectious diseases could not be successfully combated by specific isolated programmes of mass campaign against particular diseases controlled from the center. All health programmes needed the support of local
health staff and local population. The third underlying idea was that preventive and promotive action should not be separated from curative action. This was the way in which services had developed in most countries, both developed and developing. Fourth was the evidence that there was a range of health activities, which were relatively cheap and very effective which nevertheless, did not reach millions of people throughout the world. Finally, it represented a strong action against authoritarian attempt of the health professionals to impose health on people.

1.1.5. Some denials

Reviewing what it is not intended to can further strengthen an understanding of primary health care. First, it is not a vertical programme aimed at eradicating a disease or having a separate organizational structure. Its success will depend on the delivery of its vital component and integration within and beyond the health care system. Second, it is not primitive health care. Although it is antonymous with 'rich' sophisticated 'medical care', it is basic health care for both the rich and poor. Its preventive and promotive tasks are applicable equally to all sections of the population. Third, primary health care is not a paramedical programme to be run by unskilled people. Medical profession has an important role to play in the organization and delivery of primary health services. Fourth, while primary health care may be 'low cost' relative to the price of sophisticated medicine, it is not intended to be cheap health care for the poor. Provision of universal health services will require sizeable financial allocations. Its implementation will most likely require increased budget for the health sector.
1.1.6. Characteristics

Primary health care is both a ‘philosophy’ and a ‘strategy’ (Cole-King, 1981). Its philosophical merit is derived from the principles it espouses, while its strategy consists of broad based activities with in and beyond the health sector aimed at the improvement of health. The philosophy of primary health care holds that health is a basic human right. Thus, the main objective of a policy espousing primary health care would be to provide as yet un-reached groups with at least basic health services through redistribution of financial resources, man power and materials.

1.1.7. Principles of Primary Health Care

1. Universality: Primary health care is a flexible approach. It is applicable to all nations irrespective of their problems, resources and state of development or requirements. It should be available for all irrespective of sex, age, religion, status or ability to pay.

2. Accessibility: Sufficient proximity is another consideration. Many, especially the vulnerable segments such as women, children aged, rural and urban poor and tribal do not have access due to remoteness or inability to pay. It is a well-known injustice that though 3/4th of the world’s population live in rural areas and usually contribute as much of the countries income, the urban elite, who generally form only 1/4th of the population, have 3/4th of health services. By equitable distribution we can make it more accessible for all.

3. Acceptability. This implies social and cultural acceptance. The wide social distance between the sophisticated health providers and poor,
illiterate villagers and tribal is an inhibiting factor affecting both accessibility and acceptability.

4. Community participation: Not with standing the overall responsibility of Central and State governments, the involvement of individuals, families, and communities is an essential ingredient of primary health care. There is an increasing realization of the fact that the components of primary health care cannot be provided by the health sector alone. The declaration of Alma-Ata states that “primary health care involves in addition to the health sector, all related sectors and aspects of national and community development, in particular agriculture, animal husbandry, food, industry, education, housing, public works, communication and other works” (WHO, 1978)\textsuperscript{13}.

5. Appropriate technology: Appropriate technology has been defined as “technology that is scientifically sound, adaptable to local needs, and acceptable to those who apply it and those for whom it is used, and that can be maintained by the people themselves in keeping with the principle of self reliance with the resources the community and the country can afford” (WHO, 1978)\textsuperscript{14}.

1.2. Statement of the problem

Kerala has been described as a unique case among developing countries, a society where the health and demographic transition have been achieved within a single generation, i.e. after the formation of Kerala. Kerala has apparently entered the third or final phase of demographic transition characterized by low birth rate and declining death rate leading to a slow down in the growth rate of population. Birth rate in Kerala is reduced to 16.2 9as
against 25.4 for all India in 2004. Infant mortality rate is 10.0 as against the All India rate of 63.0 for the same period. The crude death rate for Kerala in 2004 was 6.4 per 1000 compared to national average of 8.10 and an average of 10 for low-income countries and 8 for middle-income countries. Kerala infact has achieved the basic development indicators in 1980, which the Government of India has targeted for 2020.\textsuperscript{15}

Most analysts have seen Kerala’s achievements in health as something of an enigma. Kerala achieved the health status as par with that of USA spending roughly 10 US $ per capita while US spends about 3500 $ per capita per year on health care. Kerala’s achievement in health in spite of its economic backwardness and very low health spending has prompted many analysts to talk about “Kerala Model of Health”, worth emulating by other developing parts of the world (Anita, 1996).\textsuperscript{16}

Apart from the socio economic factors, the universally available public health system in Kerala has also contributed much to the high health status of the people. Various studies tend to concentrate on the success of public health programmes in controlling infectious diseases and on greater accessibility to and the utilization of medical care system in Kerala. Kabir and Krishnan (1992)\textsuperscript{17} have pointed out the critical role played by the government in providing access to health and the importance of social and political change in bringing about the health transformation in Kerala. Another major indirect finding was the importance of preventive and public health measures in reducing morbidity and mortality. According to Kannan et al. (1987)\textsuperscript{18}, Public health care institutions have played a crucial role in health care in the early decades but since eighties there has been rapid expansion in the health care facilities in the private sector.
Low rate of utilization of public health care even among the poor shows poor performance of the public health institutions and the preventive health care aspects in the public institutions does not seem to get the attention they warrant. Paniker (1975)\textsuperscript{19} attributed the health improvement in Kerala mainly to the development of public health measures. A United Nations study (1975)\textsuperscript{20} on Kerala's health development concluded that development of Kerala in lowering mortality rate and rising life expectancy to almost to the levels of more developed countries must be attributed largely to the widespread net work of health services and their utilisation. Public health measures such as sanitation, control of infectious diseases introduced by Travancore and Cochin in the 19\textsuperscript{th} and 20\textsuperscript{th} centuries were the key to reduce mortality. Nair (1974)\textsuperscript{21} suggested that the extension of primary health centers and public health measures in the state has led to the decline in IMR and mortality in 1950s and 1960s. Paniker and Soman (1984)\textsuperscript{22} laid equal emphasis on public health and medical care services. While the first phase of health status improvement was attributed to preventive health measures against infectious diseases, in the second phase the stress was on the expansion of medical care. This was also supported by KSSP study (Kannan \textit{et al.}, 1991)\textsuperscript{23}. Thus major studies pointed out the critical role played by the public health measures in attaining signal achievements in health in Kerala. Universally available public health system in Kerala has contributed to the high health status of the people in Kerala.

Present disturbing trend is that pubic health system is getting alienated from the people since 1980s, and only 30 % of the people even from the lower income seek medical help from the government hospitals. This is because of the fall in the quality of the services of the government hospitals. Today, rate of utilization of private sector has increased drastically pointing to the poor
performance of the public health sector. Higher and increasing trend of utilization of private sector even by the poor is a strong indicator of several shortcomings of public health care institutions. According to Paniker (1992)\textsuperscript{24}, private expenditure in Kerala is one of the highest in India. Lack of political commitment, bureaucratic inefficiency, corruption at various levels, lack of proper planning etc has contributed to this sorry state of affairs. Thus, the importance of public sector in health service in the state has waned greatly.

A comparison of the infrastructure and health manpower development in the private and public sector confirms the supremacy of the private sector in the state. The number of beds in the government institutions grew from around 36000 to 38000 in the 10year period from 1986 to 1996, where as in the same period, beds in private institutions grew from 49000 to 67500 (Kunnikannan and Aravindan, 2001)\textsuperscript{25}. This amounts to nearly 40% growth in the private sector beds in a period of 10 years as against nearly 5.5% in the government sector. In the case of doctors about 5000 doctors work in the government sector where as double the number work in the private sector. More significantly the private sector has far outpaced the government facilities in the provision of sophisticated modalities of diagnosis and therapy, such as CT scan, MRI scan units etc. Simultaneously, public health itself is being subjected to internal privatization. Because of the irregular supply of medicines and other materials patients seeking medical care from the government hospitals are forced to buy them from outside.

The changing health scenario of Kerala has provoked analysts to comment that the Kerala Model of Health care is slowly drifting towards an American model of Health care. The hallmark of development experience of
Kerala was low cost of health care and the universal accessibility and availability even to the poorer sections of society. This may be changing to a situation where in spite of the technological supremacy 40 million are denied health care because of privatization and the escalation of health care cost (Aravindan, 2000).26

Various studies on rural primary health care have observed that, though the infrastructure is in place in most areas, they are grossly under utilized because of poor facility, inadequate supplies, and lack of proper monitoring and evaluatory mechanism. Without safe and effective front-line care, secondary and tertiary care is likely to be inefficient and perhaps ineffective. Bypassing of peripheral facilities is one of the inevitable consequences of low quality. Relatively little work has been done on the evaluation of public health programmes in general and primary health care in particular. Even less has been done to assess the quality of primary health care. Against this background, the present study attempts to analyze the performance evaluation of primary health care system in Kerala. Hence the basic research questions are: How does the different element of primary health care work in Kerala? Whether any particular area of primary health care needs special attention? Is there any deterioration in the quality of performance of primary health centers, which are the nuclei of providing primary healthcare to the rural poor?

1.3. Objectives

1. To examine the working of the primary health care system in Kerala
2. To assess the impact of the working of primary health care system on the health status of the rural population.
3. To analyze the operational efficiency of the primary health centers in providing primary health care to the rural people.
4. Finally, to find out the point of weakness in the working of primary health care in the study area and to suggest remedial measures.

1.4. Hypothesis

1. Changes in the health profile require reallocation of resources of primary health care system.
2. Rate of utilization depends on the quality of services provided by primary health centers
3. There is a significant decline in the operational efficiency of the primary health care system

1.5. Methodology

The major elements of primary health care stated in the report of Alma-Ata International Conference on Primary Health Care (WHO, 1994)\(^27\) is studied on the basis of the classification of the elements into three: Preventive, Promotive, and Curative measures. Preventive measures include Maternal and Child Health Care including family Planning. Provision of water and sanitation is reviewed under promotive measures. Curative measures are studied using the disease profile of the study area. Health indicators given by WHO in the World Health Annual Statistics\(^28\) for proper evaluation and comparison of primary health care among countries are used to evaluate the outcome, and to know the impact of the working of the primary health care system on the health status of the people. Finally, performance evaluation of the primary health centers is done
through the opinion survey collected from the people relating to their awareness, accessibility, acceptability, and availability of the primary health care facilities.

1.5.1. Data Sources

The study is based on both primary and secondary data. Secondary sources of data include published and unpublished data related to preventive, promotive, curative measures and outcome indicators. Many of the government offices such as Directorate of Health Service Trivandrum, Economics and Statistics Department Trivandrum, District Medical Offices of the sample area, Primary Health Centers and Hospitals served as sources of information in this regard.

Collection of primary data was done through a sample survey, using pre-tested interview schedule of households of the study area.

1.5.2. Sampling Technique

Multi stage random sampling design was used for selecting the sample. In the first stage, the Districts were divided into two strata on the basis of indicators such as per capita income, literacy rate, bed population ratio (Private and Government), number of hospitals per square kilometer. The Districts were ranked on the basis of these indicators and an average index was computed for each District. The Districts were then grouped into two on the basis of their index: 1. having an index value of seven and less than seven 2. with an index value greater than seven. One District was selected at random from each of the strata. Thus, Trichur District was selected from the first
group and Palakkad was selected from the second group. In the second stage, one block was selected at random from each of the two Districts. Thus, Kodungallur and Chittur block were selected from Trichur and Palakkad respectively. In the next stage, three Panchayats were selected at random from each of these blocks. In the final stage, fifty households were selected at random from each of these Panchayats. Thus, making a total sample size of 300 households. The sample unit was defined as a household where there was a birth one year prior to the survey and belonged to the lower or middle-income groups.

1.5.3. Household Characteristics

The households surveyed have been classified into three groups using socio-economic variables. The characteristics included here are (1). Per capita income (2). Educational status (3) Land ownership and (4). Housing conditions. Initially, ranks are assigned to each household according to their characteristics and then weights are assigned to their individual ranks so as to have socio-economic status classification. Thus, three classes viz: SES 1, SES 2 and SES 3 are formed as is explained below.

**SES Characteristics**

**Per capita income**

Per capita income was considered most important for health status since payments will have to be incurred in the event of treatment. The figure relating to income are those reported by the heads of the households. Per capita income was worked out and the households were ranked as follows.
1. If the per capita income was \(< 250\) per month
2. If the per capita income was \(>250 < 500\)
3. If the per capita income was \(>500\)

Cut off rate of poverty here is estimated as Rs 250. Those who are located below this level are considered as poor. As per the survey result, 62 \% of the households in Kodungallur and 68 \% in Chittur come under this category. IRDP survey of 1992 recorded poverty level of 39 \% in Kodungallur and planning commission estimated it as 10 \%. To have a clear classification, another characteristic included was and ownership.

**Land ownership**

Total land owned by the household was taken into account and accordingly the households were divided into three groups. This is used as a counter check for income. The criteria used for classification of household according to the land ownership is

1. If the land owned is \(< 11\) cents
2. If the land owned is 11 to 25 cents
3. If the land owned is \(> 25\) cent

The first group is generally the land less or land poor, most of them having a few cents of homestead lands. Under the Kerala government scheme of redistribution of land to the land less, 10 cents was upper limit. The second group would be marginal farmers who may not be able to derive any substantial

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1 As per the planning commission's estimates, cut off points of poverty is worked out as Rs 228 and 264 for rural and urban areas respectively at 1992-93 prices. For a household of five members, the poverty line has been fixed at an annual income of Rs 13680 in rural areas and Rs 15840 in urban areas
income from the land. The third group consists of small farmers. The land
distribution brings out that 50% comes under the first category, 27% in the
second category and 23% in the third category in Kodungallur block and the
same for Chittur block is 11%, 81% and 8 % respectively.

**Educational Attainments**

Health and education are closely related. Literacy, especially female
literacy plays an important role in health attainments. Because of the existence
of high degree of correlation between health and education, the third
characteristic included for classification is educational attainments among
sample households. Kerala stands at the top of the list of human development
indicators with a literacy rate of over 90%. Because of this special condition
with regard to educational attainments no household was seen where all
members are illiterate in Kodungallur and Chittur Block. Therefore, the criterion
adopted for ranking was:

1. If the household had at least one member having seven years of
   schooling, but no one having high school or above high school level
   education
2. If the household had at least one member having high school level
   education but none with above high school level education.
3. If the household had more than one member with high school level
   education and or at least one member with above high school level
   education.
As per the educational classification, in Kodungallur Block, 6% comes under the first category, 47% in the second category and 43% in the third category. As against this, in Chittur block, 7% of the households were grouped under the first one, 67% in the second and 26% in the third one.

**Housing condition**

Fourth character included for classification is the nature of housing condition. The housing conditions to some extent would reflect the physical amenities. Two elements of housing conditions were considered here. One was roof of the house and the other was floor of the house. The details of grouping under these two characteristics are given below.

1. If the roof was made of grass, thatch etc
2. If the roof was made of tiles
3. If the roof was made of concrete

As far as the floor is concerned

1. If the floor is made of mud
2. If the floor is made of cement
3. If the floor is made of mosaic, marbles etc.

With respect to the classification according to the condition of roof a little less than 1/3rd came in the third in Kodungallur where as in Chittur block it was a little over 1/10th. Majority of the households belonged to the second group in both divisions though Chittur Block had higher proportion than Kodungallur. It was surprising to see that only 1% came under the third category in Chittur division in terms of classification according to floor, though a little more than
1/10th comes under this category in Kodungallur division. Again, more than 1/3rd of the sample units in Chittur belonged to the first group where as it is only less than 1/10th in Kodungallur. Seventy seven percentage of the households in Kodungallur and 67% in Chittur belonged to the second group. Distribution of households according to the above characteristics is summarized below in Table 1.1.

Table 1.1. Distribution of Households by Socio Economic Characteristics

<table>
<thead>
<tr>
<th>Rank</th>
<th>Monthly Per capita</th>
<th>Land Owned</th>
<th>Education</th>
<th>Housing Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Kodu</td>
<td>Chittu</td>
<td>Kodu</td>
<td>Chittu</td>
</tr>
<tr>
<td>1</td>
<td>93 (62)</td>
<td>102 (68)</td>
<td>75 (50)</td>
<td>16 (11)</td>
</tr>
<tr>
<td>2</td>
<td>34 (23)</td>
<td>28 (19)</td>
<td>41 (27)</td>
<td>122 (81)</td>
</tr>
<tr>
<td>3</td>
<td>23 (15)</td>
<td>20 (13)</td>
<td>34 (23)</td>
<td>12 (8)</td>
</tr>
<tr>
<td>Total</td>
<td>150 (100)</td>
<td>150 (100)</td>
<td>150 (100)</td>
<td>150 (100)</td>
</tr>
</tbody>
</table>

Source: Survey data.
Figures in the parentheses are percentages

Assigning some weights to the ranks (Kannan et al. 1991) obtained to the individual households forms socio-economic classification. The weights assigned were 0.35 for income, 0.25 for education, 0.25 for housing (0.10 for roof and 0.15 for flooring) and 0.15 for land possessed. Thus, three groups of classes were obtained as SES1, SES 2 and SES 3.
Here SES 1 represented lower income strata, SES 2 represented middle-income strata and SES 3 represented higher income strata. Middle-income group in this study represented income which was just sufficient to meet the subsistence level and higher income groups were those whose income was just above the subsistence level since sample units are mainly lower and middle income groups. Thus, SES 1 = Lower strata, SES 2 = middle strata and SES 3 = higher strata. Socio economic classes of sample households of the two areas were obtained as shown in the Table 1.2. From the table, it was seen that in Kodungallur division a little less than half of the samples belonged to the second group and 1/3rd came under the third group. As against this, in Chittur division, only 14% belonged to the third and nearly half belonged to the second. Thirty five percentage of the households in Chittur were in the first category where as it is only 23 % in Kodungallur division.

**Table 1.2.**

**Socio Economic Classification of Households**

<table>
<thead>
<tr>
<th>Status Group</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Kodungallur</td>
<td>Chittur</td>
</tr>
<tr>
<td>SES 1</td>
<td>34</td>
<td>52</td>
</tr>
<tr>
<td>SES 2</td>
<td>71</td>
<td>76</td>
</tr>
<tr>
<td>SES 3</td>
<td>45</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>150</td>
<td>150</td>
</tr>
</tbody>
</table>

Source: Survey data
1.6. Theoretical Framework

Donabedian (1980)\textsuperscript{29} has identified three broad dimensions of health care provision that can provide a focus for evaluation, namely, structure, outcome and process. The first of these refers to the physical environment of care, taking into account the nature, amount and distribution of buildings, equipment and personnel. The availability and quality of physical and human resources are studied under structure evaluation. Outcome evaluation is centered on the end results of care with the prime objective being to measure the impact of health care services. An outcome is defined as any change in the health status of a patient that can be directly attributed to the treatment or care they have received. Finally, evaluation of process involves a consideration of what actually goes on between health service professionals and patients during the course of the delivery of health care.

Farmer (1993)\textsuperscript{30} used the structure, process and outcome criteria to study the care and treatment provided by the primary health care team for patients with risk factors for cardio-vascular disease. Maxwell (1992)\textsuperscript{31} provided a quality assessment framework for health care systems, which incorporates Donabedian’s structure, process-outcome model. Roemer and Montoya-Aguilar (1988)\textsuperscript{32} illustrated the structure, process outcome model to assess the quality of primary health care. The distinction between structure, process and outcome had been illustrated with examples to clarify the meaning of the widely used model concerning structure, process and outcome, when applied to health experience in a population.
An audit of structure is primarily designed to describe the quality of the physical surroundings in which health care is delivered and assess the general structural aspects of care. It can include reference to the provision and layout of treatment of rooms, the age and condition of specialists, medical equipments, level of staff training, the organization of medical teams and the ratio of staff to patients. These structural characteristics are important and have some bearing on quality, particularly insofar as there are likely to be more opportunities for promoting and improving the quality of care if the appropriate medical equipment, diagnostic services and treatment facilities are readily available to health professionals. However, structural evaluation does not contain any reference to the actual performance of those involved in the delivery of care. This is covered by process and outcome evaluation.

Process evaluation concentrates on what health care workers actually do for their patients. It involves all that is done to and for patients; it covers the technical, clinical and humanistic aspects of prevention, diagnosis, treatment and rehabilitation. An outcome evaluation looks at the results of interventions such as whether there is an improvement or deterioration in the health of the patient. In other words, outcomes describe the impact and effectiveness of treatment or services. Donabedian (1988) defined outcome in a broader term as the changes in a patient’s current and future status that can be attributed to any health care. Thus, outcomes of care include not only measures of mortality, morbidity and general physical well-being, but also changes in the level of social well-being of the beneficiaries.
1.6.1. Measuring Outcomes: Health Status and Quality of Life

A critical step in the successful evaluation of health care initiatives is the identification of appropriate outcome measures or indicators of health status. Mortality and morbidity indices are among the most easily available objective measures used in health studies. Prior (1985)\textsuperscript{34} noted that the information obtained from death certificates, which is used to compile official mortality statistics, is not of a consistent quality. Haynes (1988)\textsuperscript{35} also draws attention to some of the methodological issues surrounding the definition and measurement of mortality and morbidity.

In certain clinical circumstances, survival may be an appropriate way of assessing the value of a treatment. By means of clinical trials, the effects of medical or surgical interventions can be evaluated by comparing the case fatality rates over a five-year survival period. However, it does not always follow that death and survival represent the best way of determining success and failure even when dealing with the treatment of chronic illness (Ebrahim, 1990)\textsuperscript{36}.

1.6.2. Performance Evaluation: the Quality of Health Care

As a result of the National Health Service reforms in the 1980s and 1990s the evaluation of the quality of health care became ‘a mandatory part of service provision’ (Ellis and Wittington, 1993)\textsuperscript{37}. Patient satisfaction surveys or surveys of beneficiaries were adopted as one of the main methods of data collection in the process of quality performance evaluation.
1.6.3. **Beneficiary Satisfaction Surveys**

Studies of surveys of beneficiaries with the medical and nursing services they receive form an important component of health care evaluation research. Although the patient’s distinctive viewpoint is now widely recognized to be a vital element in the evaluation of health services, there is still no consensus about optimal ways of capturing this perspective (Fitzpatrick, 1997). There are many examples of local and national studies of patient attitudes towards various forms of health care.

Self-completion questionnaires are the primary method of data collection in patient evaluation research. The simplest questionnaires ask respondents to give ‘yes-no’ answers to questions about aspects of their contact with the health care services. From the responses it is possible to calculate what percentage of respondents is satisfied or dissatisfied with a particular treatment or service rendered to them by the authorities.

1.7. **Method of data analysis**

The design of the present study is both descriptive and analytical in nature. As far as the analytical tools are concerned, growth index, percentages, ratios, rates, time series analysis, analysis of variance, chi square test, Z test were used for analyzing the data.

1.8. **Need and Relevance**

Primary health care system forms an integral part of a community’s health system. It is the central function and main focus of the overall socio-
economic development of the community. Without having a strong and effective primary health care system secondary and tertiary sector will not work. Evaluation process will improve the outcome or effectiveness of the programme. It will show not only the accomplishment of a programme, but it may also suggest the points of difficulty or weak links and over all programme may yield improvements.

1.9. Scope and limitations

The present study could shed light on the need for prioritization of resources in the light of sub-optimal allocational pattern of the primary healthcare components. An economic evaluation of these components of primary healthcare system will throw light into the optimum resource allocation pattern which may increase the operational efficiency of the existing system.

1.10. Scheme of study

The present study is organized under nine chapters viz.:

1. Introduction, methodology and design of the study
2. Literature review
3. An overview of working of primary health care system in India and Kerala.
4. Health scenario of Kerala
5. Morbidity transition in rural
6. Evaluation of preventive measures
7. Evaluation of curative
8. Performance evaluation of primary healthcare system from the beneficiary point of view.

9. Summary of findings.

The subject matter of the first chapter is the statement of the problems, objectives, scope and limitations of the study, hypothesis, method of data collection and analysis.

Review of literature is presented in the second chapter which includes changing concept of health, nature, meaning and effectiveness of primary health care socio-economic development and health status, problems and policy perspectives.

Chapter three gives an over view of major health planning and the working of primary health care system in India and Kerala with special focus on preventive and promotive measures.

Chapter four provides a picture the health scenario of Kerala using the health indicators like birth rate, death rate, infant mortality rate, life expectancy at birth and health expenditure. An attempt was also made in this regard to have a national and international comparison so as to know the status of health development in Kerala.

Since mortality syndrome is a major problem pointed out by major studies chapter five is directed to give a detailed picture related to morbidity transition in Kerala. Here, morbidity data since early nineties given by various studies has been presented to have morbidity picture.
Analysis of data is presented in sixth, seventh and eighth chapters. Analysis of preventive measures, promotive measures, and its impacts are discussed in the sixth chapter. Disease profile of the study area using data from District Medical Office, Primary Health Centers, and Private Health Centers and primary data collected were analysed in the seventh chapter. Eighth chapter deals with evaluation of performance of primary health care system from the beneficiary point of view. This is used to get a picture related to operational efficiency using quality measurement of primary health centers.

Chapter nine concludes the reports with summary of findings and recommendations.
References


4. Preamble to the constitution of World Health Organisation.


