Chapter VII

SUMMARY AND CONCLUSION

7.1 Introduction

This concluding chapter includes a summary of the present study, its major findings and suggestions. The study is organized into seven chapters. The introductory chapter briefly explains the importance of the topic, the statement of the problem, objectives, hypotheses, methodology, conceptual framework of the study, limitations of the study and presentation of the study. The second chapter provides a review of the literature related to the study. The related studies are classified into four groups namely, (i) Studies relating to health status, consisting of studies related to the factors that determine the health status, (ii) Studies relating to medical pluralism, consisting of different systems of medicine (iii) Studies relating to comparative cost of various services and (iv) Other related studies. Chapter three provides an overview of the health status and health care facilities in Kerala and this chapter examines the first objective by using secondary data. The fourth chapter analyses the general characteristics of the study area, households and sample population. The fifth chapter consists of the construction of different indices such as socio-economics status, environmental status and health status and also the test $\chi^2$. Thus the fifth chapter examines the first objective through primary data and it also tests the first part of the first hypothesis and accepts it in the case of both rural and urban areas. In the sixth chapter attention is paid to analyse the
different systems of health care services – allopathy, ayurveda and homoeopathy on the basis of episodes of illness. It analyses the different factors that influence the choice of the rural and urban population regarding the alternative systems of medicine. Thus this chapter examines the second, third and fourth objectives. It also verifies the second and third hypotheses in addition to the second half of the first hypothesis. The overall summary of the study is briefly explained below.

7.2 Summary

The role of different systems of health care is becoming important in the developing world. According to the report of WHO, over 80% of the world population depends on traditional systems of medicine, largely plant-based, to meet their primary health care needs. There is a growing realization all over the world that traditional systems of medicine offer cost effective option. The world is witnessing a resurgence of the traditional systems of medicine. The toxicity and side effects of the modern systems of medicine have highlighted the importance and relevance of traditional systems of medicine in the world. WHO has recognized it since 1978. WHO strongly supports the further promotion and development of the rational use of traditional medicine throughout the world.

In India, we have different systems of medicine like allopathy, ayurveda, siddha, unani, naturopathy, yoga and homoeopathy. Of late, the government is trying to preserve the indigenous and other systems of medicines. The government has come forward to officially support these
systems of medicine. The widely practiced systems of medicine in Kerala are allopathy, ayurveda and homoeopathy, each with entirely different mode of treatment, and they are recognized by the state government.

Kerala is well-known for the unusually rapid decline in mortality rate. At present, Kerala has the lowest levels of infant and child mortality and highest expectation of life at birth for both males and females in India, and compares favourably with the developed nations. The improvement in the health behaviour of the people and the social changes brought about by high and rising levels of education have contributed to the acceptance of new systems of medicine in the state.

The study examines the contemporary health care behaviour of Keralites, especially in the matter of curative care. It analyses the health status of the people in the context of different systems of medicine they follow and the attitude of the people towards them. It also examines the cost of different types of treatment, their accessibility and the influence of socio-economic factors on the choice of the systems of medicine. For this, a sample survey was conducted in the Kollam district of the state and the details of the episodes of illness during the last 30 days prior to the survey, sources and finance of treatment and the preference pattern of treatment from those with or without illness were collected. All these have been analysed in the context of both rural and urban areas.

Using a well-structured questionnaire from 200 households, 100 from rural areas – Eroor Panchayat and 100 from urban areas - Kollam corporation in the Kollam district of Kerala, the researcher has collected the
required data. The quantitative data were analyzed using SPSS package. In addition to the preliminary analysis, various indices such as socio-economic status, environmental status and health status were constructed. Statistical techniques like $\chi^2$ test and logistic regression were also used for an in depth analysis. For analyzing cost variations of different systems of medicine average cost of each system was calculated.

Some of the basic background information taken into account under demographic characteristics is age, sex, marital status, religion and caste. The total sample population was 967, of which 434 were from rural areas and 533(55%) from urban areas. The sex ratio is higher in rural areas (1087) than in urban areas (1058). From the survey, it is clear that there is only a slight disparity in the age distribution of the population excepting the population above 60 years, which is higher in the urban areas. In the case of marital status the percentage of widows is higher than that of widowers in both rural and urban areas. This underlines the high female life expectancy in Kerala. The Hindu households formed 54.5%; Christians 29.5% and Muslims formed 32% of the total samples. Of the total household, 14% were SCs and 5.5 % STs.

Socio-economic factors influence the health status of the people. People with greater economic resources generally seek out better health-care facilities and are able to live and work in geographic areas with more favourable physical and social conditions. The socio-economic factors considered for the study include the nature of housing, power supply or its absence, average monthly income of the family, education and occupation.
The nature of houses shows that the proportion of good condition houses is twice greater in urban areas compared to rural areas. This difference is found to be almost the same in the case of electrification also. The poor housing conditions in both areas tend to create respiratory and other health disorders. The poor housing conditions are mainly due to economic backwardness rather than due to want of awareness. Regarding average monthly income of the households, majority (59%) of the rural households come under the middle-income group (Rs.2501-Rs.4500), while it is 22% in the urban areas. The majority (69%) of the urban households come under the higher income group (Rs.4501 and above), whereas it is 17.2% in rural areas. This is mainly because the proportion of casual workers is higher (31%) in rural areas while it is only 20.2% in urban areas. Unemployment is also high in rural areas.

Literacy rate is found to be high in both the regions (around 92%). Usually higher qualification of any one member in a family is reflected on the improved health status of the whole family. Fortunately there were no households in the survey area where all the members of the household were illiterate. Education always plays a vital role in the improvement of individual’s health status.

As mentioned earlier, health is also determined by the environment in which an individual lives. The environmental factors include sources and use of water, sanitary facilities, cooking devices, disposal of waste water, disposal of solid waste and accumulation of water in the compound and surroundings. The source of water is an important determinant of health.
status particularly of children. About 2.5% of the sample population depends on canal or pond water for drinking purposes. In the case of sanitary facilities, it was surprising to note that 8.5% of the households do not have their own toilets. Proper drainage of waste water, disposal of domestic waste, etc. are crucial for a clean environment and are essential for preventive health care. But these provisions are very poor in the study areas. Accumulation of water in the compound of the houses and also in the surroundings of the houses were found to be very high in urban areas (35% and 46% respectively in urban areas as compared to only 7% for both the cases in rural areas).

The socio-economic status index shows that the high status-group in rural areas is only 19.8%, while it is 33.6% in urban areas. But, regarding the environmental status index, the percentage of people who come under high status is greater in rural areas (35%) than in urban areas (30%). This shows the poor drainage system and waste disposal in urban areas. In the case of health status index, most of the people (around 50%) come under medium level in both rural and urban areas. However, the percentage of people who come under high status group is higher in urban areas (29.1%) compared to their rural counterparts (22.1%).

The result of $\chi^2$ test shows that the health status is associated with socio-economic status and environmental status. This is true in both rural and urban areas. Thus improvement in socio-economic status and environmental status are important elements in the improvement of health status.
An effort has also been made to identify the significant variables which have influence on the choice of different systems of medicine. For this, besides demographic, socio-economic, environmental and health factors, the system of medicine followed during disease, the reason for preferring a system, cost of treatment, nature of hospital, sources of fund for treatment, etc. by the people under study were also considered.

Of the total sample population 50% were found to have illness during the reference period. About 92% people reported to have a clear preference of one system or other while 7.3% did not take any treatment on account of financial problems. Some of them follow superstitious remedies. Among them, majority of the people are from rural areas and most of them were women. Majority of the people prefer allopathy because of the availability and accessibility of the system. Allopathy is comparatively more prevalent than ayurveda and homoeopathy in both rural and urban areas. However, ayurveda and homoeopathy are also widely accepted. Even if the allopathic system is available through PHCs or sub centers in rural areas, many people do not go there because of the poor availability of medicines there.

Among the sample population, women were found to have higher morbidity than males. Compared to urban women, rural women prefer ayurveda to homoeopathy. The use of ayurvedic medicines increases as age of the person increases. However no such particular pattern is found in the case of homoeopathy. Under the category ‘others’, which includes people who do not seek any medical help on account of financial problems, etc., no
case in the age group 0-4 is reported. This shows a positive attitude of the people regarding child care. Activity of a person does not strongly influence the preference of one system over the other. In the case of serious communicable disease and accident, the majority of the people prefer allopathic medicine in the initial stages. But later on, they use ayurveda also. People prefer ayurvedic treatment more for chronic illness rather than for acute illness.

The different indices like socio-economic status, environmental status and health status show that the people who do not undergo any treatment due to financial problems, etc. (the category ‘others’) is high among all the low status groups. Irrespective of the different status group majority of the people prefer allopathy. But as the socio-economic status improves, there is an increased tendency to use non-allopathic systems. One notable finding of this study is that when the health status of the people improves, the use of different systems of medicine declines. This is due to the fact that as the health status improves, there occurs a decline in the incidence of disease.

In the case of distance travelled to get medical help under any system of medicine, about 55% of patients travel up to 3 kms in rural areas, while 68% do so in urban areas. About 33% of rural people travel more than 8 kms to get access to the different systems of medicine, while in urban areas only 11% need to do so.
The monthly per capita expenditure on health in rural areas is Rs. 122 and in urban areas, it is Rs.330. It forms 11.03% of the average per capita income in rural areas and 20.7% in urban areas. Average direct and indirect cost of treatment is high in urban areas compared to that in rural areas. The cost of treatment is the highest for allopathy, and it is relatively less for ayurveda. The treatment cost is reported to be the lowest for homoeopathy in both rural and urban areas.

Regarding the sources of funds for treatment, majority of the people use their own funds. However, most of those who borrow money for treatment depend on money lenders who charge high rates of interest. This trend is more prominent in rural areas.

The logistic regression analysis reveals that compared to rural people urban people have greater preference for non-allopathic treatment. Both Christians and Muslims use allopathic system more than Hindus. SCs and STs have a high preference to use the allopathic system compared to other castes. Broadly speaking, females use allopathy more than males. Aged people are found to use allopathy more than children (0-14). The use of allopathic system of medicine is higher among those who have high school education and more, compared to the less educated. Allopathy is found to be a more preferred system of medicine among workers as compared to non-workers. Lower income groups generally have a greater preference for allopathic system compared to higher income groups. It is also observed that regarding chronic illness, people have a preference for non-allopathic
system. Compared to low socio-economic, environmental and health status groups, high status groups prefer allopathic system.

The independent variables like type of residence, religion, caste, sex, age, occupation, income, economy, nature of disease, etc. are found to influence the preference for a particular system. However, the availability and accessibility of different systems of medicine is the most important factor determining the selection of a particular system, especially in the rural areas.

Knowledge of the demographic, socio-economic and environmental characteristics and awareness about health is the basic requirement for understanding and exploring the health status of the people. All these factors promote or inhibit the spread of disease among individuals within a household or a community. Thus they are strongly associated with the health status of the people, which in turn determines the utilization of different systems of medicine. Through an empirical study, this work presents the following conceptual framework. Accordingly, socio-economic status indirectly influences the health status through the utilization of different systems of medicine. Moreover, it also has a direct influence on health status. The demographic factors like age, sex, etc. are important in the determination of health status. These factors also influence the choice of a particular system of medicine. Environmental status of the individual also has a direct impact on health status as well as on the selection of a particular system of medicine. Again health status of an individual directly influences the utilization of different systems of medicine.
The high socio-economic status of an individual enables him to acquire the available health care facilities and improve his health status. Further, education provides greater health awareness and thereby improves the health status directly. Thus health status is influenced not only by demographic, socio-economic and environmental factors, but also by the availability and utilization of different systems of medicine.

7.3 Major Findings

Following are the major finding of the study.

- In both rural and urban areas health status of the people is influenced by socio-economic, environmental, and demographic factors.
- The rural - urban disparity in the health status is very low. However, the health status of the urban people is better than that of the rural people.
- Socio-economic status and environmental status influence the health status. Regarding the socio-economic status, environmental status and health status, the high status groups are found to prefer allopathic medicine more than the low status groups. Therefore the first hypothesis is accepted.
- It is noted that there exists large disparity in the cost of treatment in different systems of medicine. The cost of allopathy is the highest in both rural and urban areas followed by that of ayurveda and homoeopathy.
In rural areas, both direct and indirect costs of different systems of medicine influence the people’s preference for a particular system of medicine. So the second hypothesis i.e., cost differentials influence the choice of different system of medicine is accepted. This phenomena is found to be more pronounced in rural areas.

The average direct cost of treatment regarding acute illness as well as chronic illness under all the systems of medicine in urban areas is greater than that in rural areas.

In rural areas the average direct cost of treatment under allopathy for acute illness is greater than the average direct cost of chronic illness. However, the average direct cost of treatment under both ayurveda and homoeopathy for acute illness in rural areas is less than the same for chronic illness. But in urban areas, the average direct cost of acute illness under all the systems of medicine is less than the average direct cost for chronic illness.

The average indirect cost of treatment under allopathy and ayurveda for chronic illness in urban areas is greater than that in rural areas while in the case of homoeopathy, the average indirect cost of acute illness as well as chronic illness in rural areas is greater than that in urban areas.

There are variations in the preference pattern of the people for different systems of medicine in rural and urban areas. The preference for allopathy and ayurveda is greater in urban areas while the preference for homoeopathy is relatively more in rural areas. The result of the logistic regression shows that the urban people have
more preference for non-allopathic medicine than rural people. Thus, the third hypothesis is also accepted.

- There is high rural-urban disparity in the availability of and accessibility to different systems of medicine.
- The independent variables like the type of residence, religion, caste, age, sex, education, occupation, income, etc. influence the preference for a particular system of medicine.

### 7.4 Suggestions

The study offers the following suggestions for improving the efficiency and quality of health care in Kerala.

- The condition of PHCs, hospitals and dispensaries belonging to various systems of medicine, particularly in rural areas needs to be improved.
- Government policies should be oriented more towards the improvement of rural health care.
- A viable system of health care financing needs to be developed.
- An effective linkage between different systems of medicine needs to be established.
- The government needs to establish and effectively implement regulation procedures and quality control measures in the health sector.
- The R & D and the supply of raw materials regarding traditional medicine have to be strengthened.
The government should promote different cost-effective systems of medicine regarding chronic diseases.

By introducing a public health insurance scheme, the government should promote health-care with public participation for attaining sustainable development of the health sector.

Effective implementation of ‘National Rural Health Mission’ is required for the maximum utilization of the fund allocation by the Central Government meant particularly for the development of alternative systems of medicine and for the overall development of the health sector in the state.

7.5 Conclusion

It is evident from the present study that there is wide-spread prevalence of medical pluralism in Kerala. The major systems of medicine followed by the people are allopathy, ayurveda and homoeopathy. The analysis shows that the preference of the people for a particular system of medicine depends on socio-economic and demographic factors, nature of disease, accessibility, residential status (rural or urban), etc. Of late, the disease pattern in Kerala has been changing dramatically. Communicable diseases continue to be the major cause of morbidity and mortality. However, changing life styles, urbanization, industrialization and ageing of the population as a result of increased life expectancy have resulted in the increase in non-communicable diseases like cardiovascular diseases, cancer, diabetes, etc. as the major cause for morbidity and mortality in recent times. This increasing burden of chronic and degenerative diseases
demands drastic improvement in the present health care system which needs to be more effective and affordable to all the sections of the society. This requires the systematic expansion of medical pluralism in the state. Thus medical pluralism, which has the potential to provide cost-effectiveness, accessibility, availability and equity in the field of health care needs to be promoted further in the state of Kerala.