CHAPTER I

INTRODUCTION

Without good health, human well-being is incomplete. Health has been given importance from the early days of human existence.

‘Dharma artha kama moksham aurogyam moolam uthanam’

This verse from the Charaka Sutra, one of the treatises of Ayurveda, is profound in describing the importance given to health in the ancient Indian society. According to this verse, health is critical for the realisation of the four-fold goals of life - ethical, artistic, material and spiritual.

Numerous treatises are available on the ancient medical systems, around the world. At the same time, many of these health traditions are still not codified and are passed on orally only. This invaluable traditional knowledge which provided curatives and preventives for the people of the yesteryears is gradually moving into oblivion.

Modern medicine based on allopathy now dominates health care in the developed world and, to a certain extent, in the developing world. Although the traditional medical systems are used by 80 per cent of the population, it is not given due recognition. Over the years, the classical medical systems like Ayurveda were formalized and integrated into the health care system. This has also resulted in the commercialization of Ayurveda following the lines of modern medicine. Until recently, very few attempts were made to preserve the oral health traditions of the local communities around the world, otherwise called the Local Health Traditions (LHT). The advantages of Local Health Traditions are manifold.

- They are time-tested curatives or preventives.
- They make use of locally available materials.
- They are highly cost-effective and economical.
- They do not produce side effects.

The development of modern medicine and its increased use has helped to control epidemics around the world. However the truth remains that the modern medicine remains unaffordable to the marginalised. The same is true about classical medicines like
Ayurveda, with the price of medicines soaring high. Under such circumstances, it is necessary to look for options which will make health care accessible to all and ensure health to all.

The state of Kerala in India is an excellent example of how literacy and awareness have helped in attaining enviable social development. Though there are much traditional therapeutics available, allopathic medicine as constituting modern medicine dominates the health care sector here (Kunchikannan et al. 2000). The dominance of allopathic medicine is often considered the reason for the progress made by the state in the health sector. This might sound true, but the over-dependence on the modern medicine and high scale privatisation of health sector has made health care unaffordable to the people in the state (Ekbal, 2000).

The state has lost much of its traditional knowledge base in regard to the Local Health Traditions which is eroding fast (Unnikrishnan, 2004). With a rich biodiversity, and traditional knowledge base, the option of using local health traditions as a complementary medical system towards enhancing health in Kerala has to be carefully evaluated. This is necessary to know if such an option is relevant enough to attain the objective of health at affordable costs.

This study is an attempt to examine, evaluate and reflect upon the status of complementary medicine in Kerala as constituted by the local health traditions. The research also looks into the environmental and economical factors as controlling the access to the local health traditions and modern medicine. It concentrates on the possible linkages that can be drawn between the various stakeholders towards providing better health through integration of the local health traditions to the mainstream health care sector. The findings of the thesis pertain to the study carried out intensively in the rural neighbourhood of Kanjoor and extensively in the urban neighbourhoods of Edapally and Muppathadom of Ernakulam district in Kerala.

To enhance better understanding of the thesis, some of the terms which are frequently used in the thesis are explained here.

Medical System

Human beings have confronted the challenge of restoring health of the ill and providing health care and maintaining it by developing a ‘medical system’.
‘A medical system is a pattern of social institutions and cultural traditions that evolves from deliberate behaviour to enhance health.’

-Dunn, F.L. (1976)

The diseases which have ailed human beings from time immemorial, led to the development of medical systems. The medical systems thus became the socio-facts and menti-facts of the various human societies, characterised by their distinctive imprints. The modern medical system as constituted by the allopathic system and the traditional medical systems like the Chinese medicine and ayurveda are examples of the various medical systems which evolved through the ages.

Local Health Traditions

The Local Health Traditions (henceforth referred as to LHT) consists of oral health traditions passed over generations. It falls under the broad realm of traditional medicine though it is distinctly different from the classical medicine which is codified and supported by a written text. These include home remedies (grandma’s medicine) and the country medicine (folk) (Kumaran, 1999).

LHTs are the oral traditions practised by the local people, who by trial and error selected many plants from their habitat to treat the ailments confronted by them.

(Gauniyal et al, 2005; Kumaran, 2002).

It is emphasised here that the LHT as referred to in the study is devoid of any personalistic or supernatural beliefs and confines to the natural beliefs.

Modern Medicine

Modern medicine as used in the thesis refers to the allopathic medicine. It is one of the several systems which dominate mainly the technologically advanced societies.

Allopathy or the allopathic system is defined as that discipline of medical care advocating therapy with remedies that produce effects differing from those of the diseases treated.

Canary, 1983

Allopathic medicine bloomed due to the adoption of scientific and technologically advanced methods in health care (Canary, 1983) and is at present the dominant medical system in many countries. There is however no clear point of separation between the traditional and allopathic medicine. Allopathy is traditional in origin but at the same time is making rapid strides using modern technological advances.
Complementary and Alternative Medicine (CAM)

"Complementary and alternative medicine (CAM) is a broad domain of healing resources that encompasses all health systems, modalities, and practices and their accompanying theories and beliefs, other than those intrinsic to the politically dominant health system of a particular society or culture in a given historical period. CAM includes all such practices and ideas self-defined by their users as preventing or treating illness or promoting health and well-being. Boundaries within CAM and between the CAM domain and that of the dominant system are not always sharp or fixed."

-Definition of complementary medicine adopted by Cochrane Collaboration

In the present study, the term ‘complementary medicine’ is used to denote any form of medicine which lies outside the realm of popular medicine (Modern medicine) and complementing it. According to WHO, the terms “complementary” and “alternative” (and sometimes also “non-conventional” or “parallel”) are used to refer to a broad set of health care practices that are not part of a country’s own tradition, or not integrated into its dominant health care system. But there has been considerable difference in the use of the term, in various countries. Complementary Medicine in the general sense includes any form of medicine which complements the dominant medical system. Complementary medicine as used in this research takes up this meaning than the former, since LHT are part of the country’s traditions, but not integrated into the main health stream. LHT dealt within this study does not include any form of super natural, magical beliefs. The study concentrates on the LHT as a complementary medical system and how it complements modern medicine which is the dominant medical system in Kerala.

Stakeholders

A stakeholder can be an individual, group or organization, which has a stake in an initiative. A stake may be in terms of his/her role or influence on the initiative or as being affected by an initiative. Depending on their importance they are categorised as primary or secondary. The primary stakeholders are those who have high importance and play an important role in the initiative. All the stakeholders who are directly influenced and directly influence the initiative fall in this category. The stakeholders who indirectly influence or are indirectly influenced by an initiative are termed as secondary stakeholders.

With regard to influence and importance, a stakeholder may be of
• **Low importance and high influence:** These stakeholders may not be the target groups for the project. But they can have a negative influence on the project and this need to be prevented. So they should be kept informed and their views acknowledged avoiding disruption or conflict.

• **High importance and high influence:** Their support is necessary to ensure the success of any initiative.

• **Low importance and low influence:** They are highly unlikely to be involved and their participation can be limited to information sharing.

• **High importance and low influence:** The stakeholder analysis involves the preparation of a stakeholder analysis matrix by the community both in the urban and rural neighbourhoods and the stakeholders identified by both the groups were similar.

**A REVIEW OF LITERATURE**

**LHT and Modern Medicine in India**

Humans as they reached the age of reasoning, discovered through a process of trial and error, and found out which plant has medicinal value and which has not (Ranganathan, 1999). It is hard to demarcate the exact time when modern medicine got alienated from the traditional medicine.

Devi, 2001 asserts that even before the advent of Ayurveda, local healers and healing techniques were prevalent in South India and in Kerala. According to her, the knowledge of the local healers enriched the Ayurvedic traditions brought down from the North and improved upon its knowledge base in Kerala. Till the advent of the Europeans, modern medicine was never heard of. Patterson (1987) provides evidence of how the local medicines were effective in controlling the diseases as was experienced by many of the Western traders who moved into India during the 16th century. Though western medicines were employed they found that many of the local medicines were much more effective for curing local diseases. Many drugs were exported to the West from India along with the spices. This idea, according to him, changed drastically however with more western trained physicians coming into India during the 17th and 18th centuries that dismissed the local medical systems as unscientific and based on faith healing.
Hospitals were set up for modern medicine during the eighteenth and nineteenth centuries by the British. However, Devi (2001) points out that the first hospital in India for allopathy was set up in Kochi by the Portuguese in 1506 (the Santa cruz hospital). The Grant Committee in the year 1833 reported that the Indian medical colleges should be abolished, and all support for Indian medicine should be withdrawn. The Committee suggested that only western medicine should be taught, and all teaching should be in English. This was reinforced by the adoption of English as the official language of India in 1835. Increasing the number of medical schools were then set on western lines and in 1839 the first Indian students graduated from the new Calcutta medical school. This led to a gradual decline of traditional medicine. Associated with the belief in the western development models, western medicine was promoted following the lines of the British predecessors by the Indian leaders even after independence. The Bhore Committee of 1943 promoted modern medicine as the dominant system and gave relatively low importance to the traditional medicine. The efforts to promote traditional medicine came with the Indian Medicine Central Council Act (1970). The Department of Indian Medicine was established to promote the Classical medicines – ayurveda, unani and siddha and homoeopathy. Again home remedies and country medicines were ignored here. The attempt was to set a western format for Indian Medicine or to cast Indian medicine in a Western mould. This trend continues even today. The researches undertaken now, on the various herbal medicines follow the western thought of isolating the active elements, whereas Indian medicine does not believe in treating any disease in isolation.

It needs to be noted that the strides it made especially in India was due to the marginalisation of Indian medicine following colonialism and the promotion of western medicine by the Western colonialist forces (Patterson, 1987). The abolition of schools of Indian Medicine could have hindered research and development of traditional medicine. This gradually led to a monopolistic situation which was later replaced by introducing Indian Systems of Medicine parallel to modern medicine. All through these times, there was an undercurrent of traditional medicine which provided health care especially in the informal sector. The traditional knowledge systems related to health care still prevail in the rural areas but is under threat mainly due to resource degradation and cultural
alienation. One of the major goals identified by the National Rural Health Mission in its mission document (2005-2012) is to revitalize the local health traditions and mainstream AYUSH (Ayurveda, Unani, Siddha and Homeopathy). It is therefore acknowledged that there are numerous ways which are right. This research acknowledges this fact by considering modern medicine as a significant medical system in controlling endemics and epidemics. At the same time, the complementarities of traditional medicine and the LHTs in particular are given due recognition.

**Traditional Versus Modern Medicine**

A popular idea for delineating modern medicine from traditional medicine is by giving an explanation that modern medicine is scientific whereas traditional medicine is unscientific. This idea is in fact controversial since traditional medicines like ayurveda give scientific explanations to many of the diseases like diabetes in its treatises (Canary, 1983).

The intolerance of the ideas which originated from the East and the difference in structure of the knowledge systems could be the reasons for denying traditional medical systems its rightful place among sciences. Sankar (1996) argues that the domination of the East by the West has left the Eastern Societies with no other option but to accept modern science as the established and universal system. He speaks of an urgent need for cross cultural medical research and a comparative framework need to be developed which will resolve the basic difference between Eastern and Western knowledge structure. Shiva (1993) argues that the dominant culture needs to be challenged for preventing the elimination of use and appreciation of local botanical alternatives, traditions and other forms of knowledge associated with the unique culture of the locality. At present, the popular culture, however, is to blindly follow the western development models. It has to be noted that mere replication of the western development patterns may not work in the East owing to the geographical and socio-cultural differences.

The Declaration on Science and the Use of Scientific Knowledge and Science Agenda - Framework for Action (www.nature.com/wcs/1news/01-1a.html) states that

*Ironically the very knowledge that forms much of the basis of “modern” scientific research and development is not regarded as a “science”. Industry gets the rights and the profits; local communities are merely used as providers of “raw materials”. The world “scientific” community, in response to the demands for recognition of indigenous*
peoples and other local community organisations, acknowledges that traditional knowledge has "contributed to the development of modern science", but do not agree to "traditional knowledge" being classed the same as "scientific knowledge".

One of the important reasons for the loss of the traditional knowledge, in particular the LHT, is the unlimited westernisation. Though introduction of western medicine (allopathy or modern medicine) has helped in arresting many contagious diseases, it has to be reemphasised that it does not provide overall health. The undue importance given to the modern medicine has led to the complete deprivation of other forms of medicine and has led to considerable knowledge disintegration.

Threats to Traditional Knowledge and Local Health Traditions
The LHT is facing threat like any other traditional knowledge systems, and it has to be protected for its value. The communities which form the reserves of these traditional knowledge bases are seldom acknowledged.

The World Intellectual Properties Organisation, WIPO (1997) presents the threats to indigenous knowledge due to loss of the indigenous peoples’ territorial base through the destruction of the rainforests, and their displacement by government projects or through commercial utilisation of natural resources, introduction of modern agricultural and health practices, and misappropriation of knowledge by outside researchers.

According to the International Union for the Conservation of Nature and Natural Resources (IUCN) Inter-Commission Task Force on Indigenous Peoples (1997),

*Cultures are dying out faster than the peoples associated with them. It has been estimated that half the world’s languages – the storehouses of peoples’ intellectual heritages and the framework for their unique understandings of life – will disappear within a century.

Associated with the lack of obligations to the community for its ownership of the LHT or any form of indigenous knowledge are the problems relating to intellectual property rights, patents and benefit-sharing. Patents were devised to ensure benefits to the owner of the intellectual property.

Do patents and Intellectual Property Rights (IPR) ensure equitable sharing of benefits?
LHT is a community resource which is gradually becoming extinct. Patents or IPR may seem to be an efficient way of providing the community with the benefits of the knowledge they possess. But often the benefits never reach the community. The policy of
introducing patents is a threat to the local communities which will not gain any benefits from their traditional knowledge bases. To get a patent for a remedy used in the LHTs, its effectiveness has to be scientifically proven. This calls for support from the scientific community, which is rarely available. Many of the researches on herbal remedies are a result of bio-prospecting. Bio-prospecting has been practised from early days and involves the identification and experimentation of the various herbs for its utilities and the identification and experimentation is based on the knowledge of the local communities.

Dutfield (2002) presents his arguments on whether bio-prospecting is a form of legitimate research or whether it can be equated to bio-piracy. He presents the arguments on why bio-prospecting can be a form of legitimate research as he points out its role in the preservation of biodiversity. He also looks at the criticisms being raised against the bio-prospectors. According to him, they often fail adequately to compensate the countries and communities that provide access to their resources and associated traditional knowledge (TK). He further suggests that application of Intellectual Property Rights (IPR) to biological resources should not be exploitative and that there should be an equitable benefit-sharing mechanism. Also it is difficult for a native healer to pass on the knowledge he possesses in the technical format to apply for a patent and rather it is hard for them to apply for a patent.

Drahos (1997) points out at the inactive part played by the international community to protect the Intellectual Property Rights of indigenous people. According to him, while new forms of intellectual property in the form of protection for semiconductors or plant varieties have readily been minted for transnational industrial elites, both nationally and internationally, the recognition of indigenous intellectual property forms has proceeded slowly or not at all. This selective approach to solving free riding problems comes into sharp focus when one compares the evolution of protection for the semiconductor chip and protection of folklore. Prior to 1984, manufacturers of computer chips in the US had complained that existing intellectual property regimes often failed to protect their products. Their chips often failed to clear the patent hurdles of novelty and inventiveness…In 1984, the Semiconductor Chip Protection Act was passed…In contrast, the issue of protection for indigenous knowledge has largely remained just that, an issue.
Grain and Kalpavriksh (2002) claims that patents cannot protect traditional knowledge since

- it is impossible to identify an individual inventor due to the collective nature of traditional knowledge;
- traditional knowledge often can not be attributed to a particular geographical location;
- ownership of varieties of plants is alien to many social and cultural beliefs;
- the required criteria of "novelty" and "inventive step" are not always possible particularly in cases where the traditional knowledge has been in existence over a long period of time; and
- the costs of applying for a patent and pursuing patent infringement cases are prohibitive.

The knowledge of medicinal properties of particular herbs cannot be confined to one community or one individual (Jain, 2004). Serious problems may arise when patents are to be applied to the traditional knowledge bases. One of the grave problems is that of benefit-sharing. The case of Kani tribes of the Western Ghats is an excellent example of efficient benefit-sharing mechanism. The Kani tribes were instrumental in guiding the researchers of the Tropical Botanical Garden and Research Institute (TBGRI), Thiruvananthapuram, on the effectiveness of the herb arogya pachcha. The research done by the TBGRI led to the formulation an energy drink, Jeevani. The benefits were accrued to the Kani community who guided the researchers. Later Kani tribes living in other areas demanded benefits since the whole community was aware of the usefulness of arogya pachcha. An arrangement was made by the researchers and a Trust was set up for the Kani tribes and the royalty amount was entrusted to it for the development activities of the Kani tribe.

If the problems of benefit sharing are effectively addressed, the patents and IPR will indeed benefit the community as owners of the traditional knowledge bases. However, this is possible through a holistic approach and recognizing the community's contributions over the vested interests of research organizations.

**How Local Health Traditions are a viable solution?**

There has been a revival of interest in the indigenous knowledge systems owing to the inability of modern medicine to offer solutions to a number of health care problems. Researches are now on to look for remedies from the herbal preparations used in
traditional medicine for specific illnesses. Besides this the LHTs make use of locally available herbs which reduces the health care costs tremendously.

Most of the LHTs are based on the locally available herbs. Chez and Jonas (1997) asserts that:

*It is necessary to acknowledge and affirm the essential role of conventional medicine with its capability to respond competently in the care of acute diseases and trauma, its technical innovations in diagnosis and treatment and the escalating clinical applications of basic science discoveries. However, it is in the areas of comprehensive care and the management of chronic disease conditions that the more reductionistic, mechanistic, and organ-specific approach of conventional medicine can be lacking.*

According to Aregbeyen (1996) there is growing evidence that herbal medicine is effective and acceptable and that there is every reason to promote its knowledge and understanding of which type of herb is used for treating which ailment in the various communities. He further suggests that, if properly developed, the *herbal medicine could be used to supplement primary health care (PHC) and in promoting a spirit of self-reliance.*

According to the strategy adopted by the WHO for promoting the role of traditional medicine in the African region between 2001 and 2010, it is essential for the Governments to give due recognition to the importance of traditional medicine. It identifies that there should be a *sustainable political commitment* and support from the various stakeholders including the policy makers, traditional medical practitioners, NGOs, professional associations, the community and teaching and training institutions. This has to be enabled through social marketing and participatory methods.

Poudyal (1997) portrays how the traditional spiritual healers were integrated to the mainstream of providing eye care to the people in four districts of Nepal. According to him, the project helped in guiding many of the traditional healers towards referring the people who approached them to the allopathic clinics for which treatment is available in allopathy and not available in traditional medicine.

*In India studies (Tripathi et al, 2004; Unnikrishnan,2004) were carried out in relation to many aspects of preventive and curative health care. Most of these studies concentrate on*
the individual methods being adopted for specific diseases, specific herbs and compilation of Materia Medica.

Tripathi et al (2004) discusses about the various methods adopted by the rural folk in 60 villages of Bareilly district in U.P, in relation to child health. Around 124 practices for treating 27 ailments were found as part of the research. Unnikrishnan (2004) gives a comprehensive picture of some of the herbs used as part of the LHT in Payyannur. He elucidates the importance of preparing inventories for the LHT. He believes that it will slow down the rate of knowledge and resource erosion. His study throws light on the raw drug industry as existing in Payyannur, besides looking into the various categories of LHT. A snapshot of the distribution of the medicinal plants in various ecosystems within Payyannur is also provided in the study.

Samal et al (2004) looks at the indigenous health care practices and their linkages to bio-resource conservation in the Central Himalayas. The study suggests that females are the ‘real custodians’ of indigenous knowledge systems. The possible threats identified as part of the study which may threaten the continuation of these practices include the increasing population pressures and associated poverty and the uncontrolled exploitation of the bio-resources leading to its erosion and extinction.

Jain (2004) discusses the use of various herbs in multiple locations for its medicinal value. He suggests that: (1) high credibility ranking of herbs based on frequency of reports of use seems directly related to their utility in health care systems, (2) the remaining recipes with high credibility ranking be given priority for laboratory and clinical research, and (3) more such analyses of frequency of particular medicinal use be undertaken for more plants, more diseases, and in more regions and ethnic groups in India.

Dutfield (2000) advocates that the protection of Traditional Knowledge (TK) will lead to livelihood security, physical well-being and opportunities for economic development for the local communities and further is an input to much of the modern industries like pharmaceuticals. But all the value additions are captured by the developed countries. He further puts forward the view that the majority of the ‘companies’ fail to fulfil their moral obligations to the community for giving their intellectual contributions.
At this point, it becomes essential to think about a health care system which is holistic. An integrated medical system giving due reverence to the diverse medical knowledge systems has to be promoted. Complementary or Alternative Medicine (CAM) is a preferred system in many parts of the world due to its holistic approach to health. The Pan American Health Organisation (2000) in its study comparing CAM with allopathy has come out with the finding that the overall average of direct cost incurred on CAM is less than that on allopathy. The efficacy, satisfaction, and fewer side effects of the CAM have made it popular and the findings of the study acknowledge this fact.

Why complement modern medicine with local health traditions in Kerala?

Though Kerala has high accessibility to health care facilities in terms of distance (Park, 2005), health care still remains inaccessible because of prohibitive cost. The economic burden resulting from the higher cost of health care, on the lower economic classes, needs to be addressed seriously. Kannan et al., (1991) has reaffirmed this, in his study. According to him, the marginalised group (in terms of lower income) in Kerala spends 14 percent of their income for satisfying their health needs. On the other hand, the elite classes spend only 4.4 per cent of the income for satisfying their health needs. Though the amount spent by the elite may be more than that spent by the marginalized classes, the burden is more on the latter class.

Ekbal (2000) states that the health care costs are soaring high in the state. In his study on the people’s campaign for decentralized planning and the health sector in Kerala, he expresses concern of the Kerala Health Model being replaced by an American Health Model where health care becomes highly modernized but least accessible to the poor. The Kerala Health Model according to him is the result of a favourable socio-political atmosphere existing in the state for the poor and the downtrodden. He feels that the atmosphere is however changing with the high rate of privatization of the health sector and a larger flow of patients to the private hospitals. The allocation of the state resources to the public health sector has declined over the years encouraging an American Health Model.

Kunhikannan et al (2000) elucidates the changes in health status of Kerala between 1987 and 1997. During the period there has been an increase in the number of life style diseases. The study identified allopathy as the major system of treatment opted by 78.8
per cent of the population, followed by ayurveda used by 11.4 per cent and other forms contributing to 2.6 per cent. The study reaffirms that there is a high preference for private hospitals when compared to government hospitals. The better quality of care provided by the private hospitals and the inadequate care obtained at the government hospitals is stated as one of the reasons for this.

The introduction of the panchayati raj principles and the process of decentralization have made primary health a panchayat subject. This was aimed at making the local people responsible for their health care needs. However this step has serious implications on the health sector. Takoma Park (2005) reflecting on the impact of political decentralization on Primary Health Care in Kerala with regard to women’s reproductive health care, notes that the change is reflected in the decline in resource allocation to health. Health was transferred to panchayats but the resource control of the panchayats was restricted to roughly about 10 per cent of state resources.

Of late, the allocation for health from the Central Government has fallen to 0.9 per cent of the GDP, whereas according to the WHO guidelines it should at least be 6 per cent of the GDP. The public health sector has declined mainly due to this reason. And it has made health care inaccessible to the poor and the downtrodden and is pulling them further into the poverty trap.

**Attempts to revive traditional knowledge of preventive and curative health care**

With the incorporation of traditional medicine into the WHO programme, the gulf between traditional medicine and modern medicine has narrowed to some extent (Bannerman et al., 1983). In India, traditional medicine falling under the realm of classical medicine was duly recognized and was developed as a parallel stream of medicine. Though, in India, steps were taken to integrate the two, it has largely been opposed and still the two works only as parallels. The irony is that the Local Health Traditions (LHT) was left out along with indigenous medicine and was never formally recognised. With traditional medicine being the most accessed by nearly 80 per cent of the world population, its role in ensuring healthy living should not be ignored. Conducting research into traditional knowledge of prevention and curative health practices has now been identified as one of the activities to meet the rural health care needs in the Agenda 21. The agenda further suggests that integrating traditional
knowledge and experience into national health systems, is appropriate and essential for supporting research and methodology development.

According to Dutfield (2000), there has been a revival of interest in the indigenous health practices. But at the same time, there has been a tremendous degradation of the indigenous knowledge systems. Of late, there has been an increase in interest among the researchers to revitalize these LHTs and integrate them with the mainstream health care.

Sankar et al., (2000) affirms the effectiveness of initiatives to preserve the LHT available with nature ‘a first rate drug-store’ through the efforts of the Foundation for Revitalisation of Local Health Traditions (FRLHT) in setting up domestic herbal gardens. The authors emphasize the role of primary health care based on indigenous herbal plants already under experimentation in many parts of India. According to them setting up of such nurseries ensure the immediate availability of plants for Primary Health Care. They further recommend a change in policy by basing public health policies on LHT and Indian Systems of Medicine. They advocate the preservation of the LHT and attribute the decline in use of LHT to the colonial educational pattern still followed in India. They argue that it is high time that the decision makers understand ‘the system of corporate control in which modern allopathy is now firmly embedded.’

One of the few limited efforts taken up to preserve and conserve the indigenous knowledge including LHT is the initiative to prepare People’s Biodiversity Register (PBR) as inventories of the community resources (Gadgil, 2001). The PBRs were prepared in Kerala on a pilot basis by the community and the volunteers of the Kerala Shastra Sahitya Parishad (KSSP). The use of people’s biodiversity registers as records of local folk knowledge which will ultimately become part of a biodiversity information system seems to protect the community rights over its collective resources. It is an excellent means for preserving and conserving the folk knowledge of the local communities including the LHT. The experiments, being carried out in many parts of India through NGOs and research institutions, show the viability of the approach if implemented successfully.

A project planned under the Government of India-UNDP country programme (2003-2007) is the National Programme on Promoting Conservation of Medicinal Plants and Traditional Knowledge for Enhancing Health and Livelihood Security. This project
was taken up owing to the fast destruction of the traditional Indian medicine. Kerala is one of the states identified as part of the project, where the folk medical culture and the codified classical health systems are eroding at an alarming rate. The programme aims at biodiversity conservation, revitalization of LHT, generation of rural livelihoods and initiating and sustaining South-South Co-operation. This is to be carried out through involvement of multiple stakeholders such as ministries and state departments of forests, health, rural development, NGOs, research organizations, scientific and technical agencies, private sector, policy research organizations, community-based organizations and women’s self-help groups.

One of the major initiatives taken up and promoted widely by the environmental NGOs for revitalisation of LHT is the setting up of herbal gardens. Bodeker (2000) while discussing the legal aspects of indigenous medical knowledge points towards the importance of the revitalisation movements. According to him,

Revitalization movements are drawing on traditional medical knowledge to develop integrated modern and traditional health care projects. These movements and other groups have drawn attention to the shrinking availability of medicinal plants to supply the burgeoning need for herbal medicines in non-Western societies and in the industrial countries. Conservation and horticulture programmes are emerging as vital components of the revitalization of local health traditions.

THE CONTEXT

There is a need for quantitative research to ascertain levels of existing access (both financial and geographical), and qualitative research to clarify constraints to extending such access, focusing on treatments for those diseases which represent the greatest burden for poor populations. Also, if access is to be increased substantially, the natural resource base upon which certain products and therapies depends must be protected. Raw materials for herbal medicines, for instance, are sometimes over-harvested from wild plant populations. Another major challenge concerns intellectual property and patent rights. The economic benefits that can accrue from large-scale application of TM knowledge can be substantial.

The WHO Traditional Medicine Strategy 2002-2007

The current research therefore looks towards understanding the present status of the LHTs as complementary to modern medicine in Kerala. This understanding is facilitated by an appraisal of their use and access over time, and its determinants. The use of the
LHT or Modern medicine is determined by environmental and economic considerations. The study looks into the possibilities of complementing modern medicine with the LHTs in terms of satisfying the community needs, by promoting the economy and environmental needs.

The study is carried out in Kerala due to:

- The increasing inaccessibility to health care facilities in terms of increasing costs.
- Existence of a wide array of traditional health practices which is gradually moving into oblivion.

Kerala has health statistics comparable to the developed nations and is an exception when compared to other Indian states, in terms of its health indicators. The health status seemingly enviable to the outside world may be a thing of the past, if health care becomes unaffordable. Though modern medicine offers solutions to the health needs of the population it needs to be analysed whether it is sustainable and whether it is the only means of attaining good health.

The LHTs which give immediate remedies for minor ailments for much of the rural population are eroding fast. The trend of knowledge degeneration has to be arrested since LHT makes use of the raw materials available in the immediate surroundings, most of which are herbs. And once lost, it is hard to regain it and the loss can never be reverted. Also the LHTs are devoid of any side-effects and provide effective cures to many of the illnesses. The research is therefore carried out to assess the present status of complementary medicine as constituted by the LHTs. The research looks into this option as a means of providing affordable and holistic health care and to carry out an appraisal of the possible strategies.

**The Research Problem**

The research therefore examines whether the problems relating to health care in terms of access and use, can be solved by complementing modern medicine with the Local Health Traditions. The problem was found to be important since

- the health care costs are increasing at a faster rate due to commercialisation of modern medicine;
• an increasing burden, especially on the rural poor, due to escalating health care costs;
• massive erosion and corrosion of the indigenous and local knowledge systems which include the LHTs;
• the loss of physical resources which form the basis of the LHT;
• an absence of effective strategies to integrate the LHTs to the formal health systems at the local, national or international level; and

• threats posed by bio-piracy and the ineffectiveness of patents and Intellectual Property Rights to protect the local knowledge for the benefit of the local communities, as owners of the resource.

Accessibility in terms of distance is no longer a problem for majority of the people in Kerala. But accessibility in terms of cost has to be addressed very seriously. The price of medicines of the two dominant medical systems in Kerala is soaring high. With the introduction of product patenting the prices are bound to rise yet for the allopathic medicine. This amendment of the patents act will deny access to cheaper health care options for the poor in India and the Third World countries as well (Kealya, 2005). There is an urge to look for cheaper health care solutions falling outside the realm of the formal health sector. The LHTs could be a probable solution to meet the immediate health requirements of the people at least in the rural areas. Further it needs to be examined whether the use of LHT as complementary to modern medicine is a sustainable solution. An important hindrance to such an initiative is the massive loss already taken place of the knowledge and resource base of the LHTs. Under such circumstances, the current research looks into how far the LHTs are used as complementary to modern medicine at present and the factors controlling the present level of use of the LHT and the modern medicine. The research attempts to understand the access extended and the use of the LHTs as well as modern medicine and how they complement each other in satisfying the health needs of the local population. It looks into the various problems as affecting the health seeking behaviour, necessarily as pertaining to the use or misuse of a particular health care system. The research looks into issues pertaining to the environment, economy and culture as controlling the health seeking behaviour. The research also looks
into the problems arising out of the economic and environmental facilities as promoting or hindering the use of modern medicine as well as the LHTs. Taking on from the particular issues of health at the local level, the research will try to incorporate findings which will have significance at the national and international levels.

The common commotion is that the LHTs make use of locally available materials and can be easily accessed and used. The study examines this fact in the light of the existing situation. The economy and environment's role in satisfying the community needs and maintaining the overall health of the community should not be ignored. The LHTs draw its raw materials from the immediate environment and any problem affecting the environment is bound to affect the LHTs, directly or indirectly. Associated with the use of the LHTs is the need for herbal resources. Overuse without attempts to conserve the biodiversity will create a stress on the environment and the over-exploitation of herbal resources without replacing it will make the LHTs unsustainable.

The implications of complementing the modern medicine with the LHTs at the local level and their role in satisfying the health needs and possible effects on the environment and economy also forms part of the study. In complementing the modern medicine with the LHTs, benefits and losses accrue for many organisations, institutions and individuals. An analysis of the potential stakeholders who may gain or lose from the existence of a complementary medical system is attempted in the study. This will help to gain a complete understanding of the research problem.

**The Objectives**

The objectives of the research are

1. To examine and assess the nature and extent of popularity of modern medicine and Local Health Traditions in terms of their availability, use and extent and their role in improving the health of the community.

2. To examine the environmental and economic considerations of the Local Health Traditions and the modern medicine, complementary or not to each other and the
importance of the role of pluralistic therapeutics and modes of treatment in providing efficient and effective health care.

3. To arrive at a strategy for implementing a holistic medical care system at the community level in which the Local Health Tradition is integrated with the modern medicine towards enhancing understanding and enriching experiences among the providers and users in regard to complementary medicine

**The Research Questions**

In order to satisfy the objectives, the research questions were framed, for which answers are sought through the research. The research questions are presented below.

1. How popular are the LHTs and the modern medicine along with other forms of medicine, in terms of its use and access?
2. What are the important criteria for using or accessing a medical system?
3. What are the important changes, environmental, economic and social, that have taken place in the study area?
4. How has the present economic and environmental scenario affected the use of the LHT and the modern medicine?
5. Who are the key players in an initiative to promote LHT as complementary to modern medicine?
6. What are the possible associations or linkages in complementing modern medicine with the LHT?

**The Methodology**

The methodology adopted is dependent on the objectives of the research. Since the study concentrates on a socio-cultural resource of the local communities, participatory and qualitative techniques were employed apart from the quantitative techniques. This was to enable a holistic understanding of the use and access of the medical systems as governed by the people’s perception. Researchers prefer qualitative techniques because of its holistic, contextualized and comprehensive character (Morse and Chung, 2003).

Participatory techniques were employed to ensure the engagement of the people who are affected by the research problem. *Participatory research seeks to democratize research*
design by studying an issue or phenomenon with the full engagement of those affected by it (Breitbart, 2003). In participatory research, emphasis is given to the knowledge that ordinary people possess. This form of dialogue involves not only the exchange of information and ideas but also of feelings and values (Park, 1993).

Quantitative research tools were employed due to its objective approach to analysing a problem. Further it also helps to quantify the information obtained. The use of the three unique techniques and related tools were aimed at gaining a holistic understanding. This helped in triangulation of information. Simultaneous or sequential triangulation of more than one qualitative method or combining qualitative and quantitative methods provides a more balanced perspective, moving toward holism (Morse and Chung, 2003).

The participatory techniques employed in the study include SWOT Analysis, historical profile/timeline, community mapping, gender analysis matrix and stakeholder analysis matrix. The qualitative tools employed include focus groups, group discussions and key informant interviews. The quantitative data was collected using questionnaire surveys in Kanjoor, which was later analysed using relevant analytical tools (discussed in detail in Chapter III).

THE STUDY AREA

The research was carried out in the rural neighbourhood of the Kanjoor panchayat of and in the urban neighbourhood of Edapally and Muppithadom of the Ernakulam district of Kerala. Muppithadom is the twelfth ward of the Kadungalloor panchayat.

Kanjoor Panchayat covering an area of 14.32 sq. km lies in North West Ernakulam, falls in the midlands of Kerala. The Periyar River forms the eastern and south-eastern boundary. Towards the north is the Kalady Panchayat and the small township of Angamaly. Sreemoolanagaram lies towards the west and the south.

Kanjoor Panchayat has a population of 21,651 of which 7,793 are working and 17,836 literates. The village is well-served with hospitals and educational institutions. There is one Primary Health Centre (modern medicine) and a Government Ayurveda dispensary and other private clinics for allopathy, ayurveda and homeopathy. Besides, there is one private hospital which caters to the health care requirements of the people. The area is
also rich in biodiversity, though the land use has changed tremendously over the years. The vast majority of the people seem to be dependent on modern medicine, though they employ Local Health Traditions occasionally. There are a few traditional Local health Practitioners who are quite known but only occasionally approached for prevention and cure of illnesses. There also seems to be a considerable number of people dependent on other forms of complementary medicine like homeopathy and ayurveda.

Muppathadom is a peri-urban neighbourhood whereas Edapally is an urban neighbourhood and hence are well served by modern medical facilities. LHTs are non-existent in Edapally whereas in Muppathadom there is a very minute fraction of people making use of the LHTs. In the urban neighbourhoods, the study was carried out solely using qualitative and participatory research techniques, whereas all the three techniques were employed in Kanjoor, the rural neighbourhood.

**The Relevance**

The study of the present status of complementary medicine as constituted by the LHT is relevant, since it will provide the necessary perspective on the situation as existing at the grassroots level with respect to the use and abandonment of the LHTs. Besides this, the study tries to evaluate the need for complementing modern medicine in terms of accessibility. Health is important for people belonging to the various societal strata. The aim of any health provider should be to provide the best treatment for the sick. The lay people are often guided to health care facilities, which provide quality health care at cheaper rates and where their illnesses are cured over a shorter time frame. The study intends to analyse these factors as governing the use and misuse of the various medical systems, in particular the LHTs and the modern medicine.

The study looks for a better health care option for supporting the dominant medical system – allopathy which offers quick relief to many chronic ailments. Such an option has to be looked into since allopathy in itself is not holistic and neither are the LHTs. The LHTs could be a welcome option, since they are devoid of side effects; easily available; and cost-effective. LHT also offers cures to many diseases for which modern medicine is yet to invent a drug.

Though this alternative seems alluring, the reality of the tremendous resource and knowledge degeneration related to the LHTs cannot be ignored. In such circumstances
the viability of this alternative way to holistic health care needs to be examined carefully and researched upon. The research takes up this cause and evaluates the possibilities of complementing modern medicine with the LHT. Hence the current research can be considered as an initial step towards looking for local sustainable solutions for providing health to all.

**THE LIMITATIONS**

The study though comprehensive has its own limitations – methodological, time-related and financial. Quantitative analysis was not carried out in the urban points mainly due to financial and time constraints. Though a questionnaire survey was attempted there, it was not successful enough. This was because most of the time people were not present at the houses and also because of their reluctance to answer all the questions, which left the questionnaires incomplete and invalid. Collecting the data through questionnaire surveys only on holidays demanded a lot of time. This forced the researcher to concentrate on the rural areas where the LHTs are still alive and where people are more ready to interact.

Another major constraint was in representing all the ideas that came up during the research. The thesis is a comprehensive account of all the findings, though some of the viewpoints may have been left out as part of prioritisation and relevance to the present study. This is especially true of the information collected during the participatory rapid appraisals and qualitative analysis. The information generated by these techniques were massive and could not be limited to a few pages and often fell outside the scope of the present study. However, the information relevant to the study is presented in the most comprehensive manner.

**THE ORGANISATION OF THE THESIS**

The thesis is organized in seven chapters excluding bibliography, glossary and appendix. The first chapter of the thesis is an introduction to the research topic and the contemporary researches done in the field. The chapter will provide a comprehensive review of literature available and hence present the research problem. The objectives that is set down to understand the research problem and the research questions emerging out of it will be elaborately discussed in the latter half of the first chapter.
The second chapter deals with the study area for research. In this chapter a profile of the study area will be provided in terms of its socio-economic and geographical character. Besides, an overview of complementary medicine in the study area is presented in this chapter. The methodology and framework for research are discussed in detail in the third chapter. The multiple techniques employed for the study and its relevance for the study are brought out in this chapter of the thesis.

From the fourth till the sixth chapter the findings of the research are presented in detail. All the research questions are answered in these chapters. The fourth chapter deals with the use and access to Local Health Traditions and modern medicine along with other forms of complementary medicine. The relationship of the various underlying factors to the use of Local Health Traditions are discussed here.

The fifth chapter answers the research problems arising from the economic and environmental considerations for complementary medicine as constituted by Local Health Traditions. The sixth chapter addresses the research questions related to policy issues at the government and local levels as constituted by the various stakeholders in designing a holistic model for health care which takes into consideration the complementary medical systems.

The final (seventh) chapter concludes the thesis. The implications of the research and the suggestions for further research are extensively discussed in this chapter along with the summary of findings.

CONCLUSIONS

Even if alternate medical systems are used alongside the modern medicine, the use of the LHT however exhibits a declining trend. The health care sector in Kerala is dominated by modern medicine, though the state possesses immense potentials for exploring and using the LHT. The present state of decline follows the marginalisation of this non-codified system as unscientific, initially by the westerners followed by the Indian decision makers. Formal recognition was given to traditional medicine in the 1970s, with the setting up of a Department of Indian Systems of Medicine. However, this effort did not help the local health traditions since they were not given formal recognition. The trend was similar in Kerala, where the use of modern medicine was more than other systems.
The use of modern medicine helped in containing the pandemics and epidemics, to a very great extent and made it popular over other systems. The LHT which were once popular were replaced by modern medicine. This was supported by the view that the LHT are unscientific and did not explain how they helped prevent or cure illnesses. The intolerance of the West towards the eastern philosophies and scientific thoughts aggravated the situation. However, there is a need for bridging the barriers between eastern and western knowledge systems to give the LHT their rightful place in the realm of scientific knowledge. LHT are vital to the discovery of many drugs and they need to be protected from the threats of bio piracy. The LHT are a common community resource, and proper legislations need to be made to protect the rights of the local community over their socio-cultural asset.

However the patents and IPR which were devised to ensure benefits to the owners of the intellectual property have seldom served the interests of the local communities. Local communities or individuals seldom have the power or knowledge to apply or fight against the infringement of their rights. The conservation of the LHT becomes necessary owing to the immense possibilities they offer in preventing and curing illnesses.

The use of the LHT as complementary to modern medicine is a viable option since they are affordable, available and applicable especially for meeting the health needs of the rural poor. Kerala has a wide array of health practices falling under the realm of the LHT, which if effectively used can bring down the health care costs. The present study takes on these issues and tries to evaluate the access and use of the LHT and modern medicine. It tries to build on the economic and environmental realities as influencing the existence and sustainability of modern medicine and the LHT.

The strategies for promoting the LHT as complementary to the modern medicine have to be evolved on the basis of these realities and a better understanding of the stakeholder roles and influences. The participatory, qualitative and quantitative techniques were employed to get a holistic understanding of the research problem. Though the research has been limited to a few localities, it gives valuable insights on the issues relating to the health care system in the state and the possibilities of making the LHT complement modern medicine.
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