CHAPTER I

INTRODUCTION

1.1. INTRODUCTION

Health is the essence of productive life. It is an integral part of development. The international objective of ‘Health for All by 2000 A.D.’ was suggested by the World Health Organisation. ‘Health for All’ means that health is to be brought within the reach of every one in a given community. It implies the removal of obstacles to health – that is, elimination of malnutrition, disease, provision of protected drinking water and hygienic housing. It depends on continued progress in medicine and public health.

Most of the developing countries are concerned about the resources of the health sector. Such concerns broadly relate to: (i) the sources of finance for health services; (ii) the ability to maintain at least the past funding levels; (iii) resource allocation patterns and (iv) economic efficiency and equity in health care delivery. In developed countries too, with rich-economies, the concern about the high cost of health care in the perspective of scarce resources, has called for closer economic seeking and analysis of the health systems prevailing there. In this background, it is important for all public health administrators know and to apply the principles of Economics in the field of health.
Human health has come to be regarded as a pre-requisite for optimum socio-economic development. Human resource development of which health is an important aspect, has been instrumental in accelerating economic development. The health of the people is really the foundation upon which all their happiness and all their powers as a state depend. Low income, poverty and illiteracy prevent many people in developing countries neglect giving due importance to the promotive and preventive aspects of health care. There are many social and economic factors that influence the provision of health care services in developing countries. The problem of under-development in ‘health’ in developing countries like India is not only an economic but also a technical problem. The Government’s efforts at providing health care services free of cost or at low cost and making them easily accessible have their impact on the health status of the country. It could also be a reflection of the greater awareness of the people of their rights in getting health care services.

Health should be considered as a fundamental human right and therefore the attainment of the highest level of health should be the most important goal. Part IV of the Indian Constitution, namely the Directive Principles of State Policy mentions “The State shall regard in raising the level of nutrition and the standard of living of its people and improvement of public health as among its primary
duties”. The constitution of the WHO says, “enjoyment is one of the fundamental rights of every human being without distinction of race religion, political belief, economic and social condition.\textsuperscript{2}

Welfare Economics has branched off into many applied disciplines and important among them with significant social relevance is Economics of health. Aware of the economic manifestation of health and diseases and the limited resources allocated to health care services has brought to the focus, a new discipline – Health Economics. The ultimate aim of all human activity is social well – being. Maximization of welfare is the keynote of modern planning. In the human resource development process, health occupies a predominant position. Health care is an important objective of Normative Economics. Improvement in the health status of the population is a priority and appropriate political economic and social action is called for, apart from the development of the science of health care as such. Man is the primary factor of production. Basic standards of health and improvements thereof provide an entry point to change agents.\textsuperscript{3}

\begin{footnotesize}
\footnote{T.K. Parthasarathy, “Preventing Diseases through Health Education”, \textit{Yojana}, Republic Day Special, Health for All, 1992, p. 62.}
\footnote{Shanmugasundaram, Yasodha, “Nature and Significance of Economics of Health”, Paper presented at the Conference on \textit{Economics of Health} held under the auspices of Tamil Nadu Economics Association and Madras Medical College Research Society, 13-14, April 1979.}
\end{footnotesize}
Health Economics encompasses the medical industry as a whole and extends to such fields as the economic analysis of the cost of diseases, benefits of health programmes, returns from investment in medical Education Training and Research.

WHO inter–regional seminar gave a comprehensive definition of Health Economics. It defined Health Economics as “that which seeks *Inter alia* to quantify over time, the resources used in health service delivery, their organisational functioning and the efficiency with which the resources are allocated and used for health purposes and the effect of preventive, curative and rehabilitative health services for individual and national productivity.”

The importance of the economic manifestation of health care and diseases and the financial limitations restricting the provisions or procurement of adequate health care, is well recognised. Day by day health is becoming all the more valuable and disease all the more expensive. This course of events has brought together two of the applied sciences, namely Medicine and Economics. As a result of a new discipline, Health Economics has emerged with the task of regulating the relationship between the health objectives on the one hand and the available resources on the other.

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Victor R. Fuchs (1986), a well known health economist, opined that “there is no completely objective invariant ordering across individuals or population with respect to health. Health can be defined according to criteria such as life medical care or ability to perform a variety of personal and social functions. Health care can be defined as those activities that are undertaken with the objective of restoring, preserving or enhancing the physical and mental well-being”.

1.2. HEALTH CARE PROGRAMMES IN INDIA

Since India became free, several measures have been undertaken by the national government to improve the health of the people. Prominent among these measures are the National Health Programmes, which have been launched by the central government for the control/eradication of communicable diseases, improvement of environmental sanitation, raising the standard of nutrition, control of population and improving rural health. Various international agencies like WHO (World Health Organization), UNICEF (United Nations Child Emergency Fund), World Bank, as also a number of foreign agencies like SIDA (Swedish International Development Agency), DANIDA (Danish International Development Agency), NORAD (Norwegian Agency for Development) and USAID (United States Agency for International Development) have been

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providing technical and material assistance in the implementation of the health care programmes.

Due to various programmes of eradication and control of several preventable communicable diseases, tangible progress in reduction of morbidity and mortality has been achieved. The availability of safe drinking water to the rural population considerably reduces the incidence of communicable diseases such as cholera, malaria, filariasis and Japanese Encephalitis.

A government sector provides public finance and manages curative and preventive health care services from primary to tertiary level, throughout the country and free of cost in many programmes to the consumer. The provision of health care by the public sector is a responsibility shared by state, central and local governments, although it is effectively a state responsibility in terms of service delivery. State and local governments incur about three-quarters and the centre about one-quarter of public spending on health.

In the Eighth Five Year Plan (1992-97)\(^7\), Indian Council of Medical Research (ICMR) attempted to consolidate significant leads in “priority” or “thrust” areas that were identified by various scientific expert groups. These areas included emerging health problems like HIV/AIDS, other important communicable diseases like tuberculosis, leprosy, diarrhoea diseases, malaria, malaria,

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\(^7\) www.india.gov.in
filariasis, Japanese encephalitis etc., non-communicable disease like cancer, cardiovascular diseases, metabolic disorders, etc., contraception, Maternal and Child Health (MCH) and nutrition.

Health education and promotion has been an integral component of all national health care programmes and family welfare programmes. The Information Education and Communication (IEC) approach uses a community based strategy. National health programmes are supported with health education and promotion strategies and activities specifically designed to suit programme needs. Such national programmes include leprosy eradication, tuberculosis control, malaria eradication, and HIV/AIDS control, as well as the national iodine deficiency disorder programme and the environmental health and sanitation programmes.

The availability of health and family welfare facilities to the people is directly or indirectly linked with the prevailing mortality and morbidity conditions. It is not surprising that the half of the world’s tuberculosis patients and one-third of the world’s leprosy patients are Indians. Also water borne diseases such as malaria, cholera, typhoid and gastroenteritis kill a sizeable number of our people every year. The need for health facilities for the growing population has been recognized and there has also been a significant infrastructural development
in the health sector. However the high population growth rate has led to constraints and even contributed to the deterioration of the quality of health\(^8\).

The Government of India takes concerted measures to combat communicable, non-communicable and other major diseases. For this purpose several national health programmes are launched and run by the Ministry of Health and Family Welfare, New Delhi, which can have a bearing on the reduction of mortality and morbidity and also have a salutary effect on efforts to improve the quality of life of the common man. These programmes also reinforce the delivery of primary, secondary and tertiary health care throughout the country.

They are;

1. National Leprosy Eradication Programme (1955)
   (The word ‘control’ was modified as ‘Eradication’. The new policy named as the National Leprosy Eradication programme was introduced in 1983).
2. National Tuberculosis Control Programme (1962)
   (Revised National Tuberculosis Control Programme (DOTS strategy) was implemented in 1997).
3. National Cancer Control Programme (1975)
4. National Programme for Control of Blindness (1976)


   (It is renamed as National AIDS prevention and control Policy and introduced in 2002).


11. Reproductive and Child Health Programme (1997)

   (This programme includes Integrated Children Development Scheme (ICDS) 1975, The Balwadi Nutrition Programme introduced in 1970-71, National Nutritional Anaemia Prophylaxis Programme [1970]).


   (This new programme consists of the following programmes (a) National Malaria Eradication Programme (b) Filaria Control Programme (c) Japanese Encephalitis Control Programme (d) Kala Azar Control Programme (e) Dengu Control Programme).
The central Government plays a very important part in planning, guiding and co-ordinating all the national health programmes in the country. The programmes are implemented at the state level. These national programmes are not static. New programmes can be added and old programmes can be deleted from the list.

These National Health Programmes are administered and monitored by the Ministry of Health and Family Welfare, New Delhi.\(^9\)

Government initiatives in the public health sector have recorded some noteworthy successes over time. Small pox and Guinea Worm Disease have been eradicated from the country; Polio is on the verge of being eradicated; Leprosy, KalaAzar, and Filarlasis can be expected to be eliminated in the foreseeable future. There has been a substantial drop in the total fertility Rate and Infant Mortality Rate (IMR)\(^{10}\).

Health is an index of human efficiency. Good health is an essential requirement for the enjoyment of every aspect of life. A chronically sick person, inspite of his high income and higher education, cannot enjoy his life and would contribute very little good to the society. Perhaps for this reason, almost all the


\(^{10}\) National Health Policy 2002, www.mohfw.nic.in.
countries in the world are spending sizeable resources on health care. In India, the expenditure on health comprises 5.2 per cent of GDP with public health investment at 0.9 per cent in 2007\textsuperscript{11}.

Health means human effectiveness. Health contributes to human resource development significantly and economic development ultimately. The principal benefits of investment in health are two fold (i) longevity of life, (ii) improvement in the physical and mental development of the people. Provision of health care facilities, mainly lays emphasis on preventive, curative and promotive services.

At the global level there are about 180 countries developing with different socio, economic, political, and cultural and health status for various reasons. The Secretariat of United Nations Development Programme had framed Human Development Indices for 179 countries and published in Human Development Report, 2008.

The human development index is based on three indicators, namely life expectancy at birth, adult literacy and the standard of living measured by real GDP per capita. The following Table shows Human Development Indices (HDI) for selected countries for the year 2008. Government’s efforts to improve adult literacy and to create employment opportunity will pave way for expanding the life span and improving the standard of living.

\textsuperscript{11} Economic Survey 2007-08 Government of India, New Delhi.
TABLE 1.1

HUMAN DEVELOPMENT INDICES FOR SELECTED COUNTRIES IN 2010

<table>
<thead>
<tr>
<th>SL.No.</th>
<th>Countries</th>
<th>HDI Value</th>
<th>HDI Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ice Land</td>
<td>0.968</td>
<td>1</td>
</tr>
<tr>
<td>2.</td>
<td>Canada</td>
<td>0.967</td>
<td>3</td>
</tr>
<tr>
<td>3.</td>
<td>United States</td>
<td>0.950</td>
<td>15</td>
</tr>
<tr>
<td>4.</td>
<td>United Kingdom</td>
<td>0.942</td>
<td>21</td>
</tr>
<tr>
<td>5.</td>
<td>Germany</td>
<td>0.940</td>
<td>23</td>
</tr>
<tr>
<td>6.</td>
<td>Singapore</td>
<td>0.918</td>
<td>28</td>
</tr>
<tr>
<td>7.</td>
<td>Cuba</td>
<td>0.855</td>
<td>48</td>
</tr>
<tr>
<td>8.</td>
<td>Costa Rica</td>
<td>0.847</td>
<td>50</td>
</tr>
<tr>
<td>9.</td>
<td>China</td>
<td>0.762</td>
<td>94</td>
</tr>
<tr>
<td>10.</td>
<td>Sri Lanka</td>
<td>0.742</td>
<td>104</td>
</tr>
<tr>
<td>11.</td>
<td>India</td>
<td>0.609</td>
<td>132</td>
</tr>
<tr>
<td>12.</td>
<td>Pakistan</td>
<td>0.562</td>
<td>139</td>
</tr>
<tr>
<td>13.</td>
<td>Zambia</td>
<td>0.453</td>
<td>163</td>
</tr>
</tbody>
</table>


The above Table 1.1 discloses the following facts. Iceland stands first in life expectancy at birth, adult literacy and the standard of living measured by real Gross Domestic Product per capita. Developed countries have naturally higher ranks. Very small countries like Singapore, Cuba and Costa Rica are far better in health status, literacy and standard of living. India gets only 132nd ranks. In global scenario, India has to strive hard to improve its health status, literacy level and standard of living by implementing revised health and educational policies.
The following Table 1.2 reveals the achievements through the years 1991-2010 in India. \(^\text{12}\)

### TABLE 1.2
**HEALTH ACHIEVEMENTS IN INDIA DURING 1991-2010**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>1991</th>
<th>2001</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>i) Demographic Changes</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life Expectancy</td>
<td>36.7</td>
<td>54.0</td>
<td>64.6 (RGI)</td>
</tr>
<tr>
<td>Crude Birth Rate</td>
<td>40.8</td>
<td>33.9 (SRS)</td>
<td>26.1 (1999 SRS)</td>
</tr>
<tr>
<td>Crude Death Rate</td>
<td>25.0</td>
<td>12.5 (SRS)</td>
<td>8.7 (1999 SRS)</td>
</tr>
<tr>
<td>IMR</td>
<td>146.0</td>
<td>110.0</td>
<td>70.0 (1999 SRS)</td>
</tr>
<tr>
<td><strong>ii) Epidemiological Shifts</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malaria (cases in Million)</td>
<td>75.0</td>
<td>2.7</td>
<td>2.20</td>
</tr>
<tr>
<td>Leprosy Cases (per 10000 population)</td>
<td>38.1</td>
<td>57.3</td>
<td>3.74</td>
</tr>
<tr>
<td>Small pox (no of cases)</td>
<td>&lt;44887</td>
<td>Eradicated</td>
<td>3.74</td>
</tr>
<tr>
<td>Guinea Worm (no of cases)</td>
<td>--</td>
<td>&lt;39792</td>
<td>Eradicated</td>
</tr>
<tr>
<td>Polio</td>
<td>--</td>
<td>29709</td>
<td>265</td>
</tr>
<tr>
<td><strong>iii) Infrastructure</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC/PHC/CHC</td>
<td>725</td>
<td>57363</td>
<td>163181 (1999 RHS)</td>
</tr>
<tr>
<td>dispensaries and Hospitals (all)</td>
<td>9209</td>
<td>235555</td>
<td>43322</td>
</tr>
<tr>
<td>Doctors (allopathy)</td>
<td>61800</td>
<td>268700</td>
<td>503900</td>
</tr>
<tr>
<td>Nursing personal</td>
<td>18054</td>
<td>143887</td>
<td>737000</td>
</tr>
</tbody>
</table>

Source: Documents of National Health Policy 2010. [www.mohfw.nic.in](http://www.mohfw.nic.in)

From the above Table, health indicators prove that the public health initiatives over the years have contributed significantly to the improvement of health status. This is the outcome of the several complementary initiatives under wider umbrella of the development sector, coverings rural development...
agriculture, food production, sanitation, drinking water supply, education etc.

In spite of these impressive public health gains, the morbidity and mortality levels in the country are still unacceptably high. The aggregate expenditure in the health sector is 5.2 per cent of the GDP. Out of this about 17 per cent of the aggregate expenditure is for public health spending and the balance being out of pocket expenditure.13

**TABLE 1.3**

DIFFERENTIALS IN HEALTH STATUS AMONG STATES IN INDIA

<table>
<thead>
<tr>
<th>Sector</th>
<th>Percentage of Population Below Poverty Line</th>
<th>IMR per 1000 Live birth</th>
<th>Children Less than 5 years mortality per 1000</th>
<th>Under weight of children below 3 years per 1000</th>
<th>MMR per lakh</th>
<th>Leprosy cases (in 1000)</th>
<th>Malaria cases (in 1000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>26.10</td>
<td>70</td>
<td>949.0</td>
<td>47.0</td>
<td>408</td>
<td>3.7</td>
<td>2200</td>
</tr>
<tr>
<td>Rural</td>
<td>27.09</td>
<td>75</td>
<td>103.7</td>
<td>49.6</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Urban</td>
<td>23.62</td>
<td>44</td>
<td>63.1</td>
<td>38.4</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Better Performing States</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kerala</td>
<td>12.72</td>
<td>14</td>
<td>18.8</td>
<td>27</td>
<td>87</td>
<td>0.9</td>
<td>5.1</td>
</tr>
<tr>
<td>Maharasra</td>
<td>25.02</td>
<td>48</td>
<td>58.1</td>
<td>50</td>
<td>135</td>
<td>3.1</td>
<td>138.0</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>21.12</td>
<td>52</td>
<td>6.3</td>
<td>37</td>
<td>79</td>
<td>4.1</td>
<td>56.0</td>
</tr>
<tr>
<td>Low performing States</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orissa</td>
<td>47.15</td>
<td>97</td>
<td>104.4</td>
<td>54</td>
<td>498</td>
<td>7.05</td>
<td>483</td>
</tr>
<tr>
<td>Bihar</td>
<td>42.60</td>
<td>63</td>
<td>105.1</td>
<td>54</td>
<td>707</td>
<td>1.183</td>
<td>132</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>15.28</td>
<td>81</td>
<td>114.9</td>
<td>51</td>
<td>607</td>
<td>0.8</td>
<td>53</td>
</tr>
<tr>
<td>U.P.</td>
<td>31.15</td>
<td>84</td>
<td>122.5</td>
<td>52</td>
<td>707</td>
<td>4.3</td>
<td>99</td>
</tr>
<tr>
<td>M.P.</td>
<td>37.45</td>
<td>90</td>
<td>137.6</td>
<td>55</td>
<td>498</td>
<td>3.8</td>
<td>528</td>
</tr>
</tbody>
</table>


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13 www.mohfw.nic.in
When centralized planning was accepted as a key instrument of development in the country, the attainment of an equitable regional distribution was considered one of its major objectives, despite this conscious focus on the development process, the statistics given in Table 3.3 clearly indicates that the attainment of health indices in different states has been very uneven across the rural divide. Tamil Nadu, Kerala and Maharashtra are better performing states in India as far as Health development is concerned. Certain states namely, Orissa, Bihar, Rajasthan, Uttar Pradesh and Madhya Pradesh are low performing states in health development.

The National Health Policy (NHP) 2002 takes into account the serious apprehension expressed by several health experts of the possible threat to health security in the post – TRIPS, under WTO as a result of a sharp increase in the prices of drugs and vaccines (Ministry of Health and Family Welfare, New Delhi).

The Government of India takes concerted measures to combat communicable, non-communicable and other major diseases in the country. For this purpose several National Health Programmes are launched and run by the Ministry of Health and Family Welfare, New Delhi, which can have a bearing on the reduction of mortality and morbidity and also have a salutary effect on efforts to improve the quality of life of the common man. Health programmes also reinforce the delivery of primary, secondary and tertiary health care throughout the country.
Level of Morbidity – Inter-State Comparison in India

The estimated Number (per 1000) of Ailing Persons (NAP) is known as incidence rate. Persons Reporting Commencement of any illness (PRC) is known as prevalence rate. The observed differences in incidence rates and prevalence rate do not reveal differences in the actual health status. They only confirm the widely held view that self-perceived morbidity reporting is highly influenced by the level of general health consciousness prevailing among the population.

The level of morbidity in rural areas measured in terms of NAP varied from 28 in Rajasthan to 118 in Kerala. The variation in PRC ranged from 15 in Rajasthan to 60 in Kerala. Tamil Nadu State reveals morbidity incidence rate in rural areas as 52 and in urban area as 58. The morbidity prevalence rate in rural areas is 31 and in urban area it is 37. The morbidity incidence rate in rural areas of Tamil Nadu (52) is less than that of all India level (55) and morbidity incidence rate in urban areas of Tamil Nadu (58) is greater than that of all India level (54). Similarly the morbidity prevalence rate in rural areas of Tamil Nadu (31) is equal to that of all India level (31). The morbidity prevalence rate in urban areas of Tamil Nadu (37) is higher than that of all India level (30)\(^\text{14}\). Tamil Nadu lies in the zone representing a medium level of morbidity.

\(^{14}\text{National Statistical Sample (NSS) 52}^{\text{nd}}\text{ Round Survey on Morbidity and Treatment of Ailments, Sarvekshana, 2000.}
With the availability of better health care, the longevity of the people is expected to rise, leading to a relatively older age-distribution and hence the high level of morbidity. The Government focuses on redressing the health care problems of old age people, and natural levels of morbidity will be likely to diminish. Malnutrition is one of the basic reasons for the prevalence of morbidity.

1.3. HEALTH STATUS IN TAMIL NADU

Tamil Nadu has excelled in bringing about a faster reduction in Death Rate, Birth Rate and Infant Mortality Rate. The Crude Birth Rate per thousand people had declined substantially from 31.4 in 1971 to 19.1 in 2001 and further reduced to 18.3 in 2003 indicating a declining trend in fertility. The Crude Death Rate also declined significantly from 14.4 in 1971 to 7.7 in 2001. The life expectancy at birth had steadily increased to reach the level of 65.6 for both males and females in 2001. It is projected to go up to 67.0 for males and 69.75 for females during the period 2001-2007.\(^\text{15}\)

Tamil Nadu State held the following relative positions in various health indicators when compared to other States in India. Tamil Nadu has the fifth highest Life Expectancy at Birth (65.6); it has the fifth lowest Infant Mortality

\(^{15}\) Website: [www.tnhealth.org](http://www.tnhealth.org)
Rate per 1000 live Births (52), it has the second lowest birth rate (19.3) and it has the sixth lowest Death Rate (7.9) during 2000-2001\textsuperscript{16}.

The state has fared well in realizing the various National Health Policy goals set for the year 2000 well in advance. With regard to Crude Birth Rate (CBR). Crude Death Rate (CDR) the National Growth Rate, Infant Mortality Rate (IMR) and Couple Protection Rate, TamilNadu state has the distinction of being in the vanguard in the realization of family welfare goals. TamilNadu is the leading state in India in implementing the various government health programmes, as per the observation made by UNICEF and WHO. Both India and Tamil Nadu were nearing the health goals.

TABLE 1.4
HEALTH INDICATOR AND DEMOGRAPHIC INDICATORS OF TAMILNADU DURING 1985-86 – 2009-10

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Life Expectancy at Birth</td>
<td>58.4</td>
<td>61.2</td>
<td>63.8</td>
<td>65.6</td>
<td>65.6</td>
</tr>
<tr>
<td>2.</td>
<td>Birth Rate</td>
<td>24.7</td>
<td>21.6</td>
<td>20.3</td>
<td>19.3</td>
<td>15.8</td>
</tr>
<tr>
<td>3.</td>
<td>Death Rate</td>
<td>9.5</td>
<td>8.5</td>
<td>8.1</td>
<td>7.9</td>
<td>7.2</td>
</tr>
<tr>
<td>4.</td>
<td>Infant Mortality Rate</td>
<td>81</td>
<td>59</td>
<td>54</td>
<td>52</td>
<td>37</td>
</tr>
<tr>
<td>5.</td>
<td>Maternal Mortality Rate</td>
<td>2.4</td>
<td>2.2</td>
<td>1.8</td>
<td>1.3</td>
<td>0.9</td>
</tr>
<tr>
<td>6.</td>
<td>Still Birth Rate</td>
<td>38.3</td>
<td>28.4</td>
<td>18.7</td>
<td>16.1</td>
<td>11.7</td>
</tr>
<tr>
<td>7.</td>
<td>Density of Population</td>
<td>399</td>
<td>429</td>
<td>456</td>
<td>478</td>
<td>480</td>
</tr>
<tr>
<td>8.</td>
<td>Sex Ratio</td>
<td>971</td>
<td>974</td>
<td>982</td>
<td>986</td>
<td>987</td>
</tr>
<tr>
<td>9.</td>
<td>Fertility Rate</td>
<td>2.8</td>
<td>2.6</td>
<td>2.2</td>
<td>2.0</td>
<td>1.7</td>
</tr>
<tr>
<td>10.</td>
<td>Couple Protection Rate</td>
<td>41.6</td>
<td>45.1</td>
<td>53.0</td>
<td>58.7</td>
<td>59</td>
</tr>
</tbody>
</table>

Source: 1. Directorate of Medical and Rural Service, Chennai.
2. Directorate of Public Health and Preventive Medicine, Chennai.

The above Table illustrates the improvement in health status of Tamil Nadu during 1985-86 to 2009-10.

Health Care Infrastructure

There has been a steady increase in the health and infrastructural facilities in the state catering to the health need of the population as indicated in Table 1.5.
### TABLE 1.5
EXPANSION IN HEALTH FACILITIES IN TAMIL NADU DURING 1980-2010

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No. of Hospitals</td>
<td>No. of Beds</td>
<td>No. of Hospitals</td>
<td>No. of Beds</td>
</tr>
<tr>
<td>1.</td>
<td>Teaching Hospitals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) Allopathy</td>
<td>32</td>
<td>14689</td>
<td>33</td>
<td>16374</td>
</tr>
<tr>
<td></td>
<td>b) Homeopathy</td>
<td>1</td>
<td>25</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>c) Indian Medicines</td>
<td>2</td>
<td>358</td>
<td>2</td>
<td>459</td>
</tr>
<tr>
<td>2.</td>
<td>District Head Quarters Hospitals</td>
<td>15</td>
<td>4641</td>
<td>22</td>
<td>6609</td>
</tr>
<tr>
<td>3.</td>
<td>Taluk Hospitals</td>
<td>117</td>
<td>6156</td>
<td>121</td>
<td>7550</td>
</tr>
<tr>
<td>4.</td>
<td>Primary Health Centre</td>
<td>1392</td>
<td>2298</td>
<td>1386</td>
<td>5208</td>
</tr>
<tr>
<td>5.</td>
<td>ESI Hospitals</td>
<td>4</td>
<td>1553</td>
<td>7</td>
<td>1749</td>
</tr>
<tr>
<td>6.</td>
<td>ESI Dispensaries</td>
<td>116</td>
<td>--</td>
<td>134</td>
<td>--</td>
</tr>
<tr>
<td>7.</td>
<td>Government Dispensaries</td>
<td>197</td>
<td>233</td>
<td>14</td>
<td>--</td>
</tr>
<tr>
<td>8.</td>
<td>Non-taluk Hospitals</td>
<td>108</td>
<td>9095</td>
<td>72</td>
<td>2014</td>
</tr>
</tbody>
</table>


Towards achieving the goal of “Health for all” by 2000 AD, preventive and curative health and medical services are being delivered to the rural and urban people through a network of district hospitals, taluk hospitals, non-taluk hospitals, district T.B. Centres, ESI hospitals, Leprosy Control units, dispensaries and primary health centres. The Primary Health Centres, community Health Centres and health sub-centres are offering the preventive, curative and rehabilitative...
health care service to the rural people. The state has already met the Government of India norms of one PHC for every 30,000/20,000 population in the plains / hills and one HSC for every 5000/3000 population in the plains / Hills.

In Tamil Nadu state, the one development that causes a little concern was the sex ratio continuing its downward movement till 1991 census that it raised in 2001. From 1007 females to every 1000 males in 1951, the ratio had drastically come down to 972 to 1000 in 1991. Taking due note of this adverse trend, the Government has been implementing specific programmes with their focus on raising the status of females by curbing gender bias in all walks of life and upholding the interests of the female child. Then the sex ratio was raised to 987 females to every 1000 males in 2001, when compared to 1991 census. The establishment of the women’s Development corporation, the recent 30 per cent reservation of job opportunities for women, the determined efforts to eradicate the practice of female infanticide wherever it existed and similar other measures are bound to have a favourable impact on the sex ratio\textsuperscript{17}.

Tamil Nadu states continue to face major challenges growing burden of non-communicable diseases, quality of care and equity issues as well as health financing issues in the state. To respond the health challenges, the Government of Tamil Nadu developed a Health policy in 2003. This strategy focuses on

\begin{footnote}{17}{Tamil Nadu An Economic Appraisal, “Health Services”, 1993-94 and 2000-01.}
improving the health status of the general population, with special emphasis on
the health of low-income communities and families, over the next two decades.
The Tamil Nadu Health System Project (TNHSP) will support implementation of
this strategy through the following interventions.

- Increasing access to and utilization of health services, particularly for
  poor, disadvantaged and tribal groups.
- Development and pilot testing effective interventions to address key
  health challenges, specifically non-communicable diseases.
- Improving health outcomes, access and quality of service delivery
  through strengthened management of the public sector health systems
  and greater engagement of the non-government sector.
- Increasing the effectiveness and efficiency of the public sector hospital
  services, primarily at district and sub-district level.

The World Bank’s involvement in the Tamil Nadu Health Systems Project
will help to introduce new approaches in the way the health sector functions in the
state, such as promoting collaboration with the non-governmental sector, adopting
quality assurance mechanisms and addressing the growing burden of non-
communicable diseases. While the Health system in Tamil Nadu has been fairly
effective in providing basic health needs of its people, it is expected that the goals
sought in the project will demonstrate the impact of cutting-edge-reforms.
According to the Tenth Five Year Plan (2002-2007) of TamilNadu, “Health for All” was the main objective of the plan. It focused on the improvement in the general health status of the population, better access to health care services, improved Maternal and Child Health (MCH) care, effective control and prevention of communicable and non-communicable disease (Tenth Five Year Plan – TamilNadu: 2002-2007).

The public health and preventive medicine is concerned with the prevention of disease like Malaria, Tuberculosis, Filaria and Japanese Encephalitis, AIDS, Blindness, Leprosy, Smallpox, Cholera, Typhoid and infective hepatitis. The directorate of public health and preventive medicine is also concerned with the implementation of programmes for immunization, school health, maternal and child health care, for adulteration and health education.

Due to the successful implementation of the immunization programme, diphtheria pertussis has almost controlled. To sustain this polio free status, two rounds of PPI (Pulse Polio Immunisation) campaigns were conducted every year benefiting 72 lakhs of children under 5 years in the State of Tamil Nadu.

The National Leprosy Control programme has been in operation since 1955 with the main thrust on detection and sustained regular treatment of all leprosy patients. In 2004, the prevalence rate was 1.4 per 10,000 population. At present, TamilNadu is marching towards a caseload of less than one (0.6 per cent).
The Tamil Nadu state Blindness Control Society was formed on 01.04.1996, as a separate entity, to give thrust to the goal by planning, executing and monitoring at the District level. The Tamil Nadu State Blindness Control Society is functioning under the control of Mission Director, State Rural Health Mission, Chennai with effect from 1\textsuperscript{st} April 2007. Every District in the state has one District Blindness Control Society to govern the activities of the National Programme for control of Blindness. The Cataract, being the major cause of the available blindness, was given importance and various infrastructure facilities like base eye wards, dark rooms etc, have been built till 2002 and are now in use. Tamil Nadu has been a pioneer in tackling blindness, particularly arising from cataract. The government of Tamil Nadu has already reduced the prevalence of blindness to the level of 0.8 per cent with the assistance provided by the Government of India\textsuperscript{18}.

Tuberculosis is a serious public health problem in the country. India accounts for nearly half of the global TB burden. The revised national TB control programme using DOTS (Directly Observed Treatment Short course) strategy was launched on 26\textsuperscript{th} March, 1997 and is being implemented in a phased manner. The National Anti-Malaria Programme is the ‘worlds’ biggest health programme

\textsuperscript{18}www.tn.gov.in.
against a single communicable disease and continues to be the country’s most comprehensive and multifaceted public health activity.

The important objective of the health and family welfare sector in the state is to implement schemes for prevention and control of communicable disease and non-communicable diseases with a special focus on newly emerging vector borne disease and lifestyle diseases.

1.4. STATEMENT OF THE PROBLEM

Health has been identified and accepted as an important factor in human development. The Constitution of World Health Organisation (WHO) defines health as, “a State of complete physical, mental and social well being and not merely the absence of disease or infirmity”. Thus, the health of the community has to be viewed in a broader perspective than merely in terms of demographic indicators. The basic objective of any health care delivery system, therefore, would be to provide and organise the services in such a way that it reaches to everyone and the available resources, knowledge and technology are optimally utilised. In India, several policy initiatives have been taken up from time to time in this direction to deal with various aspects of the delivery of health care and family welfare.
Health and development are closely interlinked. It is now established that the poor State of health slows down economic development and that insufficient economic development perpetuates a bad State of health. General health improvement tends to increase worker productivity and thus contributes to economic growth. Hence, the human health has come to be regarded as a prerequisite for optimum socio-economic development.

In Tamil Nadu, Government has taken pains to provide health care services free of cost or at low cost and make them easily accessible. At this juncture, it is the duty of the researcher to review the economics of primary health care services provided by the Government at the level of Primary Health Centres in Tirunelveli district. Hence, the present study is an attempt to analyse and compare the role of PHCs to promote the health status of the people in Tirunelveli and Sankarankoil Health unit areas of Tirunelveli district.

1.5. OBJECTIVES OF THE STUDY

The aim of this study is to evaluate the health status of the people of Tamil Nadu with special reference to rural and semi-urban areas in Tirunelveli district. The specific objectives of the study are:

1. To study the trends in health indicators in Tamil Nadu and Tirunelveli district.
2. To analyse the determinants of health status of people in Tirunelveli district.

3. To study the revenue villages covered, staff pattern, beds, budget allocation and number of out-patients treated at the selected PHCs.

4. To discuss the socio-economic conditions of the sample users of PHC services.

5. To analyse the morbidity level and health awareness among the sample respondents.

6. To examine the reasons for preferring health care services by the sample respondents.

7. To offer a few suggestions to the policy makers based on the findings to improve the health status in the study area.

1.6 HYPOTHESES OF THE STUDY

Null hypothesis is a statement of generalisation and assumption that has to be tested empirically. Hypotheses are framed based on the objectives of the study. The following are the null hypotheses formulated to test in the study.

1. Infant mortality rate is independent of female literacy rate.

2. The total government spending for health care has not improved the life expectancy at birth of people.
3. Among the users of the health services in PHCs, female is more than male.

4. Distance is not a factor in making use of health serviced provided by Primary Health Centres.

5. Getting immunisation to children aged under five does not reflect the health awareness among the sample respondents.

1.7. LIMITATIONS OF THE STUDY

The main limitations of this study are confined only to Primary Health Services (PHCs) level in Tirunelveli district. The study includes only the health care services of the public sector particularly PHCs. The researcher does not cover rehabilitative health care service of public health sector in the study area.

The period of study is confined to a single financial year i.e., 2010-11. The data were collected by personal interview through a pre-tested schedule with the help of user’s recall method, subject of the limited memory power of the users, to gather appropriate information.

1.8 SCHEME OF WORK

The present study is divided into seven chapters.

Chapter I highlights the importance of health care services, health care programmes in India, level of morbidity, health status in Tamil Nadu, health care
infrastructure, statement of the problem, objectives of the study, hypotheses, limitations and scheme of work.

Chapter II reviews the earlier studies relating to general health care programmes, Primary Health Centres, health expenditure and health insurance and various concepts used in the study.

Chapter III describes the methodology which includes the choice of the study area, sampling procedure, collection of data, period of study and tools of analysis. Further, the profile of the study area is also presented in this chapter.

Chapter IV evaluates the health status in Tirunelveli district. Further, it analyses the factors influencing the health status.

Chapter V analyses the working performance of the selected Primary Health Centres (PHCs) in Tirunelveli and Sankarankoil health units areas of Tirunelveli district.

Chapter VI deals with the socio-economic conditions of the users of PHCs and the health awareness.

Chapter VII presents the summary of findings along with conclusion and suggestions based on the study.