CHAPTER I
INTRODUCTION

The health status of a society depends mainly upon the provision of effective and quality health care system and its utilization. This is a reflection of the socio-economic development of the country. It is also shaped by a variety of factors like the level of income and standard of living, housing, sanitation, water supply, education, employment, health consciousness, personal hygiene etc. The relationship between health and poverty or health and development is complex, multifaceted and multi directional. Poverty is considered as an important determinant of an individual’s health. It has a direct bearing on the morbidity and longevity of people. Health is also seen as one of the major components of human development. Poor health status contributes to decline in cognitive ability and long term economic potential. Poor health also leads to income loss, large medical expenses and impoverishment. There are huge gaps in commitment and achievement with regard to the average health status of Indian, the inequality in health status and the affordability of health care (Ajay Mahal, Bibek Debroy and Laveesh Bandari, 2010). Improvement in life expectancy and reduction in infant mortality rate are viewed as indicators of progress in health.

For economic development of a country, improvement of health care and education for the masses is most inevitable and it is equally significant as that of level of improvement in production. Better health care for the masses improves their living conditions, ability to work and efficiency of labour and in turn contributes to general improvement of
productivity and thereby can stimulate economic growth, which is essential for economic
development. India and the major states in India have experienced improvement in the
level of human development. The infant mortality rate had the expected negative effect on
growth and SDP per capita. That is, higher the infant mortality reduces SDP growth and
SDP per capita. It also shows that the higher growth and decreased infant mortality rate
tend to reduce poverty and higher SDP growth and higher per capita health spending
reduces infant mortality (Gupta and Mitra 2004). The health and nutritional status of
mothers and poor nutrition in early childhood contributes to low birth weight, to delay in
educational development and resultantly, to lower educational achievements and lower
incomes (Barber 1998, Politt 2000). Thus health has a powerful impact on aggregate
economic outcomes.

Amartya Sen (1985) has suggested “… that health contributes an important capability, in
that it enables individuals to pursue things that they might value”. He also says “…the
value life atleast partly because of things we can do, it alive (Sen, 2004). Access to good
quality and affordable health services also contributes a human right, one of the most
basic requirements for individuals to flourish.

Health Survey and Development (Bhore) Committee, 1946 suggested that no individual
should fail to serve adequate medical care, curative or preventive, because of an inability
to pay for it and there ought to be special requirements for certain sections of the
population including mothers, children and the mentally ill. It also recommended that
reduction of sickness and mortality among women and children should be amongst the
highest priority issue in any programme of health development (Government of India,
1946).
The Government of India was a signatory to Alma Ata Declaration and the South East Asian Health Charter with the World Health Organization (WHO) for achieving the goal “Health for All by 2000” (Ajith.K.Dalal, Subha Ray, 2005). Alma-Ata Declaration, 1978 strongly reaffirms that health is a fundamental human right and that the attainment of the highest possible level of health is a most important worldwide social goals whose realization requires the action of many social and economic sectors in addition to the health sector. Primary Health Care is the key to attaining this target, which includes education concerning prevailing health problem, prevention and control of disease, promotion of food supply and proper nutrition, supply of safe water and basic sanitation, maternal and child health care including family planning, immunization and provision of essential drugs (International Conference on Primary Health Care, Alma-Ata, USSR, 1978).

1.1 Context of the study

Generally, women seem to have more health problems which were linked to their work child bearing and contraception. Motherhood is the supreme fulfillment in a women’s life. It is so special and sacred. But many women die in the process of child birth in many countries of the world, especially in the developing countries. The health of children lies much greater in the health and nutrition of women, her physical condition, education and economic status (Dhanalakshmi Dash, 2005). Survival of the child is dependent on maternal health and nutrition status, which in turn, is determined by factors such as age at marriage, fertility behavior, use of antenatal, natal and post natal care and medical attention at the time of delivery. The women tended to neglect their health care needs for household tasks and relied more on home remedies and informal services providers for
treatment (Nandraj et al, 1999). The socio-economic and cultural background influences the perception of health and the utilization of health care services.

The health problems of mothers are directly affect the health of their children and their health issues may considered as an obstacles of social and economic development of a nation. Reproductive and child health and mortality has been viewed as an indicator of socio-economic wellbeing. Thus reducing maternal mortality becomes an important goal of public health programme throughout the world. The relevance of the reproductive and child mortality in the process of social and economic development may be judged from the fact that the maternal and child mortality are included in the list of Millennium Development Goals, 2000 that have now universally been accepted as the yardstick of development efforts by Government, donors and Non-Government Organisations (Alok Ranjan Chaurasia and S C Gulathi, 2007). The Millenium Development Goals (UNDP 2007) highlighted to reduce Under-five child mortality by two-third, improve maternal health through reducing Maternal Mortality Rate (MMR) by three quarters and to achieve universal access to reproductive health and for HIV/ AIDS etc.

With the assistance of World Bank and United Nations, an integrated Maternal and Child Health (MCH) and Immunization Programme known as the “Child Survival and Safe Mother Hood” (CSSM) was initiated during 1992-93. The programme undertakes various activities such as Oral Rehydration Therapy, universalisation of Prophylaxis Schemes, control of Acute Respiratory Infection etc. for child survival and provision of training to traditional birth attendants, aseptic delivery kits and strengthening of first referral units for dealing high risk and obstetric emergencies for ensuring safe mother hood.
The promotion of maternal and child health has been included as one of the most important issues of the world. The problem of maternal death and poor health of the children are very acute in the developing as well as under developed countries. The risk is connected with child bearing in case of women and growth developments for infants and children. In India for the poor, the safe delivery of a healthy child and survival of both mother and child cannot be taken for granted. The Government of India took steps to strengthen maternal and child health services as early as the first and second five year plan. In 1996, the Government has introduced Reproductive and Child Health Programme for both women and men. The child survival with safe mother hoods, being one of the objectives, the child survival and safe mother hood programme failed to achieve its goal to cover the 80% of children and reproductive part of the Indian population as per National Family Health Survey-II, 1998-99 and the utilization of antenatal, natal and post natal care is less than the developed countries (Ganesh Chandra Mallik, 2010).

In India there exist regional and social class disparities in the coverage of reproductive and child health services. The inequality to access and to use even the basic essential reproductive and child health services in the country appears to be primarily responsible for the unacceptable state of reproductive and child health situation (NFHS-III, 2005-06). Women’s poor reproductive health is affected by a variety of socio economic factors. Women’s health in general and reproductive health in particular is determined in women’s poor to make a choice inequality of available health care services, life style and women’s position in the society (Umamageshwari K and Radha Krishnan M, 2012). Communal belief and cultural practices also influence the health status of mothers and children (Ganesh Chandra Mallik and Rijumoni Sarma, 2010).
The coverage of reproductive and child health services by caste shows that the utilization of the services among Scheduled Tribals (ST) and Scheduled Caste (SC) is comparatively lower than other social groups. Scheduled Tribals occupy the lowest position in case of three ante natal care in the last birth (40.2 percent). It is 44.3 percent for SC and 48.5 percent for back ward classes. Birth attended by professionally trained persons for ST was 26.9 percent and for SC and OBC, it was 42.3 percent and 48.5 percent respectively. Institutional deliveries were 19.6 percent for ST, 35 percent for SC and 39.6 percent for OBC. Mother receiving post-natal care from professionally trained person 22.1 percent for ST, 31 percent for SC and 35.2 percent for OBC and the current use of any family planning method for ST is 42.7 percent, SC-47percent and OBC-48percent during 2005-06. The child health status among ST also shows that they have poor health outcome than other groups. Only 31.4 percent of ST children were fully immunized. It was 39.7percent for SC and 40.7percent for OBC. 18.2 percent of ST children were received Vitamine-A (SC-20.5 percent and OBC- 18.9 percent) and 49.8 percent of ST children 6-9 months receiving solid or semi- solid food and breast milk. It was 55.1 percent for SC and 56.4 percent for OBC. The accessibility of rural health infrastructure especially Subcenters, Primary Health Centres (PHCs) and Community Health Centres (CHCs) in the tribal areas are very low. In India, about 4422 shortfall of Sub- Centres, 736 PHCs and 251 CHCs in tribal areas during 2008 ( Rural Health Status Bullettin, March 2008, MOHFW). It is clear from the fact that the demand for reproductive and child health care services and the accessibility to health services are comparatively lower among Scheduled Tribals than other social groups.
1.2 Concepts and Indicators of Reproductive and Child Health Status

- Health

The World Health Organization defined Health as a “state of complete physical, mental and social well-being”. For a long time biomedical model of health was the dominant perspective on health. In this perspective, health is the absence of morbidity and morbidity is itself a function of risk, availability of medicines and diet. Risk itself is a function of socio-economic status, family size and environmental factors (Ajit.K.Dalal, Subha Ray, 2005). It can be symbolically expressed as,

\[
\text{Health} = f(\text{morbidity})
\]

\[
\text{Morbidity} = g(\text{risk, medicines, diet})
\]

\[
\text{Risk} = h(\text{socio-economic status, family size, environmental factors}).
\]

- Reproductive Health

Reproductive health is defined as a “state of complete physical, mental and social well-being and not merely the absence of disease or infirmity in all matters relating to the reproductive system and its function and process” (Jayasree & Jayalakshmi, 2001). It is multi dimensional and associated with various life cycle events of women such as menarche, marriage, pregnancy, child birth and menopause.

The World Health Organization gives various indicators of reproductive and child health status, including;

- Maternal Mortality Ratio
- Under -FIVE Mortality with the proportion of new born deaths
- Children under five who are stunted
- Proportion of demand for family planning satisfied (met need for contraception)
• Ante-natal coverage
• Prevalence of HIV and treatment taken
• Skilled attendant at birth
• Post-natal care for mothers and babies within two days of birth.
• Exclusive breast feeding for six months.
• Three doses of combined DPT3
• Anti biotic treatment for suspected pneumonia.

Dr. Rekha Dutt provides the indicators of maternal and child health status namely Maternal Mortality Rate and Mortality in infancy and childhood. Mortality in childhood are measured through by using different indicators such as Perinatal Mortality Rate (PMR), Neo-natal Mortality Rate (NMR), Post Neo-natal Mortality Rate (PNMR), Infant Mortality Rate (IMR), 1-4 Mortality Rate, Under five mortality Rate and Child Survival Rate (CSR). [www.unicef.org].

❖ Maternal Mortality Rate

World Health Organization defines Maternal health as “health of a women during pregnancy, child birth and the post partum period”. Maternal Mortality Rate is the death rate of women while in pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of pregnancy, from any cause related to or aggregated by the pregnancy or its management but not from accidental or incidental causes. The cause of maternal morbidity and mortality include hemorrhage, infections, high blood pressure, unsafe abortion and obstructed labour.

❖ Perinatal Mortality Rate

Peri-natal Mortality Rate is the rate of late fetal deaths and early neo-natal deaths in one year per total number of live births.
Neo-natal Mortality Rate

Neo-natal Mortality Rate is the number of deaths of children less than 28 days of age in a year per total number of live births.

Post-Neo natal Mortality Rate

It is the number of deaths of children between 28 days of age to one year per total number of live births in the same year.

Infant Mortality Rate

Infant Mortality Rate is the ratio of number of deaths of children less one year of age to total number of live births. It indicates the health status of community, level of living and effectiveness of maternal and child health services.

1-4 Years Mortality Rate

It is the number of deaths of children aged 1-4 years in a year per total number of children aged 1-4 years in the middle of the year.

Under five Mortality Rate

Under five Mortality Rate is the annual number of deaths of children under five per thousand live births.

Child Survival Rate

The formula for finding out the Child Survival Rate is as follows:

\[ \text{Child Survival Rate (CSI)} = \frac{1000 - \text{under five mortality rate}}{10} \]

The Maternal and Child Health Status highly depends on the availability of effective and quality maternal and child health care system and its utilization. That is the health care service utilization is related with the availability of (supply side) and the accessibility (demand side) for health care services. The supply side of health care services is measured through the availability of health infrastructure, medicines, doctors, nurses etc.
and the demand side in terms of user’s perception on the services. User’s perception on the health care services depends on their socio-economic status, locality, quality of health care services, sex and age etc.

1.3 Maternal and Child Health: Global Scenario

Complications of pregnancy and child birth are the leading cause of death and disability among women of reproductive age in developing countries. The Millennium Development Goals call for reducing the Maternal Mortality Rates by 75 percent between 1990 and 2015, but few countries and no developing country region on average will achieve this target. They die because they are poor, malnourished and weakened by disease and lack of accessibility to trained health worker and modern medical facilities. In poor countries the life time risk of maternal death may be more than 200 times greater than for women in Western Europe and North America (World Bank, 2012).

The World Development Indicators 2012 shows that in high fertility countries women are repeatedly exposed to the risk of maternal mortality and in high income economies the life time risk is less than 0.03 percent or less than women is expected to die in child birth. The adolescent fertility rate is highest in Sub- Saharan Africa and is declining slowly. Contraceptive use has increased in most developing countries. In all most all regions more than half of women who are married or in union use same method of birth control. World-wide an estimated 120 million women have an unmet need for family planning. In South Asia and Sub- Saharan Africa less than half of all birth are attended by doctors, nurses or trained midwives.

India’s global position in terms of socio-economic demographic parameters indicates that life expectancy at birth was high in Sri Lanka (74) and China (71) and low in Nepal (61). It was 63 in India in 2000-05 (UNDP, Human Development Report 2005).
mortality and Under-5 mortality were high in Pakistan in 2003. Maternal Mortality was very high in Nepal (740) low in China (56) and it was 540 in India. India compares unfavorably with the nations like China and Sri Lanka in respect of socio-demographic parameters. With regard to health indicators such as Life Expectancy (LE), Total Fertility Rate (TFR), Infant Mortality Rate (IMR) and Maternal Mortality Rate (MMR) points that countries placed almost similar situation such as Indonesia, Sri Lanka and China have performed much better than India (Registrar General of India, 2006).

**Table 1.1 Health Indicators among selected Countries in 2006**

<table>
<thead>
<tr>
<th>Country</th>
<th>Infant Mortality Rate (IMR/1000 Live-Births)</th>
<th>Life Expectancy M/F (in years)</th>
<th>Maternal Mortality Rate (MMR/1000 Live-Births)</th>
<th>Total Fertility Rate (TFR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>58</td>
<td>63.9/66.9</td>
<td>301</td>
<td>2.9</td>
</tr>
<tr>
<td>China</td>
<td>32</td>
<td>70.6/74.2</td>
<td>56</td>
<td>1.72</td>
</tr>
<tr>
<td>Japan</td>
<td>3</td>
<td>78.9/86.1</td>
<td>10</td>
<td>1.35</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>3</td>
<td>74.2/81.5</td>
<td>20</td>
<td>1.19</td>
</tr>
<tr>
<td>Indonesia</td>
<td>36</td>
<td>66.2/69.9</td>
<td>230</td>
<td>2.25</td>
</tr>
<tr>
<td>Malaysia</td>
<td>9</td>
<td>71.6/76.2</td>
<td>41</td>
<td>2.71</td>
</tr>
<tr>
<td>Vietnam</td>
<td>27</td>
<td>69.5/73.5</td>
<td>130</td>
<td>2.19</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>52</td>
<td>63.3/65.1</td>
<td>380</td>
<td>3.04</td>
</tr>
<tr>
<td>Nepal</td>
<td>58</td>
<td>62.4/63.4</td>
<td>740</td>
<td>3.40</td>
</tr>
<tr>
<td>Pakistan</td>
<td>73</td>
<td>64/64.3</td>
<td>500</td>
<td>3.87</td>
</tr>
<tr>
<td>Srilanka</td>
<td>15</td>
<td>72.2/77.5</td>
<td>92</td>
<td>1.89</td>
</tr>
</tbody>
</table>

*Source: Registrar General of India (2006), Government of India (Latest Figures), Other State of World Population (2006)*

The health system, reproductive health status and child health status in India and World shows that India stands in the low position in terms of almost all health indicators, which are mentioned in the table 1.2. Among the indicators India possess high position in case of MMR. It was high in the world (260) and for India it was 230. Exclusive breast feeding in India is high as compared with the world level.
Table 1.2 Health Systems, Reproductive and Child Health Status in India and World, 2012

<table>
<thead>
<tr>
<th>Indicators</th>
<th>India</th>
<th>World</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health System</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Expenditure (% of GDP 2010)</td>
<td>4.1</td>
<td>10.5</td>
</tr>
<tr>
<td>Health Workers (1000people, 2005-10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physician</td>
<td>0.6</td>
<td>1.4</td>
</tr>
<tr>
<td>Nurses &amp; Midwives</td>
<td>1.0</td>
<td>2.8</td>
</tr>
<tr>
<td>Community Health Workers</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>c. Hospital Beds (1000people)</td>
<td>0.9</td>
<td>2.9</td>
</tr>
<tr>
<td><strong>Reproductive Health</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Fertility Rate (2010)</td>
<td>3.9</td>
<td>2.5</td>
</tr>
<tr>
<td>Adolescent Fertility Rate</td>
<td>79</td>
<td>53</td>
</tr>
<tr>
<td>Unmet need for contraception(2005-10)</td>
<td>13</td>
<td>-</td>
</tr>
<tr>
<td>Pregnant Women receiving pre-natal care (2005-10)</td>
<td>75</td>
<td>84</td>
</tr>
<tr>
<td>Birth attended by skilled health staff (2005-10)</td>
<td>53</td>
<td>66</td>
</tr>
<tr>
<td>Life Time Risk of Maternal Mortality(2008)</td>
<td>140</td>
<td>140</td>
</tr>
<tr>
<td>Prevalence of anemia among pregnant women</td>
<td>50</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Child Health Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neo natal Mortality Rate (2010)</td>
<td>32</td>
<td>23</td>
</tr>
<tr>
<td>Infant Mortality Rate (2010)</td>
<td>48</td>
<td>41</td>
</tr>
<tr>
<td>Under five Mortality (2010)</td>
<td>63</td>
<td>58</td>
</tr>
<tr>
<td>Child Mortality Rate (2005-10)</td>
<td>12</td>
<td>-</td>
</tr>
<tr>
<td>Nutrition intake and supplements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Birth babies (% of births) 2005-10</td>
<td>28</td>
<td>15</td>
</tr>
<tr>
<td>Exclusive breast feeding (%) 2005-10</td>
<td>46</td>
<td>37</td>
</tr>
<tr>
<td>Vitamin A supplementation 2010</td>
<td>34</td>
<td>-</td>
</tr>
<tr>
<td>Prevalence of anemia under age 5 (2005-10)</td>
<td>74</td>
<td>-</td>
</tr>
</tbody>
</table>


1.4 Maternal and Child Health Status: Indian Scenario

India’s health indicators are almost at the same level as the average of low income economies. India compares unfavorably even with low income countries in terms of availability of health infrastructure and its utilization, as well as the overall disease burden. From among the 10.8 million under five (infant and child) death per year in the world, 2.4 million (22.2 percent) are in India (Black, Morris and Bryce 2003). Death of children below age 5 is associated with socio-economic characteristics and it is higher in
rural areas as against urban areas. Poor self assessed health tends to be concentrated among women who are poor and belong to deprived ethnic or racial groups.

The National Family Health Survey-III (2005-06) shows that the infant mortality rate is 70 among children in households in the lowest wealth quintile, 58 in middle wealth quintile and 29 in the highest quintile households. Households in the highest quintile experience only one-third the under-five mortality rate of households in the lowest quintile. The major causes of infant and child deaths are diarrhea, pneumonia, measles, malaria, neonatal sepsis, pre term delivery, neonatal tetanus and mother to child transmission of HIV/AIDS. The state wise analysis shows that the infant mortality is highest in Uttar Pradesh (73) and lowest in Kerala and Goa (15). With respect to under-five mortality also Uttar Pradesh has the highest rate (96) and the Kerala has the lowest rate (16). All states in the Southern and Western regions have lower levels of infant and child mortality.

Maternal Mortality Rate is the number of maternal deaths per 1, 00,000 live births, which was 301 for India in 2001-03. It was 110 for Kerala (Government of India, 2006). Many studies point out that most of the death occurs due to post partum hemorrhage and they occur in transit or delayed entry at the referral centers. Maternal Mortality can be divided in to direct and indirect obstetric deaths. The relative share of causes of maternal mortality rates in India shows that about three fourth of maternal deaths are due to direct causes such as hemorrhage, puerperal complications, obstructed labor, abortions and anemia and one fourth indirect causes such as anemia, pregnancy with TB/Malaria, vital hepatitis etc.

In India there exists interstate variations in MMRs estimated by Bhat (2002) is highest in Assam (984). It could be lower in Punjab and Kerala due to high status of women and
high quality of reproductive health services. The states with high Maternal Mortality Rate are Uttar Pradesh (737), Madhya Pradesh (700), Orissa (597), Gujarat (596), Rajasthan (580) and Bihar (513) and this crosses the national level of 479. NFHS-III (2005-06) shows that Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh perform worse than the low socio-economic groups of all India in antenatal care, delivery and post partum care. A number of socio-economic and culture factors operate through a set of intermediate determinants such as health status, reproductive status, access to health services and extent of utilization of health services to determine the level of maternal mortality. Anemia is the major contributor to 20-40 percent of maternal deaths (David Rush, 2000).

1.5 Maternal and Child Health Status: Kerala Scenario

Compared to all India level, improvements in child’s and women’s health have been substantial in Kerala. However malnutrition, nature and types of reported delivery and post delivery complications among the deprived section have been on the increase. Kerala and its close by State Goa, outperform all other states in terms of delivery care, with nearly all deliveries taking place in medical institutions and a similarly high percentage of deliveries assisted by a health professional. The IMR in Kerala during 2004 was 12 and in 2005, is 15, showing a small increment. The maternal and child care indicators show that there has been a remarkable advancement in the maternal and child health status of Kerala, but there exists wide disparities in the health care service utilization within the districts and between different social groups. In the districts of Wayanad and Idukki, 1 in 50 new born babies die before reaching the first birth day, whereas in most of the other districts it is 1 for every 100 (Government of Kerala, 2005). Amartya Sen showed that, “the incidence of reported morbidity was higher in Kerala than in Bihar, a poor state with considerably higher mortality. People from
states with more education and greater access to health and medical facilities are in a better position to assess their own health than people from disadvantaged states”.

1.6 Health Status of Tribals: An Overview

The tribals or a group of people living in conditions of low level of social and economic development. They constitute about 8 percent of India’s population (Census, 2001) and are spread out mostly in Madhyapradesh, Bihar, Orissa, Andrapradesh, West Bengal, Maharashtra, Rajasthan and North- Eastern States. They face many problems like poverty, inadequate health resources, ignorance and follow high risk beliefs and practices, which contributed to the vulnerability of this population. Communicable diseases, genetic disorders and nutritional disorders are more prevalent among tribals. Higher level of infant and maternal deaths also prevalent among these groups. The percentage of mothers who underwent institutional deliveries is remarkably lower among tribals (17 percent) than the general population (40.1 percent). Disparity existed for other indicators like percentage of mothers delivered with assistance of doctors (14.5 percent vs. 37.3 percent), percentage of mothers received antenatal check up from doctors (34.7 percent vs. 56.5 percent) and percentage of mothers taken TT injection during pregnancy (46.4 percent vs. 72.2 percent) (NFHS II, 2000). The NFHS-III (2005-06) also shows that some more health improvements have experienced by the tribal groups, but which are lower than other social groups. Disparities in health developments among scheduled tribals with rest of the population are shown in table 1.3.
Table 1.3 Health developments among SCs, STs and Rest of population in India, 2005-06

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Scheduled Castes</th>
<th>Scheduled Tribals</th>
<th>Other Backward Classes</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infant Mortality Rate</td>
<td>66.4</td>
<td>62.1</td>
<td>56.6</td>
<td>48.9</td>
</tr>
<tr>
<td>Under five mortality</td>
<td>88.1</td>
<td>95.1</td>
<td>72.8</td>
<td>59.2</td>
</tr>
<tr>
<td>Total Fertility Rate</td>
<td>2.92</td>
<td>3.12</td>
<td>2.75</td>
<td>2.35</td>
</tr>
<tr>
<td>Child’s size at birth (2.5 Kg or more)</td>
<td>76.3</td>
<td>77.7</td>
<td>78.7</td>
<td>79.3</td>
</tr>
<tr>
<td>Children with anemia</td>
<td>72.2</td>
<td>76.8</td>
<td>70.3</td>
<td>63.8</td>
</tr>
<tr>
<td>Children with acute respiratory infections during two week period</td>
<td>5.3</td>
<td>4.6</td>
<td>5.5</td>
<td>7.0</td>
</tr>
<tr>
<td>Children with diarrhea during two week period</td>
<td>8.7</td>
<td>8.8</td>
<td>9.5</td>
<td>8.3</td>
</tr>
</tbody>
</table>

Source: NFHS-III (2005-06).

In Kerala, there is also a higher prevalence of poor health outcome was observed among Scheduled Castes and Scheduled Tribals and Other Backward Class women than in the forward caste women in Kerala, which is related with lower level of education and small household landholdings (Mahindra, Slim Haddad & Narayana, 2003). The tribal health culture and health seeking behavior are not free from superstition and their taboos. Lack of knowledge about the health care services and perception of quality of services are the main reasons for lower utilization of services. The quality of services is associated with low waiting time and better or longer consultation duration. The poor rich gap in health is largely due to non accessibility of health to the poor. The high level of mortality rates among tribals are due to malnutrition, poor intra-natal care, low birth weight afflictions with vaccine preventable diseases, poor socio-economic and environmental conditions accompanied by high level of female illiteracy and poor hygiene (Gupta et.al 2001). When compared with general population 53.3 vs. 40.7 neonatal mortality per thousand live
births, 30 vs. 21.1 post neonatal mortality per thousand live births, 83 vs. 61.8 infant mortality per thousand live births, 46.3 vs. 22.2 child mortality and 126.6 vs. 82.6 under five mortality per thousand live births. NFHS III – 2005-06 also shows that infant mortality rate, under five mortality rate, children with anemia etc. are higher among Scheduled Tribals compared with general population in India.

1.7 Maternal and Child Health Care Service Utilization: Basic Problems and Issues

Many women die in the process of child birth in many countries of the world, especially in the developing countries. In the world as a whole about 6 lakh maternal deaths occur every year due to complications during pregnancy and child birth and 99 percent of these deaths occur in developing countries (Balasubramanian, 2000). Among the poor, both in rural and urban India, delivery and child birth are fraught with risk. The mother’s health or even the child’s survival does not cause anxiety, despite the fact that the child and mother may or may not survive. India is moving towards a market driven health care system. There is a trend towards greater utilization of health care services from private providers. The maternal and child health care services utilization is affected by social structure including education, occupation, family size, religion and belief, family factors such as income, health insurance type and accessibility, community factors such as availability, cost of service and residence etc. There is perceptible difference in the expenditure incurred for child birth and maternity care between the urban and rural areas. Lack of proper health care service utilization leads to maternal and child health problems. Apart from the social causes of maternal mortality, there are some other causes among which the most important is medical causes including hemorrhage, obstructed pregnancy, unsafe abortion, infection etc. The other pregnancy related diseases like anemia, hepatitis, malaria and cardiac diseases can be prevented only if taken care of in
time. Iron deficiency anemia is a major threat to safe motherhood and to the health and survival of infants because it contributes to low birth weight, lowered resistance to infection, impaired cognitive development and decreased working capacity. The complete immunization of children against diseases has a strong correlation with mother’s literacy. The knowledge and utilization of maternal and child health care services in different slums of Delhi and observed that about 52-82 percent of women were unaware about the services (Bajaj, 1999). High cost of service and non-availability of adequate health infrastructure also affect the proper health care service utilization.

1.8 Review of Literature

Children are the most important human resource for any nation. Mothers play a vital role in the child development. Mother’s care during pregnancy has a direct influence on the development of children and it depends on their socio-economic and cultural factors. Among the poor, both in rural and urban area, delivery and child birth are fraught with risk. The emerging market driven health care system in India does not provide solutions for the poor and high risk segments of the population. The so far studies about the perception, importance, accessibility, trends, problems and issues related to maternal and child health care service utilization among the poor and the general give the clear picture about the health conditions of mothers and children as a whole.

Caldwell and Helan (1979; 1984) in their study pointed out the influence of education of mother on child survival through different pathways including enhance socio-economic status, greater health choice for children such as interaction with medical personnel, cleanliness, emphasis on child quality in terms of fewer children and more food and capital investment. Moreover mother education seems to have indirect effects through antenatal care during pregnancy and family formation patterns.
Omran and Standley (1981), Mahadevan (1984), Chabra et-al (1987), Mukherjee (1992), in their study observed the health problems related to complications of pregnancy and child birth viz, first and or third trimester period. Severe anaemia, labour complications and toxemia of pregnancy are said to be associated with early marriage of females. Also the percentage of children born with low weight with the risk of premature birth will be higher. These serious health problems will result in higher maternal mortality and other deaths related to child birth and pregnancies like foetal mortality, still births, perinatal mortality, neo-natal mortality, infant mortality, mortality of toddlers (2nd years of life) and children of age 2-4 years.

Oliveira (1986) pointed out the major causes of infant mortality and low birth weight of children, women from poor facilities face more problem in married life like violence, alcoholism, lack of economic support on the part of the spouses, restriction on their movement outside the home and exhibit a lower use of maternal health services etc. than the non-poor women. Poor health of mother’s causes the poor health status of their children.

Pebely and Stepp (1987) mentioned the three demographic factors like mother’s age at birth, birth order and preceding birth interval have been found to have powerful effect on child survival probability in the first three years of life. It is also noticed that very young mother may not be physiologically and emotionally mature enough to adequately manage the pregnancy.

Agarwal and Agarwal, Singh and Paul, Roy Chaudari and Jayaswal (19987, 1988, 1989) reported that prematurity and low birth weight resulting mainly due to the poor nutritional status of the women are directly responsible for about one quarter of all infant deaths and are associated factors in about 50 percent of all neonatal deaths. It has
also been observed that women who have received antenatal care experience lower maternal mortality and fewer complications. The prevalence of lower birth weight and infant mortality is also low in these mothers.

Mubarak (1989) Tinker and Koblinsky (1993) have reported that the health status of mother and their young children are closely related, especially during gestation and in the neonatal period.

Basu (1992) studied the relationship between culture, status of women and fertility behavior of slum dwellers of Delhi. The study indicates that the role of culture seems to be mere vital in determining the demographic behaviour than the status of women.

Sundari (1993) in her Tamil Nadu study reported that the socio-economic and cultural factors within the family and society affect the health status of women in Tamil Nadu. She found that the prevalence of reproductive health problems is significantly higher among illiterate women and lower among women who are educated and from owner families and tenant families. The study also showed that younger the age of pregnancies more likely is the women to report the symptoms of gynecological problems.

World Development Report (1993) shows the health investment profile of India. It shows that the investment in health is around 6 percent of the total GDP. Out of this, only 21.7 percent comprised the public expenditure; while 78.3 percent constitutes Private expenditure. The private expenditure never goes to tribal areas and the tribal population who is in need of health care. They are unable to avail it due to poverty, poor access and high cost of services. In compulsory situations huge spending is coming from their pockets. This out of pocket expenditure leads them to poverty and indebtedness, as they have to sell their produce or borrow money at high rates of interests from money lenders.
It is also indicated that India had the lowest (1.9 percent) government expenditure on health compared to other nations of South Asia like Thailand (8.2 percent), Myanmar (7.4 percent), Srilanka (5.2 percent) and Nepal (4.7 percent).

Gupta (1994) examined the impact of female headed households on the health status of women and children. According to him, in female headed households, women find themselves as member of households in which they are new arrivals and their social supports are lean. This makes them ill-arranged to protect their health at a phase in their lives when they are exposed to reproductive health risk associated with pregnancy and child birth. Heavy work load, low nutritional intake and low utilization of antenatal care services are common among the poor women. Fertility levels are also the highest among the poor women.

Zubeda Khan et. al (1994) in their study on mother’s education and utilization of health care services reveals that mother’s age is insignificant but birth order is a significant determinant in the utilization of health care services. That is mothers at first parity consult modern sources of health care more than at the later parity.

Ramji (1994) in their study observed that iodine deficiency is a wide spread problem which hampers the physical growth and mental development of children. Its deficiency in pregnant women could influence foetal outcome and affect the child’s normal physical growth and mental development. It could also result in abortion, miscarriage, stillbirths, mental retardation, neuro-motor handicap, delayed motor development and speech and hearing defects.

Bhatia and Cleland (1995) in their study reported that the current level of maternal mortality in India is still higher than international level. It needs strong government intervention. Special efforts are needed to focus attention on providing
antenatal care to all pregnant women and developing an efficient management system to provide primary health care and family planning facilities to each and every woman irrespective of her education and socio-economic status.

Pandey (1996) in his study on primitive Hill Korwa tribe of Sarguja district of Madhya Pradesh reported that the total fertility rate of Hill Korwa women is about half of the rural women. He attributes their low fertility to genetic diseases, poor nutrition, high infant mortality and inaccessibility to the Maternal and Child Health programme.

Gupta and Khan (1996) found that literacy have a very high positive association with age at marriage of girls and an inverse relationship with the proportion of the married couples among teenagers. Besides, female literacy, literacy or educational levels of husband also have significant association with the fertility level.

WHO and Bolam et-al (1996) estimated that 99 percent of the world’s maternal deaths and 50-60 percent of infant deaths in developing countries occur within one month of birth, mainly because of lack of maternal health care services.

Allen and Ahluwalia (1997) in their studies reported that the prevalence of nutritional anaemia and its potentially deleterious effects on pregnant, lactating and menstruating women as well as on growing children is a major public health problem in India. Nutritional deficiencies such as iron and folic acid and vitamin B12 deficiency are the main causes of anaemia. The study also reported that poor socio-economic conditions, poverty, illiteracy, contaminated environment and cultured beliefs are some contributing factors of anaemia.

Kavitha and Audinarayana (1997) in their study found the strong association between caste and utilization of maternal care services. The study has shown that working women in rural Tamil Nadu use antenatal care services to a lesser extent than
non-working women mostly because they are engaged in low wage jobs and availing jobs and availing leave affects their income.

Rajaratnam et-al (1997) and Bhat (2002) reported that high maternal and child mortality in tribal communities seems largely attributable to much less accessibility to modern medical facilities.

Pavalavally, Govindasamy and Ramesh B.M (1997) examined the relationship between education and utilization of Maternal and Child Health (MCH) Care Services and shed more light on the factors that could affect maternal, infant and child mortality and morbidity. The study also shows that maternal education emerges as the single most significant predictor of the utilization of MCH services and higher the level of maternal education results in improved child survival to a substantial extent because preventive health services are used to a greater extent by mothers with higher education than those with little or no education.

Bhatia (1998) in his study in Anantapur in Andrapradesh reveals that about half of the women who were transported died on the way to hospital, underlining the direct relationship between maternal mortality and distance from health centre.

Rejna et al (1998) reveals that the influence of birth interval associated with the risk of child death in the first three years of life. Besides, children of first, second to third birth orders are found to be more likely to survive than children of birth order four and above. It also shows that the children of higher birth order receive poorer food and care by virtue of being born in large families.

Nanda Kishore Kannuri (1998) in his study about the health behaviour of the Koyas – a tribe of Khammam district of Andhra Pradesh reported that some features of tribal culture, which also influence their health, are isolated inhabitation, presence of
traditional health care practices, and their belief patterns. Natural and supernatural causation is the basic premise on which the tribal world view on health and illness is based. Their health culture is based on personal and natural systems of health. They have developed their traditional medical system through observation of nature for ages and it is embedded in their concept of magic and religion and is a part of their culture. They largely depend on their traditional medical practitioners for their health needs. Owing to increasing contact with non-tribals, they have also started approaching the modern medical facilities, but usually they adopt it as a last resort.

National sample survey organization (1998) reported that the hike in health care costs across the country revealed that it had adversely affected the deprived and down trodden groups in the society which further resulted in increasing their indebtedness, gender and age biases in health seeking behaviour and also growing volume of untreated morbidity.

A study conducted by Appolo Hospital, Chennai (1998) analyzing 1,000 women observes that most of the educated women, even from middle socio-economic groups, were lacking the awareness of preventive health care. They were uninterested and indifferent to their own health even during the period of maternity. This may be one of reasons for the high maternal mortality among women of reproductive age in India. A majority of women belonging to the lower socio-economic states are undernourished. An undernourished and underweight mother gives birth to underweight child posing risk for both the child and herself.

Kaur and Pattnaik (1998) in their study in Orissa observed that rural women were less aware of health services than urban women. This was due to non-availability of medical help at the village level besides other factors like low education, poverty,
ignorance, prevailing myths and superstitions. Poverty is said to limit access to health and family planning services and this contributes to high level of fertility, morbidity and mortality.

The NFHS-11 (1998-99) shows the incidence of infant mortality is found to fall with a rise in the level of education of the mother and with a rise in the standard of living index. The IMR was found to increase when the birth interval is less than 24 months. Children born of younger mothers (of age less than 20 years) and older mothers (aged 40-49 years) were found to have a higher IMR than mothers in the middle age groups. The IMR was also found to rise when the birth order was more than six. Absence of medical care also led to a higher rate of IMR. It also reveals that the percentage of mothers who underwent institutional deliveries is remarkably lower among tribals (17percent) than the general population (40.1percent). Similar disparity existed for other indications like percentage of mothers who delivered with assistance of doctor (14.5percent Vs 37.3percent), percentage of mothers who received antenatal check up from doctor (34.7percent Vs 56.5percent), percentage of mothers who have taken TT injection during pregnancy (46.4percent Vs 72.2percent) etc. High rates of under-five mortality indicate not only the socio-economic status, but also nutritional security among children.

The NFHS –II and Reproductive and Child Health Survey (1998-99) reveals that fewer than half of the women reported at least one obstetric morbidity and more than ¹⁄₁₀ᵗʰ reported at least one gynecological morbidity. More women in urban areas had reported obstetric morbidity where as more rural women from rural areas reported gynaecological morbidity. Educated women, women who work in other activities and Scheduled Castes and Scheduled Tribe women reported that they are suffering from obstetric problems. Women who live in semi pucca houses reported gynaecological
problems. There is a relationship between age at ‘first delivery’ or ‘child birth’ and the reproductive morbidity of women. Reproductive morbidity due to abortion is high among rural women. It also shows that higher the age at first child birth, the higher will be reproductive morbidity and vice versa. Gynaecological morbidity is greater among women who gave birth before reaching 15 years of age, conceived more than 3 times or had institutional deliveries.

The Reproductive and Child Health Project Rapid Household Survey (1998-99) shows about 47 percent of the babies were normal with birth weight above 2500 gms and remaining 22 percent were found under weight with birth weight below 2500 gms in Rajasthan. About 22 percent of the deliveries in the state were conducted in the health institutions. In most of the districts, the practice of breast feeding immediately after the child birth shows a clear relationship with women’s education. The extent of early breast feeding within two hours of birth is comparatively higher among urban women and those with 10 or more years of schooling.

Bandana Bhuyan (1999) in her study in Assam focused on the role of mother in the child development particularly child bearing or rearing. In every society the mother is considered the prime care taker of her children. Care of mothers during pregnancy has a direct bearing on the development of children and it depends upon their customs, belief and taboos. In the tribal societies, no consideration is given on rest for expectant mothers. The study also shows that the tribal people by and large do not follow the modern methods of child care. A very close relationship is witnessed between literacy level of the people and availing health care during pregnancy. Deliveries are usually attended by Dai. Most of the parents had no knowledge about the purpose of
immunization or the vaccines that the children had received and some did not have faith in hospitals. People are very much tradition bound in the matter of treatment.

Neha, Nandraj and Roopashri (1999), in their study of illness and child bearing among women in Maharashtra reveal a higher morbidity rate for females (36 percent) than for males (33 percent). According to them, this rate is highly correlated with age, marital and occupational status. Similarly, reproductive health problems were more prevalent among young women while weakness, aches and pains constituted a large part of the morbidity of ageing women. More over utilization of health care by women was quite low. For instance, 34 percent of pregnant women in rural areas had not any sort of antenatal care and 70 percent the deliveries were conducted by relatives or untrained midwives in rural areas.

Thankappan K R, Sankara Sarma P, Mohanan Nair V and Rajappan Pillai (1999) reported that proportion of fully vaccinated children in the state was not highest in the country as expected. Proportion of Cesarean section deliveries is very high in Kerala. Increased proportion of Cesarean section is likely to be associated with the high MMR in the state. Medical termination of pregnancy was reported to be available in both Private and Government sector hospitals. The study showed that overall 39 percent of households reported the proper visiting of someone from the Health Centre. Awareness regarding STI and HIV was good and immunization coverage was generally high. Institutional delivery was found to be the norm. Most of the respondent’s preferences for private health institutions was due to hidden cost care in public institutions, staff behavior and access issue. The study also recommended a substantial proportion of reproductive and child health services should be provided through the public health sector institutions in Kerala.
Krishnaswamy and Prasad (1999) in their study mentioned that more than half of the women and girls during their reproductive age group are the victims of anaemia. This is responsible for 30% of all pregnancy related deaths in India. Calorie inadequacy, goiter and Vitamin-A and B Complex deficiency also contribute to maternal morbidity and promote chronic energy deficiency, low birth weights and a national short fall in child development, reproductive performance and over all public health.

International Institute for Population Studies, IIPS (2000) have indicated that Acute Respiratory Infection (ARI) is a major cause of morbidity and mortality among children and the incidence of ARI decreases as the age of the child increases. It has also been found to have a lower frequency with a higher level of education of mothers, or a better standard of living. The incidence is found to be higher in babies with low birth weight, under nourished children, and those with Vitamin A deficiency. The main causes of ARI are inadequate protection from weather, harmful living conditions (overcrowding dampness, poor ventilation), substandard environmental sanitation and hygiene, high level of pollution (including those in the household from biomass cooking fuel), low social and economic status of the family and illiteracy.

Agnihotri (2000) indicated that the rise in sex selective abortions and emergence of female infanticide in various part of the country are two serious aspects of excess child mortality. There is a close linkage between female foeticide and female infanticide. The female foeticide is the result of an unholy alliance between traditional preference for sons and modern medical technology, increasing greed of doctors etc.

Sambamoorthi et.al (2000), on the basis of NFHS-11 1998-99 have calculated that only 46.9 percent of ever married tribal women aged between 18-48 years with at least one birth had antenatal care. It was found to be the lowest as compared to other
social categories. That is, SC (56.2 percent), backward (59.5 percent) and other (68.8 percent). Majority (53.1 percent) of tribal women of the national sample never had antenatal care.

Kateja (2001) in this study reported that Rajasthan does not perform fairly well on the human development front. Concentrating on the health and education will not only lower Infant Mortality Rate but also improve the overall social development in the state. Hence supporting public services such as primary health care and basic education must be the topmost priority of the state Government.

Jayasree and Jayalakshmi (2001) in their in Andhra Pradesh reported that menstrual problems, lack of privacy to handle menstruation and the availability of toilets are the most important factors that affect the reproductive health status of women in rural areas. It also shows that women’s control over her body and her right of choice and freedom to have sex have also been considered as important factors that determine the reproductive health status.

Griffiths & Stephenson (2001) in their study in Maharashtra found that socio-economic status was not a barrier to maternal service use. A large number of women perceived private services to be superior to those provided by the Government. Respondents identified the poor quality of the services offered at Government institutions for home delivery.

Kati S L (2001) pointed out that majority of tribal population in Maharashtra have poor health status, peculiar health needs and a wide prevalence of red blood cell genetic disorders that complicates their health problems further. More over inadequate health infrastructure in tribal areas to deal with such complicated health problems is a matter of grave concern. Their remains a conspicuous lack of maternal and child health
services among the hilly tribal areas and consequently the tribal demographic scenario is one of high fertility, high maternal and infant mortality rates.

Mahal et al (2001) in their benefit – incidence study on supply side financing strategy for health care services showed that the poorest 20 percent received only 10 percent of public subsidies on curative care in comparison to richest 20 percent, who received more than 30 percent of subsidies. It also showed that the influence of education and wealth index on receiving the benefit of public services.

Das N P, Vinod K, Mishra and Saha P K (2001) in their work examined how community- access variables influence utilization of planning, antenatal care, delivery care and child health care services, controlling for selected socio- economic and demographic characteristics of households, women and their children. It has been argued that the physical access to health services is the key to their utilization, particularly in region that are characterized by low levels of economic and social development. Household living standard, women’s education, women’s exposure to mass media and son preferences have considerable influence on the use of these services. The service utilization is also affected by the quality of services, such as limited choice of family planning methods gaps in counseling and information provided, inferior clinical standards and procedures and lack of follow- up and continuity of care. The study also tried to inform programme managers and policy makers of the potential effects of improved accessibility of family planning and maternal child health services in the less developed rural areas of India.

Sekhar et.al (2001) in their study in Karnataka found that most of the sub centres and PHCs lack the basic infrastructure and large scale vacancies exist for critical posts like Auxiliary Nurse and Midwife (ANM) and Medical Officers in many districts.
Most of the northern Karnataka districts are characterized by low age at marriage, low status of women, low literacy and poor health facilities.

Kumar et-al (2002) observed that a very high IMR in Rajasthan is a consequence of high nitrate presence in drinking water supply and low coverage of institutional delivery.

Rajesh Singh and Pritee Singh (2002) made a critical analysis of causes of increasing death rate due to malnutrition of infants and children in Melghat region in Maharashtra. The study shows that people are aware of giving medicine to their children and moderately large population visits hospital for treatment of their children. Death of children is high in the age group of 0-5 years, i.e., still birth, age specific death and infant mortality are very high. A large number of children have died and are still dying due to the problem of malnutrition.

Mohindra, Slim Haddad and Narayana in their study in Kerala (2003) reported that women from lower castes (Scheduled Caste/Scheduled Tribe) and other backward castes (OBC) reported a higher prevalence of poor health than women from forward castes. Socio-economic inequalities were observed in health regardless of the indication, education, women’s employment status or household land holdings. Poor health among SC/ST and OBC is associated with lower levels of education and small household land holdings. The percentage of women reporting poor health outcomes is lowest among women who are engaged in non-wage activities.

Breast feeding promotion Net work of India (2003) revealed that only 39.7 percent of infants were exclusively breast fed for the first six months. The situation regarding introducing semi-solids was even worse. There is no knowledge or awareness regarding the child’s requirements. Besides, many food items (dal, bananas etc.) are
taboo because of folklore and misconception. While others in the family eat these items and share whatever there is in the household, the young child is deprived of them.

Winkisen and Marmot (2003) mentioned that the health status of population depends, apart from health care, on nutrition, access to safe drinking water and sanitation facilities, environment, type of shelter, awareness about health and health care and more significantly health seeking behavior and health practices.

Gupta A and Rohde J Bellagio (2003) found that universal practice of exclusive breast feeding for the first six months and continued breast feeding for 6-11 months could save about 13.15 percent deaths in children under five years of age in India, which means well over 3,00,000 child death could be saved in one year. Adequate complementary feeding between 6 and 24 months could prevent an additional 6 percent of all such deaths.

Raman Kutty (2004) in this study based on two large hospitals in Kerala reported around 15 percent of incidence of babies with low birth weight. The high incidence of babies with low birth weight was observed in Wayanad district (30 percent). The principal risk factors are mother’s nutritional status before pregnancy, her weight and height ratio, order of first birth and premature birth (15 days before the expected date of delivery).

Nair et.al (2004) in their study based on NFHS-1 showed that all maternal care indications were highly correlated with various childhood mortality parameters. The study also indicated the need for further strengthening the maternal care services and suggested the importance of developing strong information, education and communication programme with respect to maternal care services and infant and child survival.
Prayas (2005) in their study in Udaipur district of Rajasthan reported that the tribal health situation in these villages is characterized by very little pre and post natal maternal care. It has high incidence of unsafe births under almost nil trained medical supervision, high mortality rate, very low level of child immunization, early girl child marriage with declining sex ratio in younger population, poor hygienic standards and use of unsafe drinking water coupled with poverty and low level of literacy.

Goel S.L (2005) highlights the importance of family planning as an instrument for the promotion of health. He states that the family planning and health are intimately related. Family planning can promote women’s health through the prevention of unwanted pregnancies, limiting number of births and proper spacing, timing of births and foetal health. It also promotes the health of the child through the reduction of child mortality and promotion of the child development.

Arup Maharatna (2005) pointed to the necessity of being cautious about the use of child- woman ratios in inferring on fertility level and the inverse relationship between female antonemy and fertility. It is also found that fertility estimate is higher than that of non-tribal groups.

Alpana Kateja (2006) in their study focused the influence of various factors on infant survival. The infant survival is influenced by the operation of several closely interrelated biological, social, economic and environmental factors. This study shows that infant mortality rate in rural areas is much higher than urban areas in Rajasthan too. In rural areas female infanticide is still practiced. The problem is compounded by the prevalent female foeticide. It also shows that more than 80 percent of the infant deaths in Kerala are neonatal deaths. Kerala’s perinatal mortality (13) is more than Infant Mortality
Rate (11) due to high still birth rate in Kerala to its IMR. Nutritional status of children as well as of mothers is an important determinant of health and well being of children.

Sharma (2006) in her study about women empowerment and education is the corner stone of women’s empowerment because it enables them to respond to opportunities, to challenge their traditional roles and to change their lives. She points out that education of women benefit the whole of society. It has a more significant impact on poverty and development than men’s education. She concluded that education is the most influential factor improving child health and reducing infant mortality and women’s education also has an effect on family size. Education surely liberal and equip for women to take control of their life.

Bhatia M R, Yesudean C A K, Gorter A and Thankappan K R (2006) in their paper discussed the problems of supply side financing for Reproductive and Child Health (RCH) services in India. And recommended the need for demand side financing and introduce a competitive voucher schemes for certain RCH service package of maternal and child health and the family plan services. The study also aims to complement the current financing strategy in addressing some of its concern, particularly in terms of targeting Government subsidies and providing access to marginalized population groups, who for various reasons are unable to access RCH services within the Government sector.

Sundarasoman (2006) focused on the role of Auxiliary Nurse Midwife (ANM) and Anganwadi Worker (AWW) in child health. In child health, the ANM is seen as playing the key role, with the Anganwadi Worker assisting. The ANM does the immunization and the AWW provides the site and helps to bring the children. In some states, anti worm medication and vitamin A are stocked and administered by the Anganwadi Worker. For the rest it is through growth monitoring, food supplementation
and related health education that the Anganwadi is expected to make its contribution to child health.

Muthurayappa R (2006) in his study highlights the extent of reproductive health problems and the factors responsible for increasing reproductive tract infections among women in Karnataka. The study reveals that fewer than half the women who reported gynecological problems did not seek treatment. Of the women who reported at least one symptom of gynaecological problems nearly half were in the 25–34 age group and only 50–60 percent of them sought treatment. Education played a major role in women’s health-seeking behaviour. Reproductive morbidity is linked with higher education. Age at marriage for educated women is higher and pregnancy risks are involved for those who have children at later ages. Among those who sought treatment majority had gone to private health facilities. There is need to expand informed choices among women. Women must be empowered to take charge of their pregnancy-related needs. It is important to raise community awareness regarding early marriage and pregnancy. Misconceptions about nutrition and health care during pregnancy must be confronted at the community level and among pregnant women, and the families in which they reside.

Alok Ranjan Chaurasia, Gulati S C (2007) reviewed the rural-urban gap in reproductive and child health situation in India on the basis of NFHS data. It is observed that there exists a very wide gap in maternal mortality between rural and urban areas. The maternal mortality ratio in rural areas has been estimated to be approximately three times the maternal mortality ratio in the urban areas. The rural-urban and social class disparities in the coverage of these services remain fairly wide which indicates that the access to and hence the use of even the basic essential reproductive and child health services in the country remain highly unequal. This inadequate appears to be primarily
responsible for the unacceptable state of reproductive and child health situation. It also shows that almost half of the estimated maternal death in the country are due to hemorrhage and sepsis and there is a need for official efforts to improve the reproductive and child health situation in India which are primarily focused on minimizing regional variations in reproductive and child health status and population stabilization.

WHO (2007) observed that a high level of childhood morbidity and mortality in the developing countries is caused by mainly two diseases: acute respiratory infections (mostly pneumonia) and diarrhea. Much of this illness is once to exposures to contaminated water or food, as a result poor water quality, limited access to water, poor food hygiene and safety or poor sanitation in the home.

Sandhya Rani Saswata Ghosh and Mona Sharan (2007) observed the maternal healthcare seeking among tribal adolescent girls in Jharkhand. This article presents evidence from a cross sectional survey on the extent of maternal health care seeking among married adolescent tribal girls in Jharkhand and the factors associated with their productivity. The study findings show the limited maternal health care seeking among them. A substantial proportion of girls did not receive any ante natal services, nearly all delivered at home and only a small proportion received a post- partum check-up.

Salil Basu (2007) in his paper examined the various socio-cultural and environmental issues associated with tribal sexuality, morbidity and mortality pattern of tribal communities in different states of India. It is stated that child bearing imposes additional health needs and problems on women- physically, psychologically and socially. Maternal mortality rate was reported to be very high among various tribal groups and the main causes of maternal mortality were found to be un-hygienic and primitive practices for parturition. The study also found that tribals have poor access to
health services owing to social, cultural and economic factors. It is also suggested that urgent attention need to be given for effective coverage of tribal areas under basic health services with the help of trained, cultural and socially oriented health providers towards tribal culture.

Gangadharan K (2007) in his study mentioned the health status of population in Kerala. It identified the regional variations in illness prevalence rate, root causes for the hike in morbidity and community differences in the utilization of health care services in the state. It is found that lack of basic infrastructure facilities in the interior rural, urban and slum areas are responsible for the hike in illness prevalence rate and the dependence on private health care is quiet high even among the lower expenditure classes and the rural areas especially for outpatient treatment. It is also stated that in Kerala the utilization of maternal and child health care services too is weak in tribal and hill areas where marginal, deprived and vulnerable sections of the communities are residing. The low utilization of public health centres is mainly due to lack of medicines and supplies in Governmental hospitals which makes them as mere scarecrow. The study also suggested that effort should be made to increase the utilization of maternal and child health care services among the marginal, deprived and vulnerable sections in the country.

Rajiv Ranjan and Sulabha Parasuraman (2007) observed the prevalence of post-partum complication and treatment seeking behavior of women in Bihar. The study noted that women had a higher risk of post-partum complication that had 1-2 antenatal check-ups, assisted deliveries, home deliveries, occurred complications during antenatal and natal compared to their counter. The place of delivery and reproductive health problems are significantly associated with the post-partum complications and the treatment seeking behavior is higher for those who have three or more problems. In the case of post-natal
problems also women use to go for treatment after the accumulation of their problems. It may be due to lack of awareness about the programme and low education as well. Utilization of Government health facility is also performing poorly in terms of antenatal services, delivery care and treatment for morbidity due to lack of health facility in terms of supply, man power, and infrastructure. The study recommend for an urgent need to generate awareness, at community as well as different programmes like Information Education and Communication (IEC), Interpersonal Communication (IPC) and Behaviour Change Communication (BCC) should also promote.

Rekha K Jadhav (2008) discussed the gender dimensions of poverty levels and health inequalities among women and children than men in India. Indian women have high mortality rates, particularly during child hood and their reproductive years. Maternal mortality is most likely related to differences in the socio-economic status of women and access to health care services among states. Poor women often lack to access medical facilities because of her critical house hold conditions. Unwanted pregnancies terminated by unsafe abortions also have negative consequences for women’s health. Reducing fertility is an important element in improving the overall health of Indian women. Women in poor health are more likely to give birth to low weight infants. Majority of births in India still taken place at home in non hygienic conditions or births that are not attended by trained medical personnel are more likely to have negative outcomes for both mother and child. The number of infants who die in their first year is an important indicator of infant and maternal health. It also shows that Infant Mortality is a result of low birth weight, poor nutrition, inadequate pre natal care, educational level of mother and her overall health, due to poor diet, stress, smoking, drinking and drug use or HIV/AIDS. It appears that poverty, combined with low female literacy, under nutrition, poor
environmental sanitation, the attitudes and perceptions of women and expectant mothers, tradition and taboos observed during pregnancy as far as infant feeding practices provide a backdrop for high infant mortality often maternal mortality.

Bindu Ramachandran (2008) highlighted that Kerala women give a high priority to their health problems because of the impact of their high literacy states and employment. But the situation is totally different in the case of tribal women. The general and reproductive health situation of tribal women was very poor. Women had high abortion ratio and Infant Mortality Rates. In case of institutional deliveries among tribal women it is found that 50 percent of them are not attending hospitals for deliveries. This is most common among tribal groups where most of the settlements are located in reserve forest area or interior villages which is not accessible to hospitals in the case of emergency. The infant mortality and foetal wastage are also high among tribal women with a high proportion of reproductive morbidities.

Pinak Tarafdar (2008) in his paper explored the local conceptions of health and disease, medical system, medical belief, related religious practices, diagnosis, treatment as well as the issue of health rights in selected tribal villages in West Bengal. The study showed that many of the tribal do not prefer to follow traditional methods of treatment due to the impact of modern medical system. They were not very much dependent on sub-centres due to having the psychological support from traditional methods of treatment. The tribals were also reluctant to visit PHC due to unequipped infrastructure and irregular availability of the medical practitioner. The study also mentioned the tribal’s right to health and there is also division taken place in choosing health services from traditional system to modern medical system.

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Mallikarjuna Rao K (2008) in his study assessed the utilization of reproductive and child health services among tribal population in ICDS project areas of Andrapradesh. It is observed that a numbers of factors like inadequate household food security, inadequate access to health services, traditional belief, economic constraints and inadequate care of women and children made the tribal vulnerable to health and nutrition stand point. There exist wide heterogeneity in the health and nutritional status of tribal population in the area. Ecological degradation aggravates the situation in these areas. The information on health and nutrition status, the access to and utilization of available health services for the tribal population is scanty. The study also indicated that the antenatal registration is an important indicator to show improvement in quality and coverage for maternal and child health services. But there exists low percent of early registration and low coverage of different components of antenatal check-up. Most of the deliveries were being conducted at home and by untrained Dai/neighbors. Anaemia and oedema were some of the complications reported by the tribal pregnant women. About 79 percent of the mothers initiated breast feeding within 24 hours of delivery and the rest did only on 2nd and 3rd day or after. The identification of mothers and children having risk is also an important component of MCH services. The study recommended the need for effective management of health and nutrition programmes in tribal areas.

Raghunath Rao (2008) in his book wrote that social and economic changes have played an important role in reducing infant and child mortality and illness. Infant and child care centres are much more widely available now, especially in cities, which may give working women access to better child care. The birth planning programme also contributed to lower child mortality by encouraging women to wait longer between pregnancies, thus easing health demands on women and giving parents more time to care
for each child. Parents with fewer children generally have more resources including time, food and money to devote to each child. Social and economic changes can also put children at greater risk of social and physical problems. With more women working full time mothers may spend less time with their young children than mothers did in the past, and grandparents may have less time to care for their grand children.

Seema K N and Khairunnisa Begum (2008) studied child rearing practices among the four tribals- Jenu Kuruba, Betta Kuruba, Kadu Kuruba and Soliga settlements in villages of Nanjungud Taluk in Karnataka State. The study reveals that allopathic and herbal medication was in common use among these tribals. The tribals are experiencing radical change in their views and practices. Although they continue to live in secluded areas, urbanization has made an impact on their practices and livelihood, which also includes child rearing practices.

Naidu T S and Palanesamy G (2008) in their study among the primitive tribals of the Nilgiri hills of Tamil Nadu mentioned the prevalence of disease among tribals by age – wise. It is found that in 0-1 year age group male infants suffering from cough, fever and stomach ache and among female infants suffering from fever and cough. And in 2-6 years age group, males suffering from cough, fever, body pain, stomach ache and among females, suffering from cough, fever and head ache. It also shows that majority of the tribals are aware of modern medical treatment. They are suffering different types of diseases, related to vitamin, protein, iron deficiencies and skin infections. This study also highlights the need of Primary Health Centres and Anganwadi Centres for meeting the health needs.

Swarup P, Reddy B.P and Lakshmamma T (2008) in their study observed the relationship between number of surviving children and adoption of family planning. The
study shows that the use of contraceptives is an important factor which determines fertility. It is clear from the study that the proportion of non adopters is high among the women with one child or only child and the adoption of sterilization is high for all age groups after attaining two children. Spacing methods are used by women who have only one child. Adoption and non-adoption of family planning by caste shows non-adopters are more among Scheduled Castes and Scheduled Tribals and they highly adopt contraceptive methods than other communities. The study also highlights the reason for non-adoption and the health problems due to the adoption of contraceptives.

Riche Chandraker, Suman Chakrabarty, Mitashree Mitra and Premananda Bharati (2009) in their study assessed the pregnancy related women reproductive health, infant and child mortality and the nutritional status of mother and under five children among Dur Gond Tribal Community of Mahasamund district of Chattisgarh, India. It is found that the poor health status during child bearing period, low antenatal care, high deliveries at home along with high prevalence of under nutrition of under five children and mothers are mainly due to low socio-economic conditions, high illiteracy and lack of awareness among these community.

Lalmalsawmzauva K. C and Nayak D K (2010) examined the impact of access to health facilities as well as other demographic and health indicators pertaining to antenatal care on mother’s health seeking behavior in Mizoram. They also investigate intra state variations in ante natal care for understanding the pattern of utilization of maternity services and to correlate selected developmental variables and health indicators at the contextual level and tried to understand whether location does in matter in the utilization of ante natal cares. The findings reveal that there is substantial disparities and unevenness in the behavior of health seeking mother during pregnancy. The study
demonstrated the positive relationship between utilization of ante natal care and socio economic background of mothers in terms of literacy status and urbanization. Accessibility also emerged as a significant influence on maternal health services in the state.

Subrata Mukherjee (2010) in their study assessed the state of health and health care in West Bengal in a comparative perspective with Kerala and Tamil Nadu. It is found that except for immunization coverage, there is a significant urban- rural difference in the coverage of antenatal care, health awareness and health status of women and children. Over the years the present per capita availability of doctors, nurses and paramedics in West Bengal is well below Kerala and Tamil Nadu. Experience of HIV/AIDS awareness campaign clearly shows that there is an urgent need of increasing per capita Government expenditure on health care and have more equitable targeting of Government health subsidies, especially in inpatient care sector and for formulating district- specific interventions to improve various health indicators, the state government needs to develop its own machinery to estimate crucial health status parameters at the district and sub- district levels with adequate sample sizes and at regular intervals of time. Ratnawali (2010) mentioned that women in general and tribal women particular are more vulnerable to health related problems. The availability of health facilities and the attitude of health personnel play a big role in the acceptance of modern health services in the communities. Inadequate availability of health services automatically transfers dependence upon traditional services. Better roads and communication facilities not only have attracted the private practitioner to the villages, but also offered various other facilities which were hardly offering any women- specific problems.
Rejumoni Sarma (2010) examined the cultural practices and their effect on reproductive health condition of the two Tiwa villages of Morigaon district, Assam. It is observed that the food habit, income, individual hygiene, methods of sanitation, traditional way of delivery, poor communication system and their cultural belief play a key role in their reproductive health status. It is also found that the people are not interested to take the advantages of health related programmes of Government because they could not completely come out of their super natural beliefs.

Narahari (2010) in his study investigated the influence of habits like smoking and alcoholism and consanguinity on fertility and reproductive mortality or reproductive wastage or pregnancy wastage in a primitive tribal population of Andrapradesh. The study reveals that revenue trend for alcoholism and reproductive mortality and it also projects that smoking increases reproductive mortality more than non-smoking and the effect of alcoholism seems to be in reverse direction where in it decreases fertility and mortality in alcoholic than non-alcoholic women.

Shahina K K (2010) reported that Adivasi in Wayanad are brought to sterilization camps in large members by health workers. Out of 42 men underwent non scalpel vasectomy in 2010, 32 were from tribal communities. The district has the largest Infant Mortality and maternal death rates in Kerala. The state average infant mortality is 13/1000 but it is 50/1000 in the district. 86 infant deaths were reported out of which 46 were from tribal communities. Similarly of 8 maternal deaths 6 were of adivasi mothers. Average Life Expectancy of Tribals in Wayanad is 45 years.

Shailendra K Mishra, Suatha Kar and Susmitha Mukhopadhyay (2010) in their study investigated association of socio-demographic characteristics with acceptance of antenatal care during pregnancy and use of skilled attendance at delivery among women...
of two groups residing in Sikkim. The contingency table for antenatal care and socio-demographic variables in the study shows significant association with literacy states on the acceptance of antenatal care. Attended delivery showed significant association with mother’s education. Antenatal care taken and parity has significant association with utilization of skilled attendance at delivery. Socio–economic factors like mother’s education and monthly expenditure have been found to be good prediction of antenatal care and delivery care. The study also suggested that a women’s decision making capability about their own health is crucial for prenatal care practices.

Ganesh Chandra Mallick (2010) in his paper examined the health care practices in the ante natal, natal and post natal stage of children and mothers among the HOS of the Mayurbanj district of Orissa. The study found that the villages are not all aware about the age of mothers at the time of birth and early age at marriage seriously reflects their childrens health. Over 50percent of births, mothers do not take any antenatal care services because they believe that they may face problems at the time of delivery, if they fall in to God’s annoyance. Most of the mothers give birth to their children at home. Only 15percent of births mothers facilitated to post- partum check-up within two months of births. The babies were given breast feeding immediately after birth facilitates the babies to develop the natural immunity power. The study also recommends that if their communal belief against the acceptance of modern health care system would change with the help of governmental or non- governmental organization or any type of voluntary organization, they would appreciate heartily the health care programmes. This may bring better health services for that population in the near future.

Laveesh Bhandari and Aali Sinha (2010) in their study considered an analysis of ailments across various socio-economic categories. The study shows that socio-economic
background influences the perception of health/ill health and for instance lifestyle is also a source of many health issues. Moreover, awareness about health issues and affordability, both in terms of finances and time, are crucial in determining whether people report ailments or not.

Mitesh Kumar N Bhandari and Srinivasan Kannan (2010) in their paper attempt to assess the untreated reproductive morbidities and the factors affecting treatment seeking behavior among ever married women of urban slums in Gujrat. The study found that the cost of care, distance, time, social barriers, provider’s poor attitudes, need for accompanying person, availability of transport, follow-up requirements, poor quality services and long waiting times were influenced the health seeking behavior among them. Education is positively related with health seeking behavior. In terms of social stratification, care seeking behavior of reproductive illness is compromised among the socially disadvantaged and marginalized Scheduled Castes and Scheduled Tribals who have low level of education and low socio-economic status. Women preferred female health worker when seeking care for reproductive illness and maternal health and women who delivered with unskilled attendants had high reproductive illness. The determinants for accessing reproductive health care were resources available at the household level, social factors, the availability of services and behavior related to health. The study also indicates that Government health facilities remained underutilized among these categories.

Himanshu Sekhar Rouf (2011) pointed out the factors account for the demand for the health care for rural people in Ghana. The study showed that the health care facilities, distance of health centre, availability of infrastructural facilities, socio-economic status,
environmental condition, nutritional status and life style of the individuals have significant influence on the accessibility of health care facilities among the people. 

Rejoice P R and Ram Shankar A K (2011) on the basis of NFHS-3 data, explored the utilization of health care services during pregnancy period of currently married women in Tamil Nadu and Karnataka states of South India. The study highlights that only 0.9 percent of women did not receive antenatal check-up during pregnancy period in Tamil Nadu, whereas it was 9.4 percent in Karnataka. With regard to TT Vaccination and IFA Tablets, 1.3 percent and 7.5 percent of the women did not receive TT injection and IFA Tablets in Tamil Nadu while these were 12 percent and 25.5 percent respectively in Karnataka. It is also found and suggested that the pregnant women in Tamil Nadu more likely utilize the antenatal care than the women lived in state and there is a need for raising the strategies to achieve better and effective services of maternal health care at both states.

Tapan Kumar Roy, Bijesh P Singh and Singh K K (2012) in their study investigate the level and determinants of child mortality in children below three years of age in Madhya Pradesh by selected socio-economic and demographic characteristics. It has been seen that child mortality under age three was higher among rural children than their urban counterparts. Education of mother was inversely related with child mortality with literate mothers experiencing lower child mortality. Children belonging to households with at least medium standard of living index experienced lower probability of death. The child mortality was also found to be low among working mothers. The study indicates that the under three, mortality is highest among adolescent mothers. Similarly, children with longer proceeding birth interval and lower birth order experienced lower mortality. Under
three mortality has also been found to be lower among the male children as compared to
the female children.
Ranjana Kesarwani (2012) analyzed the pattern of reproductive morbidity in Bihar and
Jharkhand states of India by selected demographic, socio economic and pattern of health
utilization characteristics to understand the extent of association between the antenatal
care received and pregnancy, delivery and post delivery complications among women. It
is observed that women living in urban area are more about maternal morbidity. The
education of the woman and her husband show negative correlation with complications
during pregnancy, delivery and post delivery. Women whose standard of living is high
reported less complication than the women with low standard of living because they have
high economic status can afford high quality health care. Institutional delivery shows
negative association with maternal complications. The study also recommended the need
of adequate knowledge to both men and women regarding reproductive health issues, to
reinvigorate the family planning programme and honest delivery of safe motherhood
interventions.
Rakesh Chandra (2012) in his paper analyzed the importance of male involvement for
improving reproductive health of women by comparing men’s knowledge, attitude and
practices in Madhya Pradesh and Kerala, and factors which influence this knowledge,
attitude and practices. The analysis suggests that the role of males in family planning and
reproductive health of women is more or less similar in two states and the women who
have to take care of herself and male’s knowledge, attitudes and practices do not going to
change the situation.
Kasturi Mondal and Chande Shekhar (2012) discussed the impact of maternal
characteristics and health services on Neonatal mortality in Uttarpradresh. The study
reveals that the risk of neonatal death is lower in educated than in uneducated women and in households with highest wealth index. They pointed out the influence of age, parity, birth interval, region, sex of the child, caste, availability of health care services, use of health care services and distance to health facility on neonatal mortality. The risk of neonatal death is estimated to be high in institutional delivery. The study also recommended the effective implementation of National Rural Health Mission in the reduction of neonatal and infant mortality in the state.

Sasmitha Jena (2012) analyzed the status of urban poor women in Odissa and examined the relationship between the sex of the household head and utilization of Ante-Natal Care (ANC) services among urban poor women. It is observed that the utilization of antenatal care services is poor among working women and women belonging to female headed households compared to male headed households. The utilization of ANC services was higher among educated women. The study also highlighted the role of Anganwadi Worker ANM in improved utilization of antenatal care services.

Maya C (2012) reported that inflexible health system, attitudes of tribals to blame for maternal deaths among them. The health systems, social distance from tribal population, its inflexibility and inability to accommodate social realities among the tribals and the callous attitude of the hospital staff to the tribal population are killing more mothers in Wayanad than the spectrum of home deliveries and post-partum haemorrhage. The study also reported that tribal mothers do not get ante-natal care partly because of their physical inaccessibility and also because of their refusal to take advice from the health staff. It also observed that Wayanad account for chunk of the maternal deaths in the state, even though only 2.5 percent of the population resides in this district. The maternal deaths are being reported from among the tribals, especially the Paniya Tribals, who constitute 17 percent
of the district population. More than 90 percent of the mothers have anemia, about 30 percent have Hb levels less than 7 percent.

Umamageshwari K and Radhakrishnan N (2012) analyzed women health care system in India. The study reported that women’s reproductive health in India is affected by a variety of socio-economic factors. Women’s health in general and reproductive health in particular is determined in women’s power to make a choice in quality of available health care services, life style and women’s position in the society. The study also recommended that for improving the reproductive standards of the women, policy makers should address factors which are responsible for the spread of diseases and well as its socio-cultural dimensions and there is a need of more innovative and systematic interventions strategies involving communities.

Srinivasan K and Dhandapani C (2012) in their study pointed out women’s health in India and key challenges in health sector. According to them, biological and social factor affect women’s health. Women’s health is also affected by fertility, education, utilization of health care services, cultural factors and working status of women. Infant and maternal mortality are decreasing, but slowly. The study also states that developing countries are faced with an unfinished health agenda of problems like high MMR and malnutrition, increasing prevalence of chronic and cardiovascular diseases resulting from an ageing population. The utilization of health care services is low due to limited availability of services.

Govindan S and Dhandapani C (2012) examined the health care system and health status among tribal community in India. The study reveals that lack of personnel hygiene, poor sanitation, poor mother-child health service, absence of health education, lack of national preventive programmes and lack of health services are responsible for the
poor health of the tribals. The traditional health care system among tribals depends both herbal and psychosomatic lines of treatment. The study also highlights the prevalence of malnutrition is higher among tribals in India.

Most of the studies reveal that care of mothers during pregnancy has a direct bearing on the development of children and it depends on their socio-economic conditions, customs, availability of health facilities etc. The health status of mother and their young children are closely related, especially during gestation and in the neo-natal period. Maternal and child health also depend upon awareness, marriage age, status of women, mother’s age, educational level of husband, birth order, type of delivery, place where delivery take place, privacy to handle menstruation, attitude and health practices and the availability of pure water, better sanitation facilities, food in-take and proper medical care. Children face most of the problems like low birth weight, malnutrition, anemia, acute respiratory infections etc. and the incidence of infant mortality is found to fall with a proper child health care. It is also found that child mortality is higher among low educated mothers, adolescent mother and non-working mothers and under three mortality is lower among male children as compared to female children. Rural- urban analysis of maternal and child health care service utilization indicates that prevalence of reproductive and child mortalities are higher among rural mothers and children and morbidity is higher among urban mothers and children. Caste wise analysis shows that women from lower castes (Scheduled Castes/Scheduled Tribals) and Other Backward Castes reported higher prevalence of poor health than women from forward castes due to poor accessibility of antenatal and postnatal care. The increased private investment in health resulted in high health care cost which mostly affected the health care service utilization of deprived sections of the society.
Among tribal communities, the maternal and child health care seeking is limited. Maternal and child mortality among them is largely attributed to less accessibility to modern medical facilities. Tribal mothers by and large do not follow the modern methods of child health care and parents had no knowledge about the purpose of immunization or the vaccines that the children had received and did not have any faith in hospitals. Inadequate household food security, inadequate access to health services, traditional belief, economic constraints, social distance of health system, inflexibility and inability to accommodate social realities, callous attitude of the hospital staff and inadequate care of women and children made the tribal communities vulnerable to health and nutrition stand point. The habits like smoking and alcoholism, low percentage of early registration of pregnancy, low coverage of different components of ante- natal and post-natal checkups and child health services are also influenced on fertility, reproductive and child mortality among the communities. Though the Government has introduced various programmes to improve the health conditions of mother and children, its benefits are not reached to the deprived communities.

1.9 Statement of Research Problem

Motherhood is the supreme fulfillment in women’s life. Many women die in the process of child birth in many countries of the world, especially in developing countries. Children suffer most when mother dies, as children whose mother died, are three times more likely to receive less health care and also more likely to die. The event of maternal death is a concern to the family, children, community, state and nation as it affects the national productivity. Children, the asset of the nation, are highly influenced by the health of their mothers. They need proper care at their early stages of life. About 99% of the world’s maternal deaths and 50-60 percent of infant deaths in developing countries
occur within one month of birth, mainly because of lack of maternal health care (Bolam et.al, 1998 and WHO, 1996).

The Government of India took many steps to strengthen maternal and child health services as early as the first and second five year plans. The Child Survival and Safe Motherhood (CSSM) programme and the Integrated Child Development Service (ICDS) Programme are the important public programmes in India for improving the health status of women and children and the reduction of maternal, infant and child mortality and morbidity, which are reaching out to the most neglected sections of the population. The Government delivers reproductive and other health services through its network of Primary Health Centres (PHCs), Sub centres and other health facilities in rural areas and in urban areas and they are available through Government or Municipal hospitals, urban health posts, hospital and nursing homes operated by Non Governmental Organizations (NGOs) and private nursing and maternity homes.

The Government has allotted a lot of funds through different health service schemes. But its benefits are not reaching every section of the society properly. Even though there exist considerable variations in maternal mortality in different states of India, there is no effective surveillance system to keep track of maternal mortality across the country. The reforms in the health sector from 1991 onwards adversely affected the delivery of the minimum required health services for the deprived and vulnerable sections of the Indian community. The problem is more pronounced in the wake of liberalization and globalization which deliberately cut the health sector outlay mainly due to the privatization of basic health services which creates deeper inroads in the health profiles of the society. The emerging private health insurance market does not provide solutions for the poor and high risk segments of the population.
The so far conducted studies also reveal that though the utilization of maternal and child health care among tribal communities has been increased, but it is less compared to other social groups. The studies demonstrate that the health status of tribals, particularly the reproductive health of women and child health have been lower than the general population (Government of India, 2005, Sambamoorthy et al, 2000, Salil Bassu, 2007, Bindhu Ramachandran, 2000, Ratnawali, 2010, Shahina K K, 2010, Maya C, 2012). The physical inaccessibility, refusal to take advice from the health staff, high cost and quality of services offered at Government and private health institutions are also reasoned for the poor health conditions of tribal mothers and children. Unevenness in the health seeking behavior among mothers and accessibility has emerged as a significant problem which becomes reasoned for social and regional disparities in reproductive and child health conditions across the world. Among the tribal communities also, disparities exist with respect to utilization of health care services on the basis of their different social economic and cultural back grounds. The availability of health services and attitude of health personnel play a big role in the acceptance of modern health services in the tribal community. So it is needed to check out the demand-supply gaps in the reproductive and child health services among the tribal communities and find a better solution for improving the health conditions of tribal mothers and children.

In recent years more attention is being given by the Government to the problem of rural health, especially for the tribal community and supplies various medical facilities. The NRHM is supposed to strengthen preventive and curative care, particularly in rural areas. But they do not properly utilize the facilities available to them. The utilization of maternal and child health care services is relatively less among the deprived sections and marginal community. The important question at this point is that what are the factors which affect
their demand for health care services or is there any lack of availability of maternal and child health care services among them? So the present study focuses on these issues and investigates the major reproductive and child health problems among the tribal communities in Wayanad District, Kerala.

1.10 Importance of the Study

Motherhood is special and sacred. But there is no safety to women at the time of pregnancy. Complications of pregnancy and child birth are often the major causes of morbidity and mortality among women in child bearing ages in the developing countries. Child mortality is one of the important factors influencing fertility and it is well established that the higher the mortality, higher is the likelihood of fertility. The National Policy adopted by the Government of India in 2000 (Ministry of Health & Family Welfare, 2000) reiterates the Government’s commitment to the safe motherhood programme within the wider context of reproductive health. Government has an important role in protecting the health of people because human capital is essential for economic development.

Women’s poor reproductive health in India is affected by a variety of socio-economic factors. Women’s health in general and reproductive health in particular is determined through their perception about the reproductive health problems and treatment taken for them, quality of available health care services, life style and women’s portion in the society (Umamageswari K and Radhakrishnan N, 2012). Women in general and tribal women in particular are more vulnerable to health related problems, the difficult living conditions and improvised health facilities lower their chances of optimum good health. Access to health facilities constrained by poor infrastructure by road and transportation, lack of personnel hygiene, poor sanitation, poor mother-child health service, absence of
health education, lack of national preventive programmes and lack of health services are responsible for the poor health of the tribals. Malnutrition, anaemic and reproductive health problems are recorded higher among these population (Ratnawali 2010, Govindhan S and Dhandapani 2012). The communal belief against the acceptance of modern health care system and to take home remedies in case of services health problems also caused for higher maternal and child mortality (Ganesh Chandra Mallik, 2010) among these groups. They were far away from the coverage of various health services programmes.

According to NFHS-III, the under-five mortality rate and the child mortality rate are much higher for Scheduled Tribals than any other social groups (95.7 percent and 35.8 percent respectively). There is a significant gap in the infant mortality rate and under-five mortality in rural and urban areas in almost all states and Union Territories. Among ST mothers, only 32.4 percent of mothers received advice about where to go if they experienced pregnancy complications. Only 17.7 percent of births to ST mothers are delivered in health facilities compared with 51 percent of births to mothers in other category. 31.3 percent of ST children were found to be fully vaccinated as compared to 53.8 percent belonging to others and 11.5 percent of children have no vaccinations. The utilization of ICDS services through AWC is higher among these groups. Only 2.6 percent of ST households have a member with health insurance and 61.0 percent of currently married ST women have demand for family planning, of which only 77.5 percent have a met need for contraception.

In the world-wide maternal and child mortality also a compelling problem, which happened due to lack of access to trained health care worker and modern medical facilities, they are poor and malnourished and weakened by disease. The demand and
supply side factors of health services shows India occupies lowest position as compared to world level with respect to pregnant women receiving ante natal care (75/84), birth attended by skilled health staff (53/66), child immunization rate (72/83) health expenditure as a percentage of GDP (4.1/10.5), physicians (0.6/1.4) and nurses and midwives (1/2.8) per 1000 population and hospital beds (0.9/2.9) per 1000 people during 2005-10 (World Bank, 2012).

The study so far conducted with regard to maternal and child health in India and Kerala concentrates on the basic issues and problems in the maternal and child health care service utilization. Various rounds of National Family Health Survey provide there has been an increasing trend in the utilization of maternal and child health care services and exist rural-urban and socio-class disparities in the coverage of these services. It also shows that Kerala, Goa, Tamil Nadu Himachal Pradesh and AndraPradesh are the best five states in India nearly universal coverage of reproductive and child health care services has been achieved (Government of India, 2007). Apart from the socio-economic and cultural constraints, perception, availability of health facilities and attitudes of health personnel also play a big role in the acceptance of modern health service among the tribal communities (Ratnawali, 2010).

In spite of the effort of the Government, there are poor maternal and child health services and ineffective coverage of national health and nutrition. Infrastructures like sub-centres, Community Health Centres (CHCs) and PHCs and others are less than required in the tribal areas. Rajasthan, West Bengal and Madhya Pradesh are the state with maximum deficit in the number of sub-centres, PHCs and CHCs. There is a short fall of 1018 sub-centres in Rajasthan, 933 in West Bengal and 898 in Madhya Pradesh. The state of Arunachal Pradesh, Chattisgarh, Kerala, Karnataka and Orissa are leading by having
more than required number of sub-centres. The same is the situation with the PHCs and CHCs in these states (Government of India, 2008). The availability of surgeon, obstetricians, Gynecologists, physicians, pediatricians, specialist, radiographers, pharmacist, lab-technicians and other health workers in the sub-centres, PHCs and CHCs were found to be very short in states like Chattisgarh, Madhya Pradesh, Maharashtra and Gujarat.

The state Kerala with high performance of maternal and child health status, also experience regional and social differences in the health care utilization. In Kerala 95.6 percent women received ante natal care in the first trimester, 96.6 percent had at least one TT injection and 72.2 percent of the women received full ANC. The proportion of women who consumed 100 IFA tablets was 73.3 percent. Among the districts, Malappuram district is lowest (55.9 percent) and in Kottayam a highest (84.4 percent) of women received full ANC. The women who received full ANC is lowest (57.3 percent) among tribal communities and higher for Other Backward Classes (70.8 percent). Besides Wayanad, Kasargod, Thiruvananthapuram and Palakkad, institutional delivery is 100 percent in all other districts in Kerala. Institutional delivery is also lowest among scheduled tribals (85.6 percent). About 24 percent of women in Kerala had faced at least one delivery complications and more than one-fifth of women had post delivery complications.

In case of child health, children received check up within 24 hours of birth and awareness about child health problems are lower tribal groups (85.9 percent) as compared with the state average (99 percent). Children aged 12-23 months received colostrums, exclusive breast feeding and full vaccination are higher for tribal communities. But child morbidities such as diarrhea, acute respiratory infection, malnutrition etc. are higher
among these social groups. The perception of family planning, contraceptive measures and its use are also popular among them (Government of Kerala 2007-08). All these reflect a positive sign to the improvement in the health status of tribal communities in Kerala.

In Kerala there is an adequate availability of health facilities such as health personnel, drugs/ medicines, equipments, basic reproductive and child health care amenities and infrastructure at the level of sub- centre, PHC and CHC and District Hospitals (Government of India, 2010). It is being noted that 77.6percent of the sub- centres in Kerala are adequately equipped and 96.4percent of sub-centres had adequate supply of essential drugs for RCH services. But the quality of these centres was very poor. Only 10.3percent of the PHCs in Kerala were functioning on 24 hour basis, 74percent of the PHCs have at least 60percent of essential drugs and 27.4percent of the PHCs have at least 4 beds. New born care equipments are available in only 4 of the PHCs, 5 have functional operation theatres and 8 provide referral services for delivery. There is no Lady Medical Officer in the PHCs of Kannur, Kozhikode, Thrissur, Ernakulam, Idukki, Pattanamthitta and Kollam districts. Only 14.3percent of CHCs have gynecologists in position, 26.3percent have functional operation theatres and 11percent have new born care facilities. The availability of pediatrician, anesthetists and health manager was very low in CHCs in Kerala. That is 15.7percent, 2.3percent and 0.5percent respectively.

The regional and social class disparities in the coverage of reproductive and child health care services remain fairly wide across the countries and all become responsible for inaccessible state of reproductive and child health situation in the world. The Government of India provides the information that has been an increasing trend in the national and child health care services utilization in the national level; but it was
comparatively less among the deprived sections especially scheduled tribals. Even though the Government has launched various programmes to provide more facilities to improve their health situation, its benefits are deprived to the most neglected sections of society. In this context, it is very relevant to assess the causes of demand and supply gap prevalence among tribal communities. So the present study focuses on the demand and supply factor influencing the maternal and child health services, the extent of maternal and child health care services utilization and reproductive health problems among the Scheduled Tribals in Wayanad, a tribal dominating area among the districts of Kerala.

1.1 Objectives of the Study

- To examine the perceptions about Maternal and Child Health Care Services among tribals in Wayanad district, Kerala
- To examine the factors influencing the demand for Maternal and Child Health Care Services among tribals in the study area
- To examine the supply aspects of Maternal and Child Health Care Services among tribals in the study area
- To identify the major reproductive and child health problems among the tribals in the study area
- To provide possible suggestions for improving the Maternal and Child Health Status of tribals in Wayanad district

1.12 Hypothesis

- The Maternal and child health care service utilization among the scheduled tribals is different and depend not only on their socio-economic and cultural constraints but also their perception about the services
There exist demand–supply gap in maternal and child health care services among Scheduled Tribals

1.13 Methodology

The present study is conducted on the basis of both primary and secondary data. To examine the perception, availability and accessibility of maternal and child health problems among the tribal community in Kerala, primary survey is conducted among the tribals of Sulthan Bathery Taluk in Wayanad district of Kerala, a district identified for the domination of tribals. The survey was carried out among seven major tribal communities like Paniya, Kattunaikkan, Urali, Adiyana, Mullukurumar, Thachanadan Moopan and Kurichiyan among eight panchayaths in Sulthan Bathery Taluk, which constitute most of the tribal population (38.31 percent of the total ST population) among three Taluks in Wayanad district as per census 2001. The study is primarily descriptive in nature.

1.13.1 Sources of Data

The primary survey is based on 400 tribal mothers having at least one child within the age group of three years in Sulthan Bathery Taluk in Wayanad district. The population is identified from the official records of three ICDS projects under the Taluk. The details of sample population are collected with the help of Anganwadi Workers in the identified area. The secondary data has been collected through various sources like World Bank Report, National Family Health Survey of India, District Level Household and Facility Survey, District- Panchayath level statistics, Wayanad and the reports of the Planning Commission and other similar agencies at the national and international level.

1.13.2 Sample design

The study employs stratified proportionate random sampling. As per Census 2001, Sulthan Bathery Taluk covers 51288 Scheduled Tribe Population and male and female
population constitute 25424 and 25864. There are eight panchayaths in the Taluk with seven major tribal groups like Paniya, Kattunaikkan, Urali, Adiyan, Mullukurumar, Thachanadan Moopan and Kurichiyan having 2695 tribal mothers in the age group of 15-49, living with their husbands, having at least one child with in the age group of 0-3 years. The list of all tribal settlement in the Taluk was identified as the sample frame. From the sample frame a separate list with all the settlement of the seven communities selected for study was prepared. The sample size is fixed to 400 tribal mothers (14.8 percent of the total population), which are proportionately divided among these seven communities. Out of 400 sample population, the sample sizes of different tribal communities are fixed on the basis of their majority in numbers. As the representatives of tribal mothers, 197 mothers from Paniya Community, 97 mothers from Mullukurumar, 83 mothers from Kattunaikkan, 19 mothers from Urali, 2 mothers from Thachanadan Moopan and Adiyan and 1 mother from Kurichiyan communities are taken for the study.

1.13.3 Data gathering instruments

The primary survey of the present study is based on a sample of 400 tribal mothers having at least one child with in the age group of 0-3 years. The details of sample population are collected from Anganwadi Centres in Sulthan Bathery Taluk. When population is identified, sample population is randomly selected from each community among 8 panchayaths in the Taluk. The data collection has been done by using a structured interview schedule which was answered by the mothers who have children in the age group of 0-3 years. The secondary data for the study is gathered from the official records of Block Panchayat, Tribal Development Office, ICDS Department at Sulthan Bathery, Publications of various Government and other agencies at the national and international level, Census Report, Reference Books, and Internet etc.
1.13.4 Data Management Analysis

Analysis of data was done by using statistical methods like percentages and chi-square test and the analyzed data are presented in tables and charts.

1.14 Limitations of the study

Limited sample size and refuse to answer some questions by the respondent are the limitations of the study.

1.15 Chapter Scheme

The chapter layout of the present study is as follows.

The first chapter provides introduction, definition to health, reproductive health and child health, maternal and child health among different social groups at international, national and state level, problems and issues related with maternal and child health care service utilization, context of the study, review of literature, statement of the problem, importance of the study, objectives and hypothesis, methodology and limitations of the study. The second chapter covers the conceptual and theoretical framework. The third chapter provides the socio-economic, demographic and health profiles of study area and sample respondents. The fourth chapter gives maternal and child health indicators in Kerala. The fifth and sixth chapters cover the empirical analysis of perception, accessibility and availability of maternal and child health care services and major reproductive health problems among the sample respondents. The final chapter gives findings, suggestions and conclusions of the study.
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