CHAPTER THREE

RESEARCH METHODOLOGY

3.1 LOCALE OF THE STUDY

Tamil Nadu is one of the 35 states of India. It lies on the eastern coast of the southern Indian peninsula bordered by Puducherry, Kerala, Karnataka and Andhra Pradesh. Tamil Nadu is bound by the Eastern Ghats in the north, the Nilgiris, the Annamalai Hills, and Palakkad on the west, Bay of Bengal in the east, Gulf of Mannar, Palk Strait in the south east and Indian Ocean in the south.

Tamil Nadu is the homeland of the Tamilians and has existed since prehistoric times. The culture and artwork of this region are considered to be some of the oldest in the world. It is home to one of the classical languages of the World, Tamil. The language has been documented as being around for at least 5,000 years in the script form but was spoken long before that. Tamil Nadu also has one of the oldest culinary heritages in the world.

It is one of the foremost states in the country in terms of overall development. One of the most industrialized and urbanized states in India, it is home to many natural resources, rare flora and fauna, cool hill stations, grand Hindu temples of Dravidian architecture, beach resorts, multi-religious pilgrimage sites and three UNESCO World Heritage Sites. The Cultural heritage sites include the three great temples of 11th and 12th Century namely, the Brihadisvara Temple at Thanjavur, the Brihadisvara Temple at Gangaikondacholisvaram and the Airavatesvara Temple at Darasuram. The temples testify to the brilliant
achievements of the Chola in architecture, sculpture, painting and bronze casting.

Tamil Nadu covers an area of 130,058 km\(^2\) and is the eleventh largest state in India. Tamil Nadu has a coastline of about 1000 km which forms about 18% of the country’s coastline (third longest). There are 32 Districts of Tamil Nadu.

According to Census 2011, the state’s population is 72 million. It is the seventh most populous state in the country. Except for Kerala, Tamil Nadu recorded the lowest population growth rate in 1991-2001 among all the states and Union Territories in India. The decadal (2001-2011) growth rate is 15.60%. The population sex ratio, defined as the number of females per 1000 males in the population, works out to 995 in 2011 compared to 987 in 2001 and 974 in 1991.

According to Census 2011, the Chennai population is 46,81,087. The Sex Ratio of Chennai is 986 and the Child Sex Ratio is 964.

Chennai city expanded from 174sq.km. to 426 sq.km. since October, 2011. Zones increased from 10 to 15 and population from 47 lakhs to 69 lakhs. The total number of slums increased from 1700 to 2478 due to expansion of Chennai city. Around 30-40% of Chennai population live in slums.

However, the child sex ratio, defined as the number of girls per 1000 boys in the age group of 0-6 years, has gone up from 942 in 2001 to 946 in 2011. The density of the population is 555 persons per sq. km in 2011 against 478 in 2001 and 429 in 1991. Life expectancy is projected to be 65.2 years for males and 67.6 years for females.
The population of Scheduled Castes (SCs) is 19% in 2001 against 19.2% in 1991, higher than the national percentage of 16.2 in 2001 and 16.3 in 1991. However, Tamil Nadu has a lower percentage of Scheduled Tribes (ST) 1% of the state’s population in 2001 against the national average of 8.2%.

Tamil Nadu is one of the educationally more advanced states in the country. The literacy rate stands at 80.3% (male literacy 86.8% and female literacy 73.9%), higher than the national literacy rate of 74.0%.

As per the Human Development Index (HDI) prepared by the State Planning Commission, the districts that fare well in terms of both HDI and Gender Development Index (GDI) are Chennai, Kanyakumari, Thoothukudi, Kancheepuram, Coimbatore and the Nilgiris. The poorly performing Districts include Pudukottai, Thiruvannamalai, Villupuram and Dharmapuri.

3.2 OBJECTIVES OF THE STUDY

The main objectives of the study are:

i) To know the socio-economic background of the respondents.
ii) To examine the availability of Mother and Child Health programme to the poor and needy.
iii) To identify the problems experienced by the target group in accessing Mother and Child Health services.
iv) To analyze the utilization of health facilities for ante-natal and post-natal care.
v) To examine the reasons for the non-utilization of Mother and Child Health services by the beneficiaries.
3.3 STATEMENT OF THE PROBLEM

In this research, the issues that have been taken up for study are the availability, accessibility and utilization of various phases of maternal care like antenatal or prenatal care, natal or care during pregnancy, post natal care and child care. In this light, the study tries to expose how the availability, accessibility and utilization of the health care services are related to maternal and child health care services and also influenced by other factors. The nature of obstetric morbidity, that is, pregnancy, delivery and post-delivery complications and child morbidity are also considered in this study. Apart from these, problems of maternal and child health care services, from both the providers and receivers perspectives, also need to be investigated. Special emphasis has been laid on maternal and child health since the inception of the Reproductive and Child Health (RCH) approach as it had set out to promote antenatal, delivery and postnatal care and child immunization.

The maternal and child health problem in India is mainly due to lack of or poor utilization of mother and child health service. It may result in maternal complications like anemia, postpartum hemorrhage, toxemia of pregnancy and low birth weight in baby.

Uncontrolled fertility has adverse effects on mother and children. Decrease in birth spacing results in inadequate care for the existing child and risk of more complications during pregnancy. Therefore, family planning services form an important aspect of MCH programmes.

Since its independence, India has become a world leader in Medical advancement due to its incredible Medical education systems. To-day, India is
considered as a major provider of health services and the hospitals in India have highly skilled and qualified Medical providers in the world. But at the same time, quality health care remains inaccessible for many parts of the country. Even though Medical treatment is available, public hospitals are frequently under staffed and under supplied.

Among the maternal health parameters, Ante Natal Care (ANC) and safe delivery are extremely important. Because they are directly related to maternal mortality, loss of foetus, infant deaths and so on. Expectant mothers need proper health care and medical advice. Another area of concern in the Maternal and Child Health programme is the place of delivery as the maternal and child health care is to provide quality health services that would result in safe delivery under proper hygienic conditions and under the supervision of trained health personnel, so that the health of both the mother and child would be safe.

Similarly, post-natal care is concerned with the medical advice and health care necessary for the mothers to regain her health after the strain of childbirth and also necessary advice for child care. Child immunization also forms an important criterion in child survival, along with the above mentioned factors.

The concept of healthy mother and healthy baby is an important aspect of MCH programme. It can be realized when the women take and utilize the mother and child health care services and follow the advice of the health care providers. Therefore, the present study is important to understand the availability, accessibility and utilization of mother and child health care services.
3.4 SIGNIFICANCE OF THE STUDY

This study may help to find out the role of both private and public health care providers in the implementation of MCH programmes. The study may provide insight on the issues related to availability, accessibility and utilization of MCH programs and its implications on women in reproductive age. The study may help the policy makers to find effective ways and means to create awareness on the importance of availing MCH programmes for the welfare of mother and children.

Mothers and children not only constitute a large group, but they are also a “vulnerable” or special group. They comprise 71.4 % of population of the developing countries. In India, women of child bearing age (15-44 years) constitute 22.2% and children under 15 years of age is about 35.3% of total population, together 57.7% of population consists of mothers and children.

Every year, 4,300 mothers die due to complications of pregnancy and childbirth, 20,000 babies are stillborn and another 23,000 die in their first month of life. In total, 75,000 children do not make it to their fifth birthday. Despite, conducive policies and high coverage of antenatal care and other services, the challenge of HIV and AIDS and the inadequate implementation of existing maternal, neonatal and child healthcare programmes are largely responsible for the loss of lives.

The Urban Health Centre plays a significant role in maternal and child health services. The availability, accessibility and utilization of Urban Health Care services especially the maternal and child health care services are very effective and efficient in Tamil Nadu. Though, there are plenty of studies on maternal and child health focused on rural and tribal areas with different perspectives only a
few studies are conducted in urban areas. Hence, it is decided to find out the availability, accessibility and utilization of mother and child care services in Chennai city from the Sociological perspective.

3.5 FORMULATION OF HYPOTHESIS

After the selection of a research problem, the researcher formulates the testable propositions to obtain a tentative solution of the problem, which is technically known as hypothesis. A good research hypothesis should be conceptually clear, testable, logical, comprehensive, general and related to the existing body of theory and facts. It should provide maximum deductions and should be related to available scientific tests and apparatuses. By keeping this view in mind the specification of the dependent and independent variables should be incorporated in this study. The following hypotheses are formulated for the study in order to understand the relationships between the variables:

i) Most of the deliveries are done only in the Government Hospitals.

ii) Majority of the married women have the knowledge of family planning methods and spacing in between child.

iii) All economical categories of mothers did not have any hesitation to avail medical care facilities in Government hospitals.

iv) All the delivered mothers have the tendency to follow the immunization schedule correctly without fail.

v) The Government welfare schemes are some of the highly motivating factors to avail MCH services in Government Hospitals.
3.6 PILOT STUDY

The researcher referred plenty of books and journals pertaining to the maternal and child health conceptualization with erstwhile stated aim and objectives of this study. In order to get a clear-cut idea about the feasibility of the study, the researcher had formal and informal discussions with the pregnant mothers and mothers with babies below five years of age. The discussion with the pregnant mothers helps to prepare and finalize the Interview-Schedule for the study.

3.7 RESEARCH DESIGN

Research itself is a plan with a structure and strategy of investigation conceived in order to obtain answers to research questions with viability to control the contradicting elements. The structure of research is more specific. It is the outline, the scheme, the paradigm of the operation of the contradicting element. The study described the availability, accessibility and utilization of prenatal, natal and antenatal care of maternal mothers. Hence, the appropriate design for the study purpose can be designated as Descriptive Research Design.

3.8 CONSTRUCTION OF THE INTERVIEW TOOL FOR THE STUDY

Interview-schedule is used to collect data from the respondents. Based on the viscosity of the pilot study many of the interrogations were arrayed as a tool for the study. The queries were arranged on the basis of aim and objectives formulated for the study purpose. They were in the order of:

- Socio-Demographic Factors of the respondents.
- Child Birth Details of the Respondents.
➢ Availability and Accessibility of Mother and Child Health Care Service.
➢ Utilization and Non-Utilization of Mother and Child Health Care Service.
➢ Child Birth Care and Family Planning.

3.9 PRE-TEST

After preparing the study tool, the investigator carried out a pre-test with 20 mothers identified from two selected areas. Pre-test is used to test the validity and effectiveness of the prepared interview tool and based on the pre-test the unwanted queries were eliminated from the Interview-Schedule in order to hold an efficacy of the study tool.

3.10 SAMPLING PROCEDURE

i) Selection of the Study Area
The study is designed to focus on urban center. Therefore Chennai city is purposely selected for the study. Chennai, on the Bay of Bengal is the capital of Tamil Nadu. Apart from being a major district this metropolis also serves as the gateway of South India. The city of Chennai has developed as a cosmopolitan city that plays an important role in the cultural, intellectual and historical growth of India.

Since Chennai is the capital of Tamil Nadu it has higher number of primary health centers. The topography of the study area is Chennai city. Chennai city is purposely selected for the study since it is a capital of Tamil Nadu with higher number of Primary Health Centres. Chennai, the metropolitan city holding its Corporation led administrative capacity with 200 Divisions/Wards with 15 Zones. As far as the Mother and Child Health care is concerned, Chennai city
has 81 Urban Primary Health Centres (UPHCs) and 16 Emergency Obstetric Care (EOC) Units. Both, UPHC and EOC units are under the control of Corporation of Chennai.

As Chennai is located in a prime hub of attractive job opportunities and various sorts of livelihood opportunities proving in many instances prosperity for those who have migrated, it is become a popular destination for migration. This has led to a combined group of various social economic strata of people living together in Chennai. In spite of the mushrooming private hospitals in the City it has been noted that people tend to utilize public health services. In order to verify any gap between the health needs and the existing health services the scholar has chosen to investigate the same in Chennai.
**CORPORATION OF CHENNAI**

**NUMBER OF URBAN PRIMARY HEALTH CENTRE (UPHC) AND EMERGENCY OBSTETRIC CARE UNITS (EOC), DELIVERY CONDUCTED MATERNITY HOSPITALS**

<table>
<thead>
<tr>
<th>ZONE</th>
<th>NAME OF THE ZONE</th>
<th>TOTAL NUMBER OF UPHC</th>
<th>TOTAL NUMBER OF EOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Thiruvottiyur</td>
<td>01</td>
<td>01</td>
</tr>
<tr>
<td>II</td>
<td>Manali</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>III</td>
<td>Mahdvaram</td>
<td>-</td>
<td>01</td>
</tr>
<tr>
<td>IV</td>
<td>Tondiarpet</td>
<td>07</td>
<td>01</td>
</tr>
<tr>
<td>V</td>
<td>Royapuram</td>
<td>21</td>
<td>02</td>
</tr>
<tr>
<td>VI</td>
<td>Thiru-Vi-Ka Nagar</td>
<td>10</td>
<td>01</td>
</tr>
<tr>
<td>VII</td>
<td>Ambattur</td>
<td>01</td>
<td>01</td>
</tr>
<tr>
<td>VIII</td>
<td>Anna Nagar</td>
<td>06</td>
<td>02</td>
</tr>
<tr>
<td>IX</td>
<td>Teynampet</td>
<td>18</td>
<td>01</td>
</tr>
<tr>
<td>X</td>
<td>Kodambakkam</td>
<td>07</td>
<td>02</td>
</tr>
<tr>
<td>XI</td>
<td>Valasaravakkam</td>
<td>-</td>
<td>01</td>
</tr>
<tr>
<td>XII</td>
<td>Alandur</td>
<td>01</td>
<td>01</td>
</tr>
<tr>
<td>XIII</td>
<td>Adyar</td>
<td>09</td>
<td>01</td>
</tr>
<tr>
<td>XIV</td>
<td>Perunkudi</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>XV</td>
<td>Shozhinganallur</td>
<td>-</td>
<td>01</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>81</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

(Source: Department of Health and Family Welfare, Tamil Nadu)

The Corporation of Chennai has 15 Zones with 81 UPHC and 16 EOC.
ii) Selection of Zones and UPHC and EOC

The multi stage sampling procedure was adopted for the study. In the first stage, the total number of 15 Zones in Chennai was identified with total number of Urban Primary Health Centre (UPHC) and Emergency Obstetric Care (EOC) Units. The list of Zones was collected from the Department of Health and Family Welfare, Tamil Nadu.

In the second stage, out of the 15 Zones, 10% of sample was selected by applying the lottery method. The two Zones (Zone – X Kodambakkam and Zone – VI Thiru-Vi-Ka Nagar) are randomly selected for the study.

In the third stage, from the selected two Zones, the researcher identified 7 UPHC and two EOC units in Zone-10 and 10 UPHC and one EOC units in Zone-6. The details of all areas are given below:

<table>
<thead>
<tr>
<th>SL. NO</th>
<th>AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Saligramam (UPHC)</td>
</tr>
<tr>
<td>2.</td>
<td>Nallankuppam (UPHC)</td>
</tr>
<tr>
<td>3.</td>
<td>West Mambalam (UPHC)</td>
</tr>
<tr>
<td>4.</td>
<td>Kamarajar Colony (UPHC)</td>
</tr>
<tr>
<td>5.</td>
<td>West Saidapet (UPHC)</td>
</tr>
<tr>
<td>6.</td>
<td>T. Nagar (UPHC)</td>
</tr>
<tr>
<td>7.</td>
<td>CIT Nagar (UPHC)</td>
</tr>
<tr>
<td>8.</td>
<td>Vadapalani (EOC)</td>
</tr>
<tr>
<td>9.</td>
<td>Saidapet (EOC)</td>
</tr>
</tbody>
</table>
Zone VI (Thiru-Vi-Ka Nagar)

<table>
<thead>
<tr>
<th>SL. NO</th>
<th>AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Sembium (UPHC)</td>
</tr>
<tr>
<td>2.</td>
<td>Thiru-Vi-Ka Nagar (UPHC)</td>
</tr>
<tr>
<td>3.</td>
<td>Jaibeem Nagar (UPHC)</td>
</tr>
<tr>
<td>4.</td>
<td>Narasimha Nagar (UPHC)</td>
</tr>
<tr>
<td>5.</td>
<td>Nammalwarpet (UPHC)</td>
</tr>
<tr>
<td>6.</td>
<td>Thanthai Periyar (UPHC)</td>
</tr>
<tr>
<td>7.</td>
<td>K.M. Garden (UPHC)</td>
</tr>
<tr>
<td>8.</td>
<td>K.P. Park (UPHC)</td>
</tr>
<tr>
<td>9.</td>
<td>V.V. Koil Street, Choolai (UPHC)</td>
</tr>
<tr>
<td>10.</td>
<td>Pulianthopu (UPHC)</td>
</tr>
<tr>
<td>11.</td>
<td>Pulianthopu (EOC)</td>
</tr>
</tbody>
</table>

The total number of UPHC and EOC in two Zones is 20. That is, 9 in Zone 10 and 11 in Zone 6 of the selected Zones for the study.

In the fourth stage, from each UPHC and EOC units 25 respondents are selected on the basis of Convenient Sampling procedure. Therefore, the total number of respondents selected and interviewed for the study is 500 (that is, 25 x 20 = 500 samples).

3.11 METHODS OF DATA COLLECTION

The constructed study tool (Interview-Schedule) was administered on the identified 500 mothers dwelling in the study area which comprised of 15 Zones. The selected respondents were assured of strict confidentiality of the valued
responses. Hence, a direct interview method is used to collect data from the respondents in two zones selected for the study.

3.12 ANALYSIS OF DATA

The data gathered from the field survey has been subject to centralized editing. The edited data has been coded as per attributes and variables. Data was classified and represented in tables and charts. In this regard, the percentage was drawn for the purpose of statistical analysis. Row and column percentages have been used to analyze the data represented in tables. Percentage bar diagrams and Pie diagrams have been used in relevant places to represent the data. The statistical evidences have been interpreted to draw inferences. The findings thus generated have been utilized for drawing generalization and conclusions of this study.

3.13 LIMITATIONS OF THE STUDY

This study is limited to focus only on the Availability, Accessibility and Utilization of Mother and Child Health in the selected Divisions/Wards of Chennai because studying all the pregnant women in Chennai is not possible by the level of the individual researcher due to constraints imposed by money, time, energy and efforts.

This study focused only the Urban Primary Health Centres which are not applicable for maternal and child health care in rural Primary Health Centres. So, the findings of the study are limited to urban pregnant mothers and it may not be applicable to rural pregnant mothers.
The study reveals only the availability, accessibility and utilization of MCH care services prevailing during the time of data collection which may have changed further.

3.14 OPERATIONAL DEFINITION

**Availability** - Availability means obtainable or capable of being made use of.

**Accessibility** - Accessibility means easy to approach, enter, use or understand.

**Utilization** - Utilization means the state of having been made use of.

**Maternal Health** - Maternal health has been defined as safe motherhood, narrowly defined to mean ensuring that all women receive the care they need to be safe and healthy through pregnancy and childbirth.

- Family Care International, 2000 -

**Child Health** - Child health is a state of physical, mental, intellectual, social and emotional well-being and not merely the absence of disease or infirmity. Healthy children live in families, environments and communities that provide them with the opportunity to reach their fullest developmental potential.

- WHO -

**Mother and Child Health** - According to WHO, Maternal and Child Health services can be defined as, “promoting, preventing, therapeutic or rehabilitation facility or care for the mother and child”.

**Maternal Mortality Rate** - The maternal mortality rate is the number of maternal deaths per 100,000 women aged 15-49 in a given period and measures a
woman's risk of dying from pregnancy related causes and her risk of being pregnant at a particular period of time.

Reproductive Health - Reproductive health is a state of complete physical, mental and social well-being, and not merely the absence of reproductive disease or infirmity. Reproductive health deals with the reproductive processes, functions and system at all stages of life.

Ante-natal Care or Prenatal Care – Pre-natal care or Ante-natal care is a type of preventive healthcare with the goal of providing regular check-ups that allow doctors or midwives to treat and prevent potential health problems throughout the course of the pregnancy while promoting healthy lifestyles that benefit both mother and child.

Natal Care or Peri-natal Care - Natal care refers to the care given to women during childbirth. The care of a foetus or newborn given before, during and after delivery from the 28th week of gestation through the 7th day after delivery.

Post-Natal Care – Post-natal care is the care given to the mother and her newborn baby immediately after the birth and for the first six weeks of life. This period marks the establishment of a new phase of family life for women and their partners and the beginning of the lifelong health record for newborn babies.

Immunization - Immunization is the process whereby a person is made immune or resistant to an infectious disease, typically by the administration of a vaccine. Vaccines stimulate the body's own immune system to protect the person against subsequent infection or disease.