Chapter – I

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“Every woman is unique; every baby is unique; every birth experience is unique. That is why it is so important to give a woman and her partner choice: choice of place of birth; choice of style of care; and choice of professional who is going to accompany them in this unique and special journey”. Baroness Cumberlege (House of Lords, 2003).

The economy of a country is divided into three main sectors. The service sector, also called the tertiary sector, is one of the three parts of the economy. The other two are the primary sectors, which cover the areas such as farming, mining and fishing; and the secondary sector covers manufacturing and production. The service sector consists of the soft part of the economy, i.e. activities where people offer their knowledge and time to improve productivity, performance, potential, and sustainability. The basic characteristic of this sector is the production of services instead of end products. It is remarkably diverse in nature. It comprises a wide array of industries that sell services to individual consumers, business customers, government agencies and nonprofit organizations. Activities in the service sector include Telecommunication, Pharmaceuticals, Hospitality/Tourism, Mass media, Healthcare/hospitals, Information technology, Banking, Insurance, Financial services, Legal services, Construction, Food processing, Consulting, Education and so on.
In the service sector, the health care industry, one of India’s largest sectors in terms of revenue and employment, is growing rapidly. A hospital is an institution for health care providing treatment with specialized staff and equipments, but not always provide for long-term patients’ stay. Today, hospitals are the centers of professional health care provided by highly qualified physicians and nurses. Hospitals are usually funded by the state, health organizations, health insurances or charities, including direct charitable donations. Similarly, modern-day hospitals are largely staffed by professional physicians, surgeons and nurses, whereas, in the past, this work has been usually done by the religious orders or by the volunteers. Hospitals are of many types. The best-known is the general hospital, which is set up to deal with many kinds of diseases and injuries, and typically has an emergency ward to deal with immediate threats to health and the capacity to dispatch emergency medical services. A general hospital is typically the major health care facility in its region, with a large number of beds for intensive care and long-term care, facilities for surgery and childbirth, biopsy laboratories, and so on. Larger cities may have many different hospitals of varying sizes and facilities. Patients come for diagnosis and/or for treatment and then leave the hospitals during the day itself (outpatients), but some others stay even during nights (inpatients). Placing the patient first, is a challenge that requires not just a huge change in the mindset of all the stakeholders in health care provision, but also the means to measure the levels of satisfaction of patients, and to discover what matters them before, during, and after their visit to the hospital. Customers
perceive quality in services through, how satisfied they are with their overall experiences. This customer oriented terms; quality and satisfaction have been the focus of attention for executives and researchers alike, over the last decade and earlier. Companies today recognize that they can compete more effectively by distinguishing themselves with respect to service quality and improved customer satisfaction.

With the fast growing purchasing power, Indian patients are willing to pay more money to avail health care services of international standard. In the era of globalization and heightened competition, it has been observed that delivery of quality service is imperative for Indian healthcare providers to satisfy their indoor as well as outdoor patients. (Shabbir et.al. 2010) The study has laid its focus on the maternity health services provided by the hospitals to emphasize the importance of reproductive health services. Maternal health refers to the health of women during pregnancy, childbirth and the postpartum period (the period beginning immediately after the birth of a child and extending for a maximum of six weeks). While motherhood is often a positive and fulfilling experience, for too many women it is associated with suffering, ill-health and even death. According to the Central Intelligence Agency publications there are 200 deaths per 1,00,000 live births in India (2010) which states that our country is in the 54 position, when compared to other countries of the world which experience safer deliveries than ours. One of the greatest risks to the health of a woman is childbearing. The World Health Organization (WHO) presents key recommendations on the delivery of
maternal and neonatal care in health facilities. It stresses that the health facilities should have certain standards in place as a minimum (essential) care for all mothers and babies in need of obstetric and special care. Worldwide maternal health services are directed towards improving women’s health which is now receiving the attention they deserve with the focus and emphasis put on the concept of “Reproduction Health” which is a partnership approach in the provision of quality care to the whole woman and taking into consideration the well-being of the entire family. This quality care must be provided with compassion, dignity, confidentiality, continuity and informed choice. (Zineldin,2006). This approach has led to quality assessment in reproductive health services which examines service delivery in a comprehensive manner, taking into account the points of view of health facility users, quality of services at a structural level and describes how quality services are actually delivered. A health care organization can achieve patient satisfaction by providing quality services; keeping in view patients’ expectation and continuous improvement in the health care service. This study focuses on the measurement of patient satisfaction in the light of service quality provided by the hospitals. In this regard, the application of redefined SERVQUAL (Service Quality) model has been considered to investigate the relevance of the same in measuring patient satisfaction in Health sector in today’s competitive environment. RATER (Reliability, Assurance, Tangibility, Empathy and Responsiveness) dimensions are used for evaluating service quality through patient satisfaction.
HISTORY & DEVELOPMENT OF MATERNAL & CHILD HEALTH SERVICES IN INDIA

A maternity hospital is a hospital that specializes in care for women while they are pregnant and during childbirth. The hospital also provides care for newborn infants. These were started with the help of many voluntary organizations. Modern Maternal & Child health work was begin in India by the foreign missionaries with effort to train dais. Dai is a woman who is illiterate, with little formal training, five years of practical experience conducting deliveries, is herself a mother and supported by the community.

The historical facts are as follows

1885 : An association for medical aid by the missionaries to the women of India was established by the Countess of Dufferin

1918 : Lady reading Health School was started in Delhi offering health visitors course. This was another stepping stone in Maternal and Child Health Services

1921 : Lady Chelmsford League was formed in India for developing Maternity & Child welfare services

1931 : The Indian Red cross society established Maternal and Child Health Bureau in association with the Lady Chelmsford League & Victories memorial Scholarship Fund & Co-ordinated the Maternal and Child Health work throughout the country. Madras was the first state then to set up a separate section for Maternal & Child welfare in the Public health department under the control of an Assistant Director of Public Health. It was again Madras state which first attempted to replace the better qualified personnel such as midwives & nurse midwives. The
midwife is recognized as a responsible and accountable professional who works in partnership with women to give the necessary support, care and advice during pregnancy and labour to conduct births on their own responsibility and to provide care for the infants. The midwife has an important task in health counseling and education, not only for the woman, but also within the family and community. A midwife may practice in any setting at home, the community, hospitals, clinics or health units.

1938 : Indian Research Fund Association was established which formed a committee that undertook the investigation into the incidence & cause of Maternal & infant morbidity & mortality. Sir A. Mudaliar was the key person of this committee. Investigation thus carried out in certain cities of the country revealed that (i) Institutional Midwifery services were limited, (ii) Maternal & Child welfare centre were poorly equipped & staffed, (iii) Untrained dais mostly handled the deliveries. This situation continued for some more time.

1946 : The Fifth health survey & development committee (Bhore committee) stated in its report that India was facing the problem of high maternal & infant death. It recommended empathetically that the measures for the reduction of sickness & mortality of mothers & children should have the highest priority in the health development programme of India. It was also mentioned that these deaths were preventable with the help of organized health services.

1951 : Bacillus Calmette–Guérin (BCG) Vaccination programme was launched

1952 : Primary Health centre set up

1953 : Nationwide family planning programme was initiated

1965 : Direct Bacillus Calmette–Guérin (BCG) Vaccination without prior
tuberculosis test on a house to house Basis initiated

1970 : All India Hospital (Post-partum) Family Planning Programme was started

1976 : National Programme for Prevention of Blindness was formulated

1977 : Multipurpose health worker scheme was launched

1978 : Extended Programme on Immunization was launched (EPI) was launched

1983 : National Health Policy – Maternal and Child Health & Family welfare services were integrated during this policy

1985 : Universal Immunization Programme was launched. A separate Department of women & Child Development was set up under the newly created Ministry of Human Resource Development

1987 : A world wide “Safe Motherhood Campaign” was launched by World Bank

1990 : Control of Acute Respiratory Infection (ARI) programme initiated as a pilot Project in 14 districts

1992 : Child Survival & Safe Motherhood Programme (CSSM) was launched on 20 August
  • SMI (Safe Motherhood Initiative) Programme was started
  • The Infant Milk substitute, feeding bottles & Infant food (regulation of Production, Supply & Distribution) Act 1992 came into force

1995 : ICDS renamed as Integrated Mother & Child Development Services (IMCD)

1996 : Pulse Polio Immunization, the largest single day public health event took place on 9th & 20th Jan 1996. 2nd phase PPI was conducted on 7th Dec 1996 & 8th Jan 1997.

Prenatal Diagnostic Technique (Regulation & Prevention of Misuse)
act 1994 came into force from Jan 1996.

1997 : Reproductive and Child Health (RCH) programme in October

After : The National Family Welfare Program had undergone a Paradigm shift, from the past, with its focus on target free approach based on community needs, decentralized participatory planning and greater emphasis on quality of care and client satisfaction

Till date the Government of India has amended the Reproductive and Child Health Programme under the Eleventh Five Year Plan to emphasise on need-based, client-oriented, demand-driven and high quality integrated services.

Five Key Principles as the basis of Reproductive and Child Health Programme:

- Moving away from traditional approach of numerical, method-specific, contraceptive targets and incentives to a client-centered system of performance goals and measures.
- Expanding the use of male and reversible contraceptive methods and broadening the choice of contraceptives.
- Improving the breadth, availability and quality of services and involving communities for managing the public sector programmes.
- Strengthening the role of the private sector in the programme.
- Assuming adequate funding for the current programme and for the expansion, which is implicit in adopting the reproductive health approach.
The provision of good quality care is the main thrust of the RCH programme. Thus, greater emphasis is given to better quality of services than those under the previous National Family Welfare Programme. Good quality of service is determined by:

- Type of services provided: need based and through community needs assessment approach,
- Competence of the service providers,
- Good quality of equipment, which are correct, appropriate, well-maintained and well-utilized,
- Attention to Social aspects of the reproductive and child health problems.
- Gender sensitivity
- Timing of delivery of the services which is suitable for women
- Encouraging male participation and
- Involvement of women in the programme.

**SERVICE QUALITY**

Service quality can be defined as “the collective effect of service performances which determine the degree of satisfaction of a service user”. It is reflected at each service encounter in a delivered service. Customers form service expectations from past experiences, word of mouth and advertisement. They generally have a tendency to compare the service they 'experience' with the service they 'expect'. When the experience fulfills their expectations there is a satisfaction.
The most important and widely used service quality model is SERVQUAL method. The service quality model developed by Parasuraman, Zeithaml and Berry (1990) highlight the main requirements for delivering high service quality. They are as follows: Reliability of the service performance; Assurance exhibited by the service provider; Tangibles available in the service organization; Empathy exhibited by the service provider and Responsiveness of the service provider.

**SERVQUAL** is a service quality framework. SERVQUAL was developed in the mid-eighties by Zeithaml, Parasuraman & Berry (1988)

**SERVQUAL** (Service quality) was originally measured on 10 aspects of service quality:

1. Access
2. Communication
3. Competence
4. Courtesy
5. Credibility
6. Reliability
7. Responsiveness
8. Security
9. Tangibles
10. Understanding/Knowing the Customer

By the early nineties the authors had refined the model to the useful acronym RATER:
RATER (Reliability, Assurance, Tangibility, Empathy and Responsiveness)

dimensions sorted by relative importance (Zeithaml, 1990).

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Description</th>
<th>Relative importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliability</td>
<td>Ability to perform the promised service dependably and accurately</td>
<td>32 per cent</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>Willingness to help customers and provide prompt services</td>
<td>22 per cent</td>
</tr>
<tr>
<td>Assurance</td>
<td>Knowledge and courtesy of employees and their ability to convey trust and confidence</td>
<td>19 per cent</td>
</tr>
<tr>
<td>Empathy</td>
<td>Specialised and individualized attention the firm provides to its customers</td>
<td>16 per cent</td>
</tr>
<tr>
<td>Tangibles</td>
<td>Existence of adequate physical facilities, equipment and personnel</td>
<td>11 per cent</td>
</tr>
</tbody>
</table>

Every organization wants to get loyal customers which add to repeating purchases and of course increasing their revenue to the maximum but to get there, the organization need to know about the five Service Quality Dimensions. Service is not just a little part of the marketing mix, but it is actually a very important part of both the four and seven P's. Each of the five Service Quality Dimensions makes an extra addition to the level and quality of service which the organisation offers their customers. It also makes the service far more unique and satisfying.

**Dimension I - Reliability**

The reliability Service Quality Dimension refers to how the company are performing and completing their promised service, quality and accuracy within the given set requirements between the organization and the customer. Reliability is
just as important as a good first hand impression, because every customer want to
know whether their supplier is reliable or not and fulfill the set requirements with
satisfaction.

**Dimension II - Responsiveness**

The responsiveness Service Quality Dimension refers to the willingness of
the organisation to help its customers in providing them with a good, quality and
fast service. This is also a very important dimension, because every customer feels
more valued if they get the best possible quality in the service.

**Dimension III – Assurance**

The assurance Service Quality Dimension refers to the organisation's employees. Are the employees skilled workers which are able to gain the trust and confidence of the customers? If the customers are not comfortable with the employees, there is a rather large chance that the customers will not return to do further business with the organisation.

**Dimension IV - Empathy**

The empathy Service Quality Dimension refers to how the organisation cares and gives individualized attention to their customers, to make the customers feel extra valued and special. The fifth dimension actually combines the second, third and fourth dimension to a higher level. If the customers feel they get individualized and quality attention there is a very big chance that they will return to the organization.
Dimension V - Tangibles

The tangible Service Quality Dimension refers to the appearance of the physical surroundings and facilities, equipment, personnel and the way of communication. In other words, the tangible dimension is about creating first hand impressions. Any organisation should want all their customers to get a unique positive and never forgetting first hand impression, this would make them more likely to return in future.

Service quality in Maternity hospitals:

The RATER’s model proposed by Parasuraman et al, (1990) have been utilized to evaluate the quality of maternity hospitals within Tiruchirappalli Corporation by performance based aspect of the measure.

1.1 STATEMENT OF THE PROBLEM

Childbirth is a major event in the lives of women who become mothers, and for their families and communities. There are 34 live births registered per day in India every minute. Most of the time pregnancy and childbirth are healthy experiences for both women and their babies.

Pregnancy and birth are, in fact, so ordinary or commonplace that they may be invisible – in society as well as on political and health agenda. Because it is such an ordinary part of life, we have just assumed that good maternity care is readily available for women and families as they move from pregnancy through birth and parenting. Despite, its everyday occurrence however, pregnancy and
childbirth are approached as serious, potentially life-threatening medical conditions, requiring both medical specialists and a great deal of technology, rather than the normal, healthy physiological events. According to the Human Development Report the maternal mortality rate (the annual number of female deaths per 100,000 live births from any cause related to or aggravated by pregnancy or its management, excluding accidental or incidental causes) among the various Asian countries shows that Iran has the least mortality rate of 21 per lakh live births followed by Uzbekistan (28), China (37), Thailand (48), Kazakhstan (51) in the fifth position respectively and India is in the eleventh place with a mortality rates of 200 per lakh live births. Within the country, Kerela holds the lowest mortality rate of 81 per lakh live births and Tamil Nadu holds the second position to restrict the mortality rate to 97 among the states (Family welfare statistics of India 2011). Given this approach to pregnancy and childbirth, access to medical care affects where and how women experience these life events. Maternity care is different from other forms of health services. Women’s experiences during pregnancy and birth, good or bad, can deeply affect how women feel about their babies, about themselves as mothers, and their other relationships. Providing pregnant and birthing women with good care therefore, improves the lives of women and their children both immediately and in the long term. Many of us have been led to believe that more technology is always better and that big hospitals are always better than small one but good maternity care always looks like having (1) regular prenatal visits which allow a rapport to
develop between a woman and her provider, it also include time to discuss labour and birth, a woman’s questions and concerns, her hopes and her fears (2) includes standard tests to measure pregnant women’s blood sugar levels and blood and albumin composition to detect some complications in pregnancy. Women need to be given full information about what a test entails, why it is needed, what it can detect, and what a positive or negative result will mean for them and their babies. (3) Supportive care for childbirth begins before labour starts, with good information provided about what to expect physically and what to expect from the doctor. As long as pregnancy, labour and birth are treated respectfully and with confidence, as long as good attentive care is given, most women will proceed through all the stages without any difficulty. In such cases women and their babies fare better. Excellent maternity care is about a philosophy and model of care that is woman and family-centered. Many maternity hospitals do provide woman and family-centered care supported by appropriate changes in the delivery of maternity care services. With the advent of multi-specialty hospitals for all kinds of illness and modernized treatment many people are attracted to approach these hospitals for maternal care also. The rising birth rate is challenging many organisations, as they seek to maintain safe services in terms of both appropriate staffing levels and the physical capacity to care for more women. At the same time changes in expectations for obstetric, pediatric and neonatal cover is driving discussions about the future configuration of maternity services. It will be important to understand the local market so that it can assure itself that providers’ plans are
affordable, achievable as well as delivering high quality safe services. The researcher has made an attempt to study the birthing conditions in the maternity hospitals which are family centred and are longstanding within Tiruchirappalli City Corporation. It is imperative to study the patient experiences to understand the views of the women towards service delivery in such hospitals. To specifically state them the study identifies how the expectant mothers select a hospital for child birth? How do they prioritize the SERVQUAL (service quality) dimensions? What are the areas of concern that need to be improved to enhance quality of maternal services? What effect do baseline demographic and clinical characteristics have on patients' assessments of care?

1.2 OBJECTIVES

GENERAL OBJECTIVE

The aim of the research is to assess the quality of care that is provided by private maternity hospitals in Tiruchirappalli City by applying SERVQUAL model.

SPECIFIC OBJECTIVES

1. to study the socio-demographic profile of the customers of the Maternity Hospital;

2. to identify the factors which influence the choice of a Maternity Hospital and cluster the respondents on the basis of the choice criteria;

3. to determine the influences of SERVQUAL dimensions such as
i) reliability,

ii) assurance,

iii) tangibility,

iv) empathy and

v) responsiveness dimensions on the patients’ assessment of quality in maternity hospitals; and

4. to analyse the impact of SERVQUAL dimensions on patient satisfaction.

1.3 HYPOTHESES

1. There is a relationship between the demographic variables, like educational qualification, occupation, distance and income of the respondent and the choice of a maternity hospital.

2. There is a significant difference among the demographic variables like educational qualification, occupation, distance and income of the respondents with regard to their assessment on the dimensions of service quality of maternity hospitals.

3. There is a significant association between the dimensions of service quality (tangibility, reliability, responsiveness, assurance and empathy) and patient satisfaction.

1.4 METHODOLOGY

Within Tiruchirappalli City Corporation there are 118 hospitals registered and functioning. The researcher undertook a field study to identify a list of private
maternity hospitals which came up to 20 in number. In those hospitals majority of their bed strength were utilized by the health professional (gynecologist) for maternity and child birth except for a few which were used by their spouse, who was also a MD specializing in another discipline.

A Descriptive research is done to study the consumer opinions on the service quality of the maternity hospitals based on the implications of a pre-test.

1.5 PRE-TEST

The researcher obtained a list of hospitals from Tiruchirappalli Corporation. A field study was also undertaken to identify all the hospitals located within the limit during December 2012 as the obtained list was not exhaustive. It included hospitals of various capacities in several names. The researcher pre tested an interview schedule based on SERVQUAL model with a sample of 50 respondents to study the views of the patients admitted in various departments in hospitals. Certain limitations were encountered in collecting the survey instrument from the inpatients of orthopedics, cardiology, nephrology and general surgical departments due to health issues. It was identified that the patients were not responsive to answer, and from those who replied, it was observed that their opinion of service quality differed according to their health related needs in various departments.

The chief indicators of the pilot study are

1. The SERVQUAL model applied in hospitals is unique for each department as health services are multidimensional. Therefore, the researcher decided
to study the patients’ assessment of service quality in a particular discipline where the respondents were relaxed and receptive to answer the survey instrument. For this purpose the maternity hospitals were selected for the study.

2. The private maternity hospitals ranged from having five beds to a maximum of forty three beds. Therefore, four hospitals namely Jagatha, Pankajam, Shyamala and Janet were chosen based on the judgement of the researcher on account of the following justifications:
   a. The bed strength and the average number of deliveries occurred per month (taken from hospital records) by these hospitals are higher when compared to other hospitals
   b. These hospitals are one of the pioneer institutions specializing in maternity services and have been continuing their services for more than twenty five years with leading practitioners in the field.
   c. Service quality can be analyzed better in hospitals where patients undergo prenatal care and treatment prior to child birth.
Table 1.1

TOP FOUR MATERNITY HOSPITALS WITH MAXIMUM NO. OF DELIVERIES

<table>
<thead>
<tr>
<th>Hospital’s Name</th>
<th>Year of establishment</th>
<th>Bed strength</th>
<th>Average No. of deliveries per month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Janet</td>
<td>1988</td>
<td>43</td>
<td>113</td>
</tr>
<tr>
<td>Pankajam</td>
<td>1971</td>
<td>31</td>
<td>62</td>
</tr>
<tr>
<td>Jegatha</td>
<td>1964</td>
<td>30</td>
<td>95</td>
</tr>
<tr>
<td>Shyamala</td>
<td>1979</td>
<td>26</td>
<td>75</td>
</tr>
</tbody>
</table>

Source: Field study

3. The survey instrument was designed to incorporate the views of the respondents from the prenatal phase to the post natal period (i.e) upto one week after child birth. Keeping this in view only private maternity hospitals where people go in for regular prenatal visits till child birth were taken into consideration.

The data collected through the instrument was tested for its internal consistency of reliability using the Cronbach’s Alpha test which resulted in 0.810 which indicates a good output which would support the measurement of a latent construct.

1.6 SAMPLING FRAMEWORK

Combs, Howard (2010) suggests that 100 per hospital would be a sufficient sample to reflect the opinion of a proposed population. In accordance with the review the researcher has selected a larger sample of 150 respondents per hospital.
to minimize the error to four per cent with a confidence level of 95 per cent and a precision rate of 50 per cent

**DETERMINATION OF THE SIZE OF THE SAMPLE**

The sample size was determined statistically using the following formula suggested by David Freedman *et al.*, (1997) taking into consideration the confidence level of 95 per cent, permissible error as estimated by the researcher 4 per cent and the precision rate as 50 per cent

\[ \text{Sample size} = Z^2 \times (p) \times (1 - p) \times C^2 \]

*Z*-values (Cumulative Normal Probability Table) represent the probability that a sample will fall within a certain distribution.

The *Z*-values for 95 per cent confidence level is 1.96

\( p \) refers to the percentage of population who support a choice, expressed as decimal

\( C \) refers to the margin of error expressed as a decimal

\[
\text{Sample size} = (1.96)^2 \times (0.50) \times (0.50)
\]

\[ = 0.0016 \]

\[ = 600 \]

This sample size is equally distributed over the four hospitals and 150 respondents were selected from each hospital chosen for the study.
SAMPLING TECHNIQUE

Convenient sampling technique was adopted as the sampling elements consisted of inpatients who have experienced live births and have spent at least three days in the hospital. They were encountered on the day of discharge as per their accessibility to respond to the instrument.

<table>
<thead>
<tr>
<th>Hospital name</th>
<th>No. of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jegatha</td>
<td>150</td>
</tr>
<tr>
<td>Janet</td>
<td>150</td>
</tr>
<tr>
<td>Shyamala</td>
<td>150</td>
</tr>
<tr>
<td>Pankajam</td>
<td>150</td>
</tr>
</tbody>
</table>

Table 1.2
DISTRIBUTION OF THE SAMPLE

1.7 DESIGNING THE INTERVIEW SCHEDULE

After the pretest was conducted necessary changes were made to the interview schedule to make it appropriate for the study. The recommendations of the health professionals were also incorporated to make it complete in all respects. The instrument was made simple and easy by providing multiple choice questions. The interview schedule consisted of three parts: the first part includes 15 questions relating to the socio demographic data of the patient. In the second part, the instrument contains 14 questions, of which, seven questions relate to prenatal care, three questions relate to labour and birth and four questions relate to postnatal care. In the third part, the schedule was based on modified SERVQUAL model with some modifications suitable for health care consumers to assess the
patients’ perceptions of service quality. The schedule included 30 items reduced in five service quality dimensions as tangibles (seven items), reliability (seven items), responsiveness (six items), assurance (five items), and empathy (five items) followed by five items on loyalty. The attributes under each dimension were rated on a five point Likert scale with scores as follows:

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>5 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>4 points</td>
</tr>
<tr>
<td>Neutral</td>
<td>3 points</td>
</tr>
<tr>
<td>Disagree</td>
<td>2 points</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>1 point</td>
</tr>
</tbody>
</table>

1.8 COLLECTION AND ANALYSIS OF DATA

The researcher collected primary data through a structured interview schedule from the inpatients of the selected private maternity hospitals.

The secondary data was collected from journals, books and reports, published articles and also through the hospital records.

The primary data collected from the respondents have been classified and tabulated for the purpose of analysis and data have been scrutinized by using Statistical Packages for Social Sciences (SPSS) with appropriate coding for the drawing of inferences. Tools like Weighted mean, ANOVA, Chi square, Cluster, Discriminant and Conjoint analysis are applied to analyse the data.
1.9 TOOLS FOR ANALYSIS

ANOVA Test

ANOVA is used for examining the differences in the mean values of the dependent variable for several categories of a single independent variable. It is used to know if there exist a significant difference between the various groups of income, education, occupation and distance on the assessment of dimensions of service quality.

It is also used to know if the mean values of each dimension differ within the select hospitals. In case of significant difference DUNCAN POST-HOC TEST is carried out to investigate differences between the sample hospitals.

Chi square

The chi square statistic is used to test the significance of two variables cross tabulated. It assists in determining whether an association exists between the demographic variables and choice of a maternity hospital. The association between the all the service quality dimensions and the satisfaction of the respondents is also verified.

Discriminant analysis

There are many attributes which are used to discriminate the maternity hospitals by the people. To identify the attributes which best discriminate the selected maternity hospitals, attribute based perceptual map is developed using this analysis. The dependent variable is the choice of maternity hospital and the independent variables are the attributes such as such as quality care, proximity,
cleanliness, waiting time, standard of facilities, personal experience, family members experience, neighbours’ suggestions, experience of the doctor and normal delivery.

**Cluster analysis**

Cluster analysis is a technique used to classify the respondents into relatively homogenous groups called clusters. The respondents are clustered on the basis of self-reported importance attached to each factor of the choice criteria utilized in selecting a maternity hospital for child birth. The demographic profiles of the grouped respondents are compared to identify the features of each cluster and each cluster is named on the basis of the traits identified.

**Conjoint analysis**

Conjoint analysis is used to determine the relative importance consumers attach to the service quality attributes and the utilities they attach to the levels of attributes. This helps in determining the composition of the most preferred attributes that should be present in a product/service. The most favoured maternity hospital in terms of Reliability, Assurance, Tangibility, Empathy and Responsiveness is identified through this analysis.

**1.10 SCOPE OF THE STUDY**

In a decade the number of hospitals in Tiruchirappalli City Corporation has increased twofold. In tune with the increased need to modernize and specialize, many hospitals have emerged with multidisciplinary departments. The
advancement of the sector has led people to opt for specialized health professional in case of any treatment required. Therefore, healthcare organizations emphasized that improved service quality is the only means to acquire the competitive position in the market (Lim and Tang, 2000) asserting that quality is the only key factor that helps the customer to discriminate the services. So, healthcare organizations aimed to gain a competitive advantage by maintaining quality which contributes to success (Taylor, 1994).

Patient satisfaction is considered a widely accepted measure of health care quality and as an outcome indicator to evaluate hospitals. The expanded use of patient satisfaction scores and their association with quality care ratings has confronted hospital management to understand factors that affect these scores. There is a strong relationship between patient satisfaction, the overall quality of care received during hospitalization, and the likelihood to recommend the hospital to family and friends. Hence, it is essential to be aware of how the patients and patient parties evaluate the quality of health care service. Such an understanding facilitates hospital administration to enhance quality of service and satisfy patients to a great extent as well.

There are numerous hospitals within the city which attract people from nearby villages also for maternity and child birth purposes. The study could be presumed to be useful to the target customers to identify those maternity hospitals which render quality service and produce more number of normal deliveries than the other multi speciality hospitals.
The study adds a new perspective towards understanding how the concept of service quality can be adopted in a maternity hospital set up. The researcher elicits the views of the customers regarding service encounters to identify the customer relative importance and satisfaction and detects the areas of dissatisfaction that can be quickly remedied and ensure improvement in the areas of satisfaction.

The facility design of the hospital, with its equipment and technology, has an impact on the quality and safety of patients. This study provides a unique opportunity to the local health professionals to use the current evidence to improve the physical environment in which nurses and other caregivers work, and thus improve both nurse and patient outcomes. It provides benchmarking analysis for hospitals in the same specialization. SERVQUAL can trace the trend of customers’ relative importance if applied periodically.

1.11 LIMITATIONS OF THE STUDY

1. There is no strict classification of hospitals adopted for registering in accordance with their capacities; instead they were named as per the convenience of the health professionals or the management of the hospitals.

2. The services offered by the hospital sector are multidimensional; the findings of the study pertaining to maternity hospitals cannot be applied to other areas of specialization where the outlook of the consumers might differ.
3. In common with studies which consider views of service users in the general population, women feel reluctant to complain about their care, especially when still in hospital.

4. As many hospitals are sprouting out day by day the views of the consumers with regard to the hospitals and their services would change in the future.

1.12 CHAPTER SCHEME

**Chapter I** : It clearly visualizes the design and execution of the study. It deals with the statement of the problem, objectives of the study, hypotheses, methodology, scope of the study and limitations.

**Chapter II** : This chapter deals with the past researches conducted to assess the service quality of the hospitals in general and specifically with regard to maternity services.

**Chapter III** : This chapter deals with the profile of the study area and profile of the maternity hospitals.

**Chapter IV** : This chapter deals with the analysis of primary data, related to the patients’ assessment of service quality in maternity hospitals through various statistical tools.

**Chapter V** : Based on the analysis of data, the researcher presents the findings, conclusion and suggestions about the study on the opinion of the patients on the service quality of maternity hospitals.
END NOTES


6. Standards for Maternal and Neonatal Care Steering Committee, World health organization publication, viewed on 22/06/2013


