CHAPTER II

REVIEW OF LITERATURE

2.1 Introduction

2.2 Literature pertaining to services

2.3 Literature pertaining to service quality

2.4 Literature pertaining to measurement of service quality

2.5 Literature pertaining to significance of SERVQUAL model in healthcare environment

2.6 Literature pertaining to application of SERVQUAL in healthcare sector
CHAPTER II
REVIEW OF LITERATURE

2.1 Introduction
This chapter deals with the review of relevant literature pertaining to the problem selected for the study. The review of literature of previous studies, either theoretical or empirical may assist in the delineation of the new problem area and provide basis for developing a theoretical framework of the study. It may also give an insight into suitable methods and procedures and operational definitions of major concepts and provide a base for the interpretation of the findings. The researcher finds a paucity of literature in the relevant area (particularly literature pertaining to public hospitals and mission hospitals), even though the service quality of private hospitals is studied in different angles both in India and abroad. The viewpoint of various authors regarding service quality and various experts’ conceptions regarding the same is presented in this chapter. The literature review is segregated and presented in the following manner:

a) Literature pertaining to services.
b) Literature pertaining to service quality
c) Literature pertaining to the measurement of service quality.
d) Literature pertaining to the significance of SERVQUAL model in healthcare environment.
e) Literature pertaining to application of SERVQUAL in healthcare sector.

2.2 Literature pertaining to services
There are three sectors in an economy. They are the primary sector (extraction such as mining, agriculture and fishing), secondary sector (manufacturing) and tertiary sector (services sector). There was a developmental progression of heavy reliance on primary sector toward the development of manufacturing sector and finally toward a more service based structure. Currently, the service sector is one of the most intensive international competition and most common workplace in India. The service sector consists of the soft parts of the economy such as insurance, government, tourism, healthcare, banking, retail, education, and social services.¹
In developing countries like India, the services sector can lead to inclusive growth through backward and forward links, according to Banga (2005)\(^2\) in a study titled ‘Critical issues in India’s service-led growth’. Deloitte (2011)\(^3\) in the research ‘Inclusive growth: A challenging opportunity’ view that the services sector also ensures equitable access to the basic services at low prices by creating employment opportunities and by developing human capital.

According to Cronin and Taylor (1992)\(^4\) in their study “Measuring Service Quality: A Re-examination and Extension”, the increase of economic share of service sector in almost all economies of the world has led to the expectations for the high quality of services. Therefore, delivering superior quality services to the customers are the key strategies adopted by most of the organisations to sustain in this competitive environment.

There are many other reasons given to explain the growth of services; some inspired by the theories previously discussed, and some are independently developed by various researchers. Some of these are summarized as follows\(^5\):

i. The increase in efficiency of agriculture and manufacturing that releases labor to services.

ii. The flow of workers from agriculture and other extraction to manufacturing and then to services.

iii. The application of comparative advantage in international trade.

iv. A decrease in investment as a percentage of Gross Domestic Product (GDP) in high-income industrialized countries or an increase in the percentage of the GDP in low-income countries.

v. A rise in per capita income.

vi. An increase in urbanization.

vii. Deregulation.

viii. Demographic shifts.

ix. An increase in international trade.

x. Joint symbiotic growth of services with manufacturing.

xi. Advances in information and telecommunication technologies.
In the next two decades (a ‘growth window’ for India which may not come again because the working population to total population ratio increases up to mid-2030s) it will be important for India to absorb the growing labour force if the services sector is to play an important role. India is in a strong position to do this since it has a history of using English for communication, which in turn supports global trade and finance. Only the services sector can have a major impact on poverty. Improvements in agriculture are not having an effect on poverty. To address poverty there is a need to move people from bad sectors to good sectors or from unemployment to employment. This is happening with growth in human skills intensive sectors such as hotels, restaurants and IT, but there are geographical, labour unions and human skills restrictions on labour movement.6

The interface of the two parties namely, the service provider and the consumers, is the foundation of services. The distinguishing feature of services is its intangibility, inseparability, heterogeneity and perishability. Mostly healthcare services are intangible in nature like the hospital environment, expertise of doctors, care given by the staff, and the like. Sometimes it is a blend of intangibles and tangibles (e.g., spectacles, prosthetic device, medicine, laboratory reports) and this fusion creates service products in healthcare sector as viewed by Irfan (2011)7 in their comparative study titled “Comparison of service quality between private and public hospitals: empirical evidence from Pakistan”.

Patients view services in terms of their whole experience which includes the successful surgery, hospital environment, tidy rooms and wards, courteous staff, informative physicians and nurses, supportive staff and excellent follow-up.

2.3 Literature pertaining to service quality

Nimit and Monika (2007)8 in a study on “Prioritizing service quality dimensions” view that “Service quality is an obscure and abstract concept” as described by researchers. Service quality received extensive attention and interest of both practioners and researchers during the last couple of decades.

Service quality has been defined by various researchers from diverse angles. Bitner, Booms and Mohr (1994)9 in their research “Critical service encounters: The
Employees Viewpoint”, define service quality as “the consumer’s overall impression of the relative inferiority or superiority of the organisation and its services.”

In a study titled “SERVPERF Versus SERVQUAL: reconciling performance based and perceptions minus expectations measurement of service quality” undertaken by Cronin and Taylor (1994)\textsuperscript{10}, they observe that service quality as a form of attitude representing a long-run evaluation.

Gronroos (2001)\textsuperscript{11} in his report titled “The perceived service quality concept- a mistake” defined service quality as “a function of the differences between expectations and performance along the quality dimensions.”

Roest and Pieters (1997)\textsuperscript{12} define service quality from the same perspective as “service quality is a relativistic and cognitive discrepancy between experiences based norms and performances concerning service benefits.”

Zeithaml, Parasuraman and Berry (1990)\textsuperscript{13} propound that service quality is consumer’s perception about the level of services, either it is of high quality or low quality. Thompson, Glenn and Bradley (1985)\textsuperscript{14} in their paper entitled “The strategic management service quality” opine that the driving force towards the success in services business is the delivery of high quality service. Many researchers established that the quality of services is the key determining factor of consumer satisfaction. Most of the theorists agree that customer satisfaction is a short-term, transaction-related measure whereas service quality is an attitude formed by long-term and overall appraisal of performance. Incredibly, both service quality and customer satisfaction are interolved. Some of the researchers believe that customer satisfaction leads to perceived service quality, while some believe that service quality leads to customer satisfaction. Still, the relationship that exists between customer satisfaction and service quality and their effect on purchasing behaviour still remains unexplained was deciphered by Cronin and Taylor (1992)\textsuperscript{15}.

In his book, Bateson (1995)\textsuperscript{16} point out that the service providers must focus on service quality and proper systems must be evolved to substantiate that goal by being controlled effectively and delivered as it was premeditated to be delivered. The entire organisation needs to be focused on the task of evaluating high quality in order to
deliver a compatible set of satisfying experiences and the performance constrictions under which a firm operates and the need of the consumers must be apprehended in detail.

Thus it can be inferred that service quality is a vital component of customer perceptions. Service quality will be the dominant element in customer’s evaluations in pure services like healthcare, financial services, education. When customer service or services are offered in combination with physical product (e.g. IT services, auto services), service quality may be very critical in determining customer satisfaction. The following diagram reflects the relationship between expected service and perceived service:

Fig 2.1
Relationship between expected service and perceived service

Source: Adapted from Gronroos (1984)
2.4 Literature pertaining to measurement of service quality

Service quality is an intricate process and difficult to appraise. The measurement of service quality was a critical issue and number of service quality models was presented during the last couple of decades.

Table No. 2.1

Table depicting service quality models

<table>
<thead>
<tr>
<th>Author &amp; Year</th>
<th>Service Quality model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parasuraman, 1985</td>
<td>GAP Model.</td>
</tr>
<tr>
<td>Haywood-Farmer, 1988</td>
<td>Attribute service quality model.</td>
</tr>
<tr>
<td>Brogowsic, 1990</td>
<td>Synthesised model of service quality.</td>
</tr>
<tr>
<td>Cronin &amp; Taylor, 1992</td>
<td>Performance only model (SERVPERF)</td>
</tr>
<tr>
<td>Mattsson, 1992</td>
<td>Ideal Value model of service quality</td>
</tr>
<tr>
<td>Teas, 1993</td>
<td>Evaluated performance and normed quality model.</td>
</tr>
<tr>
<td>Berkley &amp; Gupta, 1994</td>
<td>IT alignment model.</td>
</tr>
<tr>
<td>Dabhilkar, 1996</td>
<td>Attribute and overall affect model</td>
</tr>
<tr>
<td>Spreng &amp; Mackoy, 1996</td>
<td>Model of perceived service quality and satisfaction</td>
</tr>
<tr>
<td>Philip &amp; Hazlett, 1997</td>
<td>PCP attribute model.</td>
</tr>
<tr>
<td>Sweeney, 1997</td>
<td>Retail service quality and perceived value model.</td>
</tr>
<tr>
<td>Oh, 1999</td>
<td>Service quality, customer value and customer satisfaction model.</td>
</tr>
<tr>
<td>Dabholkar, 2000</td>
<td>Antecedents and mediator model</td>
</tr>
<tr>
<td>Frost and Kumar, 2000</td>
<td>Internal service quality model</td>
</tr>
<tr>
<td>Soteriou and Stavrinides, 2000</td>
<td>Internal service quality DEA model.</td>
</tr>
<tr>
<td>Broderick &amp; Vaachrampump, 2002</td>
<td>Internet banking model.</td>
</tr>
<tr>
<td>Zhu et, 2002</td>
<td>IT-based model</td>
</tr>
<tr>
<td>Santos, 2003</td>
<td>Model of E-service quality.</td>
</tr>
</tbody>
</table>

Source: Nitin Seth and Deshmukh, 200517.

Among all the models used to appraise service quality, the SERVQUAL model formulated by Parasuraman, Zeithaml and Berry18 in 1985 is the commonly used
model. It is an empiric model to compare quality performance with customer service quality needs. It is adopted to do a gap analysis of an organization’s service quality performance against the service quality need of its customers. That’s why it is called the GAP model. According to Parasuraman, (1985), customer perception about the service quality can be determined by the five gaps as represented below:

**GAP MODEL OF SERVICE QUALITY**

![Fig 2.2](image)

*Gap model of service quality*

*Source: Adapted from Zeithaml and Parasuraman (1988).*
GAP 1 - It is the gap between the management perceptions of consumer expectations and expected service by the customer.

GAP 2 - This is the gap between translation of perceptions into quality specifications and management perceptions of consumer expectations.

GAP 3 - The gap between service delivery and translation of perceptions into quality specifications.

GAP 4 - The gap between external communication to consumers and service delivery.

GAP 5 - The gap between expected service and perceived service by the consumer.

The SERVQUAL scale is used to determine Gap 5 that is differences between expectations and perceptions. SERVQUAL was based on Disconfirmation Model was suggested by Oliver (1980) in his research “A Cognitive Model of Antecedents and Consequences of satisfaction decisions”.

Baggs and Kleiner (1996) in their research “How to measure customer service efficiently?” point out that although the SERVQUAL model provides good relative indication on how the service levels rate against similar competitors, it lacks a quantitative foundation that can be used universally across industries.

Buttle (1996) in his research “SERVQUAL: Review, Critique, Research Agenda” opined that SERVQUAL was based on the concept that customer’s estimation of service quality is the foremost. He also mentions that SERVQUAL is used by researchers in various service industries like retailing, restaurants, banking, telecommunication, airline, hotels, hospitals and education.

Lee, Bunda and Kim (2000) in their study “Methods of measuring health care service quality” proposes that satisfaction is a function of the disconfirmation of perception from expectation.

Nyeck, Ladhari and Pons (2002) opined that SERVQUAL remains the most complete attempt to conceptualise and measure service quality and insists that it is a well anchored as well as trusted model for measuring service quality of all the services.
Rohini and Mahadevappa (2006) in their empirical study on service quality in Bangalore Hospitals substantiated that SERVQUAL is a standardised and reliable instrument that classifies five different dimensions of service quality and authenticates those dimensions in different service situations:

- **Tangibles**: Appearance of physical facilities, equipment, personnel, and communication materials.
- **Reliability**: Ability to perform the promised service dependably and accurately.
- **Responsiveness**: Willingness to help customers and provide prompt service.
- **Assurance**: Knowledge and courtesy of employees and their ability to inspire trust and confidence.
- **Empathy**: Caring, individualized attention the firm provides its customers.

Llosa, Chandon and Orsinger (1998) are of the opinion that these dimensions have 22 statements which have to be written twice: first to find out the customer’s expectations from the service providers and second to measure perceptions of performance of the same service provider.

The SERVQUAL instrument, added with some modifications or additional operational measurements, have been used to measure service quality in a variety of service industries but not restricted to: education (Arambewala & Hall 2006); hotels (Olorunniwo, Hsu and Udo 2006); banking (Roig 2006); Yavas (1997); retail stores (Eastwood, Brook and Smith, 2005); Airlines (Prayag 2007) and mobile communications (Lai 2007).

2.5 Literature pertaining to the significance of SERVQUAL model in healthcare environment

Uzun (2001) opined that even though several tools have been developed for the measurement of patients’ expectations and perceptions, these tools differ in terms of meaning, content and measurement but the SERVQUAL instrument developed by Parasuraman, Zeithaml and Berry (1988) remains the most widely used tool to (i) identify the implicit consequence of the five dimensions of tangibility, responsiveness, reliability, assurance and empathy on customer perceptions and (ii) track quality inclination over time.
The SERVQUAL device has been empirically tested in the hospital environment and has been established as a reliable and valid instrument in a hospital setting as found out by Babukus and Mangold (1992)\(^{35}\) in their study “Adapting the SERVQUAL scale to hospital services: An empirical investigation”.

Zeithaml and Bitner (1996)\(^{36}\) in their book on “Services marketing” pointed out that SERVQUAL model can be applied to healthcare sector from the following dimensions:

- Reliability: Appointments kept in schedule, accurate diagnosis.
- Responsiveness: Accessible services, no waiting, willingness to listen.
- Assurance: Knowledge skills, credentials, reputation.
- Empathy: Patient acknowledged as a person, awareness of previous problem, Patience.
- Tangibles: Waiting room, examination room, equipment, written materials.

In the study titled “Perceptual gaps in understanding patient expectations for healthcare service quality” conducted by O’Conner, Trinh and Shewchuk (2001)\(^{37}\) revealed that SERVQUAL tool is adaptive to analyse the perceptual gap in understanding patient expectation among healthcare stakeholders. Pakdil and Harwood (2005)\(^{38}\) in their research titled “Patient satisfaction in a pre-operative assessment clinic: an analysis using SERVQUAL dimensions” found SERVQUAL to be an expedient model to measure the differences between patients’ expectations and their actual experiences. Through their study titled “Perceived service quality in the urgent care industry”, Qin and Prybutok (2009)\(^{39}\) accentuated that all the five dimensions of service quality in SERVQUAL instrument are emphatic and infallible in the health care setting. Chunkala (2010)\(^{40}\) undertook a project on “International Patients’ Satisfaction towards Nurses Service Quality at Samtivej Srinakarin Hospital” which vouched that SERVQUAL helps in comprehending the customers’ value and how well a hospital fulfils the needs and expectations of the patients.

The seven benefits of SERVQUAL were excogitated in the research by Mangkolbrat (2008)\(^{41}\) on “Foreign patient customer satisfaction with Private Hospital service” which can be summarised as follows:
a) It is good at eliciting the views of the customers regarding service encounters.
b) It is able to warn the management to consider the perception of both the employees and customers.
c) The fulfillment of the expectations by addressing the service gaps and formulating suitable strategies is ensured.
d) It is able to identify the specific areas of superiority and limitations.
e) The areas of service weakness can be prioritized.
f) It provides prototype analysis for organisations in the same industry.
g) SERVQUAL can identify the trend of customers’ relative value, expectations and perceptions, if applied recurrently.

2.6 Literature pertaining to application of SERVQUAL in health care sector

Reidenback and Sondifer-Smallwood (1990) in their study titled “Exploring perceptions of hospital operations by a modified SERVQUAL approach” employed a varied SERVQUAL approach to bring out the relationship among patients, outpatients and emergency room patients’ perception and their overall perceptions of service quality satisfaction. Seven dimensions were identified and it was found that ‘patient confidence’ affected patient satisfaction in all three environments and influenced perception of service quality in both the inpatient and outpatient settings.

Babukus and Mangold (1992) through their study titled “Adapting SERVQUAL scale to hospital services: An empirical investigation” found that SERVQUAL is dependable and effectual in the hospital environment. In the same year, Silvestro and Johnston (1992) through their research titled “The determinants of service Quality: Hygiene and Enhancing Factors in Scheuig” found eighteen aspects of quality such as cleanliness, aesthetics, comfort, functionality, reliability responsiveness, flexibility, communication, integrity, commitment, security, competence, courtesy, friendliness, attentiveness, care, access and availability and recognised care as the predominant quality factors

‘Caring’ and ‘patient outcomes’ were the additional two quality dimensions identified by Bowers, Swan and Koehler (1994) to the five generic quality dimensions of SERVQUAL in their paper “What attributes determine quality and
satisfaction with healthcare delivery?” The study tapered that Empathy, responsiveness, communication and caring were strongly correlated with complete patient satisfaction.

“Grounds of discrimination establishing criteria for evaluation” was the research undertaken by Gabboott and Hogg (1995)\textsuperscript{46} through which it was constituted that “caring” was a dimension but decided not to segregate it as a separate dimension since it was already covered by the five SERVQUAL dimensions.

Anderson (1995)\textsuperscript{47} employed SERVQUAL to assess the quality of service offered by the Public University Health Clinic in his research “Measuring service quality at University Health Clinic”. It was brought out that the Health Clinic was deficient in assurance dimension which means that there is a lacuna in creating a sense of security in the minds of the patients and also there was lacking in exhibiting courtesy and politeness by the employees.

Youssef (1996)\textsuperscript{48} employed SERVQUAL to expose the satisfaction of patients in the National Health Service Hospitals in the United Kingdom. The study revealed that reliability was the prominent dimension which had an effect on the patients’ perceptions; the least focal dimension was the tangibility dimension.

In the study titled “Continuous Quality Improvement in acute healthcare: Creating a holistic and integrated approach” by Sewell (1997)\textsuperscript{49}, the influencing dimension on patients’ perception was reliability, next was empathy and responsiveness (rated equally) and the last dimension was the tangibility factor.

Lam (1997)\textsuperscript{50} in his work “SERVQUAL: A tool for measuring patient’s opinions of hospital service quality in Hong Kong” analysed the applicability of SERVQUAL to the healthcare sector in Hong Kong. The study showed that SERVQUAL is a consistent and reliable framework to quantify health care quality. The results from the Factor analysis revealed that the measurement scale could be considered as ingenuous as the results describe one factor dominating which comprise expectations and perceptions.

Service quality was examined in Greece with respect to the public and private hospitals by Angelopoulou, Kangis and Babis (1998)\textsuperscript{51} through their study “ Private
and Public Hospitals: A comparison of quality perceptions”. The patients in the private hospitals were more satisfied with the infrastructure, waiting time and admission procedures whereas in case of the public hospitals, the competent quality of the physicians and nurses were the source of satisfaction for patients.

**Camilleri and O’ Callaghan (1998)**\(^5^2\) looked into the service quality in public and private hospitals in Malta in their research “Comparing public and private hospital care service quality”. It was found that both the hospitals’ services surpassed their customers’ perception. A five-facto model that influences patients’ satisfaction was propounded by **Andaleeb (1998)**\(^5^3\) through their research “Determinants of customer satisfaction with hospitals: A managerial model” at Pennsylvania. The result disclosed that perceived competence of the hospital and their department had a substantial effect on the patients’ satisfaction.

In Australia, **Dean (1999)**\(^5^4\) examined the applicability of refined SERVQUAL, consisting of fifteen statements in both medical care and healthcare settings by undertaking a research on “Applicability of SERVQUAL in different health-care environments”. The findings brought forth that the service quality dimensions diverge according to the health service offered. Responsiveness and Reliability were mainly considered to influence patients’ perception in medical care environment whereas Assurance and Empathy topped the list in the health care environment.

**Dabholkar, Shepherd and Thorpe (2000)**\(^5^5\) through their paper titled “A comprehensive framework for service quality: An investigation of critical, conceptual and measurement issues through a longitudinal study” confirmed that service quality is an antecedent to customer satisfaction and both service quality and customer satisfaction are two distinguishable terms and commended that both should be measured separately so that customers’ evaluation of service quality could be interpreted.

**Lim and Tang (2000)**\(^5^6\) in their examination titled “A study of patients’ expectations and satisfaction in Singapore hospitals” altered the SERVQUAL dimensions from five to six and included Accessibility and affordability along with the
already existing dimensions. This study noticed that all the hospitals needed to ameliorate their services in all the six dimensions.

A study titled “Service quality perceptions and patient satisfaction: A study of hospitals in a developing country”, undertaken in urban Bangladesh by Andaleeb (2001)\textsuperscript{57} brought into focus that patients’ perceptions were deficient in all the five dimensions of SERVQUAL namely, responsiveness, assurance, communication, discipline and baksheesh (tips). Discipline dimension was an outstretched concept of tangibles dimension and this had the greater impact on customer satisfaction followed by assurance, responsiveness and communication. The dimension that had the least impact of satisfaction was baksheesh (tips).

Wong (2002)\textsuperscript{58} in his investigation “Service quality measurement in a medical imaging department” discovered that the three SERVQUAL dimensions namely responsiveness, assurance and empathy, among the five dimensions, were the dominant reasons which affected the patients’ satisfaction.

A comparative study of the “Quality of Private and Public hospitals” was undertaken by Jabonn and Chaker (2003)\textsuperscript{59} with regard to all the dimensions of service quality. It was found that the public hospitals were better perceived than the private hospitals on the quality of the services offered.

In the same year, Sohail (2003)\textsuperscript{60}, in Malaysia, undertook a research to analyse the service quality of private hospitals bearing the title “Service quality in hospitals: More favourable than you think”. It was evident from the study that the patients’ perceptions surpassed their expectations for all the items of the service provided by the private hospitals.

A field study on the “Quality of services of Primary Health Centres (PHCs)” in India was examined by Rameshan (2004)\textsuperscript{61}. It was noticed that the services provided by the PHCs were inadequate in many aspects. The customers and the villagers perceived that the physicians and the staff at the PHCs were unable to rectify any of the grievances raised by the villagers.
Boshaff and Gray (2004)\textsuperscript{62} in their study “The relationship between service quality, customer satisfaction and buying intentions in the private hospital industry” performed a service quality research in South Africa among the private healthcare organisations. It was inferred from the study that nursing staff’s empathy, assurance and tangibles had a positive impact on the loyalty of the patients.

Varimly and Cakir (2004)\textsuperscript{63} identified four service quality dimensions, namely, physicians, nurses, process and personnel in the study on the patients in private hospitals in Turkey. Patients were satisfied mostly due to the demeanour of the physicians and nurses and were moderately influenced by the price of the services offered.

A research on “The applicability of SERVQUAL in cross national measurements of health-care quality” was undertaken by Kilbourne, Duffy and Giarchi (2004)\textsuperscript{64} which emphasised that SERVQUAL has the ability to captivate even the weak indicators of quality in an extraordinary manner namely, tangibles, responsiveness, reliability, tangibles and empathy and also the total service quality.

An effort to examine the customer satisfaction, expectations and perceptions as a measure of service quality was undertaken by Mququ (2005)\textsuperscript{65} through his study titled “A survey of customer satisfaction, expectations and perceptions as a measure of service quality in Sanbs”. The results depict that the customers were dissatisfied with the services they receive and the expectations of the private hospitals and rural hospitals were rated higher than those of the state urban hospitals.

In Turkey an attempt was made by Pakdil and Harwood (2005)\textsuperscript{66} through their analysis titled “Patient satisfaction in a preoperative assessment clinic: An analysis using SERVQUAL dimension” to apply SERVQUAL in order to assess the patients’ satisfaction by determining the gap between patients’ expectations and perceptions. It was found that the patients were highly satisfied with all components of service quality and in particular, they were satisfied with the ‘adequate information about surgery’ and ‘adequate friendliness, courtesy’ concepts of service quality.
Two additional dimensions were identified by Ramsuran-Fowder (2005) in his paper “Identifying healthcare quality attributes”, namely, “core medical outcomes” and “professionalism or skill or competence” and added some attributes to the already existing items of the five SERVQUAL version. The study concluded that SERVQUAL dimensions could not be duplicated entirely to the healthcare services.

Wisniewski and Wisniewski (2005) used SERVQUAL in a Colposcopy Clinic in Scotland and measured the five dimensions by expending mean score and T-test analysis. Among the five dimensions, reliability was the dimension that had both highest mean weight and largest negative gap.

Donabien (2005) while “Evaluating the quality of medical care”, views that patient satisfaction has become an essential consequence of the quality of health care services and a vital aspect to define quality from the view of patient expectations. Thus satisfaction with health care is related to the quality of healthcare services provided by the health care providers.

In the same year 2005, an empirical study was conducted by Mostafa (2005) to analyse the “Expectations and satisfaction of patients in Egyptian public and private hospitals”. It was pointed out that there existed some inconsistency between the three-factor component and the five dimensions of SERVQUAL. Nevertheless, the 22 statements of SERVQUAL in both expectations and perceptions were found significant in the study.

Rohini and Mahadevappa (2006) probed into the patients’ satisfaction through their empirical study on “Service quality in Bangalore based hospitals”. The results exposed that expectations surpassed the perceptions of the patients for all the dimensions of SERVQUAL. The least negative score in all hospitals was assigned to the assurance dimension.

Yagci and Daman (2006) investigated the “Relationship between service quality and customer satisfaction in public, private and university hospitals in Turkey”. The public hospitals had the lowest values in service quality dimensions and overall
satisfaction, followed by the university hospitals. The private hospitals had good scores with regard to the service quality dimensions and overall satisfaction.

Rao, Krishna Peters and Karen (2006)\textsuperscript{73} looked into the significance of patient-centered health services in India through a modified SERVQUAL model using a 16 item scale in their research on “Towards patient-centered health services in India-a scale to measure patient perceptions of quality”. The outpatients’ analysis brought out that their satisfaction was influenced by the doctor’s behaviour, followed by the availability of medicine, hospital infrastructure, staff behaviour and medical information. From the in-patients view point, the influencing factor for their satisfaction was staff behaviour succeeded by doctor’s behaviour, medicine availability, medical information and hospital information. Patients’ perception of the aggregate quality of the public health facilities was slightly better than neutral.

Safavi (2006)\textsuperscript{74} in the study titled “Patient-centered pay for performance: Are we missing the target?” was of the opinion that patient satisfaction depends on three basic aspects of the healthcare system that are the perception of patients regarding health care service quality, good providers of health care and good health care organisation. It was also pointed out that satisfaction with hospital services was driven by dignity and respect, speed and efficiency, comfort, information and communication and emotional support.

Karassividou and Papadoupoulos (2007)\textsuperscript{75} in their paper “Health care quality in Greek NHS Hospitals: No one knows better than patients”, measured service quality on three components i.e., human aspects, physical environment and infrastructure and access by applying modified SERVQUAL dimensions. Gaps between patients’ expectations and perceptions were measured for the above components. It was understood that based on the rapport of physicians and other staff with patients the human factor played a vital role in deciding the patients’ perception of service quality.

Caha (2007)\textsuperscript{76} in a research on “Service Quality in private hospitals in Turkey” pointed out that the private hospitals’ offer qualitative health service due to the high perception of the patients. The adverse aspect of private hospitals was the long waiting time for treatment and consultation, as perceived by the patients. The driving force
behind the poor quality of services in these hospitals was the lack of physical and human resources.

Mangolrat (2008)\textsuperscript{77}, in the research on measuring patient satisfaction with private hospital services, recommended a framework for estimating the gap between patients’ expectations and their perception for the outlook of service quality.

Akter, Upal and Hani (2008)\textsuperscript{78} in a study titled “Service Quality Perception and Satisfaction: A study over sub-urban public hospitals in Bangladesh”, applied the SERVQUAL model by replacing the original dimensions of reliability, tangibles and empathy with three new dimensions namely, communication, discipline and tips or Baksis. The replacement was done to find the gap between the patients’ expectations and perceptions of service quality and found that the third dimension of Baksis had a lesser impact when compared to other dimensions.

In Turkey, Bakar, Akgun and Assaf (2008)\textsuperscript{79} employed an altered SERVQUAL scale in their research “The role of expectations in patient assessments of hospital care”, to determine the patients, attitudes towards health services. Of all the dimensions, reliability and responsiveness dimensions obtained the lowest expectation scores and the perceived scores were higher than the expected scores for ordinary hospitals and perceived scores were lower than expected scores for high quality hospitals.

In Greece, Ioannis and Lymperopoulos (2009)\textsuperscript{80} intended to study “Service Quality effect on satisfaction and word of mouth (WOM) in health care industry”. Based on Parasuraman SERVQUAL variables, the authors tried to identify the effects of each variable to satisfaction and word of mouth. From survey result the author established that in addition to satisfaction, the only service quality dimension that directly affects WOM, is empathy. In addition, empathy affects responsiveness, assurance and tangibles which in turn have only an indirect effect to word of mouth through satisfaction.

Zaim (2010)\textsuperscript{81} analysed the significant factors for appraising the service quality of hospitals in Turkey in their research “Service Quality and Determinants of consumer
Satisfaction in Hospitals: Turkish Experience”. It was affirmed that tangibles, reliability, courtesy and empathy were fundamental to assess customer satisfaction while responsiveness and assurance were not influencing customer satisfaction.

Butt and Run (2010) sought to develop and test the SERVQUAL model scale for measuring Malaysian private health service quality. Data were analyzed using means, correlations, principal component and confirmatory factor analysis to establish the modified SERVQUAL scale's reliability, underlying dimensionality and convergent, discriminate validity. The results indicated a moderate negative quality gap for overall Malaysian private healthcare service quality. Results also indicated a moderate negative quality gap on each service quality scale dimension. The research disclosed that the tangibles dimension was assigned the highest and lowest expectations and perceptions gap of service quality.

In London, patients’ satisfaction with access to public and private healthcare centres was explored by Frimpong, Sonny and Baba (2010) in their analysis on “Measuring service quality and patient satisfaction with access to public and private healthcare delivery”. It was revealed that public health care patients were obviously dissatisfied with the service factors as against the private health care patients. On the whole, the patients of both private and public health care centres faced many handicaps to assess the healthcare service quality.

Patients’ perception of healthcare services in India was evaluated by Narang (2010), who adopted a 20-item scale, similar to SERVQUAL in her study “Measuring perceived Quality of Healthcare Services in India”. The author concluded that healthy personnel practices, healthcare delivery, access to services and adequate resources were the services perceived positively by the patients.

The perception of doctors and nursing staff of Government General Hospital was evidently portrayed by Narichiti (2010) in the research conducted in Guntur District, Andhra Pradesh, India. In case of the Government General Hospital, there existed a perceptible gap in the minds of the doctors and nursing staff and also on the components of service expected and received by the patients. This gap was marginally small in private general hospitals taken up for the study.
Singh (2010)\textsuperscript{86} initiated a study titled “Patients’ perception towards Government Hospitals in Haryana”, to estimate the perception of patients towards Government Hospital in Haryana, India. The patients’ perception was satisfactory with the recovery process, diagnostic services, proximity and lower charges. The patients’ perception was low with regard to hygiene, overall basic amenities and the physicians’ behaviour.

In a comparative study captioned “Healthcare service quality: A comparison of public and private hospitals,” undertaken by Yesilda and Direktor (2010)\textsuperscript{87} applied the dimensions of SERVQUAL model in both public and private hospitals in Northern Cyprus. The important dimensions of service quality highlighted through the study were reliability, empathy and tangibles. The private hospitals’ signified smaller gap between expectations and perceptions and were perceived as better service providers.

Narang (2011)\textsuperscript{88} anticipated to determine the “Quality of public health care services in rural India”. A 23-item scale that tested well for reliability and construct validity was engaged for the study. Mixed sampling technique was employed to select the sample. The researchers found from the survey result that items, availability of adequate medical equipments and availability of doctors for women were negatively rated. Education, gender and income were found to be significantly associated with the perception of patients regarding service quality.

Suki, Lian and Suki (2011)\textsuperscript{89} aimed to look into whether patients' perceptions exceed expectations when seeking treatment in private healthcare settings in the Klang Valley Region of Malaysia. A survey was conducted among 191 patients in the Klang Valley Region of Malaysia to measure service quality of the private healthcare setting in Malaysia using SERVQUAL’s five dimensions model. The results revealed that the customers' perceptions did not exceed their expectations, as they were dissatisfied with the level of healthcare services rendered by private healthcare settings in that they felt that the waiting time of more than an hour to receive the service was excessive and, when there was a problem, the healthcare provider did not provide a response fast enough.
Brahmbhatt, Narayan and Nisarg (2011) in their empirical investigation of patients perception on service quality adapting the SERVQUAL scale, indicated that private hospitals out-perform public hospitals in four dimensions out of five, namely, physical aspects, process, encounter and policy. Public hospitals perform better than private hospitals in only one dimension namely, Reliability.

Rizwan and Hina (2011) in their paper “Assessing the service quality of selected hospitals in Karachi, based on SERVQUAL model”, brought out that there were larger gaps between patients’ expectations and perception. Gap analysis disclosed large gaps in availability of informative brochures, error free and fast retrieval of documents, waiting time and affordability of charges. These dimensions were spread out in all dimensions of SERVQUAL. Respondents of public hospitals have rated ‘medical condition thoroughly’, ‘feedback obtained from patients’ and ‘affordability of charges’ as factors that give rise to larger gaps between their expectations and perceptions.

Solayappan, Jothi and Sethu (2011) in their study “Quality Measurement for hospital services” adopted the SERVQUAL tool to investigate the perceptions and expectations of patients regarding hospital services of leading hospitals in Chennai, India. The study found the service gap very high in case of reliability and assurance dimensions. In particular, the gap is lowest for ‘employees are always willing to help the patients’. Huge gaps were found in employees’ neat appearance, lack of interest in solving problem, communication regarding services, problem in doing right things for the first time, giving services as promised, poor knowledge of employees and problems in personnel attention.

Ahuja, Seema and Zehra (2011) conducted a study among Government and NGO eye hospitals in Haryana, India to analyse the service quality management using SERVQUAL model. The research discovered that the attributes of reliability and assurance have been identified by the respondents to be the most important dimensions of service quality. The responsiveness and tangibility dimensions had a negative gap, implying that patient expectations of these two dimensions are not met by these two hospitals.
Irfan and Ijaz (2011)\textsuperscript{94} used SERVQUAL dimensions to “Compare the service quality of Public and private hospitals in Pakistan”. Results showed that private hospitals are delivering better quality of services to their patients as compared to public hospitals. Private hospitals are focusing in their patients’ demands and provide maximum healthcare facilities to their patients. The poor quality of services by public hospitals are due to government funding, lack of feedback mechanism, lack of interest shown by physicians, nurses and support staff and unclean hospital environment.

Punnakitikashim (2012)\textsuperscript{95} advocated the SERVQUAL model in their paper on healthcare service quality with lean implementation. The hospital’s overall quality scores were on the positive side and the gap that was identified was in the assurance dimension.

Amjeriya, Malviya and Kumar (2012)\textsuperscript{96} undertook the “Measurement of the service quality of healthcare organisation”. It was found that significant gaps existed in the reliability, responsiveness and empathy dimensions of SERVQUAL. This lead to the conclusion that healthcare centre is still only a ‘cure centre’ and not a ‘care centre’.

Ramez (2012)\textsuperscript{97} carried out a study to understand the “Patients’ perceptions of healthcare quality, satisfaction and behavioural intention: An empirical study in Bahrain”. The study rated the reliability dimension as most important and the assurance dimension as least important. There was also a significant relationship between service quality and overall satisfaction with the services.

Abu-Kharmeh (2012)\textsuperscript{98} evaluated the quality of health services at private hospitals in Hashmite Kingdom of Jordan. Responsiveness dimension was ranked as an important dimension in evaluating the healthcare services followed by assurance, tangibles, empathy and reliability.

Al-Hawary (2012)\textsuperscript{99} compared the service quality of private hospitals situated in Jordan and Saudi Arabia. The study divulged that tangibles and accessibility were perceived better in Saudi Arabian Hospitals than in Jordanian hospitals.

Kavitha (2012)\textsuperscript{100} in her study “A comparative study on patients’ satisfaction in healthcare service” appraised the patients’ satisfaction in healthcare services between a
public hospital and private hospital. It was disclosed that in the case of public hospital, there was no significant difference between satisfaction and perceived service with regard to all dimensions. In case of private hospital, there is a significant correlation between the perceived service and satisfaction with respect to all the dimensions and hence the perception is higher than the expected service. It was concluded that the private hospital performs better in providing service quality.

**Zarie, Arab and Rashidian (2012)** inquired into the service quality of private hospitals in Iran. The tangibles dimensions were found to have the highest expectations and perceptions and empathy dimension had the lowest expectations and perceptions.

**Kumar and Chethan (2012)** examined the “Service quality at a hospital- a study of Apollo Hospital in Mysore”, based on some dimensions of SERVQUAL. Four dimensions namely, tangibles, reliability, responsiveness, empathy were considered for the study. The result indicated that there is a significant difference between reliability and customer satisfaction. Responsiveness had a positive influence on the patients’ loyalty. Empathy and tangible dimensions had a positive influence on the overall satisfaction of the hospitals’ service.

**Al-Borie and Damanhouri (2013)** appraised the “Patients’ satisfaction of service quality in Saudi Arabia using SERVQUAL model”. Five public hospitals and five private hospitals were chosen for the study and it was found that the five dimensions of SERVQUAL (tangibles, reliability, responsiveness, empathy and safety) had a high Cronbach’s alpha value and the SERVQUAL instrument proved to be reliable, valid and appropriate. The results showed that sex, education, income and occupation were significant in influencing patients’ satisfaction.

**William and Khanchitpol (2013)** measured the “Out-patient service quality of hospitals in Thailand” using SERVQUAL device. The results indicate that SERVQUAL’s five latent dimensions had a significant influence on the overall service quality. Responsiveness had the most influence; followed by empathy, tangibles, assurance and lastly reliability.
Abousi and Atinga (2013) sought to assess patients’ hospital service quality perceptions and expectations using SERVQUAL and to outline the distinct concepts used to assess patient perceptions through their study on “Service quality in healthcare institutions: establishing the gaps for policy action”. The results indicated that patient expectations were not being met during medical treatment. Perceived service quality was rated lower than expectations for all variables. Contrary to the five factor SERVQUAL model, four service quality factors were identified in the study.

Francesa and Narayanan (2013) appraised the obstetric patients’ expectations using SERVQUAL variables. The SERVQUAL measure was developed from the patient feedback and the results pointed the service strengths as staff politeness, patient respect and privacy. Areas for improvement included cleanliness, women’s involvement on decision making and lack of communication.

Bahadori, Mehdi and Ramin (2014) measured the quality of services provided to patients with chronic kidney disease in Kerman. The required data was collected using the SERVQUAL questionnaire containing the five dimensions of service quality. The result disclosed that the means of patients’ expectations were more than their perceptions of quality of services provided in all dimensions, which indicated that there were gaps in all dimensions. The highest and lowest means of negative gaps were related to empathy and tangibility. It was also found that only the difference between the patients’ income levels and the gap in assurance was statistically significant.

Sritharan (2014) in his study titled “Measuring service quality dimensions: an empirical study of private hospitals in Jaffna District, Sri Lanka” found that the quality of hospitals services has a significant impact on customer satisfaction of healthcare in private hospitals of Jaffna District in Sri Lanka. The objective of the study was to assess the important dimensions of service quality in the services offered by private hospitals and to understand the factors that influenced service quality in private hospitals. Service quality was measured based on customer satisfaction levels by using a questionnaire which consisted the service quality dimensions of tangible, reliability, responsiveness, assurance, empathy, and communication. The research findings
indicated that all factors have positive correlations and the relationship among variables is significant. And further more Jaffna district private hospitals’ patients rated the reliability dimension the most important of all, followed by tangibles, assurance, empathy, responsiveness, whereas the communication dimension rated least important of all.

**Arasanamand and Khanchitpol (2014)**\(^{109}\) analysed “The relationship between service quality and customer satisfaction of pharmacy departments in public hospitals” and also attempted to determine the influence of the five dimensions of service quality using SERVQUAL instrument. The results testified that responsiveness and tangibles negatively impacted customer satisfaction. When the five dimensions were separated, assurance had the greatest difference between average perception and average expectation (P>E) followed by empathy and reliability. There was a great difference between average expectations average perceptions (E>P) on responsiveness, followed by tangibles. This conveyed that the clients were dissatisfied with the service in terms of responsiveness and the tangibles of public hospital pharmacies.

An empirical study was undertaken by **Siddiqua, Choudhury and Haque (2014)**\(^{110}\) to identify the components of service quality of private hospitals through their study on “Service quality: An empirical study of private hospital in Dhaka city”. The findings revealed that the overall service quality regarding private hospitals were providing satisfactory services to the patients without discriminating patients based on income or occupation. It was also found that the private hospitals provide better healthcare facilities to the patients.

**Kalepu and Prabhakar (2014)**\(^{111}\) attempted an exploratory study on service quality in select hospitals of Krishna District of Andhra Pradesh and diagnosed the service quality gaps using SERVQUAL model. The results confirmed that the demographic factors and socioeconomic status play a vital role in patients’ satisfaction towards service quality.

**Yousapronpaiboon and Phondeh (2014)**\(^{112}\) investigated the five dimensions of service quality using SERVQUAL to “Measure the pharmacy service quality of public hospitals in Thailand”. The findings indicated that there exists differences in service
quality and the overall service quality was insignificant. The overall results disclosed that the public hospitals’ pharmacies were not meeting their patients’ expectations i.e., E>P in all the five dimensions of service quality. The assurance dimension was found to have the highest gap in service quality followed by responsiveness, empathy and tangibles and the lowest gap was related to reliability dimension.

Dikmen, Seda and Semra (2014)\textsuperscript{113} determined the expectations and perceptions of health service quality and found out gaps between expectations and perceptions in a private hospital in Kocaeli, Turkey through their research titled “Investigating functional health service quality in a private hospital”. The SERVQUAL scale was used to determine the functional health service quality. The study found gaps between expectations and perceptions of patients and significant relations between patients’ demographic characteristics and perception of health service quality.

Sabir, Wasim, Qaisar, Kamil and Khurshid (2014)\textsuperscript{114} intended to evaluate the service quality in the military, public & private hospitals of Pakistan. By reviewing the different facts of quality management, this study analysed the use of quality of service i.e. SERVQUAL model by which precision of the study was checked. Responsiveness, empathy, tangibility, reliability, and assurance were important determinants used in study. The findings specified that private and combined military hospitals were more anxious about quality of service but little attention has been paid on service quality dimensions by public health care centres. It is concluded that service quality of military hospital and private hospitals is more satisfactory than public hospitals. People consider military hospital and private hospitals as a source to meet the requirements of patients due to timely treatment and other facilities. The patients were worried about the condition of public hospitals. The patients are dissatisfied with behaviour of doctors in public hospitals. The environment at public hospitals was also not hygienic and healthy.

Zareii and Sattari (2014)\textsuperscript{115} evaluated the “Service quality in Bushehr Province Medicine University Hospital in view of the customers based on SERVQUAL Model” by using descriptive –surveying methods. The data was collected using SERVQUAL Questionnaire. Data analysis was executed using descriptive statistics (frequency table,
percentage, central tendency indexes and so on) and inferential statistics (dependent “t” and variance analysis). The results of analysis showed that there is a significant gap between the customer’s expectation and perceptions of the service quality offered by Bushehr Medicine University Hospital based on SERVQUAL Model.

Aghamolaei, Rafati, Kobra, Ahangari and Hoseini (2014)\textsuperscript{116} assessed the “Service quality of a referral hospital in Southern Iran using SERVQUAL technique”. Service quality gaps were seen in all five service quality dimensions and the overall quality of service. The highest perception was in Assurance dimension and the highest expectation was in the Responsiveness and Assurance dimensions. The lowest perception was in Responsiveness dimension and the lowest expectation was about empathy. It was found that the hospital was not able to meet their patients’ expectations completely.

Madan and Nitin (2015)\textsuperscript{117} in their study “An empirical study on assessing quality of healthcare services offered by private hospitals using SERVQUAL model” revealed that the private hospitals were performing well in terms of the dimensions of the service quality model. The higher gap score was in terms of patients’ lack of experience and knowledge to judge certain dimensions. The factors which had more than 0.5 service quality gap were written materials are easy to understand, same level of service experienced day and night and staff and doctors show willingness to answer questions of patients and family members. Out of the eight factors, only the Empathy factor had a significant difference between male and female while other factors had no significant difference in gender.

Pandit (2015)\textsuperscript{118} performed a case study in Kolkata to “Analyse the service quality of hospitals” using the SERVQUAL scale consisting of five dimensions. It was found that the Private super-specialty hospitals were performing as per the customers’ expectations whereas the Government and Private General Hospitals were not fulfilling the expectations of the customers. There was a significant difference for Empathy dimension for all the hospitals and for the remaining dimensions there were no significant dimensions.
REFERENCES

1. http://shodhganga.inflibnet.ac.in/bitstream/10603/2540/10/10_chapter%204.pdf


40. Chunukala. P (2010), International Patients’ Satisfaction towards Nurses Service Quality at Samtivej Srinakarin Hospital, Masters’ Project cited by Srinakharinwirot University.


77. Mangkolrat, (2008), Foreign patient customer satisfaction with private hospital service. A thesis on public health programme in health systems development, College of Public Health Services, Chaulalongkon University.


85. Narichiti, Victoria, (2010), Patient centered Hospitals: A study to evaluate the Effectiveness of Healthcare Delivery in the three selected hospitals in Guntur District, Andhra Pradesh, India. Acharya Nagarjuna University, Nagarjuna Nagar, Andhra Pradesh, India.


