SERVICE QUALITY PERCEPTION AND PATIENTS' SATISFACTION IN GOVERNMENT AND PRIVATE MEDICAL COLLEGE HOSPITALS IN KERALA

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By
PREETHI.T.M.

Under the supervision of
Dr. A. K. SARADA
Professor
Department of Commerce and Management Studies
University of Calicut

DEPARTMENT OF COMMERCE AND MANAGEMENT STUDIES
UNIVERSITY OF CALICUT
KERALA

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DEPARTMENT OF COMMERCE AND MANAGEMENT STUDIES
UNIVERSITY OF CALICUT

Calicut University (P.O) Malappuram (Dist.) Kerala – PIN 673635

Dr. A.K. SARADA
Professor

Date: 26. 12. 2016

CERTIFICATE

Certified that the thesis entitled **"SERVICE QUALITY PERCEPTION AND PATIENTS' SATISFACTION IN GOVERNMENT AND PRIVATE MEDICAL COLLEGE HOSPITALS IN KERALA"** is a bonafide record of the research work carried out by **Miss. PREETHI.T.M** under my supervision and guidance for the award of Ph.D. Degree of the University of Calicut and no part of this has been previously formed the basis for the award of any degree, diploma or other similar title in any university.

She is permitted to submit the thesis to the university.

C.U.Campus

26.12.2016

Dr. A.K.SARADA

(Supervising Guide)

DEPARTMENT OF COMMERCE AND MANAGEMENT STUDIES
UNIVERSITY OF CALICUT

Calicut University (P.O) Malappuram (Dist.) Kerala – PIN 673635

Dr. A.K. SARADA
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It is also certified that the reports of adjudicators for the thesis have not been suggested any modification or corrections of the work.

Dr. A.K.SARADA

(Supervising Guide)

DECLARATION

I, Preethi T.M, do hereby declare that the thesis entitled **"SERVICE QUALITY PERCEPTION AND PATIENTS' SATISFACTION IN GOVERNMENT AND PRIVATE MEDICAL COLLEGE HOSPITALS IN KERALA"** is a bonafide record of research work done by me and that no part of this thesis has been presented before for the award of any degree, diploma or other similar title or recognition in any University.

C.U.Campus   **Preethi T. M**

26.12.2016

ACKNOWLEDGEMENT

Dedicated

To the ever loving memories of
My father Madambi

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LIST OF ABBREVIATIONS

A&E	:	Accident and Emergency
AIDS	:	Acquired Immune Deficiency Syndrome
ANOVA	:	Analysis of Variance
APL	:	Above Poverty Line
BDS	:	Bachelor of Dental Surgery
BPL	:	Below Poverty Line
CFA	:	Confirmatory Factor Analysis
CHC	:	Community Health Centre
CS	:	Customer Satisfaction
CV	:	Coefficient of Variation
DME	:	Directorate of Medical Education
DMIC	:	Dartmouth Microsystems Improvement Curriculum
GDP	:	Gross Domestic Product
GP	:	General Practitioner
HCAHPS	:	Hospital Consumer Assessment of Health care Providers and System
HCSQ	:	Health Care Service Quality
HMO	:	Health Maintenance Organisation
HRD	:	Human Resource Development
ICU	:	Intensive Care Unit
KMSLC	:	Kerala Medical Service Corporation Limited
LISREL	:	Linear Structural Relations
MCH	:	Medical College Hospitals
MDS	:	Multidimensional Scale
MOH	:	Ministry of Health
MPS	:	Mean Percentage Score
NIHFW	:	National Institution for Health and Family Welfare
NRHM	:	National Rural Health Mission

OPD	:	Out Patient Department
OT	:	Operation Theatre
PCB	:	Patients' Complaint Behaviour
PJS	:	Patient Judgement System
PL	:	Patients' Loyalty
PS	:	Patients' Satisfaction
PDSA	:	Plan-Do-Study-Act
PHC	:	Primary Health Centre
PSQ	:	Perceived Service Quality
PVM	:	Perceived Value for Money
PWT	:	Perceived Waiting Time
RSBY	:	Rashtriya Swasthya Bima Yojana
SD	:	Standard Deviation
SEM	:	Structural Equation Modelling
SMS	:	Short Message Service
SOHC	:	Single Over Head Cam
SRS	:	Sample Registration System
SQ	:	Service Quality
TQM	:	Total Quality Management
VSQ	:	Visit Specific Questionnaire
VSS	:	Verona Service Satisfaction
VALCONEX	:	Value-in-context
WHO	:	World Health Organisation

INTRODUCTION

CHAPTER 1

INTRODUCTION

1.1.Background of the Study

Service sector is the dominating force behind all the advanced economies around the world. India is one among the nations which competes each other for getting an increased share in the world market. Since the last decade, the country has moved towards autonomy in several service sectors and outpaced industrial and agricultural sector to contribute over half the gross domestic product of the country.

In the current globalised market, people face a number of challenges in all areas of existence. To meet such challenges and to overcome such tensions one has to move on with the changing environment. The changing management practices and global economic trend towards service sector made all organisations to start developing strong customer relationships through quality services. The key to attract maximum customers is to provide best quality products and services to the customers at the lowest possible cost, thus giving them maximum satisfaction (Rehin, 2014). Today almost all the companies whether it is manufacturing or service companies, view quality of service as critical for its existence because the customers of various services have an increased awareness and expectation (Nargundkar, 2004). This unique challenge faced by the service managers raise the significance of research in service marketing.

Health is one of the most important fundamental natural resource of a nation. Health is the essential foundation that supports and nurtures growth, learning, personal well-being, social fulfilment, enrichment of others, economic production and constructive citizenship. Health sector is one of the major areas in service sector as the social and economic welfare of society directly depends on the health status of its people. Recognition and elimination of health problems is one of the main indicators in the Human Development Index. The growth rate of health care industry in India is moving ahead neck to neck with other industries like pharmaceuticals and

software industries. The health care industry in India is reckoned to be the engine of the economy in the years to come as it is worth $17 billion and is anticipated to grow by 13% every year. The health sector encompasses health care instrument, health care in the retail market, hospitals enrolled to the hospital network etc.

Hospital is a unique organisation which deals with the services like diagnosis, treatment and preventing diseases, illness and injuries, physical and mental impairments in human. It is one of the major infrastructural as well as service components of Indian economy. The main difference between a hospital and other organisation is that hospital deals with people rather than materials or products as an end. It involves 24 hours work, of emergency nature, involves high risk, ethical and legal issue, work is highly stressful since lives are affected (Taneja, 2012).With the advancement in health care facilities and treatments, the use of new equipment, methods and facilities were also come into mainstream. Most of the hospitals in India are able to undertake vivid complicated procedures and treat numerous diseases, this result in increased medical transactions in the country which plays an important role in economic growth. Studies shows that today, Indian hospitals whether big or small assure complete safety and protection in all the treatments (Porkodi & Haque, 2011).

In the changing facets confronted with new environment and new rules, many of the old assumptions regarding hospitals and their role in the society are being challenged and rewritten according to the new scenario. With the evident and recurring role of the hospitals in society it is profound that there exists a health care crisis. Although there is a crisis with many facets, the main concerns are about the costs and the quality of medical care, the desirability of receiving it, the fallibility of the physician, and the ability of the health care system to save people from imprudent lifestyles, unhealthy environment and individual genetic makeup.

By the entry of liberalization policy in the year 1991, hospital services industry got a huge boost with the entry of many players. The corporate like Tatas, Appolo Group, Fortis, Max, Wockhardt and Escorts started setting up of private hospitals in cities across India and a hospital network is formed in the country. The

growth of hospitals as profit motive business entities and extensive competition with many new players in the field resulted in poor service quality as perceived by the customers. In 2005, Ministry of Health introduced National Rural Health Mission (NRHM) and improved the nation's health system by raising number of hospitals in public sector. This situation made Service Quality a key differentiating factor which makes hospitals to improve their market to ensure their sustainability. So, measuring service quality by studying perception of patients is essential to a hospital's long term success and even existence.

Patients' perception on services has a significant influence on their level of satisfaction. Patients' satisfaction leads to patients' retention and favourable word of mouth. Thus, it is important for a hospital to provide quality services to its customers and also assess patients' satisfaction. The patients of today expect personal attention, explanation of problems, assurances of relief, and redressal of complaints. But in many cases, the hospitals do not have the resources or the capabilities to meet the expectations of every patient served (Porkodi & Haque, 2011).

Due to the growth of health insurance, price competition for inpatient hospital services is minimal among health care providers. Hospitals do compete intensely with hospitals for health care business based on both increased convenience to the consumer on lower costs. Consequently a number of alternative methods of delivering care are growing. Hospitals that do not respond to these changes by broadening their mix of services and by developing more flexible distribution systems to bring in patients are likely to experience difficulties competing in this new environment (Sharma & K'Cherry, 1996).

Medical College Hospitals are integral part of health care system of Kerala which are experiencing a rapid growth. It provides a wide range of medical services for a large group of patients and now serves an increasing population. Medical College Hospitals are popular because of the extended hours of operation and availability of all health care services. There is an increasing private participation in medical education like any other industry. The current health problems and issues in

Kerala indicate that there is a need of research on medical college hospitals. Confronted with the emergence of the medical education industry and increasing demand for hospital service, it is necessary to understand how patients perceive services of Medical College Hospitals and which factors are influencing patients' satisfaction and behavioural intentions.

There have been extensive studies made in the area of patients' satisfaction. However, there are very few attempts have been made in Kerala to study relationship between service quality, patients' satisfaction and behavioural intentions along with the mediating role of perceived waiting time and perceived value for money. The reason for not many research works on service quality and satisfaction may be due to the fact that these are based on perception of patients which varies from individual to individual. This basic difference in the perception of patients on different dimensions of Service Quality makes it more challenging to explore their relationship. So, it should be studied from the patients' point of view rather than separate entities.

The present chapter provides an introduction to the study. It describes the basic terms used in the research, area of study and conceptual framework of the research. It describes the research methodology conducted along with objectives and hypotheses. The limitations of the study while collecting the research data are also mentioned.

1.2.Patients' Perception on Service Quality

Service Quality is a complex and multi-faceted concept. Nowadays, many service organisations like educational institutions, public administrative organisations and hospitals have more concern on quality control activities. They focus their efforts to increase the overall efficiency and effectiveness and consistently maintain competitive advantage by improving the quality (Madu, Kuei, & Lin, 1995). It is a form of attitude, related but not equivalent to satisfaction, and results from a comparison of expectations with perception of performance. It is of the antecedent factors driving satisfaction.

Service marketers have realised over past few years that competition can be well managed through improving quality. Organisations that provide services of superior quality also experience higher economic returns (Gilbert et al., 2004) (Aaker & Jacobson, 1994). Service quality offers a way of achieving success among competing services, particularly the case of customer loyalty has been treated as an important source of sustained edge, in terms of customer retention, repurchase and long term customer relationship.

Hospital is not like any other usual service organisation but often the settings and results cause consumers to be hypercritical as it deals with problem of life and death. What patients experience, and what they think of that experience, should also matter to health care planners, policy makers, and managers, because that experience, as much as the technical quality of care, will determine how people use the health care system and how they benefit from it.

Patients define quality in terms of their preferences and values which lead to emphasising satisfaction with the care received from the provider and the outcomes such as recovery, mortality and functional status. Patients and physicians view quality in different way. Health care professionals agree that satisfying patients is essential to ensure high quality care. Still the physicians are not interacting properly with the patients by stating that the patients have very limited knowledge of what constitutes technical quality which make difficult for measuring patients' views accurately and reliably. Patients evaluate service quality according to the responsiveness to their specific needs. In many case, patients feel the quality on the efforts of physicians to do everything possible for a patient. They often focus on effectiveness, accessibility, interpersonal relations, continuity and tangibles as the most important dimensions of quality (Rehin, 2014). From the patients' point of view, health care quality is the meeting of the patient's unique needs and wants (Atkins et al.,1996) at the lowest cost (Ovretveit, 1992), provided with courtesy and on time (Brown et.al., 1998).

Insuring high quality of care is important to increase quality of life as well as decrease burden on the health care system. The substantial question in determining

the quality of care is that how and what should be measured. By examining the patients' view, physicians can enhance patients' perceptions of the quality of care by understanding their needs and providing adequate quality treatment.

1.3.Patients' Satisfaction

Hospitals are operating in an extremely competitive world where patient satisfaction has become a key in gaining and maintaining market share. All major players in hospital arena use satisfaction information of their customers for making decisions. Patients' satisfaction is the state of comfort; a patient feels when his wants and needs are met as a patient from the hospital. It is a person's feeling of pleasure or disappointment resulting from comparing a service outcome in relation to his or her expectations.

Nowadays hospitals are increasingly being encouraged to take into account the perspective of consumers and incorporate their participation in planning, delivery and evaluation of health care. Service managers of hospitals take into account patients' experiences and perceptions of the service provided to them that are largely translated into measurement of patient satisfaction. The most common reason hospitals survey consumers are to know whether they are satisfied with their care and what improvement in service they are expecting.

Knowledge about satisfaction with the service can serve not only as a performance indicator but also to identify areas of improvement to provide better care and services for the betterment of the user's health (Rahil & Venkatesh, 2012). Patient satisfaction has always been and will to greater extent, continue to be, a fundamental for the clinical and financial success of any sized organization providing health care, regardless of speciality (Grey Ford, 2001).To meet patient expectations the hospitals need to continuously increase their quality of care and monitor the results.

1.4.Significance of the Study

Patients are the important stake holders of a hospital. To stay ahead in competition, it is essential to keep the patients happy. Their views on every aspect of

health care environment will have to be understood so that measures can be taken to satisfy them during their future encounters with the health environment. Therefore, hospitals today make efforts to determine what the customers need, tailoring their services to meet those needs and then attracting patients to use these services. Factors that influence subjective appraisal of the patients and in turn support the evaluation of the health care are the determinants of patients' satisfaction. An in-depth analysis of the perception of patients on the service quality and level of satisfaction associated with every determinants of service quality of a hospital will further help the policy makers to understand if the patients were satisfied in the health environment provided to them.

Patients' satisfaction studies help the hospitals to evaluate the health care system, the quality of care provided and hospital-patient relationships. Results of patients' satisfaction studies can reveal the strength and weakness of the health care environment perceived by customers and what factors influenced or will influence their level of satisfaction. It serves as an indicator of overall success in terms of how well the organization is meeting the needs of its target population. There exists very few theoretical or conceptual development of the patients' satisfaction. Patients' satisfaction is conceptualy different and a superior construct. There is a practice of using patient satisfaction to evaluate the patients' perception on the quality of health service, which is seriously followed by the scholars. There is an urgent need for differentiation and standardisation of satisfaction and service quality definitions and constructs (Gill & White, 2009).

Quality of service can be ascertained only through specially designed surveys. These surveys may be conducted both by persons inside the organisation and outside the organisation to locate the problems and suggest remedies for its future performance. There are limited studies available in this field, though the studies carried out by NIHFW on different aspect of hospital administration throw light on various issues. It is the duty of research institutions and universities to take interest in this and help the management to improve their service (Goel and Kumar, 2008). An in depth study on the service quality assessment can be acknowledged by

its stakeholders, who have responsibility to identify, understand, and correct specific shortcomings in health care delivery.

As the health care services becomes more competitive, health care practitioners and academic researchers are increasingly interested in exploring how patients perceive quality before building up their satisfaction levels and generating behavioural intentions (Murti, Deshpande& Srivastava, 2013). This study examines the relationship between Perceived Service Quality, Patients' Satisfaction and Behavioural Intentions among Medical College Hospitals in Kerala. This study would provide valuable information for the management which can help them to improve the quality of services provided and can lead to better functioning of the hospital. The study would also provide them with insights into components of service quality which are related to satisfaction. The results obtained from this study can be used by the Medical College Hospitals to develop actions or plans and enhance service offered to patients.

1.5.Scope of the Study

Since Medical College Hospitals are the major players in health care industry of Kerala, the present study examines the perception of patients on the service quality and their satisfaction in Government and Private Medical College Hospitals in Kerala. It also studies the relationship between Perceived Service Quality, Patients' Satisfaction and Behavioural Intentions. The scope of the study is confined to those Medical College Hospitals in Government and Private sector which are dealing with the allopathic system of medicine. The study was done in inpatients of Medical College Hospitals in Kerala. Study covered only those patients admitted in Orthopaedic ward, General Medicine ward, Gynaecology ward, General Surgery ward, Paediatrics ward, Urology ward, Neurology ward and Nephrology wards. The study was based on the perception of inpatients during their hospital stay in the Medical College Hospitals.

1.6.Statement of the Problem

For any service organisation, it is important to satisfy the needs of its customers to the fullest since dissatisfied customers lead to revenue loss thereby posing a threat to its long term sustainability. This is true in the case of hospitals also. Hospitals are the core institutional provider in health care. As the cost of providing treatment increases, hospitals will be in an increasingly vulnerable position within the health care market (Sharma & K'Cherry, 1996). Health is an indispensable one and all achievement of life depends on it. A customer will not take risk by opting service from any hospitals; rather choose a hospital which can provide him quality service. He may sometimes opt for another hospital if he is not satisfied with the present hospital. Hospital which wins in identifying the patient requirements can be frequently selected by patients. Nowadays many hospitals are struggling to gain the confidence of patient and do some temporary solutions also. There is a need to formulate a permanent solution to provide better treatment supported by quality services to the patient.

The number of the people who utilises hospital services in Kerala has increased manifold with the changing socio-economic conditions. Government hospitals as a publicly funded health care institution do not face the issue of collapse due to the loss of customers. It can keep the customers it fails to satisfy because they have no other place to go. The commonly visible failures are due to disrespect, inconvenience, poor communication and fragmentation.

The patients of both Government and Private Medical College Hospitals face numerous issues in the matter of quality. So the researcher has taken effort to measure the existing levels of Service Quality in Medical College Hospitals of Kerala.

Financial and other resources available to government hospitals in Kerala have not kept pace with the growth in number of service seekers. Due to the large size and complexity, Medical College Hospitals in government sector loose quality in many cases. Increase in demand for the service results overcrowding in these hospitals. Lack of sufficient beds in wards and staffing shortages in housekeeping

are also evident there. Having become a large scale organization, Medical College Hospital requires more number of efficient workers and more medical equipment and aids for providing quality treatment. The cases which are complicated are being referred to Government Medical College Hospitals by the private practitioners. Thus Government Medical College Hospitals are considered as the last resort to those who have severe ailment. There is also a need for improving the efficiency of performance of Medical College Hospitals which is expected to be a model for the other hospitals by providing adequate, reliable, safe and economic services.

Private sector participation in providing medical education and health care is on increase in Kerala because entrepreneurs and technocrats see immense opportunity for gaining profit in this sector. Along with medical educational institutions, many corporate hospitals and nursing homes are started. These institutions are following different governing models to render effective and specialized services to the patients. Being a profit motive entity, many private hospitals reduce cost of operation by compromising the quality of service. The pressure for institutional survival and cost containment has forced mangers to attempt to hold firmer control over what doctors do. This has caused unethical practices among physicians, loosing quality of treatment and insisting unwanted treatments in many situations. Many hospitals even lengthen hospital stay unnecessarily for maximising revenue.

Sometimes the consumers may not be in a position to eliminate those hospitals which are of poor quality. Due to the urgency of need, the customers will be compelled to accept the services with poor quality. Thus, the quality of services rendered by Private Medical College Hospitals and Government Medical College Hospitals are to be measured and compared. It should be judged from the patients' point of view how well the needs of the inpatients are met both by Government and Private Medical College Hospitals. The purpose of this research work is to study in depth the perception of inpatients on the hospital services and thereby know the shortcomings of services rendered and recommend measures to overcome the shortcomings for infusing quality care in these hospitals.

A number of studies on Patients' Perception and Service Quality had been conducted by different scholars. But the significance of Perceived Waiting Time and Perceived Value for Money in Patients' Satisfaction is least studied. Obviously service quality is an important factor in determining the patients' satisfaction. But in some cases monetary value of service and waiting time perception can be form as a basis for deciding the level of satisfaction. While studying the relationship of Service Quality and Patients' Satisfaction, it is important to know the mediating role of Perceived Value for money and Perceived Waiting Time. Confronted with the rapid growth of the hospital industry and increasing demand for Medical College Hospitals, it is necessary to understand how patients perceive the quality of services they receive from Medical College Hospitals. The present study attempts to answer the following questions.

a. What is the level of Service Quality perceived by patients of Government Medical College Hospitals and Private Medical College Hospitals? Does the Perceived Service Quality differ between the sectors?

b. What is the level of Patients' Satisfaction in Government Medical College Hospitals and Private Medical College Hospitals? Does the Patients' Satisfaction differ between the sectors?

c. Which dimensions of Service Quality contribute more in determining Patients' Satisfaction in Government Medical College Hospitals and Private Medical College Hospitals?

d. Do Perceived Value for Money and Perceived Waiting Time have mediating role in determining Patients' Satisfaction?

e. What are the areas need improvements in Medical College Hospitals in both sectors?

The main focus of the study is to measure and compare the perception of inpatients on the services of Government and Private Medical College Hospitals in Kerala.

1.7. Objectives of the Study

The objectives of this study are as follows:

1. To study and compare Patients' Perceived Service Quality in Government and Private Medical College Hospitals in Kerala

2. To measure and compare the level of Patients' Satisfaction in Government and Private Medical College Hospitals in Kerala

3. To examine the relationship between Perceived Service Quality, Patients' Satisfaction and Behavioural Intentions

4. To study the mediating role of Perceived Value for Money and Perceived Waiting Time in the relationship of Perceived Service Quality and Patients' Satisfaction

5. To suggest ways and means to improve the quality of services and Patients' Satisfaction of Government and Private Medical College Hospitals in Kerala

1.8. Hypotheses

In order to facilitate the achievement of objectives mentioned above, the researcher framed the following hypotheses:

1. H1: Perceived Service Quality significantly differs between Government Medical College Hospitals and Private Medical College Hospitals.

2. H2: The level of Patients' Satisfaction significantly differs between Government Medical College Hospitals and Private Medical College Hospitals.

3. H3: Perceived Value for Money significantly differs between Government Medical College Hospitals and Private Medical College Hospitals.

4. H4: Perceived Waiting Time significantly differs between Government Medical College Hospitals and Private Medical College Hospitals.

5.   H5: Patients' Loyalty significantly differs between Government Medical College Hospitals and Private Medical College Hospitals.

6.   H6: Patients' Complaint Behaviour significantly differs between Government Medical College Hospitals and Private Medical College Hospitals.

7.   H7: Patients' perception on dimensions of Service Quality significantly differs between Government and Private Medical College Hospitals.

8.   H8: Perceived Service Quality significantly differs among different demographic variables.

9.   H9: Perceived Value for Money significantly differs among different demographic variables.

10.   H10: Perceived Waiting Time significantly differs among different demographic variables.

11.   H11: Patients' Satisfaction significantly differs among different demographic variables.

12.   H12: Patients' Loyalty significantly differs among different demographic variables.

13.   H13: Patients' Complaint Behaviour significantly differs among different demographic variables.

14.   H14: There is significant relationship between Perceived Service Quality, Patients' Satisfaction and Behavioural Intentions.

15.   H15: There is a significant mediating effect of Perceived Value for Money on the relationship of Perceived Service Quality and Patients' Satisfaction

16.   H16: There is a significant mediating effect of Perceived Waiting Time on the relationship of Perceived Service Quality and Patients' Satisfaction

1.9. Research Methodology

Research Methodology followed in this study is explained in this head.

1.9.1. Research Design

Design of this research is descriptive.

1.9.2. Sources of Data

Both secondary data and primary data were used for this study.

a. Secondary Data:

Secondary data collection was done through desk research from research reports published by various universities, journals, books, government reports, annual reports of NRHM and e-resources.

b. Primary Data:

Primary data required for the study were collected from inpatients of selected Medical College Hospitals.

1.9.3. Population of the Study

Defined targeted population consists of inpatients who are admitted in all the Government and Private Medical College Hospitals in Kerala.

1.9.4. Sample Frame

Sample frame consist of a total of 12 Medical College hospitals functioning in Kerala that were established before 2007. 5 Medical College Hospitals from Government sector and 7 Medical College Hospitals from Private sector were taken for the study.

Table No: 1.1

Selection of Medical College Hospitals

	Government sector	Private sector	Total
Total number of Medical College Hospitals functioning in Kerala	12	23	35
Total number of Medical College Hospitals established before 2007	7	11	18
Total number of Medical College Hospitals taken for this study	5	7	12

Source: Secondary data

The Government Medical College Hospitals selected for the study were Government Medical College Hospital, Thiruvananthapuram, Government Medical College Hospital, Kottayam, Government Medical College Hospital, Thrissur, Government T.D. Medical College Hospital, Alappuzha and Government Medical College Hospital, Kozhikode. The Private Medical College Hospitals selected for this study were Amala Medical College Hospital, Thrissur, Karuna Medical College Hospital, Palakkad, KMCT Hospital, Kozhikode, Kannur Medical College Hospital, Anjarakandi, Pushpagiri Medical College Hospital, Thiruvalla, Jubilee Mission Medical College Hospital, Thrissur and MES Medical College Hospital, Perinthalmanna.

1.9.5. Sample Size

Sample size calculation is concerned with how much data the researcher requires to make a correct decision on a particular research. As a result, in the present study the researcher calculated the sample size using power analysis on the basis of data obtained from the pilot study with 5% level significance (p value) and 90% power using software Sigma-plot 11.The result of the analysis is given in the following table.

Table No: 1.2

Sample Size Determination using Power Analysis

Type of test	Minimum Sample	Maximum Sample
Z test/ Mann-Whitney	5	42
Chi-square test	14	67
ANOVA/ Kruskal-Wallis Test	34	262
Correlation	67	348
So required Sample Size	**348 or more**	

Source: Output of Sigma-plot 11

The result of power analysis shows that a sample of 348 or more patients is adequate for the study (MacCallum et al.,1996). By considering the law of inertia of large number, researcher collected data from 788 samples. Defective and incomplete schedules were excluded and sample sizes of 770 responses were taken as sample size for the study. Among 770 respondents, 385 were from Government Medical College Hospitals and 385 were from Private Medical College Hospitals.

Table No: 1.3

Selection of Sample Respondents

Name of Hospital	No. of samples taken
Government Medical College Hospital, Thiruvananthapuram	124
Government Medical College Hospital, Kottayam	60
Government Medical College Hospital, Thrissur	29
Government Medical College Hospital, Kozhikode	137
Government T.D. Medical College Hospital, Alappuzha	35
Total number of samples taken from Govt. MCHs	**385**
Amala Institute of Medical Science, Thrissur	57
Karuna Medical College Hospital, Palakkad	29
KMCT Hospital, Kozhikode	29
Kannur Medical College Hospital, Anjarakandi	85
Pushpagiri Medical College Hospital, Thiruvalla	68
Jubilee Mission Medical College Hospital, Thrissur	85
MES Medical College Hospital, Perinthalmanna	32
Total number of samples taken from Private MCHs	**385**
Total number of sample taken for the study (Grand total)	**770**

1.9.6. Sampling Method

The selection of sample respondents was based on multistage sampling using non- probability method.

Stage 1: In the first stage, from the total of 35 Medical College Hospitals which are functioning in Kerala, 18 Medical College Hospitals which were established before 2007 (7 Government Medical College Hospitals and 11 Private Medical College Hospitals) were listed. From that list, 12 Medical College Hospitals (5 Government Medical College Hospitals and 7 Private Medical College Hospitals) were selected conveniently for collecting primary data for the study.

Stage2: In the second stage, the names of wards in all the selected 12 Medical College Hospitals were listed. Purposive sampling was done for choosing 8 wards which are common in these selected 12 hospitals and in which patients are more.

Stage3:In the third stage, the patients who were admitted at least for 2 days were selected for the study. Critical patients with congenital diseases or cardiac failure were excluded from the study. Respondents were selected based on their readiness to answer on the specific days during which the researcher visited the hospital and also based on researcher's judgment.

This is the most appropriate sampling method as the number of patients in the ward is fluctuating due to frequent admission and discharge.

1.9.7. Method of Data Collection

A structured personal interview method was used for collecting primary data from the patients admitted in selected wards of selected Medical College Hospitals.

1.9.8. Tools for Data Collection

A structured interview schedule was used for collecting primary data from selected sample respondents. The researcher adopted an instrument which is developed and validated by Hong Qin in the year 2009 (Hong Qin, 2009). The

schedule was slightly modified in consultation with the supervisor in order to the suit the requirements of the present study.

There were 72 statements in the schedule and it was closed in form, made on the basis of 5 point Likert scale ranging from (Strongly agree to Strongly disagree), as the model of rating. Summated Scales or Likert type scales takes less time to construct and can be easily used in respondent-centered and stimulus-centered opinion research studies like this (Edwards & Kenney, 1946). Demographic questions were included in the beginning of the questionnaire, which is followed by the statements to measure each study variables. The respondents were encouraged and motivated to give their free and frank opinion.

1.9.9. Tools used for Presentation of Data

Tables, graphs, diagrams and box plots were used for presenting the data in a simplified manner.

1.9.10. Tools used for Data Analysis

The data analyses were done using SPSS and Amos software. Researcher used both descriptive statistics and inferential statistics. Percentages, Averages and Standard Deviation were used for describing the data. Other tools used were as follows.

1) **MPS:** To identify the level of service quality and patients' satisfaction researcher used Mean Percentage Score, which is calculated using the formula;

$$MPS = \frac{\text{Mean score of the variable} \times 100}{\text{Maximum possible score}}$$

2) **CV:** The Coefficient of Variation (CV) is the most commonly used technique particularly in studies like this to compare the variability of two or more than two series of their relative variation. The series, for which the coefficient of variation is greater, is said to be more variable or conversely

less consistent, less uniform, less stable or less homogeneous. The formula for calculating correlation coefficient is;

$$CV = \frac{\text{Standard deviation}*100}{\text{Mean}}$$

3) **Chi-Square Test:** To test whether the hospital sector and demographic variables of patients are associated or not, the Chi-square test for independence has been applied. Chi-Square is measured as $\chi^2 = \sum \frac{(O-E)^2}{E}$, where O refers to the observed frequencies and E for the expected frequencies (the ratio of the product of the row total and column total to the grand total).

4) **Mann-Whitney Test:** Mann-Whitney U Test is the alternative test to the t-test. It is a non-parametric test that is used to compare two population means that come from the same population, it is also used to test whether two population means are equal or not. As a non-parametric test, it is used for equal sample sizes, and is used to test the median of two populations.

Mann-Whitney U Test, if the sample is large we use the Z test as

$$Z = \frac{U - n_x n_y}{\sqrt{\frac{n_x n_y (N+1)}{12}}}$$

Where, n_x = no of x (sample 1), n_y = no of y (sample 2), N = total number of observations in all samples, U_x = total number of time x>y, U_y = total number of time y>x and U= min(U_x , U_y).

5) **Kruskal-Wallis Test:** The Kruskal-Wallis Test is a nonparametric (distribution free) test, which is used to compare three or more groups of sample data. This test is used when assumptions of ANOVA are not met. To calculate the value, apply the following formula:

$$H = \frac{12}{n(n+1)} \sum_{i=1}^{k} \frac{R_i^2}{n_i} - 3(n+1)$$

Where, H = Kruskal-Wallis Test, n = Total number of observations in all samples and R_i = Rank of the sample. Kruskal-Wallis Test statistic is approximately a chi-square distribution, with k-1 degree of freedom where n_i should be greater than 5.

6) **Spearman Rank Correlation:** Spearman Rank Correlation is a non-parametric test that is used to measure the degree of association between two variables. It was developed by Spearman, thus it is called the Spearman rank correlation. Spearman Rank Correlation test does not assume any assumptions about the distribution. The following formula is used to calculate the Spearman Rank Correlation:

$$\rho = 1 - \frac{6 \sum d_i^2}{n(n^2 - 1)}$$

Where ρ = Spearman Rank Correlation, d_i= The difference between the ranks of corresponding values X_i and Y_i and n= Number of value in each data set.

7) **Structural Equation Modelling:** Confirmatory Factor Analysis (CFA) is a type of Structural Equation Modeling (SEM), which deals specifically with measurement models, which shows relationship between observed measures or indicators and latent variables or factors. It incorporates the strengths of multiple regression analysis, factor analysis and multivariate ANOVA.

8) **Sobel Test:** In mediation analysis, the relationship between the independent variable and the dependent variable is hypothesized to be an indirect effect that exists due to the influence of a third variable (the mediator). Sobel test is a method of testing the significance of a mediation effect. It is basically a specialized t-test that provides a method to determine whether the reduction in the effect of the independent variable, after including the mediator in the

model, is a significant reduction and therefore whether the mediation effect is statistically significant.

1.9.11. Variables Used For The Study

The variables used in this study were as follows

a)   **Variables:** The variables used in this study were Perceived Service Quality, Perceived Value for Money, Perceived Waiting Time, Patients' Satisfaction, Patients' Loyalty and Patients' Complaint Behaviour.

b)   **Sub Variables:** The 12 sub variables taken for measuring Perceived Service Quality were Reliability, Assurance, Empathy, Physical Environment, Responsiveness, Interaction, Communication, Availability, Technical Quality, Efficiency, Professionalism and Accessibility.

c)   **Demographic Variables:** The demographic variables taken for the study were Age, Gender, Educational Qualifications, Occupation, Poverty line, Frequency of visit, Duration of stay, Ward, and Preference of hospital.

1.9.12. Theoretical Model used for the Study

The theoretical relationship between the variables and sub variables under study are diagrammatically represented below:

Figure 1.1: Theoretical model of the study

Reliability

Assurance

Empathy

Physical Environment

Responsivenes

Interaction

Communication

Availability

Technical Quality

Efficiency

Professionalism

Accessibility

Perceived Service Quality

Perceived Value for Money

Perceived Waiting Time

Patients' Satisfaction

Patients' Loyalty

Patients' Complaint Behaviour
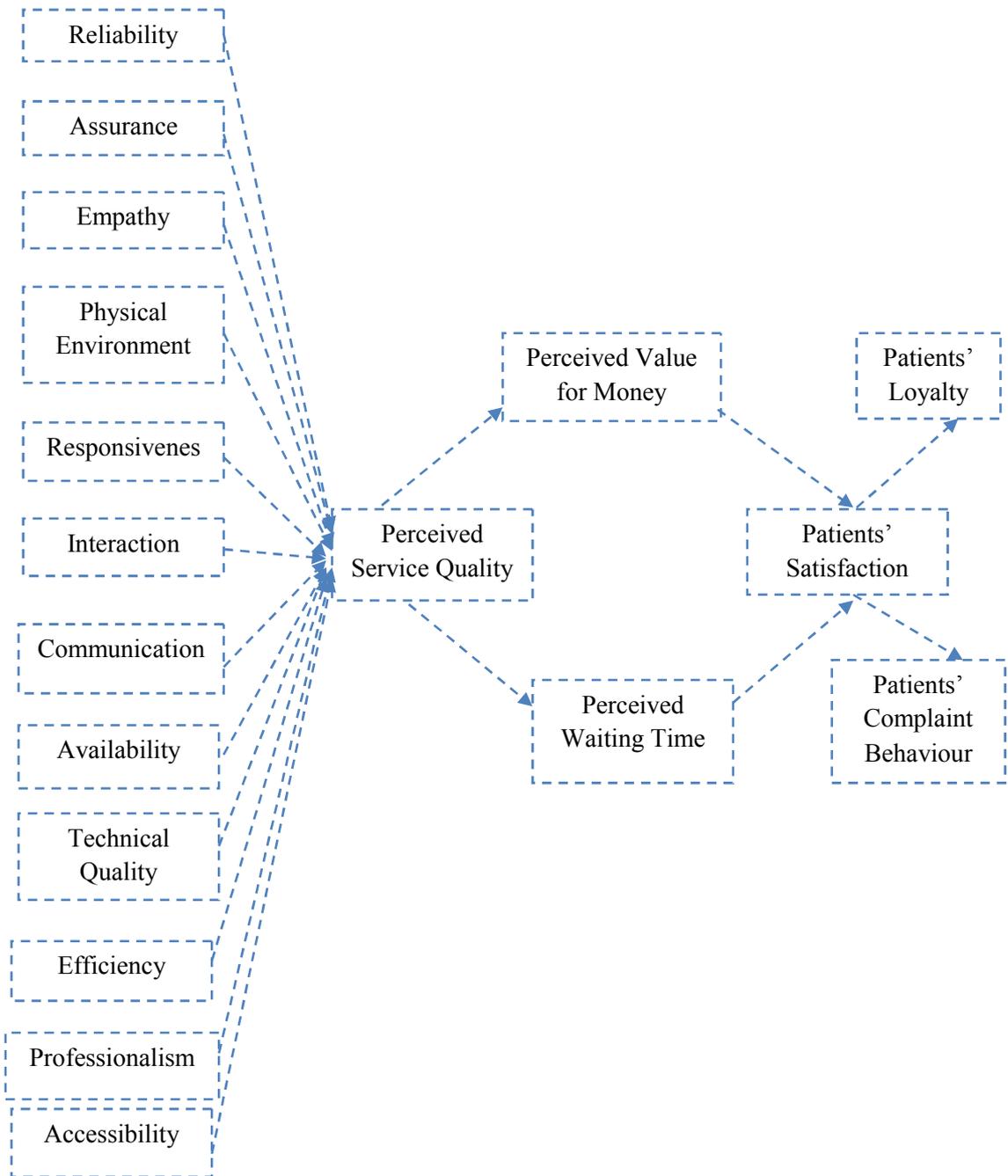
1.9.13. Period of Study

The study was conducted within a period of 5 years (from October 2011 to October 2016). The survey was conducted in eight consecutive months (from January 2015 to August 2015).

1.9.14. Pilot Study

A pilot study was conducted for testing the appropriateness of the research questions and methods adopted. Pilot survey was conducted in a sample of 100 patients with a predesigned questionnaire to 50 patients admitted in Government Medical College Hospital Kozhikode and 50 patients admitted in Amala Institute of Medical sciences, Thrissur. On the basis of findings from the pilot study, the questionnaire was further refined and this refined questionnaire was used for the final data collection.

1.9.15. Reliability Testing

Reliability refers to degree of dependability or consistency of a scale. Unreliable scale will lack consistency of measuring the study variable. For field survey, internal consistency is estimated by using Cronbach's alpha. An alpha value of 0.70 or above is considered to be criterion for demonstrating strong internal consistency and alpha value of 0.60 or above is considered to be significant. Hence, the reliability of the questionnaire used for data collection was evaluated using Cronbach's alpha. The following table gives the initial Cronbach's alpha for each of the construct considered. Result shows that all the constructs has Cronbach's Alpha value greater than 0.6. So the instrument was found to have sufficient consistency and internal reliability.

Table 1.4

Cronbach's Alpha Table

Variable	Cronbach's Alpha	No of Items
Reliability	0.623	3
Assurance	0.930	5
Empathy	0.908	2
Physical environment	0.878	5
Responsiveness	0.826	3
Interaction	0.959	5
Communication	0.947	7
Availability	0.777	4
Technical quality	0.939	5
Efficiency	0.932	5
Professionalism	0.869	3
Accessibility	0.644	5
Perceived Value for Money	0.900	4
Perceived Waiting Time	0.827	4
Patient's Satisfaction	0.902	6
Patients' Loyalty	0.892	4
Complaint Behaviour	0.602	2

Source: Output of SPSS 20

1.9.16. Validity Testing

Validity is the most critical evaluation which indicates the degree to which instrument measures, what it is believed to measure. Empirically validated scales can be used directly in the field for different programmes. Researcher tested all the major types of validity namely content validity, face validity and convergent validity.

1.9.16.1. Content Validity

Content validity is a non-statistical type of validity that involves "systematic examination of the test content to determine whether it covers a representative sample of the behavior domain to be measured" or the extent to which a measuring instrument provides adequate coverage of the topic under study. The researcher consulted various experts and academic professionals in the field of research for this purpose and hence ensured that the questionnaire so prepared for studying the perception on service quality, value for money and waiting time and patients' satisfaction and behavioural intentions is measured with sufficient content validity.

1.9.16.2. Face Validity

Face validity is an estimate, whether the test appears to measure a certain criterion, but it does not guarantee that the test actually measures phenomena in that domain and is very close to content validity. The content validity depends upon a theoretical basis for assuming a test that it is assessing all domains of a certain criterion, meanwhile face validity relates to whether the test appears to be a good measure. This judgment is also made by the researcher on the face of the test by the experts in the field.

1.9.16.3. Convergent Validity

Convergent validity refers to the degree to which a measure is correlated with other measures that is theoretically predicted with and one of the approaches to the construct validity. Otherwise, it is estimated by comparing it to the measure of the same concept developed through other methods to assess how well the items are together. Researcher has conducted the scale refinement and validation using the CFA. The result of CFA is explained in appendix V. Research in social sciences and marketing disciplines has increasingly preferred this approach due to its conceptual strength.

1.10. Operational Definitions of Key terms used in the Study

1.10.1. Patients

Patients refer to inpatients admitted in different wards who are staying in the wards and getting treatment from the hospitals.

1.10.2. Hospital Service Quality

Hospital service quality means the quality of all the services provided by the hospital in which the patient is admitted.

1.10.3. Perceived Service Quality

It is the patients' perception on the quality of services which are experienced by the patients during their hospital stay.

1.10.4. Patients' Satisfaction

It is that state of mind when patients feel that their wants and needs are fulfilled with the services rendered by the hospital.

1.10.5. Perceived Value for Money

It is the patients' perception on monetary value of all the services received by the patients during hospital stay.

1.10.6. Perceived Waiting Time

It is the patients' perception on time waited for getting each service on different stages of treatment i.e. from admission to discharge.

1.10.7. Government Medical College Hospitals

Government Medical College Hospitals are those teaching hospitals which are owned and controlled by government.

1.10.8. Private Medical College Hospitals

Private Medical College Hospitals are those teaching hospitals which are owned and controlled by private individuals or trusts.

1.11. Limitations of the Study

Every social science research has some limitations and this study is not an exemption. The following limitations occurred while conducting the study.

1. The study covers only the Medical College Hospitals and the result of the study can't be generalised with Clinics, General or other Super Speciality Hospitals.

2. Accuracy of the data is depends on the responses of the patients. It has been shown that patients were reluctant to express their feelings on services provided by their caregivers.

3. Patients' emotions and moods are extraneous variables. Even though they have a role in influencing patients' satisfaction, they are not studied.

4. Researcher used non probability methods of sampling.

Earnest attempt has been made by the researcher to overcome the limitations and to provide realistic conclusions to the study.

1.12. Scheme of Reporting

The research report is presented in eight chapters. Scheme of reporting is as follows.

Chapter 1: Introduction

The first chapter is the introduction chapter which contains a brief description about background of the study, statement of the problem, significance of the study, scope of the study, methodology applied for the research, limitations of the study and scheme of reporting.

Chapter 2: Review of literature

The second chapter deals with the literature survey conducted for the study. Literature review of related studies are done under five heads like review of literature on Patients' Satisfaction, review of literature on Perceived Service Quality and Patients' Satisfaction, review of literature on Perceived Value and Patients' Satisfaction, review of literature on Waiting Time and Patients' Satisfaction and review of literature on Patients' Behavioural Intentions.

Chapter 3: Hospital Service Quality and Patients' Satisfaction - Theoretical framework

The third chapter deal with theoretical framework on hospital service quality and patients' satisfaction. It includes introduction to service sector, hospital service marketing, meaning and definitions of service quality, different models of service quality, and dimensions of service quality and meaning of patients' satisfaction.

Chapter 4: Hospital Industry – An Overview

The fourth chapter gives an overview on hospital industry. It gives brief description about the meaning and concepts of hospitals, history of hospitals, changing concept of hospitals, classification of hospitals, Indian health care industry, health care system in Kerala and current issues and problems in Kerala hospital industry.

Chapter 5: Patients' Demographics and Perception

The fifth chapter demonstrates the results of demographic analysis of patients' perception on service quality and satisfaction. It deals with demographic analysis of Perceived Service Quality, Perceived Value for Money, Perceived Waiting Time, Patients' Satisfaction, Patients' Loyalty and Patients' Complaint Behaviour.

Chapter 6: Perceived Service Quality and Patients' Satisfaction – Comparison between Government and Private Medical College Hospitals

The sixth chapter deals with comparative analyses of Perceived Service Quality and Patients' Satisfaction of Government and Private Medical College Hospitals in Kerala.

Chapter 7: Relationship between Perceived Service Quality, Patients' Satisfaction and Behavioural Intentions.

The seventh chapter shows the relationship between Perceived Service Quality, Patients' Satisfaction and Behavioural Intentions. It presents the results and discussions of Correlation Analysis and Regression analysis done to examine the relationships.

Chapter 8: Conclusion

The Eighth chapter is the last and concluding chapter. It summarises the findings, recommendations to management of Government Medical College Hospitals, Private Medical college Hospitals and policy makers for enhancing the quality of services. It also states the scope for further research.

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REVIEW OF LITERATURE

CHAPTER 2
REVIEW OF LITERATURE

Any worthy research in any field of knowledge requires an adequate familiarity with the literature available in that field of study which subsequently helps to find out the gap in the area of research and thus opens new scope for further studies. Review of related literature helps to sharpen and define understanding of existing knowledge in the problem area, provide a background for the research and make the investigator aware of the status of the issue. Thus well acquaintance with the subject area provided by the existing literature enables the researcher to take the task to fulfil the gap in the concerned area of study. The current study is on service quality perception and patient satisfaction in government and private medical college hospitals in Kerala. The objective of this chapter is to provide an overview of findings of some of the previous works done in this area. It also comes across some literary works closely related to the application and impact of variables under study.

Several studies were conducted by individual researchers and institutions in different aspect of service quality and satisfaction. Though a large number of researchers have made theoretical and empirical contribution to the study of service quality and satisfaction in various industries like retailing, banking, insurance, education etc. the area of health care is not adequately explored by researchers. An attempt is made to collect available literature regarding service quality and patient satisfaction in India and abroad. Studies depicting the need for analysing service quality, assessing the level of patients' satisfaction and identification of dimensions of service quality as well as satisfaction are also reviewed. Literature review of related studies are classified into five categories as below

1.   Review of literature on Patients' Satisfaction

2.   Review of literature on Perceived Service Quality and Patients' Satisfaction

3.   Review of literature on Perceived Value and Patients' Satisfaction

4.	Review of literature on Waiting Time and Patients' Satisfaction

5.	Review of literature on Patients' Behavioural Intentions

2.1. Review of Literature on Patients' Satisfaction

1.	Patrick, Scrivens, & Charlton, (1983) examined how disability is associated with patients' dissatisfaction with medical care services provided by doctors in primary care. MDS developed by Roghmann and his colleagues were used for conducting survey in a sample of 1245 respondents living in London Borough of Lambeth. The measure included attitude towards the medical profession (general satisfaction) and satisfaction with patients own provider (specific satisfaction). They stated that disability can influence satisfaction with medical care received from specific doctor or practice setting. It found that person with high level of disability were more likely to be dissatisfied with dimensions of specific satisfaction i.e. access, quality and recent experience.

2.	Hughes, Hunt, & Luft, (1987) opinioned that higher hospital volume is positively related to better patient outcomes. The study was conducted in 503,662 patients abstracts from 757 hospitals. They found that both hospital volume and the proportion of patients operated on by low volume surgeons are related to quality of care as measured by patient outcomes.

3.	Study conducted by Zastowny, Rogh Mann, & Cafferata, (1989) among low income families suggest that there exist a relationship between patient satisfaction and use of health services. The study indicates that it is bidirectional and reciprocal in nature and that it is highly related to the provider from which patients seek care. It offered a conceptual model of satisfaction permitting reciprocal causation with use and satisfaction with emphasis on patient provider interactions and this model provides an identification of short and long term processes.

4. Hurst, (1992) reviewed the literature on private outpatient satisfaction and NHS outpatient satisfaction. Author describes the survey of patients in the two settings, focusing on the similarities and differences in findings, especially the differences between the administrative and clinical process in private and NHS OPDs. They discussed weaknesses and limitations in the survey design.

5. Hall, Milburn, & Epstein, (1993) conducted a longitudinal study on health status and satisfaction in 526 older patients at baseline and repeated it after one year. They assessed patients' cognitive status, emotional health, social activity, functional abilities and overall self-perceived health as well as satisfaction with medical care by using structural equation modelling. It revealed that the predominant direction of causation went from earlier self-perceived overall health and functional ability to later levels of satisfaction. There was no evidence for causal paths going from satisfaction to later health. Test of spuriousness indicated that for self-perceived overall health, the significant longitudinal path was unlikely to be explained by unmeasured confounding variables.

6. Ross, Steward, & Sinacore, (1995) examined the variability in satisfaction evaluation related to different measurement method and the effect of response bias on reported satisfaction. Seven different commonly used measures of patient satisfaction were used for collecting data from the same sample respondents. Study found that satisfaction evaluation depends on the measurement method used and unreliability of measurement may be a significant problem in satisfaction measurement, especially for the oldest and most ill patients.

7. Mummalaneni & Gopalakrishna, (1995) offered two models on patient satisfaction called as the mediational model and the moderator model. According to moderators model patients' satisfaction was influenced by both characteristics of delivery system and patients' demographics. Six major dimensions of patients' satisfaction were considered. They are access,

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financial aspects, availability of resources, continuity of care, technical quality and interpersonal manner of the physician. They found that huge proportion of the variance in patients' satisfaction was accounted for by the delivery system characteristics. Income appears to have much influence on patient satisfaction.

8. Rosenheck, Wilson, & Meterko, (1997) identified in their study that the strongest and most consistent predictors of patients' satisfaction were older age and better self reported health. Patients' characteristics were found as associated for more of the variance in satisfaction than the available facilities characteristics. Older and healthier patients reported greater satisfaction with mental health care services.

9. Kane, Maclejewski, & Finch, (1997) found that patient satisfaction indeed is related to the absolute outcomes of care in their study on relationship between quality of care, hospital care and physician's time. They interviewed 2116 patients undergoing cholecystectomy before surgery and again at six months. It addressed health status and risk factors. For determining satisfaction with care, patient's state of health is considered more than the extent of improvement they have enjoyed. The study stated that although outcomes and satisfaction are related, more goes in to the satisfaction than just outcomes.

10. Andaleeb, (1998) tested a five factor model that explains considerable variation in customer satisfaction with hospitals. The study was conducted in a sample of 130 respondents in Pennsylvania. The factors include communication with patients, competence of the staff, their demeanour, quality of the facilities and perceived cost. Regression model is used in the study. He suggested that perceived competence of the hospital staff and their demeanour have the greatest impact on customer satisfaction and followed closely in importance by perceived hospital cost. The quality of communication and the general condition of the facilities were also

significant but less important in explaining customer satisfaction with hospital services.

11. McKinnon, Crofts, Edwards, Campion, & Edwards, (1998) stated high levels of patient satisfaction with the quality of their consultations and the attitude shown to them by medical staff. Patient feedback showed that despite the introduction of the Patients' Charter, waiting times from referral to appointment and delays in clinics are still identified as the main areas for improvement. They found that patients are remarkably tolerant and understanding of the pressures and demands placed on outpatient staff.

12. Bernhart, Wiadnyana, Wihardjo, & Pohan, (1999) conducted their study to find out the patient satisfaction level in Indonesia. Data was collected from 75 patients in 11 health centres on 3 islands. Though most of the respondents were fully satisfied, they said the facilities could be cleaner and reported they are not receiving various kinds of information. The satisfaction factors like continuity of provider, waiting time, availability of amenities and cost and social interaction with the provider are at the bottom of the list of ranking of relative importance.

13. Sharma & Chahal, (1999) studies in patients revealed that while choosing a hospital, patients give first preference to the efficiency of doctors followed by prior family experience and recommendations of friends and relatives. Knowledege, cooperation, interpersonal warmth, adequate and timely information , prompt services, efficiency of the staff and conveience were the factors largely responsible for producing increased patient satisfaction. The top three factors that influenced overall satisfaction were professional ability of doctors, medical staff and paramedical staff.

14. Hall, Roter, & Milburn, (1999) explored the casual keystones of correlation between physical or mental health and satisfaction with their medical care. It stated that dissatisfaction follows from poorer health rather than how they are treated by doctors. Physicians' reactions to sicker patients in the form of

curtailed social conversation also play a role in the reduced satisfaction of these patients.

15.   Harris, Swindle, Mungai, Weinberger, & Tierney, (1999) conducted a survey in five adult and paediatric primary care sites with American Board of internal medicine patient satisfaction questionnaire named medical outcomes study visit- specific questionnaire and locally developed items. It stated that satisfaction with the provider and the office were independently correlated with overall satisfaction in both samples. In the case of adults satisfaction with access was significantly correlated with overall satisfaction.

16.   Amyx, Mowen, & Hamm, (2000) examined the relationship between patient satisfaction and patients' freedom to choose a physician and the outcome of a health service encounter. The study found out that patients who experienced a good health outcome were significantly more satisfied than patients who received a bad health outcome. Patient satisfaction ratings differed significantly only in the bad outcome condition, suggesting an outcome bias. Patients who were given the freedom to select a physician but did not receive their chosen physician were least satisfied. There was no difference in satisfaction between patients who had a choice of physician and those who did not.

17.   Mahapatra, Srilatba, & Sridbar, (2001) reported favourable overall satisfaction on the major dimensions like accessibility, availability, convenience, communication, financial aspect, general satisfaction, interpersonal aspects, technical quality and time spent with doctors.The major cause of dissatisfaction is found to be curruption apart from utilities such as water supply, fans, lights and poor maintenance of toilets and lack of cleanliness, poor interpersonal and clinication skills.

18.   Braunsberger & Gates (2002) studies established a strong and pivotal role of physicians in influencing patient satisfaction with healthcare. They found that healthier patients, older patients, males, those with a lower level of education, those who perceive system performance to be high and those with

lower levels of system usage are more satisfied with both their healthcare and health plan than their opposite counterparts. The extent of the problems that members had with their health plan was the largest statistical influence on their satisfaction with that plan. The effects of other independent variables including the three demographic variables, self-stated health status, number of visits to doctor's office or clinic, and issues related to access, though significant, show relatively small statistical influences on overall satisfaction with healthcare and health plan.

19. Geweke, Gowrisankaran, & Town, (2003) developed an econometric method to infer hospital quality in a model with discrete dependent variables and non-random selection. Bayesian inference in this model is feasible using a Markov chain Monte Carlo Posterior Simulator and attaches posterior probabilities to quality comparisons with individual hospital and a group of hospitals. They found smallest and largest hospitals exhibit highest quality than other hospitals. They also detected substantial difference in quality for a sizable minority of individual hospitals.

20. Alasad & Ahmad, (2003) investigated patients' satisfaction with nursing care at a major teaching hospital in Jordan. A total of 266 in-patients from the medical, surgical, and gynaecological wards were participated in the study. Pearson correlation, one-way analysis of variance, and logistic regression analysis were used. The findings revealed that patients in surgical wards had lower levels of satisfaction than patients in medical or gynaecological wards. Apart from other diseases gender and education levels were also significant predictors for patients' satisfaction with nursing care.

21. Bhattacharya, Menon, Koushal, & Rao, (2003) found that patient perception on satisfaction on doctors work is very high. Moderate level of satisfaction was recorded regarding the general attitude of nurses and ward servants. Technical aspect of nursing care were found satisafacatory. They suggest that treatment facilities need further improvement.

22. Perneger, Kossovsky, Cathieni, Florio, & Burnand, (2003) conducted a study on patients discharged from 2 Swiss teaching hospitals in order to compare the acceptability and patient perceptions of 4 patient satisfaction questionnaires i.e. Picker, Patient Judgement System (PJS), Sequs and a locally developed Lausanne questionnaire. It found that no questionnaire emerged as uniformly better than the others in terms of acceptability and patient evaluations. All 4 could be used for patient satisfaction surveys.

23. Lora, Rivolta, & Lanzara, (2003) establish the satisfaction of patients with community based psychiatric services, developed in the context of Italian psychiatric reform. The VSS-54 was used to measure satisfaction among 229 patients used for by the Desio Development of Mental Health. They found that continuity of care and satisfaction with psychiatric services do not seem to be related, satisfaction does not predict the number of admissions. It concludes that satisafaction is a useful indicator in monitoring quality of care.

24. Roblin, Becker, Adams, Howard, & Roberts, (2004) evaluated the association of patient satisfaction with type of practitioner atttending visits in the primary care practice of a managed care organisation. A retrospective observational study of 41209 patients were conducted. Study concluded that patients were satisfied with care provided by PA/NPs as with care provided by MDs. Patient satisfaction with care access or overall experience did not significantly differ by practitioner type and patients are significantly more likely to be satisfied with practitioners interaction on visit attended by physician assistant/ nurse practitioners than visits attended by MDs in both in adult medicine and pediatric practices.

25. Simonet, (2005) reviewed patient satisfaction under managed care arrangements with a focus on HMOs in USA. He described the US history of managed care and its effect on the satisfaction of several patient categories including the general population, vulnerable patients and the elderly. He points out that most surveys indicated the lack of choice of a provider. So

patient protection laws are necessary to avoid abuse. The study discussed patient awareness regarding satisfaction surveys and how the latter can be used when patients are seeking care.

26.   Vukmir, (2006) conducted a qualitative study to analyses the literature examining objective information concerning the subject of customer service, as it applies to the current medical practice. Articles were obtained by an English language search of MEDLINE from January 1976 to July 2005. This computerized search was supplemented with literature from the author's personal collection of peer-reviewed articles on customer service in a medical setting. He found that there was a significant lack of objective data correlating customer service objectives, patient satisfaction and quality of care. Patients presented predominantly for the convenience of emergency department care. Specifics of satisfaction are directed to the timing, and amount of caring. Demographic correlates including symptom presentation, practice style, location and physician issues directly impact on satisfaction.

27.   Alaloola & Albedaiwi, (2008) tried to spotlight the level of patient satisfaction or dissatisfaction in one Riyadh tertiary centre. A Cross-sectional survey had been conducted involving 1983 inpatient, outpatient and emergency care patients at King Abdulaziz Medical City, Riyadh. Data were collected using a self-developed patient satisfaction questionnaire. It had been found that the percentage of significant satisfaction with variables were in rank order of room comfort, respectful staff, room call button system, room temperature and room cleanliness. Patients were significantly dissatisfied with phlebotomists not introducing themselves, not explaining procedures and physicians not introducing themselves.

28.   Constantinos-Vasilios, Christina, & Irene, (2008) assessed patients' perceptions on the quality of Greek Hospitals by conducting a patient satisfaction survey. A structured questionnaire was used to collect data from 225 patients of seven hospitals. Patients were asked to report their judgements on their experience of service quality. They found that

educational status, the type of insurance patients had and the emergent admission significantly affects perception of satisfaction. Male and young people tended to rate satisfaction a little higher than females and older people.

29.   Baalbaki, Ahmed, Pashtenko, & Makarem (2008) conducted a longitudinal study on patient satisfaction and perception on both emergency room and elective-stay hospitalization visits in Beirut. Exploratory statistical methods were used to examine substantial data comprising over 300 patient stays. Comprehensive information was presented which illustrated patient perceptions, their inflection points, and the importance of this knowledge in the marketing of hospitals and health care systems. They found that patient perceptions were significantly influenced by hospital support functions and these perceptions determine hospital reputation, influence future patient demands, and were integral to the understanding of patients as consumers of health care systems rather than consumers of medical procedures.

30.   Papanikolaou & Ntani (2008) assessed patient satisfaction in Greek public hospitals. A sample of 367 patients with a minimum of three days stay at the hospital was taken for the study. Overall satisfaction, satisfaction with medical and nursing staff, satisfaction with room facilities, waiting times and extra costs were measured. Information was also collected concerning sex, age, education, salary and length of stay in the hospital. Participants were asked to indicate, in an open-ended question, the most positive and the most negative aspects of their care. They found that patients' bad experience with aspects of their care was not directly reflected in low levels of satisfaction. Patients had to wait long hours to get an appointment with a doctor or after their examination to be admitted to the hospital. Many patients had to rely on a personal nurse and to pay extra money to the medical and nursing staff. Though their overall satisfaction was very high, there is a considerable lack of staff in the hospital.

31. O'Regan & Ryan (2009) measured the rate of satisfaction of the sample population and explored factors which contributed to satisfaction ratings with an emergency department psychiatric service. Data were collected through postal questionnaire from 55 psychiatric patients. The Client Satisfaction Questionnaire-8, an eight-item instrument designed to assess post-service satisfaction was used for collecting data. It has good psychometric properties and has been validated for use in a psychiatric patient population. It is found that most of the respondents are highly satisfied. The qualitative findings reveal positive feedback regarding the staff, but patients expressed dissatisfaction about the availability of beds, waiting times for assessment, communication by staff, and deficiency of crisis services in the home and inadequate provision of information regarding services.

32. Christopher Lo, Burman, Rodin, & Zimmermann, (2009) found that patient satisfaction was not correlated with performance status, but was inversely associated with symptom burden, particularly with depression and anxiety. FAMCARE measure of patient satisfaction and the Edmonton symptom Assessment scale were used to collect data from 145 outpatients. An exploratory factor analysis was also done with the data. The study provided psychometric results concerning the use of a modified FAMCARE Scale, adopted for patient use and to assess the patient satisfaction with outpatient care in a palliative setting.

33. York & McCarthy, (2011) introduced a new customer-satisfaction measuring method termed as Reichheld's ultimate question and compare it with traditional techniques using data gathered from four healthcare clinics. A new survey method, called the ultimate question, was used to collect patient satisfaction data. It was subsequently compared with the data collected via an existing method. It founds that the ultimate question provides similar ratings to existing models at lower costs.

34. Mathew, (2011) made an attempt to identify the factors that influence the patient satisfaction and image of the hospital and assessed the level of satisfaction among the patients regarding the eye care services provided by the hospital. Among the sample size 300, 150 are outpatients and remaining 150 are inpatients. A structured questionnaire was used for data collection. Simple percentage analysis, two means and Chi-Square test were used for analysis. They found that both outpatients and inpatients are satisfied with the services of reception, doctors, nursing staff, and hospital facilities, but not happy with the waiting time taken in speciality clinics.

35. Qu, Platonova, Kennedy, & Shewchuk, (2011) examined patient satisfaction with non-physician staff as related to patient demographics, satisfaction with physician, and intentions to recommend their physicians to others. A survey was conducted in 479 patients at two internal medicine primary care clinics affiliated with a major university health system. A latent class analysis was used to detect patient subpopulations based on profiles of response for five satisfaction-with-staff indicators. Analysis revealed four patient subpopulation segments. Segment I patients uniformly indicated a high level of satisfaction across the five satisfaction-with-staff indicators. These patients tended to be older and less educated, and have lower incomes relative to patients in other segments. Patients in Segment II expressed satisfaction with staff caring and need accommodation, but dissatisfaction with access to their physicians. Patients in Segment III indicated high levels of satisfaction with access and low levels of satisfaction with staff caring and need accommodation. Segment IV patients uniformly expressed low levels of satisfaction across all indicators and generally were younger and highly educated, as well as had higher incomes than other patients.

36. Senic & Marinkovic, (2012) identified the factors impacting the satisfaction level of students at Serbia. Personal touch in service provided, promptness and tangibility were the most prominent factors impacting the satisfaction level of patients. Study suggest that doctors should devote more time to their

patients and show genuine interest in patients' problems if they wish to improve the overall satisfaction of patients with the services rendered.

37.   Bhargava, Thakur, Mishra, Taneja, Dogra, & Loomba, (2012) evaluated patient satisfaction with clinical laboratory services in G.B. Pant Hospital (a North Indian tertiary care centre). A total of 100 out- and in-patients were randomly selected and interviewed about microbiological services using a standard format. Patients did not have problems getting tests done, but the laboratory's inconvenient location caused dissatisfaction. Patients did not have problems communicating with staff, but medical terms were not understood by patients. Area need improvement is cleanliness, especially toilets, which causes the most patient dissatisfaction. Hospital staff were deemed highly competent and judged to give excellent technical help to patients. Patients are fully satisfied with financial subscale as all tests in the microbiology department are free. The overall satisfaction with services stood at 83 per cent.

38.   Karthikeyan & Thirunarayanasamy, (2012) assessed patient satisfaction with hospital services and determined the variables that affect satisfaction. Data were collected from 300 patients of 60 selected hospitals. A structured interview was used to collect data from respondents. They found that majority of the respondents said more or less all behaviour of doctors are good and have a favourable opinion on room services and attitude and behaviour of nursing staff.

39.   Puri, Gupta, Aggarwal, & Kaushal, (2012) conducted a cross-sectional hospital-based study on the quality of care and patient satisfaction. 120 OPD patients at entry (registration), 120 patients at the OPD clinic (60 doctor-patient interactions and 60 exit interviews), and a further 120 patients at investigation facilities were taken as sample. Patient satisfaction, client convenience facilities, prescription quality, doctor-patient interaction and other quality elements were described in the study. They found that most of the patients were satisfied with the OPD care. The percentage proportion of

total score is in rank order patient convenience facilities and doctor-patient interaction, the prescription quality of the doctors and signage display. The mean score for patient-doctor interaction was found to be significantly lower among unsatisfied patients compared to the satisfied patients. Satisfied patients reported a significantly higher consultation time with a doctor compared to unsatisfied patients.

40. Senarath, et al., (2013) assessed patient satisfaction with nursing care and related hospital services, and association between satisfaction and patient characteristics at the National Hospital of Sri Lanka (NHSL). A systematically selected sample of 380 patients warded for three to 90 days in general surgical/medical units were interviewed on discharge. An interview schedule contained 36 items in five sub-scales is used for data collection. Multiple logistic regression analysis was used to identify factors associated with satisfaction in each sub-scale. They found that satisfaction proportion on efficiency and competency is the highest score followed with interpersonal care, comfort and environment, cleanliness and sanitation and personalized and general information. Males reported higher satisfaction than females. Patients with GCE (A/L) were less satisfied with comfort and environment and cleanliness and sanitation compared with those educated below grade 5. Satisfaction with comfort and environment was lower among patients from medical rather than from surgical units.

41. Chahal & Mehta (2013) revealed that patient satisfaction is a multidimensional construct comprised of four dimensions, namely: physical maintenance, physician care, nursing care and internal facilities. 528 inpatients from two teaching and research hospitals operating in Jammu City, India were selected for collecting data. Both exploratory and confirmatory factor analyses were used to verify the scale dimensions. Among the four hypothesized models, only model 2 depicting the impact of dimensions on satisfaction showed a good fit while the other three models showed either average (model 4) or poor (models 1 and 3) fit. The analysis of the models

indicates that all patient satisfaction dimensions positively and significantly contributed to patient satisfaction and which also act as an important mediating factor between the satisfaction dimensions and patient loyalty.

42.   Manolitzas, Grigoroudis, & Matsatsinis, (2014) evaluated the level of patient satisfaction by using multi criteria analysis to elucidate the weak and strong points of satisfaction. They found that the average level of complete satisfaction was low indicating that the citizens were somehow satisfied regarding the emergency department. They suggested that patient services and courtesy, friendliness and professional attitude of the nurses were in need of improvement in order to feel satisfied.

43.   Kennedy, Tevis, & Kent, (2014) found that hospital size, surgical volume, and low mortality were associated with high HCAHPS score. Variables studied were hospital characteristics, process measure compliances and surgical outcomes. Squared analysis was used to evaluate for variables associated with high patient satisfaction. They concluded that factors outside of surgical outcomes appeared to influence patients' perception of their care.

2.2.   Review of Literature on Perceived Service Quality and Patients' Satisfaction

44.   Pascoe, (1983) reviewed the literature on patient satisfaction in primary health care settings. Definitions and models of satisfaction were considered. More attention was given to the conceptualization of satisfaction by investigators concerned about consumers in general as well as by researchers focusing on consumers of medical services. Research findings were discussed and used to develop a model of patient satisfaction. The measurement of patient satisfaction and the findings of empirical studies were then reviewed, including summaries of effect sizes. He concluded that patient satisfaction information can provide a dependent measure of service quality and serves as a predictor of health-related behaviour.

45. Parasuraman, Zeithaml, & Berry, (1985) suggested exploratory method of research which offers several insights and propositions concerning consumer's perception of service quality. Executive interviews and focus group interviews of consumers and management personals were conducted. They identified ten dimensions that consumers use in forming expectations about and perceptions of services. Study pointed out four key discrepancies or gaps on the service provider's side that are likely to affect service quality as perceived by consumers.

46. Parasuraman, Zeithaml, & Berry, (1988) developed a framework of service quality. They revised a model called gap analysis model and defined service quality as a degree of discrepancy between customer's expectation from the service and their perception of service performance. In their empirical study based on exploratory research, they developed a multi item scale SERVQUAL, a 22 item scale for measuring service quality along five dimensions: reliability, responsiveness, assurance, empathy and tangibles.

47. John, (1989) explored the structutral dimensions of perceived quality in health care service consumption. He argued that there are four dimensions of health care service quality named curing, caring, access and the physical environment dimensions.

48. Brown & Swartz, (1989) found that the physician interaction factor had the greatest single impact on the overall service evaluation. They explored the conept of professional service quality and its evaluation from both the provider and client perspective. 13 physicians in private practice and adult patients seen in a month were studied. Factor analysis, regression analysis etc were used to analyse the data.

49. Reidenbach & Smallwood, (1990) developed an instrument based on original ten dimension questionnaire developed by Parasuraman, Zeithaml, & Berry, (1988). They analysed patient service needs by examining the difference in perceptions of service held by patients in three basic hospital settings:

emergency room service, inpatient service and outpatient services. Differential impacts were found in all the three hospital settings.

50. Munro (1991) had undertaken a study in a rheumatology out-patients clinic which examined the flow of information, where information can be improved and how TQM can help improvement. Patients' and staff's perceptions of information quality differed to the extent that some patients were not satisfied with information quality and this was inconsistent with a TQM approach. The quality of information was measured in three areas: sufficiency, understanding, and selectivity. A structured questionnaire was used and 80 patients and 11 staff were interviewed. Study discussed differences in perceptions of information.

51. Babakus & Boller, (1992) empirically evaluated SERVQUAL for its potential usefulness in a hospital service environment. The completed perceptions and expectations scales met various criteria for reliability and validity. Suggestions were provided for the marginal use of scale and a number of future research issues were also identified.

52. Brown (1993) investigated problems in conceptualizing service quality as a difference score in SERVQUAL. He found out an alternative method for measuring service quality which has favourable psychometric properties and is more efficient than SERVQUAL.

53. An empirical study conducted by Vandamme & Leunis, (1993)had been reported on the development of an appropriate multiple item scale to measure hospital service quality. Discrepancies between SERVQUAL and the dimensions obtained from their study were discussed in some details, along with the reliability and validity properties of the scale.

54. Malhotra & Naresh, (1994) evaluated the determinants of service quality between developed and developing countries. Ten dimensions of service quality suggested by Parasuraman et al. was used and assigned some environmental factors such as economic and sociocultural factors to each of

ten dimensions. They found that the customers in developed countries have higher expectations lower tolerance for ineffective services. On the other hand, customers in developing countries tend to have higher tolerance levels and lower quality expectations.

55. Bowers, Swan, Koehler, & William, (1994) studied the five attributes of service quality from SERVQUAL model. Caring and communication were found to be significant. Three of the generic SERVQUAL dimensions were found to be related significantly to patient satisfaction: empathy, responsiveness and reliability.

56. Ong, Haes, Hoos, & Lammes, (1995) addressed different purposes of medical communication; analysis of doctor-patient communication; specific communicative behaviours; and the influence of communicative behaviours on patient outcomes. Three different purposes of communication were identified, namely: (a) creating a good inter-personal relationship; (b) exchanging information; and (c) making treatment-related decisions. Communication during medical encounters can be analysed by using different Interaction Analysis Systems (IAS). These systems differed with regard to their clinical relevance, observational strategy, reliability/validity and channels of communicative behaviour. Several communicative behaviours that occur in consultations were discussed: instrumental (cure oriented) vs. affective (care oriented) behaviour, verbal vs. non-verbal behaviour, privacy behaviour, high vs. low controlling behaviour, and medical vs. everyday language vocabularies. Consequences of specific physician behaviours on certain patient outcomes, namely: satisfaction, compliance/adherence to treatment, recall and understanding of information, and health status/psychiatric morbidity were described. A framework relating background, process and outcome variables was also presented.

57. Anderson, (1995) measured the quality of services provided by a public university health clinic, using a 15 item instrument representing the five dimensions of SERVQUAL. According to her finding all the five dimensions

measured negatively, assurance being most negatively measured. She made recommendations for budgeting future quality improvement projects.

58.   Lacobucci, Ostrom, & Grayson, (1995) presented two studies that rely on divergent methodologies to examine whether or not quality and satisfaction have distinct antecedent causes, consequential effects. Both study focused on cusumers' understanding and use of the words quality and satisfaction; in both studies, respondents reported whether or not they think quality and satisfaction differ, and if so, on what dimensions or under what circumstances. Qualitative critical incident technique is used to elicit service attributes. The study offered fairly robust consumer definitions of quality and satisfaction.

59.   Youssef, Nel, & Bovaird, (1995) measured service quality in west Midlands NHS hospital and in all the five dimensions of SERVQUAL that were measured, it was found that patients perceptions failed to meet their expectations.

60.   Youssef & Nel, (1996) studied health care quality in NHS Hospitals. They revealed that reliability was the most serious problem faced by the NHS hospital providers involved in their study.

61.   Sewell, (1997) conducted a study in the NHS hospital as an attempt to create a holistic and integrated approach. He found reliability was the most important dimension followed by assurance. Empathy and responsiveness were found to be the least important dimension.

62.   Lim & Tang, (2000) made an attempt to determine the expectations and perceptions of patients in Singapore hospitals through the use of modified SERVQUAL that included 25 items representing 6 dimensions namely tangibles, reliability, assurance, responsiveness, empathy and accessibility and affordability. They revealed existence of an overall service quality gap between patients perceptions and expectations.

63.   Raynes (2000) examined the views of terminally ill patients with cancer about the palliative care services they receive and the value they put on these. A sample of 27 patients was drawn, and their views obtained using focus groups. This enabled the exploration of the patients' own views of what services were important to them. The findings confirmed that patients spontaneously identify services like better information, help with activities of daily living, and home-care services. Macmillan nurses and GPs' services were highly rated but not in all areas. The patients identified additional services as important to them.

64.   Griffith & Alexander, (2002) supported the multi dimensionality of health care quality. He found the consumer's propensity to switch service providers rather than complain. He suggested the hospitals to be aware of what the patients look for while evaluating the professional services of a particular hospital. Perception of hospital care is derived from a set of criteria based on perceptual cues that patients use.

65.   Swanson & Davis, (2003) attempt to explore which service quality dimensions take precedence in customer satisfaction, word-of-mouth intentions, and repurchase intentions. Results indicated that, when consumers find the contact employee more responsible for the experience, what was delivered was most important to evaluations of service quality, satisfaction, and behavioural intentions. They stated that when responsibility was perceived as shared between the contact employee and management, the physical environment might play a larger role in influencing consumers' satisfaction with the service experience.

66.   Torres & Guo, (2004) described several approaches for implementing quality improvement initiatives to improve patient satisfaction. Specifically, measuring the views of patients, improving patient satisfaction through a community-wide effort, and using a Six Sigma program were discussed. They suggest that each of these programs could be an effective mechanism for quality improvement. They found that a key component to quality

improvement techniques involves collaborative efforts by all health-care professionals and managers as they seek to increase patient satisfaction.

67. Mostafa, (2005) investigated how patients perceive service quality in Egypt's private and public hospitals and also tested the SERVQUAL dimensions in hospitals with in an Arab, non-western context. A cross sectional questionnaire survey was conducted in 332 patients from 12 hospitals in Egypt. Three factor solutions had been highlighted and it does not support the five component original SERVQUAL. They suggested the use of qualitative research along with quantitative methods in future studies.

68. Choi, Lee, Kim, & Lee, (2005) investigated the structural relationships between out-patient satisfaction and service quality dimensions under a South Korea health care system. They studied the causal relationship between service quality and satisfaction between out-patient subgroups obtained on the basis of gender, age and types of services received. Confirmatory factor analysis was done to check the construct validity. Path model and multigroup LISREL analysis were also done. They found that the general causal relationship between service quality and patient satisfaction was well supported in the South Korean health-care delivery system and the pattern of relationships between service quality and patient satisfaction was similar across the gender, age, and service type subgroups. They also revealed that the level of satisfaction was not the same for subgroups when divided by age and the types of services received.

69. Zineldin, (2006) argued that patient's satisfaction is a cumulative construct, summing satisfaction with five different qualities (5Qs) of the hospital: quality of object, processes, infrastructure, interaction, and atmosphere. A conceptual model including behavioural dimensions of patient-physician relationships and patient satisfaction have been developed. It was an empirical study conducted on 224 inpatients with a questionnaire containing 48 attributes of the newly developed and most relevant five quality

dimensions. Patients' satisfaction with different service quality dimensions were correlated with their willingness to recommend the hospital to others.

70. Whitehead, May, & Agahi, (2007) identified the key factors that influence patients' perceptions of cleanliness and ranked these factors in order of importance. The project utilised a mixed methodology to collect the data. The hospital staff and people who had been recent patients took part in focus groups in order to gather their views. The hospital in-patients were surveyed through the use of a paper questionnaire. They found that the main themes that influence the perceptions of cleanliness emerging from the analysis can be summarised under three broad headings – appearance of the environment, physical cleanliness and staff behaviour. The research suggests that the appearance of the environment is the most important factor.

71. Mayuri, Chandrasekharan, & Anantharaman, (2008) identified seven factors of healthcare service quality perceived by patients. They are infrastructure, personnel quality, process of clinical care, administrative procedures, safety indicators overall experience of medical care received and social responsibility. Each of these factors plays a crucial role in determining the satisfaction level of customers. These factors are highly interrelated and interdependent and hence cannot be examined in isolation but have to be looked at holistically.

72. Arasli, Ekiz, & Katircioglu, (2008) developed and compared some determinants of service quality in both the public and private hospitals of Northern Cyprus. Randomly, 454 respondents, who have recently benefited from hospital services in Famagusta were selected to answer a modified version of the SERVQUAL Instrument. Study identified six factors regarding the service quality as perceived in both public and private Northern Cyprus hospitals. These are: empathy, giving priority to the inpatients needs, relationships between staff and patients, professionalism of staff, food and the physical environment. They also found that the various

expectations of inpatients have not been met in either the public or the private hospitals.

73. Gupta, (2008) studied service provider's perspective on the key constituents of health care service quality based on focus group discussions with various service providers. It was concluded that modern state of art equipment, comfortable, clean and appealing physical facilities, neatly and appropriately dressed nurses and support staff, consistent delivery of proper health care services, maintenance of complete and accurate medical history, prompt accessibility of doctors etc. were considered as some of the major constituents of health care service quality.

74. Rivers & Glover, (2008) developed a model that can be used to investigate a number of complex issues and relationships associated with competition in the health care industry. A literature review was conducted on a total of 50 items of literature related to the subject. Various perspectives of competition, the nature of service quality, health system costs, and patient satisfaction in health care were examined. A model of the relationship among these variables is developed in the light of propositions for empirical research. It depicted patient satisfaction as an outcome measure directly dependenton competition. Quality of care and health care systems costs, while also directly dependent on the strategic mission and goals, were considered as determinants of customer satisfaction.

75. Sengupta & Mondal, (2009) found that there is a downward trend in the average efficiency of public hospitals. This, in turn, is related to a reduction in expenditure per hospital in the reform era. The situation needs urgent policy level alterations in a way that can lead to improvement in both efficiency and competitiveness of public health care services.

76. Gill & White, (2009) reviewed patient satisfaction literature and present perceived service quality as a separate and more advanced construct. They stated that patient satisfaction is extensively studied and considerable efforts had done into developing survey instrument to measure it. They suggested

health care sector to conduct more research focus on perceived health service quality by considering the specific concepts and models that can be found in the service marketing literature.

77. Mayer, (2009) indicates that Six Sigma has been widely used to improve quality of processes in healthcare systems. Six Sigma requires the completion of five phases of problem definition, measurement of critical factors for quality, analysis phase, improvement phase and control phase. He also found that the clinical process analysis using six sigma methodologies can significantly reduce defects and address quality issues

78. Abd Manf & Nooi, (2009) conducted an empirical analysis on patient satisfaction as an indicator of service quality in Malaysian public hospitals. They studied two dimensions of service quality emerged, namely clinical and physical dimension of service. Both outpatient and inpatient were found to be more satisfied with clinical dimension of service than physical dimension. For outpatient satisfaction, there was positive correlation between waiting time and patient satisfaction. Patient satisfaction was also found to be higher in the smaller district hospitals than in the larger state hospitals. For clinical dimension of service, patients were satisfied with the services of doctors and nurses, while for physical dimension of service, patients were satisfied with the cleanliness of the facilities.

79. Panchapakesan, Chandrasekharan, & Prakash, (2009) identifies two components of service quality namely technical quality comprising of primary care attributes like treatment provided, infrastructure etc. and functional quality comprising of secondary care attributes or how the service is delivered like friendliness of service personnel, timely delivery etc. The important determinants of hospital service quality are infrastructure, personnel quality, and process of clinical care, administrative procedures, safety indicators, corporate image, social responsibility and trustworthiness of the hospital.

80.   Camgoz Akdag & Zineldin, (2010) empirically examined the major factors affecting patients' perception of cumulative satisfaction and addressed the question whether patients in Istanbul evaluate quality of health care to be similar or different to that of the Kazakhstani, Egyptian and Jordanian patients. A conceptual model including behavioural dimensions of patient-physician relationships and patient satisfaction has been used for approach. The questionnaire was taken from another research regarding Egyptian and Jordanian medical clinics. The same research was also done by the authors in Kazakhstan in 2008. A total of 48 items (attributes) of the newly developed five quality dimensions (5Qs) by the second author were identified to be the most relevant. 5Qs model encompasses technical, functional, interaction, infrastructure and the atmosphere qualities and services.

81.   Chenet, Dagger, & O'Sullivan, (2010) examined the role of service differentiation in business-to-business relationships. They stated that service quality had an impact on trust, differentiation and relationship outcomes. Trust was found to drive service differentiation which in turn, drove commitment which ultimately had an impact on both satisfaction and word-of-mouth. They also found that service differentiation is a full mediator of the impact that service quality and trust have on client commitment towards the firm. They also stated the importance of service differentiation in achieving high levels of relationship commitment and ultimately satisfaction and positive word-of-mouth.

82.   Nana, Sonny, & Baba, (2010) made an attempt to explore patients' satisfaction with access to treatment in both the public and private healthcare sectors in London. The study showed that access is a major health consumption indicator in both the public and private healthcare sectors.

83.   Padma, Rajendran, & Lokachari, (2010) conceptualized hospital Service Quality (SQ) as an eight dimensional framework from the perspectives of patients and their attendants; and analyse the relationship between SQ and Customer Satisfaction (CS) in government and private hospitals in India. A

questionnaire-survey was done to obtain the perceptions of patients and attendants. Bi-variate correlation and multiple regressions were used to analyse data. They also compared the performance of government and private hospitals in terms of the services offered. They found that patients and attendants treat the interpersonal aspect of care as the most important one, as they cannot fully evaluate the technical quality of healthcare services. They suggested that the hospital service providers have to understand the needs of both patients and attendants in order to gather a holistic view of their services.

84.   Mehta, (2011) analysed the relation between service quality and patient satisfaction and found that service quality and patient satisfaction were positively correlated. He identified three factors namely promptness, medical aid and patient interest for service quality and amenities, clinical services and physical services were the main determinants of patient satisfaction with service quality.

85.   Rajagopal, (2010) pointed out that cost of health care services and income of the patients are the critical factors that determine the preference of health care services by the poor. The poor people are favourable to utilize private health care services in Kerala. The public health care system has failed considerably in providing adequate health facilities to the poor people. He suggests that a proactive role by private hospitals with support from the government and society can definitely create an 'opportunity space' for the poor who seek private medical help.

86.   Alhashem, Alquraini, & Chowdhury, (2011) viewed that patient satisfaction is used as one of the most important indicators to measure the quality of health care services. They identified six factors affecting patient's satisfaction at primary health care clinics using exploratory factor analysis. Data was collected from 426 patients during January 2007 and May 2007 through a randomly-distributed questionnaire. They found that majority of the patients responded that the time for communication between physician and patient

was not enough. Most of the surveyed patients said they would go to the emergency room of the hospital in future if needed instead of going to the primary care clinic. Regarding the quality of the communication relationship between physician and patients, most of the patients responded negatively.

87. Laura, Dorel, & Florin, (2011) conducted a comparative study of patient satisfaction at public and private hospitals in Romania. It revealed that there existed discrepancies in the expected and perceived service quality in both public and private hospitals. The gap between the expected and perceived service quality was greater in the case of public hospitals than in private hospitals. The highest level of expectation was with regard to reliability followed by assurance. The highest level of discrepancy between expected and perceived quality was in case of the dimension with greatest level of expectation, i.e. reliability while the lowest level of discrepancy was in case of physical environment or tangible elements.

88. Wang, (2011) investigated the effects of inconsistent word-of-mouth on service quality perception and purchase intention during the service encounter. A pilot study and a subsequent formal experiment with six scenarios were designed to test the inconsistent word-of-mouth effect. Participants were recruited from a major university located in Southern China. They found that service quality perception and purchase intention were influenced more by the final word-of-mouth event than by the initial one and were more favourable with more positive word-of-mouth events.

89. Medina-Meirapeix, Jimeno-Serrano, Escolar-Reina, & Bano-Aldo, (2012) established that satisfaction and service quality are highly correlated. They assessed the relationship between patient's experiences with satisfaction and service quality in outpatient rehabilitation settings. A cross sectional self-reported survey was carried among 3 outpatient rehabilitation units belonging to Spanish hospitals. Main variable were self-reported experiences on aspects of care, participants perception of service quality, satisfaction with care, social- demographic and health characteristics. They revealed that

satisfaction and service quality provide a poor indicator of patients' experiences.

90. D'Souza & Sequeira, (2012) measured health care service quality from three different viewpoints namely doctor quality of care, nursing quality of care and operational quality of care and to assess the impact of them on patients' satisfaction based on the data collected from a health care organisation in Karnataka. The results indicated that all these three elements were equally important in determining patients' satisfaction and there was a particular need to improve the doctors' quality of care at this hospital in order to enhance patient satisfaction.

91. SERVPERF appeared to be a consistent and reliable instreument to measure health care service quality in a study conducted by Taneja, (2012). A cross sectional empirical investigation was conducted for studying perceived service quality among patients in three hospitals in Delhi. Purposive sampling was used for collecting data from 150 respondents using SERVPERF questionnaire. Averages and one way ANOVA were used for data analysis. They found that the most important service quality dimension is assurance and the least important is Tangibility. They suggest that improvement need to be made according to the type of hospital- government, trust or corporate.

92. Das, (2012) pointed out that there is an urgent need to enhance the public health care mechanism throughout the country, especially in rural India. He found that the government health infrastructure in India is very poor and inadequate to meet the health care needs of the local public which increase the health expenditure burden of common man.

93. Murti, Deshpande, & Srivastava, (2013) measured the quality of services and patient satisfaction and behavioural intentions in health care services provided by Indian hospitals. It analysed the suitability of service quality to improve customer satisfaction and in the process positively impacting behavioural intentions in the health care settings. They suggested that

construct of service quality that is developed in one culture might not be applicable in another culture.

94. Mahapatra, (2013) conducted a comparative study on patients' perception of service quality across public and private hospitals. It showed that though the private sector had an edge over the public sector, the service quality was not very different. The most important service quality gap across sectors was that the medical facilities and equipments were not maintained properly. Patients felt that the hospital environment was neither neat nor comfortable and lacked proper directional signs. They also had the opinion that services were neither affordable nor accessible and were not available 24 hours, no privacy during treatment and services were not provided promptly. Patients also felt that they were not treated with dignity and staffs were not courteous. He suggests that hospital authorities of both of public and private hospitals have to take care of these aspects in order to improve patient satisfaction.

95. Murti, Deshpande,& Srivastava, (2013) developed a comprehensive scale for measuring service quality, patient satisfaction and behavioural intentions in the health care scenario. Study was conducted in Bhopal city of central India. Multiple regression analysis was used to examine the proposed relationship. They established the direct influence of service quality on behavioural intentions, and mediating role of customer satisfaction on in influencing behavioural intentions. Service quality and patient satisfaction were found to be the strong drivers of behavioural intentions in the context of health care service in India.

96. Garrard & Narayan, (2013) found that patients had positive perception regarding staff politeness, patient respect and privacy. There were both positive as well as negative perceptions of patients regarding the quality of services offered. They suggest improvement in areas like hand cleanliness, women's involvement in decision making and communicating risk.

97. Rehin, (2014) reported that patients are satisfied with overall service quality in government hospitals. The purpose of the study was to examine the

perception of doctors regarding the extent of HRD practices at government hospitals and the perception of patients and bystanders about the quality of health care provided at government hospitals. data was collected from 240 doctors, 330 patients and 330 bystanders of 26 hospitals in kerala. The study was conducted over a period of seven months from July 2012 to January 2013. Factor analysis and multiple regression analysis were primarily used for analysing the data. Study found that patients were generally satisfied with the responsiveness of staff members, assurance of the service offered and tangible aspect of government hospitals. Bystanders perceived that patient mobility facilities were readily available at the hospital. Though the patients were generally satisfied with the reliability of services and empathy shown by doctors, nurses and supporting staff in government hospitals, there existed certain areas of dissatisfaction among the patients.

98.   Bakan, Buyukbese, & Ersahan, (2014) suggested that service quality perceptions positively influences patient satisfaction with overall hospital care. They examined the impact of the dimensions of patient- perceived Total Quality Service (TQS) on patients' satisfaction. Study was conducted in the patients of public and private health care centres in Turkey using a questionnaire. Descriptive statistics, correlation and linear regression were used for data analysis. The important factors identified in regression model regarding patients SOHC were the quality of the hospitals social responsibility, administrative processes and overall experience of medical care received.

99.   Demirer & Bulbul, (2014) established that perceived service quality has a significant positive impact on patient satisfaction and patient satisfaction has a significant positive impact on patients' preferences. The study comparatively explored the suitability of SERVQUAL and relationship between perceived service quality, patient satisfaction, and patient preference for the public and private hospitals in Turkey. An exploratory factor analysis, confirmatory factor analysis and structural equation analysis were done.

Though SERVQUAL is found to be a valid and reliable instrument to measure health care service quality, the dimensions of SERVQUAL were not confirmed.

100. Service quality dimensions identified by Deshwal, Ranjan, & Mittal, (2014) were staff professionalism, clinic staff reliability, clinic accessibility and basic facilities, tangibles, cleanliness, awareness of the clinic/diseases and how clinic staff deals with emergencies. The study was conducted in campus clinic in Delhi. Convenient sampling method of data collection was done. Data was collected from 445 respondents by using modified SERVQUAL tool. Factor analysis, reliability tests and Kaiser-Meyer-Olkin measure of sampling adequacy were conducted.

2.3. Review of Literature on Perceived Value and Patients' Satisfaction

101. Ulaga & Chacour, (2001) assessed the construct of customer-perceived value through a literature review. A multiple-item measure of customer value was developed, and the approach is illustrated by the marketing strategy development project of a major chemical manufacturer in international markets. They discussed how the customer value audit can be linked to marketing strategy development and provided guidelines for managerial actions.

102. Turel, Serenko, & Bontis, (2007) found that perceived value would be a key multidimensional determinant of behavioural intentions. The paper also discussed a broadened conceptualization of technology adoption in which value trade-offs (i.e., price, social, emotional and quality) are critical drivers in the adoption decision. Study examined this adoption by combining marketing and IS perspectives through an empirical survey of 222 young–adult SMS users.

103. Helkkula & Pihlstrom, (n.d.) outlined an alternative phenomenological framework (VALCONEX), to examine value-in-context experiences. The VALCONEX framework inductively examined lived and imaginary value-

in-context experiences in the context of Web 2.0 and public service organisations. They found that previous experience of different types of services; together with imaginary experience have impact on current and future value-in-context experiences. In service settings, customers and service managers experience and co-create value with service providers and other beneficiaries and the pre- in- and post- service consumption phases become dynamically intertwined.

104. Boksberger & Melsen, (2011) provided a comprehensive and systematic overview of the research on perceived value. The common perceived value definitions, conceptual and measurement approaches and its close relationship with important and highly researched service industry components such as service quality and customer satisfaction were discussed. They demonstrated underlying and foundational theories, systematises the research streams and addresses the unsolved concerns of perceived value.

105. Rasa, Siddiquei, & Awan, (2012) conducted a study to find the relationship between service quality, perceived value and customer satisfaction and repurchase intentions in luxury hotel management in Pakistan. Survey Questionnaires are used to collect data from 125 luxury hotel customers of Pakistan. They identified two dimensions of perceived value which are functional and symbolic. They found that perceived value and service quality have important and positive relationship with satisfaction and revisit intentions.

106. Tabaku & Kushi, (2013) pointed out that there is a need for studying the inter link among Service Quality, Customer Satisfaction and Perceived Value in different service industries. They concluded that no research has simultaneously compared the relative influence of these three important constructs on service encounter outcomes. Most of the studies are done in developed countries and so, there is a need to validate the models in developing countries, across different settings and cultures.

2.4. Review of Literature on Waiting Time and Patients' Satisfaction

107.   Booth, Harrison, Gardener, & Gray, (1992) conducted a survey of the waiting times and patients' opinions of these times in a busy district general hospital A&E department. Two parallel studies were conducted over 7 consecutive days on 240 walking wounded patients. Study analyses various components of the overall waiting time. Points of the patients' attendance, where waiting time is lengthy were identified. Result indicates that most of the patients were satisfied with the duration of their wait.

108.   Camacho, Anderson, Safrit, Jones, & Hoffmann, (2006) studied the association between waiting time and satisfaction outcomes. They assessed how this relationship varies by time spent with the provider. A cross-sectional survey in 2,444 outpatients was conducted at point of care from 18 primary and specialty care clinics. Overall satisfaction with provider care, the office ratings, and willingness to return were each rated on a 0-to-10-point scale. Multivariate and logistic regressions were used to examine the relationship between waiting time and outcomes. It is found that waiting time significantly predicted provider ratings. The association between waiting time and office satisfaction showed a similar pattern; increased waits also decreased willingness to return. The study confirmed that reduced waiting time lead to increased patient satisfaction and greater willingness to return in primary and specialty care outpatient settings and increased waiting time combined with reduced time spent with the physician may lead to dissatisfaction.

109.   Anderson, Camacho, & Balkrishnan, (2007) examined the relationship between patient waiting time and willingness to return for care and patient satisfaction ratings with primary care physicians. Cross-sectional web based survey was conducted on a convenience sample of 5,030 patients. The survey included self-reported information on wait times, time spent with doctors, and patient satisfaction. It is found that longer waiting time was associated with lower patient satisfaction and time spent with the physician

was the strongest predictor of patient satisfaction. They also found that decrease in satisfaction associated with long waiting times substantially reduce with increased time spent with the physician. Combination of long waiting time to see the doctor and having a short doctor visit is associated with very low overall patient satisfaction. They established that the time spent with the physician is a stronger predictor of patient satisfaction than is the time spent in the waiting room.

110. Kong, Camacho, Feldman, Anderson, & Balakrishnan, (2007) conducted a cross-sectional study on a convenience sample of 20,901 patients. Variables such as friendliness, wait times and time spent with doctor were scored and used to measure patient satisfaction with physician. It was found out that even though elderly and non-elderly patients had similar waiting times, elderly patients gave higher physician satisfaction scores than non-elderly patients. Increased time spent with the physician was more significantly correlated with higher physician satisfaction ratings in the non-elderly patients in comparison to elderly patients. They also found that friendliness or empathy was highly correlated with physician satisfaction in both the elderly and non-elderly groups. Elderly patients reported similar waiting times and better physician satisfaction scores. Higher physician satisfaction in non-elderly patients were more strongly associated with increased time spent with physician than in the elderly patients.

111. Corbett & McGuigan, (2008) stated that patients' satisfaction with the see and treat services was independent of waiting times. They found that patient satisfaction depends on several factors including whether they have been listened to, treated with respect and dignity, and involved in decisions about their care. When all other variables were considered, no significant relationship between waiting time and patient satisfaction was found. Study also revealed that shorter waiting time does not ensure higher patient satisfaction. They suggest that lack of professional confidence is an issue worth addressing in the future.

112. Pillay, et al., (2011) determined the average waiting time in Malaysian public hospitals and to gauge the level of patient satisfaction with the waiting time. They also tried to identify factors perceived by healthcare providers which contribute to the waiting time problem. Self-administered questionnaires were used to collect data from 21 public hospitals throughout all 13 states in Malaysia. A total of 13,000 responses were analysed for the patient survey and almost 3,000 were analysed for the employee survey. They found that on average, patients wait for more than two hours from registration to getting the prescription slip, while the contact time with medical personnel is only on average 15 minutes. Employee surveys on factors contributing to the lengthy waiting time indicate employee attitude and work process, heavy workload, management and supervision problems, and inadequate facilities to be among the contributory factors to the waiting time problem.

113. In the study conducted by Rahil & Venkatesh, (2012) patients reported less satisfaction with waiting time in departments of OPD. They tried to know the satisfaction level of patients and also get a feedback about the services provided in the outpatient department. A structured questionnaire was used to collect data from 200 patients by using probability sampling method.

114. Michael, Schaffer, Egan, Little, & Pritchard, (2013) established a strong and inverse relationship between patient satisfaction and wait times in ambulatory care settings. Convenient sampling was used in the study. It demonstrates the increase in patient satisfaction by minimizing wait times using the Dartmouth Micro system Improvement Curriculum (DMIC) framework and the Plan-Do-Study-Act (PDSA) improvement process. Significant reductions in mean waiting room and exam room wait times were observed along with a significant increase in patient satisfaction with waiting room wait time. It is found that reducing waiting room wait time improves patient satisfaction. They suggest the application of DMIC framework and the PDSA method to improve wait times and patient satisfaction among primary care patients.

115. Syed, Parente, Johnson, & Davies, (2013) investigated the relationship between the environmental, patient, and social-demographic factors to patient wait-time and satisfaction at an orthopaedic follow-up clinic.80 patients were tracked through the clinic at various time points: appointment time, registration time, time to diagnostic imaging, time to being called into an exam room, time to being seen by a trainee, time to being seen by the staff surgeon, and time of leaving the clinic. Overall satisfaction scores were calculated as per Visit Specific Questionnaire (VSQ-9). There were no statistically significant differences between the total wait-time in clinic, total VSQ-9 scores and age, gender, ethnicity, education, location of injury and overall health. Environmental variables were analysed and it was found that patients reported greater satisfaction when seen only by the surgeon and not the trainee.

116. McMullen & Netland, (2013) had opinion that minimizing the time patient spends waiting to see a provider can result in higher overall patient satisfaction scores, regardless of financial status. They conducted a cross-sectional study on 104 outpatients in an ophthalmology clinic to determine whether the actual time patients spend waiting is correlated with overall patient satisfaction scores. The actual time each patient waited to be called by the provider was recorded, and a survey was given at the end of the visit. Spearman correlation coefficients and P-values were calculated. Welch's t-test was used to test for significance. They found that there was a significant correlation between the time patients spent waiting and overall patient satisfaction scores. Patients who were not completely satisfied waited twice as long as those who were completely satisfied, regardless of whether patients received free care. Study pointed out that satisfaction with the amount of time spent waiting was the strongest driver of overall satisfaction score.

117. Bleustein, Rothschild, Valen, Valaitis, Schweitzer, & Jones, (2014) assessed the relationships between reported waiting times and various measures of satisfaction. It analysed the impact of waiting time on overall satisfaction and the specific perception of the quality of care and physician abilities. A questionnaire with Health Consumer Assessment of Healthcare Providers

and Systems patient satisfaction and waiting time queries was administered via mail to 11,352 clinic patients. Data was analysed using statistical modelling techniques. Study confirmed strong relationship between patient wait times and patient satisfaction. It is established that longer wait time is negatively associated with clinical provider scores of patient satisfaction. They also found that every aspect of patient experience specifically confidence in the care provider and perceived quality of care are negatively correlated with longer wait time.

2.5. Review of Literature on Patients' Behavioural Intentions

118. Platonova, Kennedy, & Shewchuk, (2008) found that patient trust and interpersonal relationship with the physician were major predictors of patient satisfaction and loyalty to the physician. They developed and empirically tested a model reflecting a system of interrelations among patient loyalty, trust and satisfaction as they were related to patients' intentions to stay with a primary care physician and recommend the doctor to other people. They used a structural equation modelling approach. The fit statistic indicate well fit model. They suggested that patient need to trust the physician to be satisfied and loyal to the physician.

119. Chahal, (2008) considered the quality of doctors, nurses, support staff, administrative staff, cleanliness, atmospherics and technical services are the key parameters of patient satisfaction. He opinioned that delivering service quality consistently creates and fosters the feeling of being cared and lead to patient satisfaction and loyalty. How the doctors, nurses and support staff treat patients effectively, and how patients perceive the quality of care impacts their satisfaction level. The study has also identified interpersonal experience of patients with doctors like their helpfulness, friendliness, satisfactory answers for queries, caring attitude towards the patients and their relatives and friends as significant contributors to the satisfaction of patients with physicians' quality.

120. Kessler & Mylod, (2011) established that patient satisfaction affects actual hospital choices in a large sample. Data from 678 hospitals were matched using three sources. Patient satisfaction data were obtained from Press Ganey

Associates. The study used regression analysis to estimate satisfaction's effects on patient loyalty, while holding process-based quality measures and hospital and market characteristics constant. They found that although there is a statistically significant link between satisfaction and loyalty, the relationship is weaker for high-satisfaction hospitals, consistent with other studies in the marketing literature.

121.   Daniel, Kessler, & Deirdre, (2011) opined that patient satisfaction is significantly positively correlated with end-of-life patients' propensity to return to a hospital. Other hospital characteristics also affect patient loyalty. Teaching and government hospitals have lower patient loyalty than their counterparts.

122.   Chang, Tseng, & Woodside, (2013) explored sufficiency conditions for patient loyalty to a hospital by applying fuzzy set qualitative comparative analysis (fs/QCA) in 645 self-administered questionnaires from patients in a major medical centre in Taiwan. Study supported that the three conditions (patient satisfaction, patient participation in the process of diagnosis, and patient participation in treatment decision-making) in combination were sufficient for high patient loyalty to the hospital but high patient satisfaction alone is insufficient. While the three conditions in configurable algorithm are sufficient, this expression is not necessary, which means the findings do not reject possible alternative conditions for high patient loyalty.

123.   Liu, Sudharshan, & Hamer, (2000) examined how complaint management influences overall service quality perception and behavioural intentions. The implications of their model provided more focused guidance on complaint behaviour management. They suggest that service delivery and communications are to be used to emphasize a firm's strengths. They also stated that customer expectations themselves change within the encounter itself and play a key role in the perception of service quality. They suggested that focusing during service delivery should concentrate on reinforcing customer expectations on the strengths of the service provider.

124.   Haw, Collyer, & Sugarman, (2010) analysed complaints made by, or on behalf of, inpatients at a large independent psychiatric hospital. The

hospital's complaints register was used to identify and study complaints made during 2006. A descriptive analysis was performed. Of the 392 complaints, 39 per cent related to staff behaviour, 26 per cent to clinical matters, 18 per cent to the behaviour of other patients and the remaining 16 per cent to the physical environment and facilities. They found that action as a result of complaints was mainly taken at unit level but in 9 per cent of cases organisation-wide improvements were made.

Conclusion

Review of literature in the selected area revealed the fact that this is an area where a large number of studies have been conducted and a number of works regarding to this area is currently undergoing. Service quality and patients' satisfaction have their own significance in health care industry because of the dynamic nature of the sector. The reviewed literature includes studies in the aspects of perceived service quality and patients' satisfaction and its dimensions and measurement. The review is extensive in nature as it includes studies conducted in India and abroad. It is noteworthy that the available studies in the field reviewed in which the studies conducted in India were largely carried out in northern region of the country and its focus area were aspects like service quality, level of patients' satisfaction in general hospitals. No studies have been conducted so far in Kerala to analyse the perception of inpatients in medical college hospitals.

The present study is to examine and compare the patients' perception on the service quality and patients' satisfaction of government and private medical college hospitals in Kerala. It also analyses the mediating role of perceived waiting time and perceived value for money in patients' satisfaction. There is considerable lack of literature with respect to that especially in the targeted locale and that is the research gap identified from literature survey. Thus the present study in the identified area bears its importance.

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HOSPITAL SERVICE QUALITY AND PATIENTS' SATISFACTION – THEORETICAL FRAMEWORK

CHAPTER 3

HOSPITAL SERVICE QUALITY AND PATIENTS' SATISFACTION – THEORETICAL FRAMEWORK

For conducting any research, the researcher requires a deep knowledge about the theoretical framework under study. This research is about the perception of in-patients on the hospital services and their level of satisfaction. Hence this chapter provides the conceptual knowledge about the service quality and patients' satisfaction.

3.1.Introduction to Service Sector

Services sector is recognised as a crucial field for economic wellbeing. In Indian economy the emphasis is now shifted from the agricultural and industrial sector to the service sector. Today the contribution of the service sector to the GDP of India stands around 57%. In the new business environment, defined by new technology, intense global competition and constantly changing market place, the consumer is more often a purchaser of service than a product. Consumption of services such as education, health care, civil services, transport and communication, tourism, entertainment and sports are deemed essential or otherwise considered vital today (Govind Apte, 2004).

In the ancient times, Indian economy was dominated by agricultural sector. The country has come a long way in its development since its independence in 1947. Post-independence Indian economy followed socialist development model. Lack of developments and a big inequality between the rich and the poor existed at that time. Realising these short falls, the leaders of Indian independence started attempts to make up the situation by adapting the economic development models of communist Russia and China. In every economic field, huge corporations with government ownership were floated. In addition, the government nationalised some existing private companies from service sector like insurance companies, banks and transport. Sectors such as railways, passenger transport, ports and inland transport,

shipping, electricity generation and distribution, higher education, medical colleges, management institutions etc. were kept in public sector. A centrally planned economy with ability to direct investments into socially desirable sectors was the model for development. For this a major share of the investment had to remain in the hands of the government. This led to following Russian model with five-year plans and centrally planned inputs with the objective to achieve optimisation for the long term benefits of the citizens.

By 1985, it became clear that the successful world economies were using a different model and the Planning Commission of subsequent years started to move on with the changing service sector environment. Along with the growth, service sector also faced challenges. Deregulated industries like airlines, banking and telecommunications as well as professional services like physicians, lawyers, accountants, engineers and architect have gone through rapid growth in their business and they seek better ways to segment their customers to ensure the delivery of quality service and to strengthen their positions amongst a growing number of competitors (Zeithml, Bitner, Gremler, & Pandit, 2011).

The economists adopt the method of GDP to understand the relative importance of various segments of an economy. As per the World Bank Group report, the Gross Domestic Product (GDP) in India was worth 2073.54 billion US dollars in 2015. It represents 3.34 per cent of the world economy. GDP in India averaged 582.99 USD Billion from 1970 until 2015, ranging from low 63.50 USD Billion in 1970 to high 2073.54 USD Billion in 2015.

Real GDP growth or Gross Domestic Product (GDP) growth of India at constant (2011-12) prices in the year 2015-16 is estimated at 7.6 % as compared to the growth rate of 7.24 % in 2014-15. At current prices, GDP growth rate for year 2015-16 is 8.71% and at constant prices GVA (Gross Value Added) is estimated at 7.2%.

Figure 3.1

GDP Growth of India

GDP Growth of India (2012-2016)
Source : Central Statistics Office
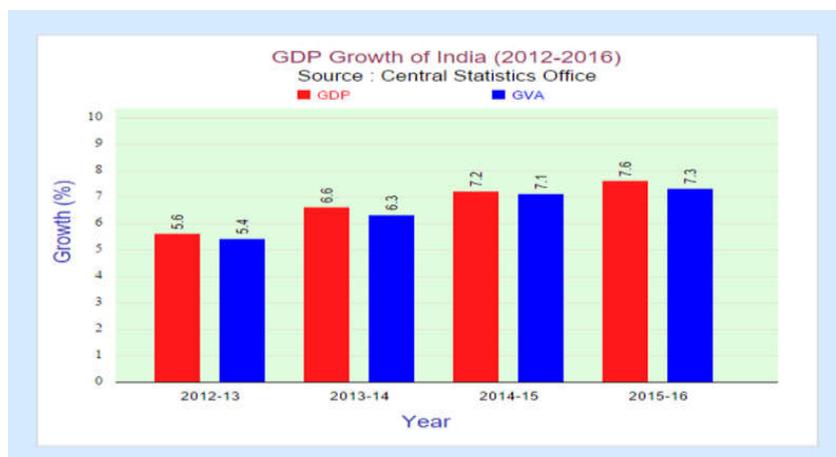
India's services sector with 27% of the work force has the largest share in the GDP, accounting for 57% in 2012, up from 15% in 1950. It is the 7th largest in the world by nominal GDP, and third largest in terms of Purchasing Power Parity.

Figure 3.2

Sector wise Contribution of GDP of India

Sectorwise contribution of GDP of India (1950-2014)
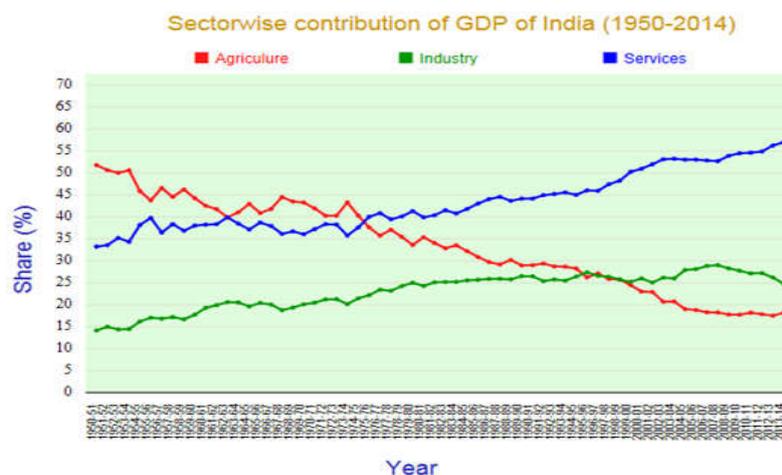
As per 2013 estimate, the sector wise composition of GDP in India is agriculture: 17.4%, industry: 25.8%, services: 56.9%.

3.2.Service - Meaning and Definition

Though services have been defined in many ways, there exists no universal definition for it. Some of the definitions given by different scholars are given below:

Philip Kotler provided the most comprehensive definition, he defines service as "an act or performance that one party can offer to another that is essentially tangible and does not result in the ownership of anything. Its production may or may not tie to a physical product".

American Marketing Association defines services as "Activities, benefits or satisfaction which is offered for sale or is provided in connection with the sale of goods".

Services are deeds, processes and performances provided or co-produced by one entity or person for another entity or person (Zeithml, Bitner, Gremler, & Pandit, 2011).

According to Sir William Bieveridge, services refer to social efforts which include government to fight five giant evils, want, disease, ignorance, squalor and illness in the society.

All economic activities whose output is not a physical product or constructions are generally consumed at the time it is produced and provides added values in forms such as convenience, amusement, timeliness, comfort, or health that are essentially intangible concerns of its first purchaser (Quinn, Baruch, & Paquette, 1987).

According to Rao, services can be defined as human efforts, which provide succour to the needy. It may be food to a hungry person, water to a thirsty person, medical service to an ailing person, education to a student, loan to a farmer, transport to a consumer, communication to two persons who want to share a thought, pleasure or pain.

According to Saser, Olson and Wyekoffs, "Establishments primarily engaged to provide various services to individuals, government establishments, and

organisations, establishments providing personal services, educational institutions, membership organisations and other miscellaneous services are included".

Services are economic activities that bring about a desired change for the recipient thereby creating value and providing benefits for the customers. In Service, emphasis is given to the personal reception of these benefits (Govind Apte, 2004). Experience of a service is the totality of the effects of all the elements present at the time so it is difficult to provide it as a sample. It is not possible to duplicate the totality as a sample.

3.3. Characteristics of Services

Services are different from goods in many ways. The main characteristics of services are as follows:

3.3.1. Intangibility

Services are performances or actions rather than objects; they cannot be seen, felt, tasted or touched in the same manner that tangible goods can be sensed. Health care services such as surgery, diagnosis, examination and treatment are performed by the provider for the patients are actions which cannot be seen or touched by the patients, although he may be able to see and touch certain tangible components of the services like equipment or hospital room. Indeed many services are difficult for the consumer to grasp even mentally. Even after completion of a diagnosis or surgery, the patient may not fully understand the service performed although there is tangible evidence of service like stiches, bandaging, pain may be quite apparent. Because of this intangible nature, services cannot be inventoried or easily patented. Services cannot be readily displayed or communicated. Pricing is also difficult.

3.3.2. Heterogeneity

The service delivering employees are visualised as service by the people but they are always not alike in their performance. In the same way, no two customers are precisely alike as each will have unique demands or experience the service in a unique way. Patients with different ailment get different treatments from a hospital.

Thus heterogeneity of service is largely the result of human interaction and all of the vagaries that accompany it. Because of this heterogenic nature, ensuring service quality is challenging. There is no sure knowledge that the service delivered matches what was planned and promoted. Standardisation of services is also difficult.

3.3.3. Simultaneous production and consumption

Customer satisfaction is highly dependent on what happens in real time. Customers will frequently interact with each other during the service production process and thus may affect each other's experience. Because of simultaneous production and consumption, mass production is difficult. Service should be manufactured and delivered in present place for the present consumer in direct. In service, the customer has to make the purchase before it is even produced because it cannot be experienced from the purchase.

3.3.4. Perishability

Because of perishable nature it is difficult to synchronise supply and demand with services. Demand forecasting, creative planning for capacity utilization and to cope with customers during peak hours are therefore important and challenging decision areas. Services cannot be returned or resold so there is a need for strong recovery strategy when things do go wrong. So, supply of service has to be understood as the capacity to produce, not as a quantity of output.

3.3.5. Lack of ownership

When a service delivery takes place, it does not ensure transfer of ownership. The challenge here is to make the customer believe that they are being offered a unique piece of service.

In short, due to the very nature of service, communication of information about the services, dichotomy between standardisation and personalisation of services, coping with the perishable nature of the service and yet pleasing the customer etc. are some challenges faced by the service provider.

3.4. Types of Services

Services can be divided into 5 categories. They are:

a. Production/trade services: Repairs, advertisement, maintenance and transportation of goods.

b. Business services: Banking, insurance, advertising, accountancy, finance, market research, lawyers, advocates, credit cards, software, business centres, call centres, and information processing.

c. Consumer/personal services: Travel, leisure, beauty, entertainment, information, investments, education, coaching classes, medical, health care, hotels, gymnasium, swimming pools.

d. Infrastructural services: Communication, transportation like roads, railways and motor transport, power, oil.

e. Public services: Government administration such as police and defence, providing employment through public works, relief work during natural calamities.

3.5. Service Marketing

In the 21st century, service organisations realised the need for new concepts and approaches for marketing and began to work across disciplines. There are many new terminologies which define concepts, frameworks and strategies in service marketing. Customer interface is more in service. So marketing and operations are more closely linked than in a manufacturing business. Consumers' exposure to the full range of need-fulfilling service products may be limited by the sale person's mental inventory of services and how he/she priorities them. Condemnation of service is troubling when, at some level, service has never been better. In health care industry, the ability to prevent and treat disease has never been greater, resulting in an ever- increasing life expectancy in India or in any other nation.

Effective service marketing is complex which involves many different strategies, skills and tasks. Service organisations have to address the issues like how to overcome problems related to absence of services for optimising demand and supply, how to initiate awareness in consumers about the quality of services and how to involve them in the process (Patankar, 1999) These issues and dilemmas exist because service provider's skills and experiences are not directly transferable.

3.6. Service Marketing Mix

The traditional marketing mix is composed of the four Ps: Product, Price, Place and Promotion. When it is being applied to services, marketers adopt the concept of an expanded marketing mix for services shown in three groups. They are people, physical evidence and process (Booms & Bitner, 1981) The expanded marketing mix is clearly an important tool that addresses the uniqueness of services, keeping the customer at the centre.

The components of service marketing mix are:

3.6.1. Product

A service product is what the service provider offers. It is not a physical entity; it is a kind of promise, which will be experienced only after purchase. It is made up of a number of intangible elements. It is not enough to pay attention to the tangibles. Every combination of elements makes a different product. The options are many. No great effort is needed to modify the features of a product at any time. The customer knows about the service after the service is bought, performed and experienced. When the service is provided, it does not matter at what level it is provided. The perception of the customer will still be that he would not have got what he received, had he not insisted on getting it; and that there was an attempt to cheat him out of what was legitimately due to him. Service that comes automatically is more satisfying.

3.6.2. Price

Price is one of the crucial elements of marketing mix as it determines the revenue that a company's services will earn. Pricing has several components, and usually there are three major criteria involved in pricing a service. They are cost, competition and objectives. A hospital which has opened up for treatment recently will have setting up cost and other recurring costs. This will be considered when charging price for the service. Simultaneous price increase can be seen in all industries; at the same time some not follow it to gain advantages from a lower price. Pricing can also be driven by company objectives in many cases. Depending on price as a quality indicator is the risk in service purchase. In high risk situations like medical treatment, the customer will look to price as a surrogate for quality. When customers depend on price as a cue to quality and price sets expectations of quality, prices of service must be determined carefully. So pricing too low and too high should be avoided.

3.6.3. Place

In a service market, a customer is often present at the same place where the service is manufactured and delivered. A customer has to be present at each of these places to avail of these services like saloon, restaurant and a hotel. So, it becomes important to decide where to locate a service. It is evident that in many cases customers will chose a conveniently located supplier of services over the best service provider located far away.

3.6.4. Promotion

One of the key aspects of modern marketing is promotion of the services through advertisement, publicity, public relation, personal selling and sales promotion. Even though promotion is vital for any business, many service businesses do not spend adequately for it. Moreover many service providers would rely on word of mouth to increase their market penetration because it plays a crucial role in getting future business. Objective based promotion plan is a must for service organisations.

3.6.5. People

All human elements like employees, the customer, and other customers in the service environment who plays a part in service delivery influence the buyers' perception. Their attitudes and behaviour, how these people are dressed and their personnel appearance all influence the customer perceptions of the service. Customers can influence other customers too. There is a direct interaction between service providers and their customers hence it is much more important for a service employee to have a good attitude and a cheerful disposition than in other jobs. Service employees are critical when the degree of direct personal contact is high and it is again critical when services involve repeated contacts like nurses in hospitals. It is inevitable that customer will have an experience which may be good, bad or indifferent.

3.6.6. Physical Evidence

Any tangible components that facilitate performance or communication of the service constitute physical evidence. When consumers have little knowledge to judge the actual quality of service they will rely on these cues provided by the people and the service process. The physical evidence that a service provider presents is not limited to buildings but to the appearance of people, stationery, bills sent to customers, visiting cards and any tangible evidence may result in an impression being formed about the service brand. A well designed physical atmosphere can attract customers, induce positive feelings in them, enhance credibility perceptions and generally increase satisfaction with the service experiences. Tangibilising of intangible services may help to market them better.

3.6.7. Process

The service process includes actual procedures, mechanisms, and flow of activities by which the services are delivered. Some requires the customer to follow a complicated and extensive series of actions to complete the process. Highly bureaucratized services frequently follow this pattern, and the logic of the steps involved often escapes the customer. None of the characteristics of the service is

inherently better or worse than another. Theses process characteristics are another form of evidence used by the consumer to judge the service. In the case of hospital services customers interact with multiple, interconnected organisations. Some of the steps involve customers interacting with providers (patients interacting with their physician), some steps carried out by customer themselves (following the doctor's orders). The combination of these steps along with many, constitute a process, a service experience that is evaluated by the consumers.

3.7. Service Quality

Quality has been shown to be an important element in the consumers' choice of hospital (Lynch & Schuler, 1990). If the quality is not good, the customers will search for the better one. So to make a customer satisfied with the product, the quality should be high. Quality is the value added offering that provides a more satisfying experience, which makes the customer come back for more of the same pleasurable experience and it is essential to build long term loyalty. It helps to gain a larger market share in the face of competition. It alone helps in the word of mouth publicity. It takes efforts to achieve and is never an accident.

Service quality is a recently established concept. It is the perception of an experience. It is how the customer reacts or responds to what the service provider has done to him. When the nurse responds to the patient's call within a minute, this is fast or slow depending on how urgently the patient needed her. The measure of one minute may be too long sometimes leading to the patients repeating the call and even shouting for the nurse. Quality of service is the difference between expectation and the perceived experience.

The American Society for Quality Control has defined quality as the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs. In this definition the totality of features and characteristics means every area of product or service delivery is considered crucial. For example, a high quality hospital service comprises not only the diagnosis, treatment and surgery, but also the nursing, the hospital environment including

hygienic ward maintenance, the quality of food supplied to the patients and accompanying relatives, and the uniforms and dresses (Govind Apte, 2004).

Quality is the core characteristic of any good health system. It should not be represented only as making people feel the use of more sophisticated technologies. Good clinical performance requires providing services that are appropriate for each patient's condition, providing them safety, competently and in an appropriate time frame, and achieving desired outcome in terms of those aspects of patient's health and satisfaction that can be affected by those services. Internal efficiencies, in terms of better resource utilisation and / or productivity, may improve the quality of the process or of the system, but not necessarily the quality of the service.

Gronroos, (1984) defines service quality as the perceived judgment resulting from an evaluation process where customers compare their expectations with the service they perceive to have received.

Parasuraman, (1985) defines service quality as a comparative function between consumer expectations and actual service performance. It is the consumers' belief regarding services received.

According to Parasuraman, Zeithaml, & Berry, (1988) it is the degree and direction of discrepancy between consumer expectation and actual performance. It is a global judgment or attitude, relating to the superiority of the service. It is otherwise the customers' judgment about an entity's excellence or superiority and it is a form of attitude and results from a comparison of expectations with perception and performance.

Rust and Oliver, (1994) defines service quality as comparison to excellence in service encounters by the customers.

Service quality is the consumers' judgment about the excellence or superiority of a service provider's performance (Babakus and Boller 1992, Cronin and Taylor 1992).

Dabholkar, Shepherd, & Thorpe, (2000) define service quality as the assessment of attributes related to service process such as responsiveness, awareness, assurance and empathy.

The customer's assessment of service quality is needed to improve business performances to strengthen competency in market (Cronin& Taylor, 1992) (Jain & Gupta, 2004). Service quality is the perception of customers (Govind Apte, 2004). Delivering high service quality produces measurable benefits in profits, cost saving and market size (Zeithaml, Leonard, & Parasuraman, 1988). Service quality is the aggregate of outcome quality, interaction quality and physical environment quality (Brady & Cronin Jr., 2001). Service quality precedes customer loyalty (Kandampully, 1998). Research suggests that customers perceive quality in multiple factors relevant to the context (Parasuraman, Zeithaml, & Berry, 1988).

Research also suggests that cultural differences will also affect the relative importance placed on the dimensions. Customers form opinions about service quality not just from a single reference but from a host of contributing factors. David Garvin, (1987) identified performance, features, reliability, conformance, durability, serviceability, aesthetics and perceived quality or prestige as dimensions of quality applicable to both goods and services.

Service quality consists of functional and technical quality. Technical quality is what core service customer got from the service provider. While functional quality is how the service provider rendered the service. Patient satisfaction should be considered seriously since the modern treatment uses the complex advance technologies. Doctors providing medical treatment in government hospitals are often as qualified as doctors in private hospitals. The shabbiness of government hospitals is not indicative of the sincerity or adequacy of the medical attention provided. It is difficult to understand the technical quality of care provided to them.

3.8.Service Quality Models

Scientists have developed a number of models to measure service quality. Some of them are universally acceptable and more used by scholars. Five major

models of service quality - Nordic Model, Gap model of service quality, SERVQUAL, SERVPERF and Hierarchical model- are explained below.

3.8.1. Nordic Model

Gronroos made first attempt to measure quality of service and defined service quality by technical or outcome (what consumers receive) and functional or process related (how consumer receive the service) dimensions (Gronroos, 1982, 1984, 1988). Model include image builds up by technical and functional quality and the effect of some other factors named marketing communication, word of mouth, tradition, ideology, customer needs and pricing. This model is based on disconfirmation paradigm by comparing perceived performance and expected service.

Figure 3.3

The Nordic Model developed by Gronroos (1984)
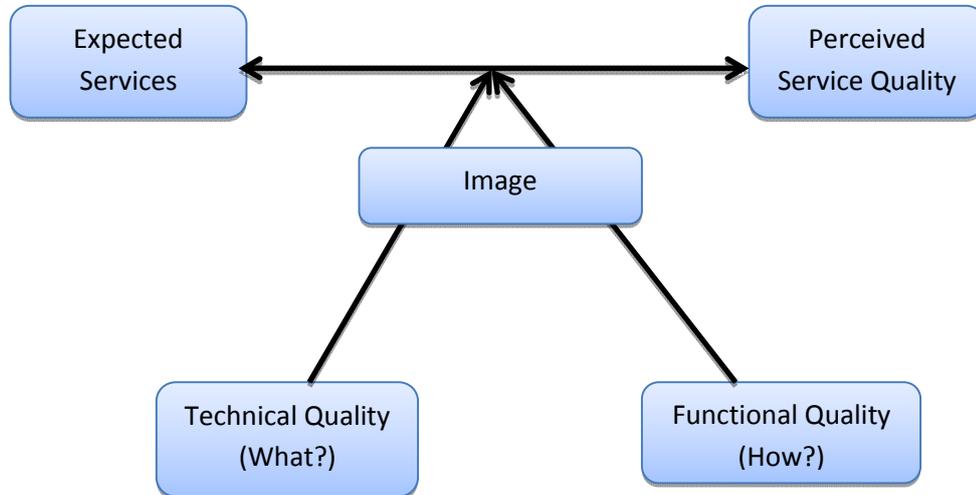
Rust & Oliver (1994) tried to refine the Nordic model by The Three-Component Model. They suggest three components: service product (i.e., technical quality), service delivery (i.e., functional quality), and service environment but they did not test their model and just a few support have been found.

3.8.2. The Gaps Model of Service Quality

Parasuraman, Zeithaml, & Berry, (1985) developed the most widely applied model of service quality, based on qualitative interviews with 14 executives in four service businesses and 12 customer focus groups. The interviews with marketers resulted in the idea of five gaps that are potential hurdles for a firm in attempting to deliver high-quality service. He identified five gaps in service quality measurement.

Gap 1: The listening gap (Customer expectations and management perceptions gap)

The listening gap is the difference between customer expectations of service and how the company understands it. The primary cause of this gap in many firms is the lack of accurate understanding of exactly what those expectations are. The factors responsible for Provider gap 1 are inadequate marketing research orientation, lack of upward communication, insufficient relationship focus and inadequate service recovery.

Gap 2: The service design and standards gap (Management perceptions and service-quality specification gap)

The presence of service designs and performance standards that reflect accurate perceptions are essential for delivering quality services. A recurring theme in service companies is the difficulty experienced in translating customer expectations in to service quality specifications that employees can understand and execute. The key factors leading to provider gap 2 are poor service design, absence of customer driven standards, inappropriate physical evidence and services cape.

Gap 3: The service performance gap (Service-quality specifications and service delivery gap)

Service performance gap is the discrepancy between development of customer driven service standards and actual service performance by company employees. Standards must be backed by appropriate resources and must be measured and compensated on the basis of performance along those standards. The

key factors that lead to provider gap 3 are deficiencies in human resource policies failure to match supply and demand, customers not fulfilling roles and problems with service intermediaries.

Gap 4: The Communication gap (Service delivery and external communications gap)

Communication gap illustrate the difference between service delivery and the service provider's external communications. The discrepancy between the actual and promised service therefore can widen the customer gap. The key factors leading to provider gap 4 are lack of integrated service marketing communications, ineffective management of customer expectations, overpromising, inadequate horizontal communication and inappropriate pricing.

Gap 5: Expected service and Perceived service gap.

Identification of gap 5 resulted from the customer focus groups, which supported the notion that the key to delivering quality is to meet or exceed customer expectations. This gap was defined as service quality. Gap 5 is the sum total of the preceding four gaps. Company should design procedures for measuring service performance against expectations to close these gaps.

Figure 3.4

Gap Model developed by Parasuraman, Zeithaml, & Berry, (1985)
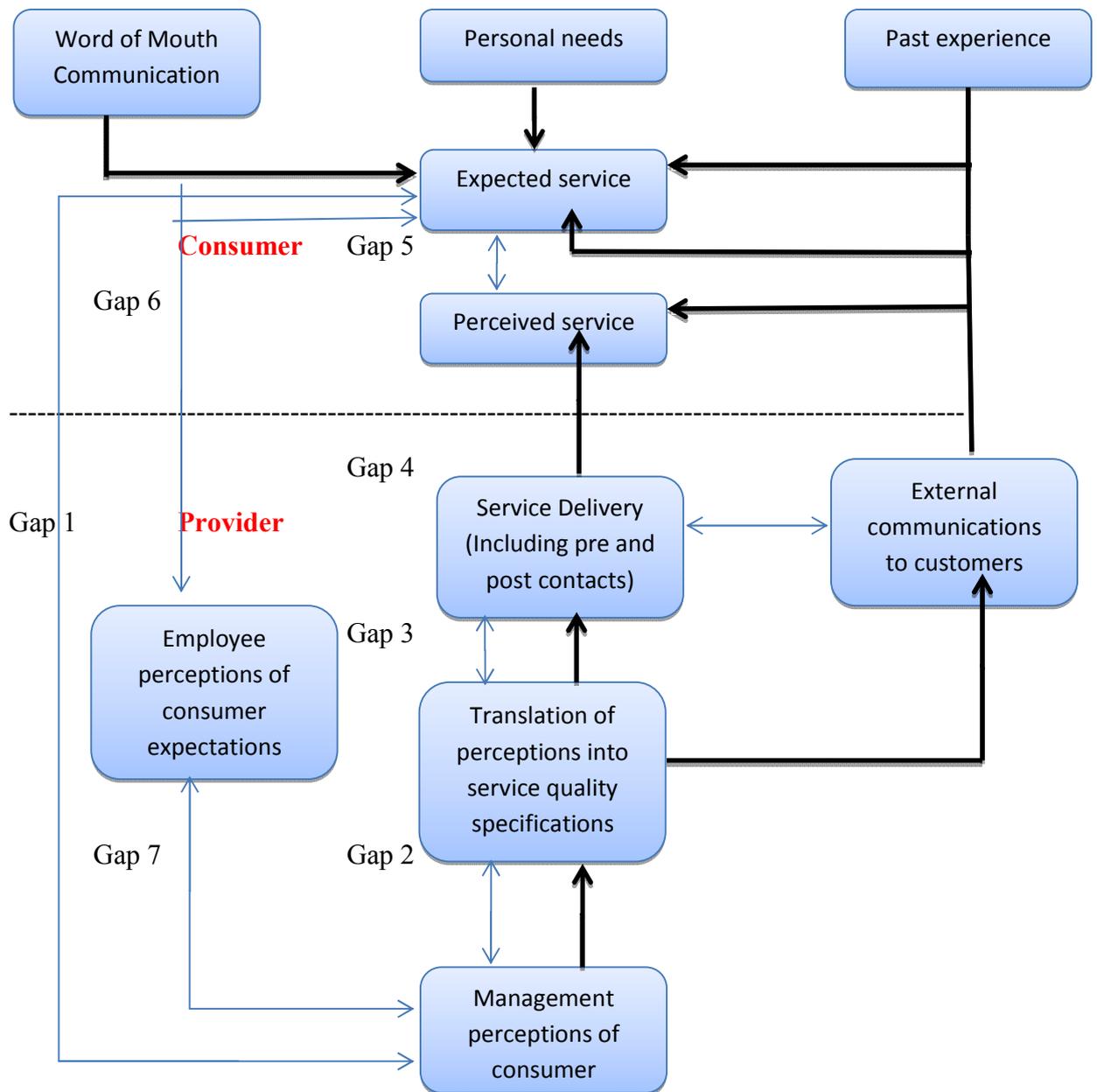
The gap model of service quality serves as a framework for service organisations for attempting to improve quality service and service marketing. The key to close customer gap is to close provider gaps.

3.8.3. SERVQUAL

Parasuraman, Zeithaml, & Berry, (1988) made a new model of service quality measurement by trying to overcome the weakness of Nordic model. The basic assumption of this measurement was that customers can evaluate a firm's service quality by comparing their perceptions with their expectations. The purpose was to measure customer satisfaction on the basis of major five dimensions - Reliability, Responsiveness, Assurances, Empathy, and Tangibility. It has several items measured on a seven point scale varying from strongly agree to strongly disagree with a total of 22 items under the identified five dimensions.

The scale has been used extensively in India to measure the quality of services provided by hotels, fast food restaurants, retail stores, telecommunication companies, and hospitals. The application of this model shows SERVQUAL factors are inconsistent and it is not comprehensive for different applications (Shahin & Samea, 2010). SERVQUAL is an analytical tool, which can help managers to identify the gaps between variables affecting the quality of the offering services (Seth, Deshmukh, & Vrat, 2005). It is an exploratory study and does not offer a clear measurement method for measuring gaps at different levels. The five dimensions of service quality in SERVQUAL tool are as under.

Reliability:

Reliability has been identified as the most important determinant of perceptions of service quality among customers. It is the ability of the organisation to perform the promised service dependably and accurately.

Responsiveness:

Responsiveness is the willingness to help customers and to provide prompt service. This dimension emphasizes attentiveness and promptness in dealing with customer requests, questions, complaints, and problems. Responsiveness is communicated to customers by the length of time they have to wait for assistance, answer to questions, or attention to problems.

Assurance:

Assurance is defined as employee's knowledge and courtesy and the ability of the firm and its employees to inspire customer trust and confidence. This dimension is likely to be particularly important for services that customers perceive as high risk or for services of which they feel uncertain about their ability to valuate outcome.

Empathy:

Empathy is the caring, individualised attention that the organisation provides to its customers. The essence of empathy is conveying through personalised or customized service to the customers as each customer is unique and special.

Tangibles:

Tangibles are defined as the physical evidence of service i.e. appearance of physical facilities, tools, equipment, personnel and communication materials. It provides physical representations or images of the service that customer particularly new customers will use to evaluate quality.

Though SERVQUAL is used extensively for studies, it is not exempted from criticism. It focuses on functional quality rather than technical quality. It is exclusive of the crucial factors such as core services, image, value, physical ambience, service encounter etc. The disadvantage of SERVQUAL may be that the number of questions might increase, creating some problems for researchers collecting the data (Nargundkar, 2004).

Figure 3.5

SERVQUAL Model developed by Parasuraman, Zeithaml, & Berry (1985)
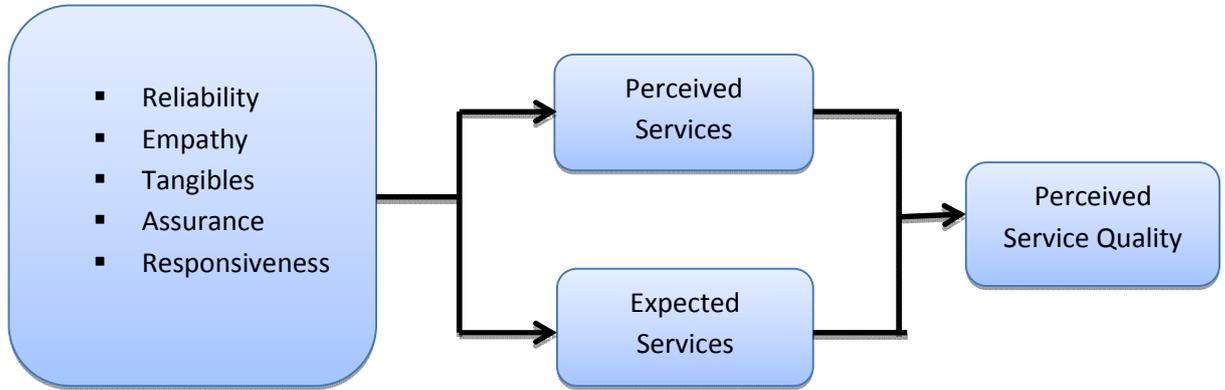
This model has been refined during the years and some argued that only performance needed to be measured as SERVPERF model in order to find perception of service quality (Cronin & Taylor, 1992).

3.8.4. SERVPERF

Cronin and Taylor (1992) in their empirical work controverted the framework of Parasuraman, Zeithaml, & Berry, (1985, 1988) with respect to conceptualization and measurement of service quality, and propounded a performance-based measure of service quality called 'SERVPERF' illustrating that service quality is a form of consumer attitude. They argued that SERVPERF was an enhanced means of measuring the service quality construct.

Figure 3.6

Performance only model (SERVPERF)
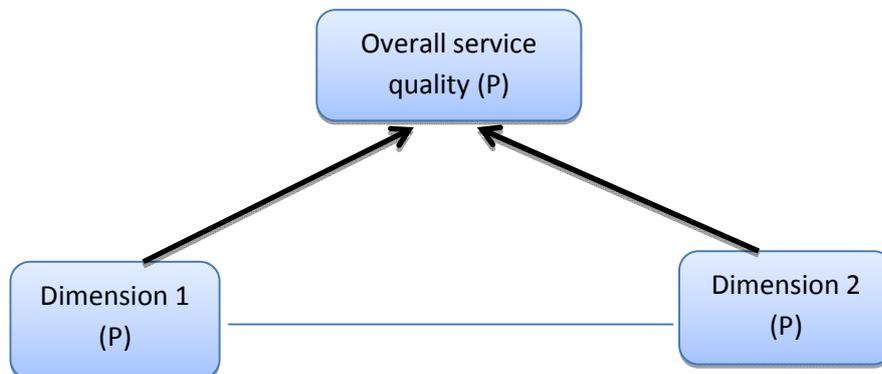
3.8.5. Hierarchical model

Brady and Cronin, (2001) suggested a new model by combining four models. They improved SERVQUAL developed by Parasuraman, et al., by specifying what needed to be reliable, responsive, empathic, assured and tangible. Brady and Cronin adopted service quality perception based on evaluation by customer in three dimensions: 1. Interaction quality (Functional quality), 2. Physical environment quality, 3. Outcome quality (technical quality) (Gronroos, 1984; Rust & Oliver, 1994). Service quality factors specified into three dimensions such as interaction, environment and outcome with three sub dimensions for each one: Interaction (Attitude – Behaviour – Expertise), Environment (Ambient Conditions – Design – Social Factors), and Outcome (Waiting Time – Tangibles – Valence).In SERVQUAL measurement, service outcomes were not clearly considered, but Brady & Cronin's model seems to fill this void (Pollack, 2009).

Figure 3.7

The Hierarchical Model developed by Brady & Cronin (2001)
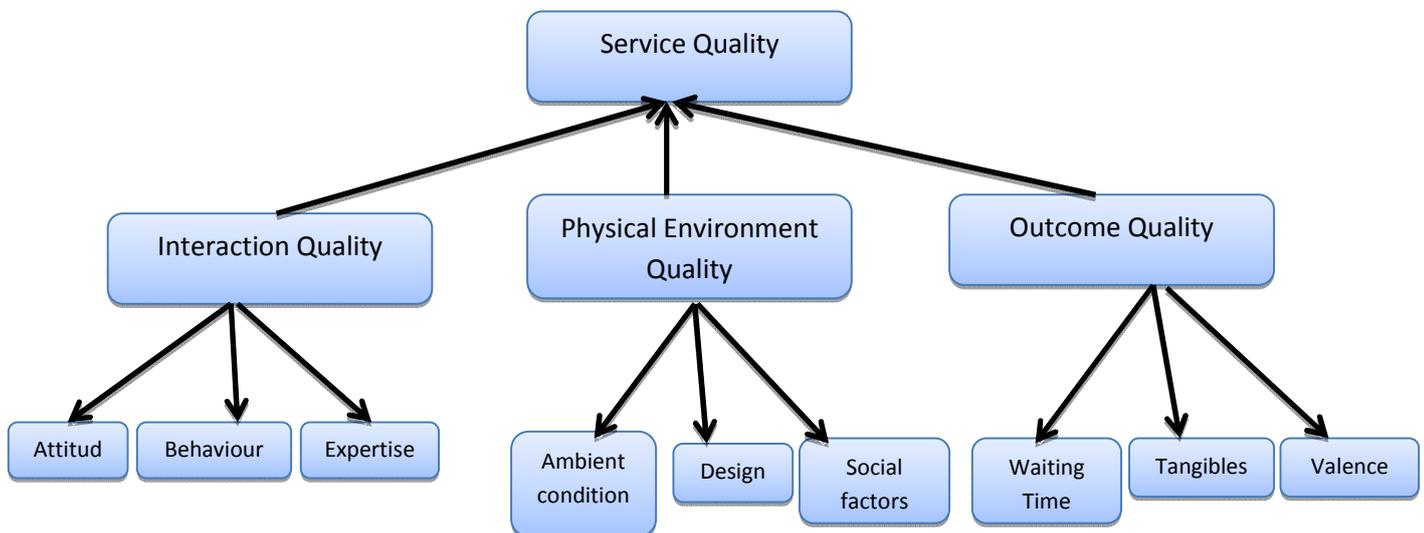
Some researchers work on the hierarchical model and found the reliability for this framework in various services. Like all the measurements, hierarchical model has difference in factors and importance of sub dimensions in regards to services such as Health care (Chahal & Kumari, 2010;Dagger, Sweeney, & Johnson,

2007), Sport (Ko, 2000), Mobile health (Akter, D'Ambra, & Ray, 2010), hairdresser (barber) and phone service subscribers (Pollack, 2009).

There are many models suggested by researchers and all models have their own advantages and disadvantages. Since Service quality models have different dimensions as per the field of service, scientists are not unanimous with any of these models. The main constrain in adopting a service quality measurement tools is that tools used in each model are developed in accordance with different environment. The important issue of patient satisfaction assessment is that most scales are developed in the western countries. These scales often include items that are specific or applicable to only some cultures or regions. The applicability of these scales in different cultures is severely limited. An inpatient satisfaction scale suitable for multinational studies is yet to be developed (Rahil & Venkatesh, 2012).

3.9. Customer Perception

Every service producers' and marketers' intention is to develop and provide offerings that satisfy consumer needs and expectations thereby ensure their own economic survival. For this, service providers need to understand how consumers choose, experience and evaluate their service offerings.

People behave differently and take different meaning for the same things because different individuals have different thinking styles, beliefs and feelings. This happens because of different perceptions. Perception is the impression created in the mind of an individual. There maybe or may not be physical evidence existing to support such as impression. Perception is intangible and hence is difficult to control. Customer perception may be tainted by customer attitudes and preconceived notions. Stephen P. Robbins defines perception as a process by which individuals organise and interpret their sensory impressions in order to give meaning to their environment, organises it and obtains meaning from it.

When a consumer passes through different stages of life, his needs and preferences for services are changing. Because of this, types of services that appeal to them differ from time to time. Perceptions are always considered relative to

expectations. As expectations are dynamic, evaluations may also shift over time from person to person and from culture to culture. The quality and satisfaction are based on customer's perception of the service for the time and it changes in time being. According to Tax & Morgan (2004), a diverse set of experiences across the network of firms (doctor's office, medical laboratory, hospital and physical therapy clinic) may influence consumer's overall impressions of their experience.

Perception is a cognitive phenomenon, influencing our observations and judgements. The perception may be an accurate understanding of the reality. If the perception of experience is better than the expectation, the service is evaluated as satisfactory. If it happened vice versa it will be evaluated as unsatisfactory. Thus for the level of service rendered, some customers may be very satisfied and some others very unsatisfied depending on the perception of experience and the expectations. There can never be a perception of good service from a person who senses that he has been ignored. In fact such a person will find a defect even if there were really none. Customer evaluation is critical that it will make them to re-think for next time. In fact, noted consumer experience experts have stated that the experience is the marketing (Gilmore & Pine II, 2002).

3.10. Patients: The Customer of Hospitals

As the primary user of the hospital offerings a patient is a customer. However he is not like a regular customer of a hotel. When a patient is being discharged, the hospital staff would not say to him "hope to see you again soon". A patient is expected to be a onetime buyer. Repeat sales are provided by the doctor to the patient if he is satisfied with the services of the hospitals. Patient is a person in distress. He expects comfort, care, and cure from the hospital. His distress is more if he is not attended well, the attending personal do not ask him what his trouble is, the attending personal do not listen to him when he is narrating the problem, his troubles and complaints are not taken seriously, he does not experience quick relief, he is not told what is being done about him, he is not told what he can expect in terms of attention and cure, there is an atmosphere of pain and distress around, particularly in general wards, there is an atmosphere of filth and neglect such as unkept

surroundings, dirty linen, pests on food and walls and the discomfort through illness is accentuated by mosquitoes, loud noises like firecrackers, marriage and pandal music.

Inpatients will be either that sent in from outpatient departments or directly referred for admission by doctors attached to the hospitals. Some hospitals try to avoid admission of inpatients because of the high demand for the limited availability of beds. If patient's chance of recovery is very low then too hospitals try to avoid admission to avoid death in their premises,

3.11. Patients' Perception on Hospital Service Quality

Hospitals are entirely different from other organisations in service industry. In hospitals, the associated emotions are of anxiety, sadness, depression and fear. The ways of catering to needs of these people cannot be the same as in the case of hotel or tourist destination.

Hospital is a complex organisation and every person from the receptionist, administration staff, doctors, nurses, ward boys, ayahs, ambulance personnel and billing staff are directly or indirectly involved in rendering services to the patient. Every interaction of patient to these people will determine whether he should come back to the same hospital.

Patients' perception of hospital service quality is critical to a hospital's long term success. It eventually influences financial performance of the hospital also. Patient satisfaction affects not only the outcome of the medical care process such as patients compliance with physical advice and treatment, reduced incidence of patients complaints, service utilization, and survivor of the hospital but also patients retention and favourable word of mouth (Taylor & Benger, 2004) (Wellstood, Wilson, & Eyles, 2005). Thus it is must for a hospital to provide quality service and address patients' satisfaction properly.

The rating on service quality by patients and physicians will always show a substantial discrepancy (Hall, Stein, Roter, & Rieseer, 1999). What a patient needs from a hospital is reasonable good quality medical care. Yet researches have shown

that hospitalised patients want a variety of amenities not associated with their basic needs. They want smiling, empathetic nurses and staff, a good selection of foods for their meals and a quick response to their calls.

An eminent doctor very thorough in examination, writing down and explaining clear instructions but is very rude in responding to question from the patient or their relatives will be justified, because he is always busy with long queues of patients and the questions are in his opinion generally silly. Despite his professional competence as a specialist, he doesn't recognise that patient has the need to talk to the doctor and so he ignores their queries. That is dissatisfying as anxieties were not relieved, and many patients tend to avoid him. Those who continued with him, and there were many has preferred the excellence of his medical care and ignored the lack of recognition. But a hospital cannot merely relay on the excellence of a doctor like this, they want to increase the size of their markets without losing its customers. Today's patients remember the state of the art technology of the hospital rather than the expert care.Patient satisfaction is a component of health care quality and is increasingly being used to assess medical care in many countries of the world.

3.12. Service Quality and Satisfaction

Building a bridge of trust between the hospital and the community is essential for a hospital's survival. Only the cheap price of the service doesn't attract the patients. In traditional customer satisfaction models, quality is presumed to precede customer satisfaction (Ravald & Gronroos, 1996). There is a practice of using the terms service quality and satisfaction interchangeably. But researchers have attempted to be more precise about the meaning and measurement of the two concepts resulting in considerable debate (Parasuraman, Zeithaml, & Berry, 1994) (Oliver, 1994) (Bitner & Hubbert, 1993) (Lacobucci, 1994) (Dabholkar, Shepherd, & Thorpe, 2000) (Cronin Jr., Brady, & Hult, 2000). It is clear that these two concepts are fundamentally different in terms of their underlying causes and outcomes (Parasuraman, Zeithaml, & Berry, 1994) (Oliver, 1994) (Brady & Cronin Jr., 2001). Though they have certain things in common, satisfaction is generally a

broader concept and viewed as an individual service transaction level or at a global level, encompassing all experiences with an organisation. Perceived service quality is just one of the numbers of antecedent factors driving satisfaction (Rahil & Venkatesh, 2012). Satisfaction is more inclusive which is influenced by perceptions of service quality, product quality and price as well as situational factors and personal factors (Zeithml, Bitner, Gremler, & Pandit, 2011). So, the researcher has taken service quality and satisfaction as different constructs in the present study.

3.13. Patients' Satisfaction

The concept of patient satisfaction is rapidly changing to customers delight which means that patients are not only cured of his ailments during the hospital stay but is also pleased with the amenities provided to him by the hospital and its staff during the stay which he fondly remember after being discharged.

Level of patients' satisfaction is vulnerable to change. So, hospitals should constantly be aware of the status. The entry of new players and the changes in customer preferences may cause a fall in the number of customers of a service firm. Thus, market research should be done constantly without waiting for fall in sales.It would be a better idea to proactively measure satisfaction, regularly, and carry out improvements in various processes in a continuous manner (Nargundkar, 2004). Some public policymakers believe that customer satisfaction is an important indicator of national economic health and quality of life.

Satisfaction is a person's feeling of pleasure or disappointment resulting from comparing a product perceived performance (out comes) in relation to his or her expectations. Although consumer satisfaction tends to be measured at a particular point in times as if it were static, satisfaction is a dynamic, moving target that may evolve over time, influenced by a variety of factors. Studies shows that customer satisfaction with a product or service is influenced significantly by the customer's evaluation of product or service features (Oliver,1997), perception of product, price, quality, friendliness of personnel and level of customization depending on the type of service being evaluated and the criticality of the service (Ostrom & Lacobucci, 1995). Personal factors such as the customer's moods or

emotional state and situational factors such as family member opinions will also influence their satisfaction.

Customer satisfaction has been extensively used to measure the service quality. The research on it influenced mainly by the disconfirmation paradigm (Parasuraman, Zeithaml, & Berry, 1988). This paradigm states that the customer's satisfaction feeling is a result of the comparison between perceived performance and expectations. The customer is satisfied when he feels that the product's performance is equal to what was expected (confirming). If the product's performance exceeds expectations, the customer is very satisfied (positively disconfirming), if it remains below expectations, the customer will be dissatisfied (negatively disconfirming).

Effective customer participation can increase the fulfilment of needs and attain the benefits the customer seeks. In the services such as health care, education, personal fitness and weight loss in which the service outcome is highly dependent on customer participation, unless the customers perform their roles effectively, the desired service outcomes are not possible.

When a doctor examines a patient and makes a decision about diagnosis and treatment, the visible portion of rendering service are things like tapping the chest, listening to the sounds, looking at the throat and reading the instruments and reports. He uses his knowledge, which is tangible. He prescribes treatment which may cure. The treatment may or may not involve medicines, but he does not deal in medicines like a chemist. The knowledge he uses remains with him which is benefited by the patient. The satisfaction is not only in the form of relief from sickness, but also in the manner of the attention he got from the doctor and the related facilities.

A doctor is paid for the knowledge, the experience and the training that he possess during these observable activities, his deductions and diagnosis and the remedy that he prescribes. If the patient is cured, the effect of the service rendered by him is experienced as good. It does not matter what the doctor's qualifications are. The patient's satisfaction mainly depends only in the good result of the service.

Examining satisfaction with clinical care ought to be different from satisfaction related to a consumer good. In case of satisfaction related to consumer goods, attention is focused on how current performance matches expectations. But with health care, the emphasis is on how much better the service provider is. It appears that present experience is the driving force for health care (Kane, Maclejewski, & Finch, 1997).

Patient satisfaction is a summation of all the patients' expectations in a health care setting and it is a human experience appraised subjectively by an individual, regarding the extent to which care received has met certain expectations (Grey ford, 2001). It is the degree to which the patient regards the health care service or product or the manner in which it is delivered by the medical service provider as useful, effective or beneficial to patient.

Patient satisfaction surveys are one of the numbers of methods available to hospitals to seek consumer feedback; patient satisfaction surveys add valuable information about patients' overall perception of their care. Patient satisfaction surveys have a role to play in accessing patient's experience with care, but are unlikely on their own to provide hospitals with the full picture of what patients think about the care they have received or patients' views but how this could be improved. Patient satisfaction is of fundamental importance as a measure of the quality of care. So the measurement of satisfaction is therefore an important tool for research, administration and planning (Sridhar, 2001).

There are numerous instruments developed to assess the satisfaction of the patients within the various medical facilities by different scholars. However, there is no standardised instrument to measure such patient satisfaction variables. It is clear from the discussions that patient's satisfaction is influenced by a number of factors. In this study researcher has taken perceived service quality, perceived value for money, perceived waiting time as variables influencing factors to analyse patients' satisfaction.

3.14. Perceived Service Quality

Service researchers have suggested that consumers judge the quality of services based on their perceptions of the technical outcome provided, the process by which that outcome was delivered, and the quality of the physical surroundings where the service is delivered (Brady & Cronin Jr., 2001). Health care industry is very labour intensive. Given the dependence on the health care professionals for service delivery, the possibility of heterogeneity of service quality must be recognised, both with an employee as skills and competencies change over time and among employees as different professions provide a service (Sharma & K'Cherry, 1996).

Parasuraman, Zeithaml, & Berry, (1985) have defined 10 factors that significantly influence perceptions of quality in service. They are responsiveness, competence, courtesy, credibility, sensitivity, access, security, appearances, reliability and communication. Later studies revealed that service quality is a focused evaluation that reflects the customer's perception of five factors namely reliability, assurance, responsiveness, empathy and tangibles (Parasuraman, Zeithaml, & Berry, 1988).

Quality of care comprises of structure, process, and health outcomes (Peobody, et al., 1999); and there are eight dimensions of healthcare service delivery: effectiveness, efficiency, technical competence, interpersonal relations, access to service, safety, continuity, and physical aspects of healthcare (Brown, Franco, Rafeh, & Hatzell, 1998). The concept of quality is multifaceted connoting different meanings to different stakeholders such as government, service provider, hospital administrators and patients (Sharma & Narang, 2011).

3.15. Dimensions of Perceived Service Quality

Abu, Ahmed, Md, & Suntu Kumar, (2006) identified seventeen variables to measure the five dimension of service quality in the health care centres. Chowdary, (2008) compared the service quality of the public and the private hospitals with the help of 21 service quality variables. Chahal(2003) used sixteen variables to measure

the quality of physicians, fifteen variables to measure the service quality of support staff, eighteen variables to measure the quality of atmospherics, ten variables to measure the overall performance. Rohini and Mahadevappa, (2006) used 22 variables to measure the service quality gap in the health care centres. Kilbourne, MIchael Duffy, & Giarchi, (2004) have used 22 variables to measure the long-term health care service quality in the USA and the UK.

The overall service quality in the hospital rests on the various tangible and intangible facilities at the hospitals (Chahal, 2003). It is related to the perception of the patients towards the doctors, the nurses, the support staff, administration, operational performance, follow-up actions and the medical facilities at the hospitals (Pakdil and Harwood, 2005).

There are three components of service quality: Institutional quality - corporate image, Physical quality - surroundings, equipment, food and process outcome, and Interactive quality - interaction between the medical contact person and the patient (Lehtinen and Laitamaki, 1985).Patients' involvement in care such as maintaining their appearance, self-administration of medications, explicitly stating their expectations, seeking information and voicing their complaints can promote satisfaction. Patient involvement must be included as a dimension in studies of health care quality (MacStravic, 1988). There are four components: the curing component, the caring component, the access component and the physical environment component (John, 1989).

In the current study, researcher has adopted a model developed and validated by Hong Qin, (2009) for studying the link among perceived service quality, patient satisfaction and behavioural intentions. The 12 dimensions of perceived quality derived by Qin which are taken in this study are explained below.

3.15.1. Reliability

Reliability refers to trustworthiness. It has been viewed as an important dimension of healthcare quality for many studies (Cronin & Taylor, 1992; Carman, 1990; Vandamme & Leunis, 1993). When a customer purchase services before they

are experiencing it, there is a certain amount of trust that the service bought will be of the expected level. If that does not happen, there is serious lack of satisfaction. Reliability deals with the extent of comfort one has, that the promise will indeed be redeemed. There is no need to legally document the promise when there is reliability.

3.15.2. Assurance

Customers want to be assured that quality will be available every time. He will go for the same service expecting the previous experience. The emphasis is on consistency of that quality which the customer is looking forward to; not a specific level of quality which differs from individual to individual. Assurance is the courtesy and knowledge of staff and their ability to inspire trust and confidence in patients. Patients are always afraid of their illnesses and they expect the professionals to be friendly, showing respect for patients, protecting patient privacy and confidentiality, and acting as advocates for the patients. Thorough explanation of patient's medical condition and treatment can make patients feel safe and relaxed, which contribute to the outcome of the medical care.

3.15.3. Empathy

Patients expect individualized care from the provider. Empathy focuses on deeper and unseen expressions of compassion and concern by healthcare providers. Patients wish professionals in hospital not only friendly and courteous, but also having personalized knowledge of the patients, and showing individualized kindness, sympathy and attention to them. Receiving individualized care can strengthen patients' emotional safety and trust, which can reduce their feeling of vulnerability and anxiety.

3.15.4. Physical environment

Physical environment is conceived to include not only the equipment, supplies and other physical materials required to provide a given service but also it must use in appropriate situation handled by the appropriate technicians. Various types of articles present in a typical ward like Para-medical equipment such as X-

ray, ECG, Medicine Trolley, Oxygen Cylinder, Intra Venous (IV) Drip stands, Fowler's bed, Side table, Stool for attendants, Cardiac table, Thermometer, Blood pressure (BP) instrument, AP Bottle with stand, for humidification purpose, Suction Apparatus, Wheel Chair, Fire Extinguishers are all coming under the physical environment. Organisational arrangement for a service delivery system has to be convenient to the customer as well as the service provider. Customers should not be subjected to discomfort and dissatisfaction due to inadequately planned facilities (Patankar, 1999).

3.15.5. Responsiveness

Responsiveness assesses how reactive the hospital is to patients' needs and requirements (Tucker III & Adams, 2001). It is described as the willingness to provide prompt service (Parasuraman, Zeithaml, & Berry, 1988). Patient with acute illnesses or injuries are seeking immediate medical care. Prompt service has a critical impact on patient's health status, sometimes even his or her life.

3.15.6. Interaction

Service delivery comprises of high level of internal and external continuous interaction between the service providers and end customers. The essential building block of the health services industry is the quality and nature of that patient-professional interaction. Despite the existence of the number of standardised practices and protocols for delivery of some services, much professional behaviour is governed by unwritten norms and reliance on individual judgement. Nurses and other professional groups perform tasks based on training received outside the hospital. As health care is highly service oriented, the attitude of caregivers, i.e. the doctors, nurses and support staff have a major say in the perception of patients and bystanders regarding the quality of services offered at the hospitals. The behaviour and attitude of doctors greatly influence the satisfaction level of patients (Rehin, 2014).

3.15.7. Communication

As health care is a group process, effective communication is even more important in case of hospitals. Guastello, et al., (2008) opines that communicating effectively with patients and families is a cornerstone of providing quality health care. The manner in which a health care provider communicates information to a patient can be equally important as the information being conveyed. Communication can influence patient evaluations of their satisfaction level.

3.15.8. Availability

Although most of the hospitals have qualified physicians and nurses who have certification to cope with the needs, their availability varies. The availability of service sand working hours are important factors for patients to select healthcare providers. Patients in wards of hospitals need the laboratory tests, X-rays and scanning. The availability of such facilities contributes to the outcome of medical care.

3.15.9. Technical Quality

Technical quality of care deals primarily with provider competence, in other words, their display of empathy, concern, etc. Some texts refer to this other dimension, or objective, as art of care, while others refer to it as interpersonal manner (Sitzia & Wood, 1997; Ware, Davies Avery, & Stewart, 1977). Technical quality is the total of physical cure like improved physical wellbeing, improved quality of life and emotional cure like improved emotional wellbeing, reduced stress levels. Technical quality of health care has two dimensions: i) the appropriateness of the service provided and ii) the skills with which appropriate care is provided. High technical quality consists of doing the right thing right. To do the right thing requires physicians to take the right decision about care for each patient.

3.15.10. Efficiency

Hospital service involves many individuals, multiple providers, and sometimes even multiple facilities for its accomplishment. Patients expect the

service will be complete efficiently only when there exists coordination between physicians and specialists, across facilities, and between providers and their health plan. An efficient health care delivery system seeks to maximize the quality of medical care for the resources allocated to health care.

3.15.11. Professionalism

Professionalism refers to the knowledge, technical expertise, and amount of training and experience of professionals in hospitals. The quality of the core service depends on the quality of the doctors there. They make their services available to the patients by visiting hospitals. A doctor's professionalism as well as his reputation has some linkage to the standard of the hospital which he visits. The reputation of the hospital depends on the stature of the visiting doctors both are complimentary to each other. The health and medical care industry is the most highly professionalised industry in our country (Sharma & K'Cherry, 1996).

3.15.12. Accessibility

Accessibility is one of the major dimensions of satisfaction (Ware, Davies Avery, & Stewart, 1977). Good access to health care means the provision of care in relation to the needs of citizens, irrespective of their geographical, social or economic situation. It also encompasses several variables and features of clinical interactions, mode of transport, the time and effort a patient spends making an appointment and distance from hospital. Studies shows that non-profit hospitals provide greater access than profit counterparts under conditions of limited competition (Schlesinger, Dorwart, Hoover, & Epstein, 1997)

3.16. Perceived Value for Money

Perceived value is defined as the consumer's overall assessment of the utility of a product or services based on perception of what is received and what is given. The overall assessment of perceived monetary value is one of the key determinants of behavioural intentions to hospital services, especially inpatient services. Perceived value in a broader view included not only monetary but also emotional,

social and performances dimensions. It is a context specific perception that may drive user attitudes and behaviours.

Some studies have hypothesis that customer satisfaction is mediated through customer's value perception. Others have argued that, perceived value as a cognitive concept has a direct impact on behavioural outcomes. This has been empirically verified in several studies.

Sweeney and Soutar developed a multi-dimensional perceived value concept and its aggregated effect on the behavioural intentions of inpatients to use hospital care. They suggested four dimensions like performance/quality (functional value that captured the utility resulting from quality perception and performance expectations), emotional (utility derived from the feelings or affective states generated by a product), value for money (dimensions that encapsulated the utility derived from the product due to the reduction of its perceived short term and long term costs) and social dimension (the enhancement of the persons self-concept provided by the product). Based on this a 19 item measure named PERVAL was developed to assess the perceived value in service industry.

Good marketing can raise perceptions of value and make low price significant. In such cases, a price cut may not only attract customers from completion, but may also drive away existing customers, suspecting a drop in quality. The price of a service is not related to the cost of producing that service. The cost of production of service is difficult to know in case of a consultant such as doctor. When a customer pays a certain amount of money for the service, the value obtained is calculated in terms of time, energy and psychological satisfaction. Medicare fees are positively related to both the number of beneficiaries treated and service intensity. To induce demand for service, physicians manipulate the mix of services provided thereby increasing the Medicare fee also (Hadley & Reschevsky, 2006). If patients' perceived value for money plays significant role in determining the satisfaction, neither the quality of service nor expectations can be taken as a basis for fixing the satisfaction.

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3.17. Perceived Waiting Time

With the growing population and changing life style, health related complexities are increasing and more and more patients are crowding in hospitals. At the same time patients who are sick, hesitate to wait for longer periods in queue. Thus understanding and optimizing the waiting time is an important task that every hospital should achieve to tackle the needs of increased patient flow without making them wait for longer periods. If patients have to wait for a long time during the process of acquiring service, these waiting experiences may typically be negative and affect the overall customer satisfaction. Research suggests that waiting time satisfaction is nearly as important as service delivery satisfaction with respect to customer loyalty (Bielen & Demoulin, 2007).

A number of substitutes in service delivery have become available for patients today. So, efficient protocols are necessary for delivering quality service. Many hospitals face remarkable demand to reduce costs and improve quality of service by reducing patient waiting times. In many case, perception on waiting times is the element with which patients express greatest dissatisfaction. Although healthcare is usually delivered within a reasonable period, most people intuitively react to waiting times in a negative way.

Waiting is not something most people tolerate well. As people work longer hours, individuals have less leisure, and as families have fewer hours together, the pressure on people's time is greater than ever. Today customers are looking for efficient, quick service without spending much time. When customers are unoccupied they will be bored and will notice the passage of time more than when they have something to do. Providing something for waiting customers to do, particularly if the activity which offers a benefit in and of itself or is related in some way to the service can improve the customers experience and may benefit the organisation as well (Taylor, 1995).

Unoccupied time feels longer than occupied time and pre-process waits feel longer than in process waits. For example, patients at a busy cardiologic surgery would go through a number of processes. Each of these steps while necessary does

keep the patient occupied to a considerable length of time. Sometimes anxiety makes the waits seem longer. The anxiety adds to the frustration or negative impact of the waiting. Therefore measures need to be taken to divert the customers' attention to some extent in order to reduce the anxiety.

Uncertain waits feel longer than finite waits and unexplained waits are longer than explained waits. If the patients are aware that despite the appointment, the doctor is away for some medical emergency, the customers can see the reason or the logic of the wait. Unfair waits are longer than equitable waits. When customers can see all those waiting in the system are being treated fairly or equally, they are usually patient. The more valuable the service, the longer the customer will wait. While a patient may grumble about the queue in the doctor's surgery, the close relatives will wait for hours together without demur when someone is being operated in the hospital. Solo waits feel longer than group waits. When customers are in a group or know some of the people surrounding them, they feel less anxious.

Waiting times is visible in many ways, including delays in scheduling, procedures, or physicians themselves, as well as wait times in the office. Time spent waiting is a resource investment by the patient for the desired goal of being seen by the physician and therefore may be moderated by the outcome.

The major reasons for waits in the service process are constrains in the physical facilities to contain customers, limited facilities for storing or processing goods, limited equipment to process people, possessions or information, limited Labour and unexpected demand. Most of the hospitals would not find it economically feasible to add additional facilities or physician to handle peaks in demand during the winter flu season; patients usually simply have to wait to be seen. Sometimes waits may occur when demand backs up because of the variability in length of time for service. In many times even though patients are scheduled by appointments in a physician's office, frequently there is a wait because some patients take longer to serve than the time allotted to them. Of course the actual length of the wait will affect how customers feel about their service experience. It is not just the actual time waiting has impact on customer satisfaction but how

customers feel about the wait and the perception during it. So making waiting pleasurable or at least tolerable is an important concern.

The customers would switch to another service provider even at higher costs to get rid of the problem of long waiting. Customers feel that their time is inelastic and therefore should not be abused by others. The customer's frustration usually shows up from the disputes during the queue formation. Verbal fights break out even in doctor's waiting rooms about who arrived first and in what order should they see the doctor. This is heightened during the period of acute physical discomfort when the patients are really sick. Thus, serious approaches must be taken to manage the perception of customers during their waits and improve the situation and match the capacity and demand.

3.18. Customer Loyalty

In all service industries, customer loyalty is a vital issue. The cost of customer retention can vary from a smile to an investment in a customer relationship management system. Satisfied or delighted customers also bring in their relatives and friends. They act as organisation's brand ambassadors. They also make donations and bequests.

Service loyalty is a pre requisite in today's competitive environment if an organisation desires to maintain market relationship. Customers' loyalty and trust is gained by the service personnel's commitment to seamless, consistent and superior service, which manifests itself to the customer as service quality (Kandampully, 1998). It is being established that satisfaction influences whether a person seeks medical advice, complies with treatment and maintains a continuing relationship with practitioners. Evidence shows that customer satisfaction and service quality perception affects consumer intention to behave in many positive ways like praising the firm, preferring the company over others, increasing volume of purchases, or agreeably paying a price premium.

Numerous researchers have given considerable attention to customer satisfaction as an important determinant of customer loyalty. They all offer the idea

that if customers are experiencing a high level of satisfaction, then they are likely to remain with their existing providers, in turn leading to greater customer loyalty. Once true attitudinal and behavioural loyalty has been established, customers have little interest in competitive offerings and defection is unlikely to happen. Research in medical service settings shows that effective coproduction by customers lead to greater loyalty towards the service provider (Auh, Bell, McLeod, & Shih, 2007).

Patient satisfaction is basically a state of mind of the patient. It is the ability of the hospital to meet the expectations of the patient. High satisfaction or delight creates an emotional bond with the hospitals and in the mind of the patient. The result is high patient loyalty. Loyal customers and employees affect an organisation's success, which can be difficult to quantify. Loyal customers grow the business by increasing market share.

3.19. Complaint Behaviour

Customers who experience service failure can respond in a variety of ways. In fact a variety of negative emotions can occur following a service failure, including such feelings as anger, discontent, disappointment, self-pity, anxiety and regret (Smith & Bolton, 2002) (Zeelenberg & Pieters, 2004).There are many way that a dissatisfied customer can report his experience. He can complain on spot to the service provider, giving the company the opportunity to respond immediately. Customers who do not complain immediately may choose to complain later to the provider by phone, in writing, or via internet. As a final step he can go for legal action by complaining to consumer court or consumer forum. Some customers choose not to complain but rather spread negative word of mouth about the company to friends, relatives and co-workers.

Some customers are more likely to complain than others for a variety of reasons. These consumers believe that positive consequences may occur and that there are social benefits of complaining. And this personal norms support their complaining behaviour. They believe they should and will be provided compensation for the service failure in some form. They believe that fair treatment and good services are their right because they paid for it. In some case they feel a

social obligation to complain to help others avoid similar situations or to punish the service provider. A very few customers have complaining personalities.

The majority of customers in most situations hold the opposite beliefs. They think complaining as a waste of time and effort (Voorhees, Brady, & Horowitz, 2006). They do not believe anything positive will occur for them or others based on their action. Sometimes they do not know how to complain or they may not realise that avenues are open to them to voice their complaint. They do self-blame denial, and possibly seeking social support (Stephens & Gwinner, 1998). They feel that the failure was somehow their fault and they do not deserve redress.

Personal relevance of the failure also influence whether people complain (Stephens & Gwinner, 1998). If the service failure is really important, if the failure has critical consequences for the consumer, or if the consumer has much ego involved in the service experience, then he or she is most likely to complain. Consumers are more likely to complain about services that are expensive, high risk, and ego involving than they are less expensive, frequently purchased services. Attempts to dismiss the complaint through defensive explanations, causes more dissatisfaction. Such attempts creates perception of not caring.

In many case, dissatisfied customers of hospitals do not always complain. 75% of them or more stop using the service and go over to the competition. A study of consumers switching patronage showed that the reasons for the switch were moving out of town, personal friendship, and cheaper outlets, unhappy with products, unhappy with behaviour. 68% of the people switch the service providers because of the latter.

There are four categories of consumer response like passives, voicers, irates and activists were identified by researchers (Singh, 1990). Passives do not take any action or say anything to the provider or complain to a third party. They often doubt the effectiveness of complaining thinking that the consequences will not merit time and effort they will expend. Sometimes their personal values and norms argue against complaining. Voicers actively complain to the service provider but they won't spread negative word of mouth, switch to another, or go to third parties with

their complaints. Their personal norms are consistent with complaining. Irates engage in negative word of mouth communication with friends and relatives and to switch providers. They are about average in their propensity to complain to the provider and are not ready to complain to third parties. Activists have average propensity to complain in all dimensions. They will complain to the provider, they will tell others, complain to third parties. They have an optimistic sense of potential positive consequence of all types of complaining.

Customer, who does express a complaint explicitly, is indeed doing a great service to the service provider. Every complaint provides an opportunity to augment the product, by adding a new element to the service, or improving the delivery. Customers should be encouraged, to record their experiences of the services provided. A complaint does not necessarily mean that there is a fault or neglect on the part of an individual. It may only be revealing an omission in designing the product or the system. Useful comments should be precise and detailed.

3.20. Medical Negligence

Medical profession is one of the noblest professions, is not immune to negligence which at the times results in the death of the patient or partial impairment of limbs, or culminates into another misery. Thus the consumers are often found running pillar to post to get relief for no fault in theirs. There are instances where in most incompetent or ill /undereducated doctors, on their own volition, have made prey the innocent patients. The magnitude of negligence or deliberate conduct of the medical professionals has many a times led to litigation. Although needless to mention that a person engaged in some particular profession is supposed to have the requisite knowledge and expertise needed for the purpose and he has a duty to exercise reasonable degree of care in the conduct of his duties. The standard of care needed in a particular case depends on the professional skills expected from persons belonging to a particular class. Medical profession is considered to be the most pious profession where in a doctor is placed only second to almighty god because he renders humanitarian service. Though its objective is improvement of life of the

people but it is also a science of uncertainty and the art of possibility at the same time.

Medical negligence, otherwise called malpractice is a dispute between the doctor and patient over the standard of medical care. It is the breach of the duty owned by a doctor to his patient to exercise reasonable care and skill, which results in some physical, mental, or financial disability. Malpractices can occur from an action taken by the medical practitioner, or by the failure to take a medically appropriate action. It may be a failure to diagnose, or misdiagnose of a disease or medical condition, a failure to provide appropriate treatment for a medical condition, an unreasonable delay in treating a diagnosed medical condition. Hals Bury's laws of England defines medical negligence as "a person who holds himself out as ready to give medical advice or treatment impliedly undertakes that he is possessed of skill and knowledge for the purpose. Such a person whether he is a registered medical practitioner or not, who is consulted by a patients owes him certain duties, namely a duty of care in deciding whether to undertake the case; a duty if care in deciding what treatment to give; and a duty of care in his administration of what treatment. A breach of any of these duties will support an action for negligence by the person."

Currently, there reported 35 lakh cases in consumer court though only the private hospital patients can complaint in consumer court. Government hospital patients have to go to civil court and not to consumer court as they get the service in concessional rate. More complexity involved in medical negligence is also because that consumer is not getting the case sheets or do not come to know treatment in operation theatres. Aggrieved can file a civil case but court fee is huge and not sure of success. Rarely doctors come and say against another doctor. It is seen that medical negligence is a common issue addressed by people of Kerala. It is the duty of doctors in government and private hospitals to maintain the health of the people, not to let them suffer due to their misconduct.

Conclusion

From the above discussions it is clear that patients do not flock to a hospital just because its services are cheap, but because of its goodwill and good image. A

customer from a hospital is very different from the regular customer, the difference being that he does not want to be a customer in the first place. Customers of other service sectors that use the services provide to them of their own free will and part with their money happily. The hospital customer is faced to be a customer because of his illness and parts with his money unhappily. The services provided to them should be of good quality and should have the capacity to satisfy their needs.

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HOSPITAL INDUSTRY –
AN OVERVIEW

CHAPTER 4

HOSPITAL INDUSTRY —AN OVERVIEW

The current study is conducted in medical college hospitals in Kerala for there is a need for having a deep discussion on the hospital industry. Thus, this chapter provides an overview of hospital industry in Kerala.

4.1.Introduction to Hospital Industry

Apart from the fundamental health service, health industry is not only backing up the human resource but it helps the growth of national development by involving in the market by its investment in national infrastructure. Kerala is a state having prime standard in its medicine and health services. Kerala model of health system got acknowledged by World Health Organisation because of its high literacy, low mortality, low infant mortality rate, high life expectancy rate and control in epidemics. Life expectancy rate in 1930 was at a low rate of 29 years which turned to 74 years in the present time which is the highest in the country. Not only the public health care system but also the small clinics in the village and remote areas and the super speciality hospitals are also having special role in achieving this high standard.

As health is a fundamental human right, every country has the responsibility to provide adequate health facilities to its people and thereby improve their quality of life and internal stability of nation. Economic as well as social development of a nation is depending on the health of its population. Good health confers on a person or group, freedom from illness and the ability to realise one's potential. Health is an indispensable basis for defining a person's sense of wellbeing. It is a level of metabolic efficiency of an organism, often implicitly human.

The conservation of health and improving standards of health care are essential to both individual and nations. Constitution of India considers the subjects of public health and the sanitations of hospitals and dispensaries in the state list while medical education and medical profession come under the concurrent list.

According to preamble of the Constitution of World Health Organization (WHO), health is defined as "A state of complete physical, mental and social well-being and not merely an absence of disease or infirmity". (Sakharkar, 2009) (Khan, 1999). According to Christian Medical Commission "Health is a dynamic state of well-being of the individual and the society of physical, mental, spiritual, economic, political and social wellbeing in harmony with environment and God" (Methodist Church, 1985). Health is not only the basic to lead a happy life to an individual, but also necessary for all productive activities in the society (Anand, 1976). In general, health means the ability to lead a socially and economically productive life (Ratna Vani, 2013). Health has several dimensions, each of which is important. The relative importance of each dimension with respect to the other depends on the circumstances in which an individual or community functions (Misra, 2007).

The WHO also defines a health system to include all the activities whose primary purpose is to promote, restore or maintain health. In this view, health care sector would include Contract Research Organizations (CROs), Pharmaceutical manufacturers, Medical equipment manufacturers, Diagnostic service centers and pathology laboratories, Medical care providers like Hospitals, Pharmaceuticals, Diagnostic centers, Ancillary services (such as health insurance and medical equipment) and Third-party support service providers (catering, laundry). Among these 75 percentages of the total health care market is in the hands of hospitals and pharmaceuticals.

A hospital is an integral part of social organization as it plays a vital role in protection of health of people. Hospital is a healthcare organization where patient care is focal point and about all the activities of hospital revolve in it. Hospital industry is the sub sector of health care industry. Before moving directly to hospital industry in Kerala, there is a need to explain the concept of health and hospital, features, classifications and functions of hospitals, history of hospitals, and evolution of hospitals in India and changing concept of hospitals.

4.2.Hospital- Meaning and Definition

The word hospital originates from Latin word 'hospice' which is also the root for the English words hotel, hostel and hospitality (Ballabh, 2007). A place where a guest is received is called hospitable, an institution for the care of sick and injured. In modern sense, hospital is an institution for health care providing patient treatment by specialized staff and equipment and often but not always providing for long-term patient stays. Its historical meaning until relatively recent times was a place of hospitality (Porkodi & Haque, 2011). The term has been used to refer to an institution for the aged, sick, and a place of rest (Arun Kumar, 2000).

The first and foremost function of a hospital is to give proper care to the sick and injured without any social, economic or racial discrimination. Hospital is an institution devoted not only to inpatient treatment, but also to ambulatory and domiciliary use. It is a media through which scientific technological innovations of medical sciences are put into operation and practiced for healthy living of the community. Today hospital is a place for the treatment of human illness, restoration of health and wellbeing of the people (Tabish, 1998). According to Britannica Encyclopedia, "Hospital is an institution that is built, staffed, and equipped for the diagnosis of disease; for the treatment, both medical and surgical, of the sick and the injured; and for their housing during this process." Many authors have given different definition to hospital. Some of them are as follows:

According to Directory of hospitals in India, 1988 "A hospital is an institution which is operated for the medical, surgical and / or obstetrical care of in patients and which is treated as hospital by the Central / State Government / Local body or licensed by the appropriate authority". Medical dictionary defines hospital as, "Hospital is an institution that provides medical, surgical and psychiatric care and treatment for the sick or injured" (Oxford Advanced Learners Dictionary, 2005)

The World Health Organisation (1968) defines modern hospital as "The modern hospital is an integral part of social and medical organization, the function of which is to provide for the population complete health care both curative and preventive and whose outpatient services reach out to the family in its home

environment. The hospital is also a center for training of health workers and for bio-social research".

Goyal offers a comprehensive definition for the hospital "A modern hospital is an institution which possessed adequate accommodation and well qualified and experienced personnel to provide services of curative, restorative and preventive character of the highest quality possible to all people regardless of race, colour, creed or economic status, which conducts educational and training programmes for the personnel particularly required for efficacious medical care and hospital serviced, which conducts research assisting the advancement of medical science and hospital serviced and which conducts programmes on health education."

Hospital, within its four walls, has an operation theatre, patients rooms, a dormitory for student nurses, residents and interns, a school for training of nurses, technicians, dietician, laboratories, a pharmacy, food vending operations, laundry and linen service, delivery service, a post office, massive internal and external communication system, blood bank, accounting and credit services, a public relation department, a motor service, and security patrols (Khan, 1999).

From above definitions, it is clear that a hospital is a social institution and a complex organization which offers medical treatment and personal care, which delivers health care to both patient and society through complicated but sophisticated and specialized scientific equipment and a team of trained staff in modern medical science who are all coordinated together for the common goal of restoring and maintaining a good health of the people who go there for relief from the pain, suffering and disease.

4.3.Characteristic features of Hospital

Hospitals are the centers for medical care and treatment to the people who are unfit. A hospital is supposed to provide comprehensive system of preventive and curative medicine and rehabilitation service. The main characteristic features of a hospital are as follows:

a. The motto of the hospital is 'service' which cannot be quantified in any economic terms, and no objective criteria can be laid down to evaluate the standard of service.

b. Service in the hospital is always personalized.

c. Medical services are rendered by the doctors, nurses and other specialized personnel according to the needs and requirements of each individual.

d. Hospital service is normally urgent in nature and no two situations are similar, which needs the same treatment.

e. The wide spectrum of people involved in the hospital activity ranges from highly skilled professional to a person who may not have visited school at all.

f. The dual control through means of professional authority in the hospital variably leads to management conflict, which is a peculiar situation every hospital administrator has to face in the day to day operation.

g. A hospital has to be highly responsive to the health needs and service expectation of the community.

h. The work in a hospital tends to be both variable and uneven.

i. There is great concern for clarity and responsibility. The cost of committing a mistake inpatient's care is treated with serious life and legal consequences (Tabish, 1998).

4.4. Classification of Hospitals

A hospital is an institution which is scientifically & economically organized for prevention, diagnosis & treatment of diseases. Each hospital is distinct in its characteristics as it differs in structure, functions, performance and the community it serves. Hospitals can be classified into different types depending upon different criteria. Among them some of the classifications which are significant in this study as follows.

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4.4.1. Based on ownership and control

a) Government / Public Hospitals: The hospitals run by central or state government, local bodies and public sector undertaking are called government or public hospitals. These hospitals are purely service organizations and non-profit making hospitals.

b) Non-Government Hospitals: It includes (i) Voluntary Hospitals which are registered under the societies act or public trust act and run by trusts and on non-commercial basis, (ii) Nursing Homes generally owned and, managed by individual doctors which do not admit cases of legal importance and usually provide only the patient care services in some of the specialties of medicines, (iii) Corporate Hospitals which are run on the basis of profit earning and are registered under companies act.

4.4.2. Based on Directory of Hospitals

a) General Hospitals: These hospitals usually provide medical care in more than one broad specialty and there is no strict departmentation.

b) Rural Hospitals: These hospitals located in rural areas.

c) Specialty Hospitals: Hospitals providing medical care usually in one or more specialty like TB Hospital, Eye Hospital, Cancer Hospital, heart centers etc.

d) Teaching Hospitals: Usually these hospitals attached to medical colleges.

e) Isolation Hospitals: Hospitals providing patient care to communicable diseases.

4.4.3. Based on systems of medicines

a) Allopathic Hospitals

b) Ayurveda Hospitals

c) Yoga Hospitals

d)   Unani Hospitals

e)   Siddha Hospitals

f)   Homeopathy Hospitals

4.4.4. Based on size or bed strength

a)   Small Hospitals: Hospitals having less than 200 beds are small hospitals

b)   Medium Hospitals: Hospitals having bed strength from 200 to 500 are called medium size hospitals

c)   Large Hospitals: Hospitals having more than 500 beds are usually called large hospitals

4.4.5. Based on teaching facility

a)   Teaching cum research hospitals: The main objectives of these hospitals are teaching based on research and the provision of health care. Usually these hospitals attached to medical colleges.

b)   Non-teaching hospitals

4.4.6. Based on clinical base

a)   General hospitals: The objective of these hospitals is to provide health care to the people while teaching and research is secondary and incidental. E.g. District hospitals, Thaluk hospitals.

b)   Specialized hospitals: These hospitals concentrate on a particular aspect or organ of a body and provide medical care in that field.

4.5.Functions of Hospitals

The main function of hospital is to promote the health of the community which it serves. Hospitals in the past were set up primarily as charity institutions for poor and weaker sections of society. These were considered as alms houses. The only function of such institutions was care of the sick and the poor. The hospital was

considered only a shelter for the socially unfit. Hospital has now become indispensable to the proper care of the broad spectrum of health problems.

4.5.1. Patient care

The first and foremost function of a hospital is to give care to the sick and injured and restore the health of diseased person. Ethically, this care should be given to all without discrimination of social, economic or racial nature. However the hospital as national investments in people's health and as centre for scientific practice of medicine must do many more things than produce medical care. In most case it is the severity of illness that determines the intensity of care or level of care. The severity of a heart attack increases the intensity of service from a simple visit to the doctor to an ambulance trip to the emergency department. There are many levels of care. Each level provides a different intensity of service. The more life threatening or unstable, the greater the intensity of care received.

4.5.2. Training

The education and training of doctors and nurses have traditionally been carried out in hospitals. It is a workshop where in the students learn by seeing what his superiors and peers do. Radiology, laboratory, radiotherapy, highly advanced surgical techniques demand a variety of skills and knowledge, all of which cannot be mastered by the doctor specialists. These activities have created the need for a large number of skilled technicians who are today the vital support to the specialists whether he is the surgeon, physician, diagnosing or therapist. These people are indispensable for the all-round excellence of all specialist works. To develop these technical skills, a programme should be organized by the hospital under the direction of people who have the required experience, knowledge and aptitude to teach others. The purpose of in-service education and training programs is to develop such knowledge and skills in all categories of paramedical personnel as are required to make them fit for the job. They hold and keep them attained to the growing needs of their jobs.

4.5.3. Medical Research

The third important function of hospital is to give support to medical research. A good hospital, where the quality of professional work is excellent, is an ideal ground of medical research. As a matter of fact, excellent professional care of patients largely results from the fruits of research into new problems. An attitude of enquiry and investigation should permeate through the day today care of patient. The hospital can develop facilities for research with comparative care and speed if the staff and administration are properly motivated. There elaborate research is expensive. Nevertheless there remains clinical investigations of applied nature that call for little capital investment. Responsibility for creation of new knowledge is that of any enlightened profession. It is in a capital that opportunities exist, if not abound, for organized as well as individuals initiative for research.

4.5.4. Health Education

The fourth and final object is to support and assist all activities carries out by various public health and voluntary agencies to prevent disease and promote positive health attitudes in the community through health education. Health education, immunization, social and economic rehabilitation are some of the many activities for which the hospital may provide assistance in terms of physical facilities and advisory services to staff. As a matter of fact, in the western countries, their aspect of the hospital as a community health centre is being emphasized more and more. Many ways are being devised to integrate the hospital with the activities of community health agencies.

4.6.Requirements in a Hospital

A hospital is a place where a person who needs medical attention goes to stay, so that he may get medical and nursing attention and be restored to normal health. A person seeks admission in a hospital only if the medical attention is necessary and which is difficult to arrange at home. There may be cases which need surgery or other procedures requiring multiple skills, support and equipment, difficult to assemble for a single patient for reasons of cost and/or availability, cases

needing intensive care because of acute physical and mental disorder, cases needing constant observation of parameters (temperature, BP, sugar levels, cardiac behaviour) for check-up and or diagnosis.

People do not come to a hospital for room or food service but for medical treatment. Rest of the things are augmenting the core medical attention. Elements that augment the core services are admission processes, permission for attendance to accompany patients, visitors timing, facilities to answer enquiries about patient's condition on the telephone and also parking facilities. The usual requirements in a hospital are:

a) Rooms for patients to stay equipped with beds, small cupboards for keeping medicines fruits and clothes, chairs for visitors.

b) Doctors of various specialisations

c) Nursing and menial staff for cleaning operations

d) Administration personal

e) Operation theatre equipped with appropriate machines and furniture.

f) Equipment for investigations, X- ray, scan, pathology

g) Essential drugs for emergency

h) Canteen for food service.

4.7.Different aspects of Hospital Services

The services provided in a hospital differ from one hospital to another. The common services provided by hospitals are as follows:

4.7.1. Emergency services or causality services

The causality department provides round the clock, immediate diagnosis and treatment of illness of an urgent nature and injuries from accidents. Simple cases after administering preliminary treatments are discharged with instructions to attend

OPD as a follow up measure. Cases of serious nature are admitted in emergency wards to provide immediate medical care. Such patients are either discharged after 2-3 days or are transferred to permanent inpatient wards. Emergency service is acquiring increasing importance due to modern problems arising out of urbanization and mechanization. The best services must be provided to the patients in emergency wards as the patients and their relatives are under emotional strain and surcharged with suspense and anxiety about the consequences of disease or calamity that has come up suddenly. Such an approach would alleviate a large part of suffering born out of fear and suspicions of the unknown. The Public Accounts Committee (1977-78) suggested that in order that the emergencies are attended to quickly and effectively, it is necessary to have an efficient setup, well-knit with other departments of the hospitals with well laid-out procedure and work distribution.

4.7.2. Out Patient Services

The outpatient department is one of the most important departments. All the patients suffering from diseases of minor, serious, acute and chronic nature are examined. It is designed to provide services to one percent of the population of the area. The function of the outpatient services is on an ambulatory basis. Outpatient department should be so planned that the building is separate from the indoor area. It should be well connected to the laboratories, X-ray departments and other supportive services. It should have enough accommodation to avoid congestion. Depending upon the size of the hospital and resources available separate areas of examination for the specialists should be provided.

4.7.3. Inpatient services (wards)

After the patient has been examined in the OPD or the emergency area, he may be advised admission in the wards. Wards are of different types. Open general wards (rows of beds in a big ward area), 4-5 bed units, and private wards for paying patients. Each ward has generally a doctor's duty room, dressing room, central nursing staff station and other essential items needed for patient care. The departments to which direct patient access should be provided are the operating theatre suite, X-ray and physical medicine departments. The pharmacy and

pathology departments should also be readily accessible from the wards for the convenience of the staff.

4.7.4. Intensive Care Unit

Some of the patients admitted to hospitals require acute, multi-disciplinary and intensive observation and treatment e.g.: patients of shock, coma, heart attack, lung, kidney, brain diseases, etc. It is desirable to have an intensive-care unit for such patients, like the emergency services, this requires much better staffing pattern one nurse for 1 ½ beds per shift. The staffs need to be specially trained to work in this area. This is very costly and should be setup only at the apex hospital.

4.7.5. Operation Theatre

Each operation room set should have a pre anesthesia room and sterilization room and a scrub room for nurses and doctors. There is a trend to provide simple laboratory facilities within the operating area to serve the purpose during emergency.

4.7.6. Supportive services

Central sterile supply department is supposed to store, sterilize, maintain and issue those instruments, materials and garments which are required to be sterile. This requirement may steadily decrease as the use of disposable items becomes more economical. The central sterile supply department should have direct lines of communication with all wards, operation theatre and outpatient and causality departments and to a lesser extent with X-ray and pathology departments. Air control in this department is essential to check contamination through air and proper control with indicators for sterilization procedures.

4.7.7. Laboratory facilities

For proper diagnosis of ailments of patients it is necessary to have diagnostic laboratory facility properly manned. The success of medical prescription would depend upon proper laboratory diagnosis. Laboratories of routine blood, urine, microbiology etc. should provide round the clock service.

4.7.8. Canteen service

The canteen service which comprises the kitchen, bulk food, stores and dining rooms, supply all meals to the patients, bystanders and staff of the hospital. Direct and easy access is required from the canteen to the wards. It is required to provide general diet, special diet for patients suffering from certain diseases. Food served in an attractive manner provides an incentive for the patients to eat.

4.7.9. Pharmacy service management

The pharmaceutical services in most of the hospitals in India today represent the functions of procurement and distribution of drugs by medical store and compounding and dispensing of medicine on doctor's prescription by persons known as compounders, generally under the control of medical offers.The hospital pharmacy is indispensable in the treatment of patients. Efficiency in pharmacy would help to ensure effective treatment programmes. The real key to a pharmacy's success is the dedication of its staff to the objectives of clinical excellence and administrative plan implementation. The pharmacy, despite its apparent autonomy, must not lose sight of its role as teams players in hospital planning.

4.7.10. Laundry

There is a need for an efficient mechanical laundry to ensure the availability of bacteria free washed linen. The small hospitals may get the cleaning done from washer man with due care and supervision. The aim is to make available to the patient clean and disinfected linen.

4.8.Inpatient Department

Inpatient department is that department of a hospital in which the patients are generally kept for more than a day for close clinical monitoring. Inpatients department constitutes of the patient wards and is considered as a temporary home for the patients and hence, needs to suit the cultural background of the community

In a hospital based health care delivery system, inpatients services or wards area is the most important and largest single component of the hospital, forming

approximately about 35-50% of the whole hospital complex. The patients of outpatient department and emergency department who need extra clinical care, which cannot be delivered at home are advised to get admitted by their consultants. These patients once they have accepted the consultant's advice have to get themselves enrolled as inpatients of the hospital. These patients remain under the watchful eyes of the consultants and receive clinical care from the trained nurses (Khan & Khan, 2004).

A ward is that unit of the hospital where all the amenities –physical, social and especially medical care are made available to make the patients feel at home till they are discharged (Goel & Kumar, 2004). Each ward has generally a doctors duty room, dressing room, central nursing staff station and other essential items needed for delivering clinical care to the patients. The departments to which direct patient access should be provided are operating theatre (OT), X-ray and physical medicine department. The pharmacy, pathology and microbiology departments should also be readily accessible from the wards for the convenience of the hospital staff (Kumar, 2000).

4.8.1. Classification of wards:

The wards of inpatients department can be scientifically classified on the basis of economic consideration and progressive patient care. Economically classified wards are general wards for weaker sections of the community and private wards for higher income group. The same consultants see the patients in both the wards. As far as treatment is concerened it is the same irrespective of the type of wards to which the patient is admitted.

According to progressive patient care concept, the wards are divided in to ICU, with step down units for intermediate care, such as cardio-thoracic ward, general wards for routine cases and private wards with the self care concept. The various types of wards frequently seen in hospitals are as follows.

a)   General medicine ward

b)   General Surgery

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c) Cardio Thoracic ward

d) Transit ward

e) Paediatric Ward

f) Urology Ward

g) Orthopaedic Ward

h) Speciality Ward

i) Private ward(Male/Female)

j) Intensive care unit

k) Cardiac care unit

l) Neonatal intensive care unit

m) Gynaecology and obstetric ward

n) Deluxe ward

o) Semi deluxe ward

p) Isolation ward

q) Nephrology ward

r) Convalescent ward

4.8.2. Frequently encountered problems in wards

Ther are a number of problems being reported frequently in a ward.

a) Defective construction of the wards in the hospital

b) Unduly big size of the ward

c) Lack of effective interpersonnel relationships among doctors, nurses, sanitary attendants etc.

d)   Defective materials management in wards

e)   Pilferage of goods from wards

f)   Poor maintenance of equipments

g)   Low morale among nursing staff

h)   Unsatisfactory nurse/patient station

i)   Non-nursing duties performed by nursing personnel

j)   Favouritism in the allotement of bedroom in wards

k)   Non courteous attitude of employees in the wards with the patients and their attendants.

l)   Corrupted practices in the wards

m)   Improper food arrangement in wards

4.9.History of Hospitals

The cave in which early man gave refuge to his companion in despair was the primitive form of hospital. In ancient culture, religion and medicine were interlinked (Heraold E-smalley, 1982). Medicines appeared as an organized entity for the first time in ancient regions of south west Asia known as Mesopotamia. In ancient Egypt, during Greek and Roman Civilization, temples were used as hospitals. In that time hospitals were integral part of temple. By the fifth century B.C. several temples to Aesculapious were active in Greece. With the birth and spread of Christianity, the hospitals became an integral part of Church.

The first recorded doctor's prescription came from Sumer in ancient Babylon under the rule of the dynasty of Hammurabi (1728-1686 B.C.). Greek temples as early as 1134 B.C. served as resting places for patients under observation. Hippocrates, the most prominent Greek Physician separated medicine from religion and philosophy. Medical training gained importance in that era.

By 500 A.D. almost every city in old Roman Empire had church related hospitals. During the middle ages (500-1350) public hospitals emerged with the spread of Christianity. It was Sri Lankans who introduced the concept of dedicated hospitals to the world. The ancient Chronicle of Sinhalese Royalty written in 6th century A.D, King Pandukabhaya had lying in homes and hospitals built in various parts of the country. Mihintale Hospital is perhaps the oldest one in the world.

Scientific medicine was rediscovered during renaissance. During 14th century medicine was increasingly separated from religion. During 16th and 17th centuries European religious brotherhoods established hospitals for homeless and poor. The development of efficient hospitals was an outstanding contribution of Islamic civilization. During 786-809 A.D. Harun-al-Rashid built a great system of hospitals which used intestines of sheep for suturing and alcohols for cleaning wounds.

Hotel Dieu, Paris established in seventh century is the oldest hospital still in operation. Some of the earliest notable hospital established in Europe were St Bartholomew`s hospital London in 1123 AD, Spanish built hospital in Mexico in 1524, the first general hospital opened in North America as Pennsylvania hospital in 1751, Bellevue Hospital in New York in 1736, Network Hospital in 1773, New Heaven Hospital in 1826 and Massachusetts General Hospital in 1861 (Joshi & Joshi, 2000) (Porkodi & Haque, 2011). The advances in medical science in the field of microbiology, pharmacology, radiation, blood transfusion, anesthesiology, surgical techniques and computers all led to exponential growth in hospital services.

During 19th century, functions of hospital underwent radical changes. Emphasis was laid on medical, surgical and nursing care. By the mid nineteenth century most of Europe and United States had established a variety of public and private hospital systems. Profit motive hospitals were arisen in late twentieth century. During 20th century, hospitals have been called on to provide ever increasing number of services to the patients, resources for the education of physicians nurses and other members of the health team and facilities for medical research. Hospitals today are staffed by professional physicians, surgeons and

nurses, where as in history this work was usually done by the founding religious orders or by volunteers. The medical science developed from symptom centered to people oriented.

The hospital in the present era is now not only high-tech, but also operating from remote places like telesurgery and telemedicine not only providing care and comfort to patient, but also to the visitors, attendants of patients. Now it is moving one step further to medical tourism also.

4.10. Evolution of Hospitals in India

Health care institutions were created specially to care for the sick. Conventionally health care in India has been based on voluntary work. Since ancient times traditional practitioners of health care have contributed to the medicinal needs of society. Acute knowledge in the medicinal properties of plant and herbs were passed on from one generation to another. Hospitals managed by Christian missionaries took centre stage. Even the intellectual elite in India with their pro-west bias favored western practices.

Efficient hospitals were constructed in India by 600B.C. The concept of public health facility was originated in India in the third century B.C. when Buddhist established hospital like installations. It was during the reign of King Asoka (273-232 B.C.) Indian hospitals started to look like modern hospitals. At that time, hospitals were called Chikistaslayas (Porkodi & Haque, 2011). In 230 B.C there were 18 hospitals all over the Mauryan Empire founded by King Ashoka which were maintained by the state. All the expenses related to medicines, physicians, nursing staff were borne by the royal treasury.

The medical practices of 2nd century B.C are described in the book "Saptarathi" written by Hala, a medical scholar of Sathavahana Kingdom. All the rulers of Pallavas, Cholas of the south, the Chanakyas and the Rastrakuta's of Deccan gave grants to physicians and dispensaries. There were evidences for hospitals and medical care during the western Chalukyan period (8th-12th century A.D) also. The12th -13th century inscriptions on the walls of "Tirumukundal"

temple in Changalpet mention about Sri Veera Choleshwara hospital with 15 beds. Under the patronage of Kakatiya's of Warangal Vishveswara Shiva had founded a hospital called Arogyashala and a maternity center in Orugallu in 14th century (Sakharkar, 2009).

During8th-12thcentury A.D, Arabic system of medicine which is called Unaniwas brought in to India by the Muslim conquerors. The Delhi and Deccan Sultans made people to get a high standard of care by the establishment of Unani hospitals (Dar-u-Shafa) all over India during medieval age (Bhatia, 1977).

The Western System of medicine came to India with the European merchant companies. In the 16th Century, hospitals were established by the Portuguese in Goa during the time of Alfonso de Albuquerque (1509-1515 AD) but it was in the 18th century that the modern hospitals were staffed with physicians and surgeons to attend to the medical needs of sick people. The first modern hospital in India was established at Madras (presently Chennai) in the year 1664, subsequently at Bombay (presently Mumbai) in 1676 and at Calcutta (presently Kolkata) in 1707. Christian missionaries who came to India did an excellent work for the establishment of modern hospitals throughout the country. In 1883, Dr. Anna Sarah Kugler founded a hospital in Guntur (Andhra Pradesh) and in Tamilnadu, the well-known Christian medical college hospital, at Vellore was established by Dr. Ida Scudder. She opened a one-bed clinic in Vellore in 1900. In 1902, she built a 40-bedded hospital. In 1909, she started the School of Nursing and in 1918, a medical school for women was opened under the name "Missionary Medical School for Women". In the late 20th century a number of for-profit hospitals arose enormously (Ratna Vani, 2013).

India got independence in 1947 and there were 7,400 hospitals and dispensaries in India. There were 1, 13,000 beds with bed population ratio of 2/1000 population. There were 19 medical colleges and 19 medical schools then. It was felt by Government of India that with the rising population and projected growth rate, it would not be possible to cope up with the health needs and demands of the community. Various committees were formed to suggest means and methods to reorganize the health care delivery system. Some of these important committees

were Bhore Committee, 1946, Chopra Committee, Mudaliar Committee, 1962, Chandha Committee, 1963, Mukherjee Committee, 1965, Mukherjee committee, 1966, Jungalwall committee, 1967, Kartar Singh Committee, 1973, Shrivastava Committee, 1975, Bajaj Committee, 1986.

4.11. Changing Concept of Hospitals

Fast changes are happening in the concept of hospitals. In earlier, hospitals were run and managed by the trustee's and there were a humanitarian approach in it. The doctors and nurses were service minded and they worked not for money. The advances in technology were minimal and the objective of the hospital was to provide cure to the patient during the period till 1920's. When laboratory medicine developed during the period 1940 to 1950, hospitals started to being utilized for medical practice also. The political and economic environment started influencing the hospitals and the hospital practice became a team approach. There happened a massive change in the scenario by the advancement in technology. Hospitals were being professionally managed by using computers and application of computers in patient's care as well as for administrative works.

When liberalization policy of the government all over the world lead to globalization, the rapid advancement in the field of information technology, with fast and safe air travel all over the world lead to the concepts of medical tourism, the concept of corporatization of the hospital. The hospital concept has changed from service approach to the profit making approach. The doctors have started thinking on management principles and functions for productivity. Telemedicine is a new addition. The patients can be treated and monitored by remote devices. The government all over the world has started thinking about easing the burden of financing the healthcare. The new emerging concept of contracting or public-private-partnership (PPP) is growing very fast. The financing of health services through insurance sector has become need of the hour.

4.12. Indian Healthcare System

Though the health of the people is a public responsibility of all the government, the scope of health services varies widely from country to country and is influenced by general, ever changing national, state and local health problems, needs and attitudes as well as available resources. In those countries which take health care as basic right, the state is the main provider and health care is largely subsidized. In countries where health care is seen as commodity, the private sector is the dominant provider and the cost of health care is market driven (Ratna Vani, 2013). India is a mixed economy where both private and public sector have equal participation.

Healthcare is one of the largest sectors of India which is expanding rapidly in terms of revenue and employment. Indian healthcare industry is expected to become a US$280 billion industry by 2020. The major factors which contribute to this growth are increase in income levels and a growing elderly population. In addition, changing demographics, disease profiles and the shift from chronic to lifestyle diseases in the country has led to increased spending on healthcare delivery (Girija, 2014).

The totals spend on the health care sector currently accounts for 6.1 per cent of the GDP, of which the government spends 1.1 per cent. India receives 1.5 lakh medical tourists every year. A CII-McKinsey report has projected that the medical tourism could contribute Rs. 5000-10000 crore (Rs. 50-100 billions) as additional revenue for the tertiary care hospitals by 2012. This will account for 3-5 percent of the total health care delivery market (Taneja, 2012).

In India, the government regulates and maintains health standards, provides preventive and curative services and builds up the infrastructure for medical and health services. The Indian Medical Central Council Act 1970 that came into existence with approval of parliament has the power to grant permission to establish any health institution in the country.

The National Health Policy which was approved by the Parliament and announced by the Government in 1983 marked a beginning to the Quest for equity in health expressed as WHO's goal of "Health for All" by the year 2000. Since the beginning of the economic reforms in 1991, the allocation of fund for the health sector has increased from Rs. 302 crore rupees in 1992-93 to 670 crore in 1995-96. A substantial portion of the allocation was spent on the control and elimination of important diseases such as malaria, leprosy blindness, tuberculosis and AIDS.

As India having PPP system of health care, it is significant to create infrastructure in private and public sector. Medical education infrastructure in the country has shown rapid growth during the last 20 years. The country has 381 medical colleges, 201 dental colleges. There has been a total of admission of 43,576 in 381 medical colleges and 25,320 in BDS during 2013-2014.

The quality of health care in India is close to and sometimes exceeds first-world standards. Indian healthcare professionals have the advantage of working in a very biologically active region exposing them to treatment regimens of various kinds of conditions. The quality and amount of experience is arguably unmatched in most other countries. Despite limited access to high end diagnostic tools in rural areas, healthcare professions rely on extensive experience in rural areas. However non-availability of diagnostic tools and increasing reluctance of qualified and experienced healthcare professionals to practice in rural, under-equipped and financially less lucrative rural areas is becoming a big challenge. Although rural medical practitioners are highly sought after by residents of rural areas as they are more financially affordable and geographically accessible than practitioners working in the formal public health care sector. Owing to a variety of factors like lack of health consciousness, low per capita income, lack of adequate education, on availability of proper sanitary condition and safe drinking water, unhealthy social taboos etc., the health status of the average Indian still remains dissatisfactory.

4.12.1. Public Healthcare System in India

The public health care system in India comprise of a set of state-owned health care facilities funded and controlled by the government of India. Some of

these are controlled by agencies of the central government while some are controlled by the governments of the states of India. The governmental ministry which controls the central government interests in these institutions is the Ministry of Health & Family Welfare. Governmental spending on health care in India is exclusively this system; hence most of the treatments in these institutions are either fully or partially subsidized. The central government undertakes the responsibility of policy formation regarding health and it develops new health programmes. It provides financial help and technical assistance to the state governments for the implementation of health policies (Goel & Kumar, 2004).

The health care facilities in public sector include All India Institutes of Medical Sciences owned and controlled by the central government with specialized facilities, Regional Cancer Centers controlled jointly by the central and the respective state governments, Government Medical Colleges owned and controlled by the respective state governments, District Hospitals or General Hospitals controlled by the respective state governments and serving the respective districts, Taluk hospitals controlled by the respective state governments and serving the respective Taluks, Community Health Centre CHCs available as basic health unit in the urban areas, Primary Health Centers with the most basic facilities, and especially serving rural India, generally at the level of a panchayat and Sub-centers as most basic units of health in villages which function as the first point of contact between villagers and public health care system in India.

Important issues that public health system in India faces are lack of financial and material resources, health workforce issues and the stewardship challenge of implementing pro-equity health policies in a diverse environment.

4.12.2. Private Healthcare System in India

About 30 years back, the private health care sector consisted of only solo practitioners, small hospitals and nursing homes. The quality of services provided by hospitals run by charitable trusts and religious foundations was excellent too. In 1980s government realized that it alone would not be able to provide good quality health care to all. Government started to provide numerous subsidies to private

health providers and allowed them to enter into market in order to reduce the gap between supply and demand for health care. Private health providers started to serve the middle class which was dissatisfied with the public health sector and sort to exit it wherever possible. They also opened up market in the 90s which further gave drive to the development of the private health sector in India. The increasing demand along with lack of health care facilities (both in quality and quantity) is expected to work in favour of the private corporate players. Driven by the change drivers, the health care services scenario in India is expected to evolve to a more developed stage (Nargundkar, 2004). 80% of new beds built between 2005 and 2015 are in for-profit hospitals. The private chains of healthcare providers in India are innovating very rapidly, offering high quality treatment at very low cost.

Major corporations like Tatas, Appolo groups, Fortis, Maz, Wockhardt, Piramal, Duncan, Ispat, Escorts have made significant investments in setting up private hospitals in cities like Mumbai, New Delhi, Chennai, Hyderabad. Because of the quality, efficiency and reliability the private health care facilities started assuming preferences over the public health care system. The establishment of private hospitals resulted in the emergence of opportunities in terms of medical equipment, information technology in health services, BPO, telemedicine and medical tourism. Large companies and affluent individuals have started five star hospitals which dominates the space for high end market.

According to National Family Health Survey-3, the private medical sector remains as the primary source of health care for 70% of households in urban areas and 63% of households in rural areas. Reliance on public and private health care sector varies significantly between states. Several reasons are cited for relying on private rather than public sector; the main reason at the national level is poor quality of care in the public sector, with most of the households pointing to this as the reason for a preference for private health care. Most of the public healthcare caters to the rural areas; and the poor quality arises from the reluctance of experienced health care providers to visit the rural areas. Consequently the majority of the public healthcare system catering to the rural and remote areas relies on inexperienced and

unmotivated interns who are mandated to spend time in public healthcare clinics as part of their curricular requirement. Other major reasons are distance of the public sector facility, long wait times, and inconvenient hours of operation. The study conducted by IMS Institute for Healthcare Informatics in 2013, across 12 states in over 14,000 households indicated a steady increase in the usage of private healthcare facilities over the last 25 years for both Out Patient and In Patient services, across rural and urban areas.

The expansion of the private sector in India has forced the government to pass a number of regulations to promote quality of care and protect consumers. This has expanded the role of Government in developing and enforcing regulations in three areas of the health sector: drugs, medical practice and health facilities. These regulations have been promulgated by both national and state governments (Porkodi & Haque, 2011).

The private sector has made tremendous progress, but on the flip side it is also responsible for increasing inequalities in health care sector. Even though private hospitals are accessible, it is expensive for poor patients. 28-30% of the project cost of a 100 bed hospital and upwards relates to recurrent expenditure on medical equipment. Maintenance cost and import duties for such equipment are high. Private health care is therefore for those who can afford it. Berating private health care for not assuming the government's role in providing health care to its citizen is not the solution. The private sector should be more socially relevant and efforts must be made to make private sector accessible to the weaker sections of society.

4.13. Hospital Industry in Kerala- Current Scenario

Kerala is a state having a population of 3.33 crore with life expectancy at birth of 74.6 years as per Census 2011. Having a high literacy rate 93.91%, Kerala stand at the top in its achievements. Hospital Industry in Kerala is characterised by mixed sector operation. Both public sector and private sector are simultaneously entering the industry. Kerala is having high standard both in its medicine and service. World Health Organisation acknowledges the Kerala model health care. The state becomes centre of attraction in its high literacy, low maternal and infant

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mortality rate, high life expectancy rate and successfully controlling epidemics. The high literacy rate in the state is one of the factors emphasising the need for development of an efficient health sector in the state. The health indicators of Kerala are shown in the table below.

Table 4.1
Health Indicators

Indicator	Kerala	India
Total population (In crore) (Census 2011)	3.33	121.01
Decadal Growth (%) (Census 2001)	4.86	17.64
Infant Mortality rate (SRS 2013)	12	40
Maternal Mortality Rate (SRS 2010-12)	66	178
Total Fertility Rate (SRS 2012)	1.8	2.4
Crude Birth Rate (SRS 2013)	14.7	21.4
Crude Death Rate (SRS 2013)	6.9	7
Natural Growth Rate (SRS 2013)	7.8	14.4
Sex Ratio (Census 2011)	1084	940
Child Sex Ratio (Census 2011)	959	914
Schedule Caste Population (In crores) (Census 2001)	0.31	16.66
Schedule Tribe Population (In Crores) (Census 2001)	0.03	8.4
Total Literacy Rate (%) (Census 2011)	93.91	74.04
Male Literacy Rate (%) (Census 2011)	96.02	82.14
Female Literacy Rate (%) (Census 2011)	91.98	65.46

Source: SRS Bulletin, September 2011, 2013; Census 2001, 2011

The face of Kerala was not as charming as it is today when it was born in 1952. It was a time when the medial facilities were practically out of reach of most people of Kerala. In 1980s there were very few hospitals operating in Kerala and was more or less carried out by Government. This situation was under constant criticism by public in general because of the poor quality and reliability of services. Consequently many private hospitals started functioning. They began to turn as an industry when financial institution began to provide loans for meeting the expenses of treatment. Health care institutions came in demand when the middle class people were willing to spend more money for health care expenses. Thus health care

institutions began to avail marketing of service to attract these middle class people. At the end of 1980s the number of institutions functioning in the public sector began to decrease and a huge growth of the private sector health care institutions taken place. During 90's the government hospitals in the state was unpopular and unsatisfactory among the masses because of its poor quality and lack of infrastructure with a malfunctioning internal structure. But today the scene is changed and now the public system consist of efficient doctors and enough technology. Even the nurses in the institution possess high academic qualification and able to handle minor cases them self. Still the patients have to receive low quality service because of the lack of aids and facilities.

Due to the availability of project financing and inexistence of rules and regulations imposed by city authorities in the state for starting a hospital, industrialists and entrepreneurs find this opportunity to invest in hospital business. There is no licensing by any legal authority and no inspections carried out for the renewal of permission. Even there is no accreditation certifying the value of the service rendered by these institutions. Many of them charge a high fee and perform complicated procedures on patients. The customers, the sick patients are not aware of the quality of the treatment and procedures which they purchase. In many instances there is no assurance of quality, no quality control and no consistency in procedures followed. The price paid for the services is quite high and earning opportunity has allowed the competition to grow. Hence many service providers make claims which are intelligible to the customer, the sick patient.

Private hospitals are playing a vital role in the maintenance of health status of people of Kerala. It is observed that persons belonging to all social classes consume this sector's services and that duration of treatment is lesser in this sector. Still, government hospitals are preferred by the people for treatment of diseases like cancer and other tumours as the associated costs are prohibitive. It is seen that in private sector, new hospitals are mushrooming and at the same time, many of the existing hospitals simultaneously closedown. This underlines the uncertainty associated with the services of hospitals in private sector. The demand for large

private sector hospitals is expected to be a temporary phenomenon and demand for small hospitals and nursing homes is expected to be a more permanent phenomenon. Utilization of inpatient treatment facilities at private hospitals is as frequent among poor as among the rich. However the deprived social groups are increasingly getting alienated from the private hospitals.

Nowadays it is seen that the out of pocket expenditure on hospitalization has increased. It is confirmed that while private sector is indeed providing a significant proportion of in-patient care to the poor, it taxes them severely. Also the overwhelming dominance of the private sector across time has resulted in marginalised groups getting more and more restricted access. If this continues for a while, there can be situations where the socially marginalised are less likely to avail health care when needed; and when compelled to opt for health care they also might opt for private facilities; and this utilization taxes them severely (Dileep, 2008).

4.14. Issues and Problems faced by Patients in Government Hospitals

Patients of government hospitals usually face a number of issues. The available staffs are not adequate to inpatients in the ward. Usually there is much number of patients and they are accommodated on the floor also. There are more than thirty to thirty five patients per nurse. Many a times X-ray machines are not operated because of voltage fluctuation. Urine sputum examination is not done as spirit is not available to light the spirit lamp, ECG works only now and then, and to cap it all, there is no ECG technician. Doctor has to take the ECG. Other investigations like blood and serum are also not done in the laboratory. The patients get them done from outside and pay heavily for that. Most of the patients who depend on these hospitals are from poor socio-economic background and they get no service free of cost from these hospital. Not only that, they have to depend on laboratories outside the hospital, medical shops and other private agencies for getting medicines, and getting investigations done.

If the patient happens to be the bread-winner of the family, disease itself is very exhausting. All the expenses relating to cost of medical care, food, travel and cost of stay of bystander during hospital stay which are levied on patient's family.

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Above all, the staffs who are already paid by the Government to provide free services to the patient deny their services as they are misusing their power through private practice or demanding of bribes. The staff's play different tactics with the patients to receive bribe.

All the medicinal drugs required for the government hospitals are brought by Kerala Medical Service Corporation Limited. Even then the medicines prescribed by the doctors are not available in the hospital pharmacy. The staff won't provide the medicine even though it is available in the pharmacy. It will be available only at the medical shop near to the hospital which is referred by the doctor.

Government promotes organ transplantation in a massive way but do nothing on the matter of cost of medicines and check-ups after transplantation. A patient whose kidney is transplanted should take medicines costing around Rs. 10000 per month but the government provide only 1000 per month to them. The poor with their already poor purchasing power are heavily taxed monetarily, mentally, physically and socially by the health service system of the government.

4.15. Issues and Problems faced by Patients in Private Hospitals

Though media celebrates only the issues in government hospitals, private hospitals are not an exemption. Perhaps the issues are not about scarcity of facilities but the practice of doing unethical things. Most of the corporate institutions in the health care sector are functioning only with the aim of profit making. There are so many cases reported on conducting sudden operations for non-existing fibroids which were made visible in the scanning report by the hospital scanning centre. Corporate hospitals consider doctors as workers and they are forced to act according to the decisions of management. When incentive systems of remuneration to the doctors implemented in many corporate hospitals, doctors started to suggest the patient a big lists of tests. Hospital's link with laboratories also matters.

A doctor must be able to recognise the ailment in the first sight or at the entry of patient to the visiting room itself. He does the check-up and diagnosis to get which system of the patients' body is affected. Laboratory tests are done only to

make sure about the ailment. But nowadays, many of the new generation doctors impose burden of all the laboratory tests on the patient in order to avoid the risk of being acquitted. So that they can easily escape from such a situation by saying they did all the tests in patients. Actually this is what is called defensive medicine. Doctors defend themselves. Lack of confidence is the major reason for this.

The surgery for removing uterus and fibroid are increasing nowadays in private hospitals. The number of disc surgery, thyroid surgery, angiogram, angioplasty and caesarean are also increasing day by day. Most of the private hospitals impose unwanted caesarean to avoid the pain of the normal delivery. They lead the patient to undergo caesarean terrifying the patient and use unnecessary medicines also. Doctors receive commission from the pharmacies for suggesting their brand to the patients. These may not be affordable to the middle and low class people who are admitted in the hospitals.

Health care issues and hospital quality issues are not becoming a political issue among the highly literate people of Kerala. Even though Clinical Establishment Act 2004 is passed at the central level in order to make the private establishments under law or legalise the private settings, no efforts had been taken from the part of Government of Kerala. The victims do not have even the basic knowledge on the rights of patients. Though there are so many cases on medical negligence in Kerala, they do not go for complaining the same. There must be a cell which can provide medical education to the patients, to provide legal advises and guidance in the matter of negligence.

4.16. Medical College Hospitals in India

Medical college hospitals are the most complex organisation in existence in health care system. There is a wide diversity of objectives and goals for different personnel and subsystems within the organisation. Various segments of the hospital will be responsible for or involved in patients care, education, research, hotel type accommodation and problems, and carry out complex sophisticated medical and surgical procedures. These various activities are sometimes contradictory and often in conflict. The diversity of personnel ranges from the most highly skilled and

educated physicians and administrators to unskilled and uneducated employees. Enabling them to work together is a major responsibility of the hospital manger. As these hospitals are in continuous operations they require high standby costs and involves substantial personnel and scheduling problems.

With the establishment of the British Government in India, it became necessary to organise the medical services to provide facilities for medical relief and improvement of public health. These services consist of Indian Medical Services, the Central and Provincial Medical Services and the Subordinate Medical Services. The members of the Indian Medical Service were recruited by a competitive examination in London until 1914, while the staffs for the central, provincial and subordinate medical services were recruited from India. Medical Colleges were started in 1835 at Calcutta, Bombay and Madras in the first instance and later at Rangoon. Medical schools were started in important centres in the provinces for recruiting the staff to the Subordinate Medical Services.

4.17. Medical College Hospitals in Kerala

As compared to Western world, Kerala is having the best health statistics in India which provides quality care at low cost. The standard of medical education delivery system in our state is one of the major factors responsible in achieving this goal. The teaching hospitals have facilities for the teaching and training of medical and paramedical students and trainers. These hospitals may be operated by the government or private agencies. There are 12 government medical college hospitals that are functioning in Kerala; two are under planning. Also there are twenty three private medical college hospitals functioning in Kerala.

4.18. Profile of Medical College Hospitals selected for the Study.

A total of 12 Medical College Hospitals were selected for this study. In that 5 Medical college hospitals are from Government sector and 7 Medical College Hospitals are from Private sector. The profiles of the selected hospitals are as under:

4.18.1. Government Medical College Hospital, Thiruvananthapuram

Government Medical College Hospital, Thiruvananthapuram is located at Thiruvananthapuram district, the capital of Kerala. It was established in the year 1951. This is the oldest and most prestigious medical college in Kerala. It is the largest multi-specialty hospital in South Kerala serving the major portion of Thiruvananthapuram, Kollam districts and adjacent districts of Tamil Nadu. The present bed strength is 3000 beds. The bed occupancy remains 90-95% throughout the year.

4.18.2. Government Medical College Hospital, Kozhikode

Government Medical College Hospital, Kozhikode is located at Kozhikode district of Kerala. It was established in 1957 as the second medical college in Kerala. This medical college hospital serves 40% of the population of Kerala. The present bed strength of the hospital is 3325 beds. This makes it as the largest bedded hospital in the country. However the patient load is beyond the commissioned number of total beds. Because of the patient overload, the floors and corridors are usually occupied

4.18.3. Government Medical college Hospital, Kottayam

Government Medical College Hospital, Kottayam is located at Gandhinagar in Kottayam District of Kerala. It was established in the year 1962. The present bed strength of the hospital is 1471 beds with 25 clinical departments including all specialty and super specialty with all diagnostic and therapeutic facilities although the hospital frequently operates at 140%–150% capacity.

4.18.4. Government Medical College Hospital, Thrissur

Government Medical College Hospital, Thrissur is located at the serene surroundings of Mulagunnathukavu (M.G Kavu) in Thrissur district of Kerala. It was established in 1982. It is one of the leading centres in medical education in Kerala, India. The present bed strength of the hospital is 700 beds.

4.18.5. Government T.D. Medical College Hospital, Alappuzha

Government T.D. Medical College Hospital is located at Vandanam in Alappuzha district of Kerala. The Medical College was started in 1963 under the patronage of the T.D. Temple at Anantha Narayana Puram of Alappuzha. It was raised as teaching hospital in 1973. This is the 4th Government Medical College in the state. The present bed strength of the hospital is 844 beds.

4.18.6. Karuna Medical College Hospital, Palakkad

Karuna Medical College Hospital is located at Vilayodi, Chittur in Palakkad district of Kerala. It was established in the year 2004 and raised as teaching hospital in the year 2006. The hospital is run and administered by the Safe Development Alms Trust, Palakkad. Karuna Medical College Hospital is having well-supported and sophisticated facilities. The present bed strength of the hospital is 500 beds.

4.18.7. MES Medical College Hospital, Perinthalmanna

MES Medical College Hospital is located at Perinthalmanna in Malappuram District of Kerala. It was established in the year 2003. It is run and administered by The Muslim Educational Society (MES). The hospital is equipped with cutting edge facilities and medical equipment as well as the latest communication and information technology tools. The present bed strength of the hospital is 570 beds.

4.18.8. Jubilee Mission Medical College Hospital, Thrissur

Jubilee Mission Medical College Hospital is located at Thrissur district of Kerala. It was established in the year 1952 and was recognised as a teaching hospital in the year 2003. The hospital is established under the Canon Law by the Catholic Archdiocese of Thrissur and was registered under the Charitable Organisations Welfare Act via Reg. No.29/71. This was the first and the only private hospital in Thrissur during that period. The present bed strength of the hospital is 1500 beds.

4.18.9. Kannur Medical College Hospital, Anjarakandi

Kannur Medical College Hospital is located at Anjarakandi in Kannur district of Kerala. It was established in 2006. Kannur Medical College is a member of Minority Professional College Management Association. It enjoys a worldwide reputation for its high quality content and rich hands on experience it provides with international exposure. The present bed strength of the hospital is 1500 beds.

4.18.10. Amala Medical College Hospital, Thrissur

Amala Medical College Hospital is located near Amalanagar, in Thrissur district of Kerala. It was established in the year 2003. The hospital is established and administered by the Devamatha Province of the Carmelites of Mary Immaculate (CMI), an indigenous religious congregation. It was started as a non-profit, charitable institution aimed at treatment and management of Cancer in Thrissur. The present bed strength of the hospital is 1000 beds.

4.18.11. KMCT Medical College Hospital, Mukkam

KMCT Medical College, Mukkam is located in the picturesque hillocks of Kallanthode, Manassery and Mampatta of Kozhikode District of Kerala. It was established in the year 2008. Hospital is run by Kunhitharuvai Memorial Charitable Trust (KMCT). The trust is a registered public trust managed by a board of trustees of high public eminence. The present bed strength of the hospital is 505 beds.

4.18.12. Pushpagiri Medical College Hospital, Thiruvalla

Pushpagiri Medical College hospital, Thiruvalla is located in pathanamthitta district of Kerala. It was established in the year 1959 and was raised to the status of a teaching hospital in the year 2002. Hospital is run by Thiruvalla Archieparchy of the Syro-Malankara Catholic Church. It is a multi-disciplinary super specialty hospital certified with ISO 9001:2000. The present bed strength of the hospital is 1200 beds.

Conclusion

Hospital industry has been experiencing a rapid growth in Kerala. Hospitals in Kerala provide a wide range of medical services for a large group of patients and now serve an increasing population. Hospitals in both government and private sector lack quality in many cases. The issues and problems faced by patients of hospitals in both sector have to be seriously considered by the concerned authority. Medical college hospitals are the last resort to the patients with severe ailment who have low purchasing power. It is vital for the state to improve the quality of services provided by Medical College hospitals in Kerala so that it can contribute to the development of an efficient health care system thus the development of state.

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PATIENTS' DEMOGRAPHICS AND PERCEPTION

CHAPTER 5

PATIENTS' DEMOGRAPHICS AND PERCEPTION

Primary data collected from the respondents were analysed after getting an overview about the concept of hospital service quality and patients' satisfaction. A structured and pretested questionnaire was used for collecting data from the respondents. The present chapter is devoted to the demographic analyses of the primary data with regard to the Perceived Service Quality and Patients' Satisfaction in Government and Private Medical College Hospitals in Kerala. This chapter presents the results of demographic analysis of Perceived Service Quality, Perceived Value for Money, Perceived Waiting Time, Patients' Satisfaction, Patients' Loyalty and Patients' Complaint Behaviour. Data were analysed via SPSS 20.0 for Windows. Descriptive statistics were used to describe and summarize the properties of the mass of data collected from the respondents. Mann-Whitney Test and Kruskal-Wallis Test were used to Test the significance of results. A level of 0.05 was established as a priori for determining statistical significance.

5.1. Demographic profile of the sample

It is evident from the existing studies that the socio - demographic characteristics of patients influence their perception towards the services provided by a hospital. The present study analyse the demographic influence on the perception of patients in medical college hospitals in both government and private sector. Data were collected from 770 inpatients selected from 12 medical college hospitals in Kerala by multistage sampling procedure using non probability sampling methods. In the sample, 385 respondents were taken from 5 selected Government Medical College Hospitals and 385 were taken from 7 selected Private Medical College Hospitals. Sample consists of respondents from different gender, age group, educational qualifications, occupations, and poverty lines, frequency of visits, duration of stay, wards and preference of sector. Respondents' profile on the basis of these groups is presented as follows.

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5.1.1. Age wise classification of sample

As the patients comprise of various Age groups, it is important to get an idea about the Age of the sample. Hence the respondents are classified on the basis of Age and presented in the table 5.1.

Table 5.1

Age of Respondents

Age (In yrs.)	Govt. MCHs		Pvt. MCHs		Total	
	No.	%	No.	%	No.	%
< 40	176	45.7	183	47.5	359	46.6
41- 60	165	42.9	166	43.1	331	43
> 61	44	11.4	36	9.4	80	10.4
Total	385	100	385	100	770	100

Figure 5.1

Age of Respondents
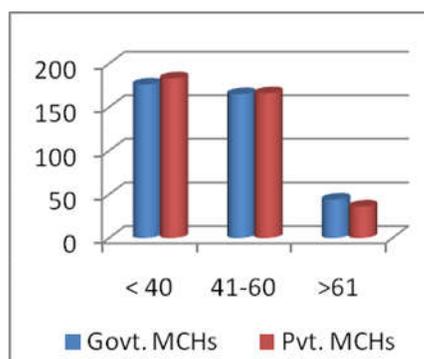
Chi-Sq. = .940 2, DF= 2, p value= .625
(Source: Primary data)

From the table 5.1 it is shown that in the total of 770 samples, majority of the respondents (46.6%) are in the Age group below 40 years i.e. Youngsters followed by the Age group 41-60 years i.e. Middle aged (43%) and Age group above 60 years i.e. Old people (10.4%). In Government Medical College Hospitals, 45.7% of the respondents are in the Age group below 40 years i.e. Youngsters, 42.9% are in the Age group 41-60 years i.e. Middle aged and 11.4% are in the Age group above 60 years i.e. Old people. In case of Private Medical College Hospitals, 47.5% of respondents are in the Age group below 40 years i.e. Youngsters, 43.1% are in the Age group 41-60 years i.e. Middle aged and 9.4% are in the Age group above 60 years i.e. Old people. The result of Chi-Square analysis shows that Sector of medical college hospitals and Age groups of respondents are independent as the p value is more than 0.05.

5.1.2. Gender wise classification of sample

Perception of people may vary according to their Gender and so it is necessary to know the Gender of sample respondents. Table 5.2 describes the classification of sample respondents on the basis of Gender. It is observed from the table that majority (54.8%) of the respondents are Female and 45.2% of the respondents are Male. In Government Medical College Hospitals 56.4 % are Female and 43.6% are Male while in case of Private Medical College Hospitals, 54.8% are Female and 45.2% are Male. The result of Chi-Square analysis shows that Sector of medical college hospitals and Genders of respondents are independent as the p value is more than 0.05.

<table>
<tr><td colspan="2" align="center">**Table 5.2**</td><td colspan="2" align="center">**Figure 5.2**</td></tr>
</table>

	Table 5.2	Figure 5.2

<div align="center">

Table 5.2

Gender of Respondents

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Gender	*Govt. MCHs*		*Pvt. MCHs*		*Total*	
	No.	%	No.	%	No.	%
Female	217	56.4	205	53.2	422	54.8
Male	168	43.6	180	46.8	348	45.2
Total	385	100	385	100	770	100

<div align="center">

Figure 5.2

Gender of Respondents

</div>

Chi-Sq. = .755, DF=1, P value= .385
(Source: Primary data)

5.1.3. Educational qualification wise classification of sample

Perception of patients may be influenced by their Educational qualifications. There is a need to get an idea about the Educational qualification of the sample. Table 5.3 shows the Educational qualification wise classification of respondents. It is clear from the table 5.3 that majority (51.6 %) of the respondents are having Primary education qualification. 26.5% of the respondents have SSLC qualification

and 10% of respondents have Plus Two qualification. 9% of respondents are Graduates and 3% the respondents are Post Graduates.

<table>
<tr><th rowspan="2">Edu. qualification</th><th colspan="2">Govt. MCHs</th><th colspan="2">Pvt. MCHs</th><th colspan="2">Total</th></tr>
<tr><th>No.</th><th>%</th><th>No.</th><th>%</th><th>No.</th><th>%</th></tr>
<tr><td>Primary</td><td>205</td><td>53.2</td><td>192</td><td>49.9</td><td>397</td><td>51.6</td></tr>
<tr><td>SSLC</td><td>103</td><td>26.8</td><td>101</td><td>26.2</td><td>204</td><td>26.5</td></tr>
<tr><td>Plus Two</td><td>40</td><td>10.4</td><td>37</td><td>9.6</td><td>77</td><td>10</td></tr>
<tr><td>Graduation</td><td>31</td><td>8.1</td><td>38</td><td>9.9</td><td>69</td><td>9</td></tr>
<tr><td>P G</td><td>6</td><td>1.6</td><td>17</td><td>4.4</td><td>23</td><td>3</td></tr>
<tr><td>Total</td><td>385</td><td>100</td><td>385</td><td>100</td><td>770</td><td>100</td></tr>
</table>

Table 5.3

Educational Qualification of Respondents

Figure 5.3

Educational Qualification of Respondents
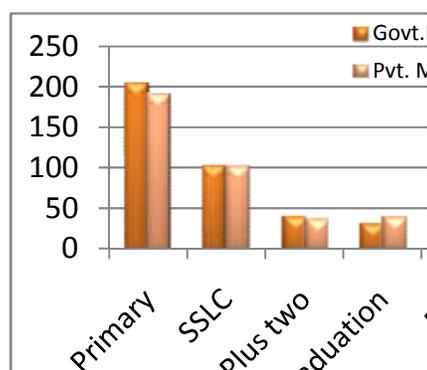
Chi-Sq. = 6.533, DF= 4, p value= .163
(Source: Primary data)

It can be further noted from the table that in case of Government Medical College Hospitals 53.2% of the respondents have Primary education, 26.8% have SSLC qualification and 10.4% have Plus Two qualifications. 8.1% of the respondents are Graduates and 1.6 % is Post-Graduates. In case of Private Medical College Hospitals 49.9% of the respondents have Primary education, 26.2% have SSLC qualification and 9.6% have Plus Two qualifications. 9.9% of respondents are Graduates and 4.4% are Post-Graduates. The result of Chi-Square analysis shows that Sector of medical college hospitals and Educational qualifications of respondents are independent as the p value is more than 0.05.
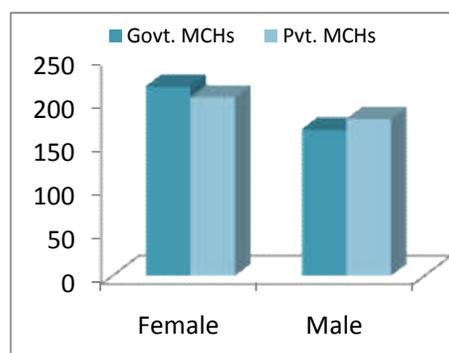
5.1.4. Occupation wise classification of sample

Perception of people may vary with their Occupation. Hence it is important to classify respondents on the basis of their Occupation. Table 5.4 illustrates that among 770 sample, majority of the respondents are Daily wage workers (41.8%). 18.2% of the respondents are Home Makers, 17.7% are Salaried, 11.2% are Self-employed, 6.9% are Business persons and 4.3% are Students.

| | Table 5.4 | | | | | | Figure 5.4 |
| | Occupation of Respondents | | | | | | Occupation of Respondents |

Table 5.4

Occupation of Respondents

Occupation	Govt. MCHs		Pvt. MCHs		Total	
	No.	%	No.	%	No.	%
Student	13	3.4	20	5.2	33	4.3
Daily wage	198	51.4	124	32.2	322	41.8
Salaried	62	16.1	74	19.2	136	17.7
Self employed	36	9.4	50	13.0	86	11.2
Business	9	2.3	44	11.4	53	6.9
Home makers	67	17.4	73	19.0	140	18.2
Total	385	100	385	100	770	100

Figure 5.4

Occupation of Respondents

Chi-Sq. = 45.199, DF= 5, p value <0.001
(Source: Primary data)
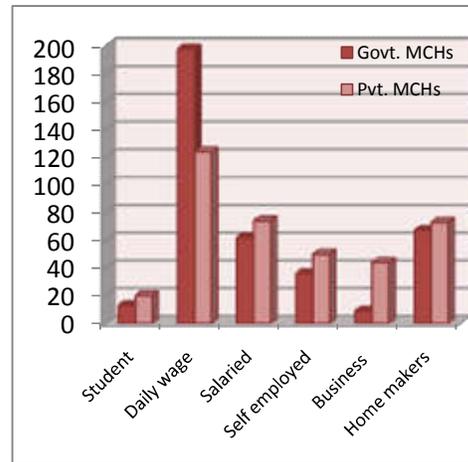
Government Medical College Hospitals comprise of majority of Daily wage workers (51.4%) followed by Home Makers (17.4%), Salaried (16.1%), Self-employed (9.4%), Students (3.4%) and Business persons (2.3%). In Private Medical College Hospitals, 32.2% are Daily wage workers, 19.2% are Salaried, 19.0% are Home makers, 13.0% are Self-employed, 11.4% are doing Business and 5.2% are Students. The result of Chi-Square analysis shows that Sector of medical college hospitals and Occupation of respondents are dependent as the p value is <0.001.

5.1.5. Poverty line wise classification of sample

People in different category of Poverty line perceive in different way. So, Poverty line wise classification of sample is also done and it is depicted in the table 5.5. Total sample consists of 376 (48.8%) respondents in APL category and 394 (51.2%) respondents in BPL category. Out of the sample from Government Medical College Hospitals, 35.8% of respondents are in APL category and 64.2% of respondents are in BPL category while in Private Medical College Hospitals 61.8% of the respondents are in APL category and 38.2% of the respondents are BPL category. The result of Chi-Square analysis shows that Sector of medical college hospitals and categories of Poverty line of respondents are dependent as the p value is <0.00.

<table>
<thead>
<tr><th colspan="2" align="center">Table 5.5</th></tr>
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</table>

Table 5.5

Poverty line of Respondents

Poverty line	Govt. MCHs		Pvt. MCHs		Total	
	No.	%	No.	%	No.	%
APL	138	35.8	238	61.8	376	48.8
BPL	247	64.2	147	38.2	394	51.2
Total	385	100	385	100	770	100

Figure 5.5

Poverty line of Respondents

Chi-Sq. = 51.976, DF= 1, p value <0.001
(Source: Primary data)
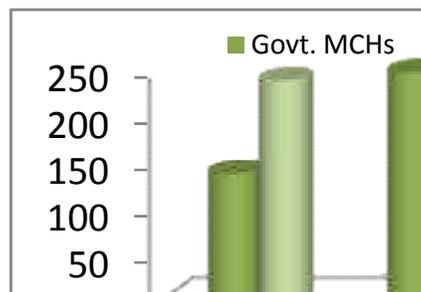
5.1.6. Frequency of visit wise classification of sample

The perception of patients may be influenced by their Frequency of visit in the hospital. Hence Frequency wise classification is also done. Table 5.6 illustrates the Frequency of visit wise classification of sample. It is clear from the table that 33% of the respondents are admitted for the First time in the Government Medical College Hospitals and 67% of the respondents are admitted for More than once in the Government Medical College Hospitals. In case of Private Medical College Hospitals, 45.5% of respondents are admitted for the First time and 54.5 % respondents are admitted for More than once in the same hospital.

Table 5.6

Frequency of visit of Respondents

Frequency of visit	Govt. MCHs		Pvt. MCHs		Total	
	No.	%	No.	%	No.	%
First time	127	33.0	175	45.5	302	39.2
More than once	258	67.0	210	54.5	468	60.8
Total	385	100	385	100	770	100

Figure 5.6

Frequency of visit of Respondents

Chi-Sq. = 12.552, DF= 1, p value <0.001
(Source: Primary data)
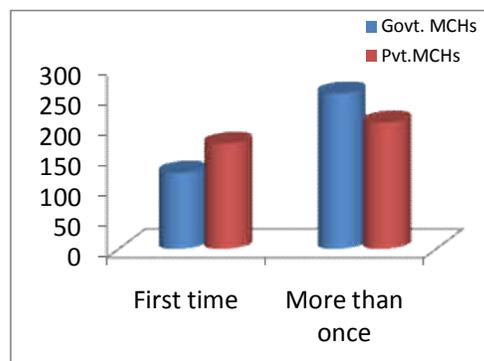
It is also noted from the table that in the total sample of 770, 39.2% of respondents are admitted for the First time while 60.8% of the respondents are admitted for More than once. Thus it is clear from the table that majority of the respondents are admitted in the respective hospital for More than once. The result of Chi-Square analysis shows that Sector of medical college hospitals and Frequency of visit are dependent as the p value is <0.001.

5.1.7. Duration of stay wise classification of sample

Duration of stay is one of the variables that may influence the perception of patients. Table 5.7 depicts the Duration of stay wise classification of sample. It is clear from the table that majority (87.1%) of the respondents have stayed in the hospital for Less than 10 days followed by 11-30 days (10.3%), 31-50 days (1.6%) and more than 50 days (1%). In the case of Government Medical College Hospitals, 82.3% of the respondents have stayed in the hospital for Less than 10 days, 13% of respondents have stayed in the hospital for 11-30 days, 2.6% of the respondents have stayed in the hospital for 31-50 days and 2.1% have stayed in the hospital for more than 50 days. While in Private Medical College Hospitals, 91.9% of the respondents have stayed in the hospital for Less than 10 days, 7.5% of respondents have stayed in the hospital for 11-30 days and 0.5% of the respondents have stayed in the hospital for 31-50 days. The result of Chi-Square analysis shows that Sector of medical college hospitals and Duration of stay in the hospital are dependent as the p value is value <0.001.

Table 5.7
Duration of stay of Respondents

Duration of stay(in days)	Govt. MCHs		Pvt. MCHs		Total	
	No.	%	No.	%	No.	%
< 10	317	82.3	354	91.9	671	87.1
11-30	50	13	29	7.5	79	10.3
31-50	10	2.6	2	0.5	12	1.6
> 50	8	2.1	0	0	8	1
Total	385	100	385	100	770	100

Chi-Sq. = 20.423, DF= 2, p value <0.001
(Source: Primary data)

Figure 5.7
Duration of stay of Respondents

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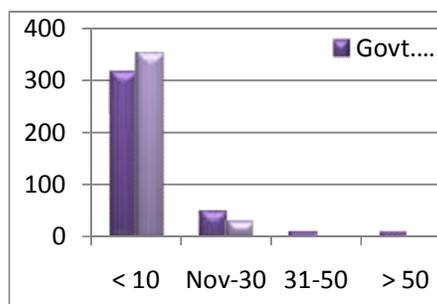
5.1.8. Ward wise classification of sample

Patients in different wards of medical college hospitals perceive the services in different way. For the convenience of research data is collected from those patients in the selected eight wards namely General Medicine, General Surgery, Urology, Gynaecology, Orthopaedics, Paediatrics, Nephrology and Neurology. Table 5.8 shows that 30.3% of the sample is taken from General Medicine ward, 24.4% of sample is taken from General Surgery ward, 9.9% of the sample is taken from Urology ward, 12.6% of the sample is taken from Gynaecology ward, 13.4% of the sample is taken from Orthopaedic ward, 4.9% of the sample is taken from Paediatrics ward, 2.3% of the sample is taken from Nephrology ward and the rest 2.2% is taken from Neurology ward.

It is also seen in the table that in case of Government Medical College Hospitals, 31.4% of the sample is taken from General Medicine ward, 31.7% is taken from General Surgery ward, 6.2% is taken from Urology ward, 10.1% is taken from Gynaecology ward, 14.5% is taken from Orthopaedic ward, 0.8% is taken from Paediatrics ward, 3.1% is taken from Nephrology ward and the rest 2.1% is taken from Neurology ward. In case of Private Medical College Hospitals 29.1% is from General Medicine ward, 17.1% is from General Surgery ward, 13.5% is from Urology ward, 15.1% is from Gynaecology ward, 12.2% is from Orthopaedic wards, 9.1% is from Paediatrics ward, 1.6% is from Nephrology ward and the rest 2.3% is taken from Neurology ward. The result of Chi-Square analysis shows that Sector of medical college hospitals and Wards in which respondents are admitted are dependent as the p value is <0.001.

| | Table 5.8 | Figure 5.8 |
| **Ward of Respondents** | | **Ward of Respondents** |

Wards	Govt. MCHs		Pvt. MCHs		Total	
	No.	%	No.	%	No.	%
General Medicine	121	31.4	112	29.1	233	30.3
General Surgery	122	31.7	66	17.1	188	24.4
Urology	24	6.2	52	13.5	76	9.9
Gynecology	39	10.1	58	15.1	97	12.6
Orthopedics	56	14.5	47	12.2	103	13.4
Pediatrics	3	0.8	35	9.1	38	4.9
Nephrology	12	3.1	6	1.6	18	2.3
Neurology	8	2.1	9	2.3	17	2.2
Total	385	100	385	100	770	100
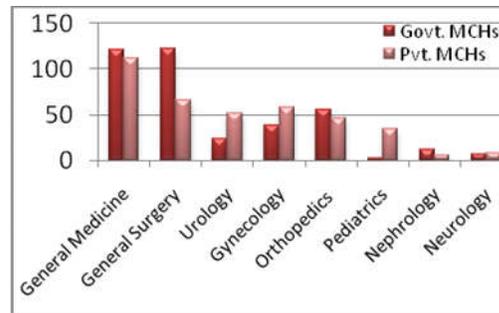
Chi-Sq. = 60.859, DF= 7, p value <0.001
(Source: Primary data)

5.1.9. Preference of sector wise classification of sample

Patients' Preference of sector also influences their perception and satisfaction. So there is a need to get an idea about the patients' Preference of sector of hospitals. Table 5.9 exhibits the preference of sector wise classification of sample respondents. It can be noted from the table that among the 770 respondents 275 (35.7%) respondents prefer Government Hospitals, 202 (26.2%) respondents prefer Private Hospitals and 293 (38.1%) respondents prefer Both Government and Private Hospitals for their treatments. Among patients in Government Medical College Hospitals, 239 (62.1%) prefer Government Hospitals while 19 (4.9%) prefer Private Hospitals and 127 (33.0%) prefer Both Government and Private Hospitals while among the patients of Private Medical College Hospitals, 36 (9.4%) prefer Government Hospitals, 183 (47.5%) prefer Private Hospitals and 166 (43.1%) prefer Both Government and Private Hospitals. The result of Chi-Square analysis shows that Sector of medical college hospitals and Preference of sector by the respondents are dependent as the p value is value <0.001.

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Table 5.9
Preference of sector of Respondents

Preference of sectors	Govt. MCHs		Pvt. MCHs		Total	
	No.	%	No.	%	No.	%
Govt. hospitals	239	62.1	36	9.4	275	35.7
Pvt. hospitals	19	4.9	183	47.5	202	26.2
Both Govt. and Pvt. Hospitals	127	33.0	166	43.1	293	38.1
Total	385	100	385	100	770	100

Figure 5.9
Preference of sector of Respondents
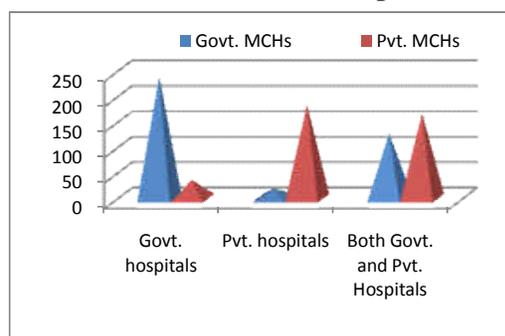
Chi-Sq. = 288.191, DF= 2, p value <0.001
Source: Primary data

5.2. Demographic analysis of Perceived Service Quality

Perceived Service Quality of patients means the quality of services perceived or experienced by the patients in a hospital. The perception may vary with the different socio demographic factors of an individual. While studying the patients' perception towards hospital services, it is important to Test whether the perception varies with their demographics. The demographic analyses of variables are done and the results are discussed under. Kruskal-Wallis Test and Mann-Whitney Test are used to Test whether the difference in mean is significant or not. Level of significance is taken as 0.05.

5.2.1. Age wise analysis of Perceived Service Quality

H0: There is no significant difference in Perceived Service Quality among Age groups.

H1: There is significant difference in Perceived Service Quality among Age groups.

Table 5.10

Descriptive Statistics and Result of Kruskal-Wallis Test of PSQ for Age group

Demographic Variable	Age groups	N	Mean	SD	Chi-Square	p value
Perceived Service Quality	Up to 40 yrs.	359	220.98	23.06	1.053	0.591
	41-60 yrs.	331	220.07	26.16		
	Above 60 yrs.	80	223.73	21.79		

(Source: Primary data)

The table 5.10 demonstrate the Age wise Mean and Standard Deviation of Perceived Service Quality. It also depicts Chi-square value and p value of Kruskal-Wallis Test conducted to check the significance of difference in Mean. The Mean score of Perceived Service Quality of Age group Up to 40 years is 220.98 with σ =23.06, 41-60 years is 220.07 with σ =26.16 and Above 60 years is 223.73 with σ =21.79. The p value obtained from the Kruskal-Wallis Test is 0.591. Hence the null hypothesis is accepted and it is found that there is no significant difference in Perceived Service Quality among Age groups.

5.2.2. Gender wise analysis of Perceived Service Quality

H0: There is no significant difference in Perceived Service Quality between Genders.

H1: There is significant difference in Perceived Service Quality between Genders.

Table 5.11

Descriptive Statistics and Result of Mann-Whitney Test of PSQ for Gender

Variable	Gender	N	Means	SD	Z	p value
Perceived Service Quality	Female	422	221.91	24.12	-0.943	0.346
	Male	348	219.62	24.52		

(Source: Primary data)

Table 5.11 depicts the Gender wise Mean and Standard Deviation of Perceived Service Quality and the result of Mann-Whitney Test conducted to check

the statistical significance of the Mean difference. It shows that the Mean score of Perceived Service Quality of Female patients is 221.91 with σ =24.12 while Mean score of Male patients is 219.62 with σ =24.52. Mann-Whitney Test results shows that this Mean difference is not statistically significant as the p value is 0.346. Hence the null hypothesis that there is no significant difference in Perceived Service Quality between Genders is accepted.

5.2.3. Educational qualification wise analysis of Perceived Service Quality

H0: There is no significant difference in Perceived Service Quality among Educational qualifications.

H1: There is significant difference in Perceived Service Quality among Educational qualifications.

Table 5.12

Descriptive Statistics and Result of
Kruskal-Wallis Test of PSQ for Educational qualification

Variable	*Educational qualification*	*N*	*Mean*	*SD*	*Chi-Square*	*p value*
Perceived Service Quality	Primary education	397	221.37	23.26	2.679	0.613
	SSLC	204	221.41	24.10		
	Plus Two	77	216.90	29.22		
	Graduation	69	219.26	26.55		
	Post-Graduation	23	225.70	18.53		

(Source: Primary data)

Mean and Standard Deviation of Perceived Service Quality among Educational qualifications and Chi- Square value and p value of Kruskal-Wallis Test are presented in the table 5.12. The Mean score of Perceived Service Quality of patients who have Primary education is 221.37 with σ = 23.26, SSLC qualification is 221.41 with σ = 24.10, Plus Two qualification is 216.90 with σ = 29.22, Graduation is 219.26 with σ = 26.55 and Post-Graduation is 225.70 with σ = 18.53. The result of Kruskal-Wallis Test shows that Chi- Square value is 2.679 and the Mean difference is not significant (p value = 0.613). Hence the null hypothesis that there is no

significant difference in Perceived Service Quality among Educational qualifications is accepted.

5.2.4. Occupation wise analysis of Perceived Service Quality

H0: There is no significant difference in Perceived Service Quality among Occupations.

H1: There is significant difference in Perceived Service Quality among Occupations.

Table 5.13

Descriptive Statistics and Result of Kruskal-Wallis Test of PSQ for Occupation

Variable	*Occupation*	*N*	*Mean*	*SD*	*Chi-Square*	*p value*
Perceived Service Quality	Student	33	217.39	22.53	30.863	<0.001
	Daily wage	322	216.97	23.43		
	Salaried	136	219.82	29.80		
	Self employed	86	223.97	18.95		
	Business	53	228.15	18.44		
	Home maker	140	227.04	23.94		

(Source: Primary data)

Table 5.13 demonstrates the Occupations wise Mean and Standard Deviation of Perceived Service Quality and the results of Kruskal-Wallis Test conducted to Test whether the Mean difference is significant or not. The Mean score of Perceived Service Quality of Students is 217.39 with ϭ = 22.53, Daily wage workers is 216.97 with ϭ = 23.43, Salaried is 219.82 with ϭ = 29.80, Self-employed is 223.97 with ϭ = 18.95, Business persons is 228.15 with ϭ = 18.44 and Home makers is 227.04 with ϭ = 23.94. Chi-Square value obtained in Kruskal-Wallis Test is 30.863 with p value <0.001. Hence the null hypothesis is rejected. So it is concluded that there is significant difference in Perceived Service Quality among Occupations.

Table 5.14

Result of Mann-Whitney Tests of PSQ for Occupation -Multiple Comparisons

PSQ for Occupation	Student	Daily Wage	Salaried	Self Employed	Business	Home Makers
Student		U 4910.000 W 56913.000 Z -.718 Sig .473	U 2146.000 W 2707.000 Z -.389 Sig .697	U 1267.000 W 1828.000 Z -.903 Sig .367	U 614.000 W 1175.000 Z -2.315 Sig .021	U 1745.000 W 2306.000 Z -2.185 Sig .029
Daily Wage			U 19684.500 W 71687.500 Z -1.709 Sig .087	U 11213.000 W 63216.000 Z -2.711 Sig .007	U 5812.000 W 57815.000 Z -3.722 Sig .000	U 16333.500 W 68336.500 Z -4.708 Sig .000
Salaried				U 5564.500 W 14880.500 Z -.609 Sig .543	U 3030.500 W 12346.500 Z -1.699 Sig .089	U 8195.000 W 17511.000 Z -2.001 Sig .045
Self Employed					U 1921.000 W 5662.000 Z -1.553 Sig .120	U 5325.000 W 9066.000 Z-1.458 Sig .145
Business						U 3693.000 W 5124.000 Z -.049 Sig .961
Home Makers						

(Source: Primary data)

Researcher conducted multiple comparisons analysis of Perceived Service Quality of patients with different Occupations and the results are shown in the table 5.14. Significant difference in Perceived Service Quality is found between Daily wage workers and Self-employed people (U 11213.000, Z -2.711, Sig .007), between Students and Business Persons (U 614.000, Z -2.315, Sig .021), between Daily wage workers and Business persons (U 5812.000, Z -3.722, Sig .000), between Students and Home makers (U 1745.000, Z -2.185, Sig .029), between Daily wage workers and Home makers (U 16333.500, Z -4.708, Sig .000) and between Salaried people and Home makers (U 8195.000, Z -2.001, Sig .045). It is conclude that Business persons have high Perception on Service Quality and Daily wage workers have low Perception on Service Quality.

5.2.5. Poverty line wise analysis of Perceived Service Quality

H0: There is no significant difference in Perceived Service Quality between Poverty lines.

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H1: There is significant difference in Perceived Service Quality between Poverty lines.

Table 5.15

Descriptive Statistics and Result of Mann-Whitney Test of PSQ for Poverty line

Variable	*Poverty line*	*N*	*Mean*	*SD*	*Z*	*p value*
Perceived Service Quality	APL	376	223.68	24.49	-2.719	<0.001
	BPL	394	218.19	23.87		

(Source: Primary data)

Table 5.15 shows the Poverty line wise analysis of Perceived Service Quality and the result of Mann Whitney Test conducted to check the difference in Mean is significant or not. The Mean score of Perceived Service Quality of patients in APL category is 223.68 with $\sigma = 14.49$ and that of patients in BPL category is 218.19 with $\sigma = 23.87$. Z value is -2.719 and p value obtained is <0.001. The null hypothesis is rejected. So the difference in Mean of Perceived Service Quality between Poverty lines is statistically significant which means Perceived Service Quality of patients in APL category is higher than patients in BPL category.

5.2.6. Frequency of visit wise analysis of Perceived Service Quality

H0: There is no significant difference in Perceived Service Quality between Frequencies of visit.

H1: There is significant difference in Perceived Service Quality between Frequencies of visit.

Table 5.16

**Descriptive Statistics and Result of
Mann-Whitney Test of PSQ for Frequency of visit**

Variable	*Frequency of visit*	*N*	*Mean*	*SD*	*Z*	*p value*
Perceived Service Quality	First time	302	218.81	24.51	-1.842	0.066
	More than once	468	222.20	24.12		

(Source: Primary data)

Table 5.16 illustrates the Mean and Standard Deviation of Perceived Service Quality with Frequency of visit and the result of Mann-Whitney Test conducted to check the Mean difference is significant or not. The Mean score of Perceived Service Quality of patients who are admitted for the first time is 218.81 with ϭ =24.51 and that of the patients who are admitted for more than once is 222.20 with ϭ =24.12. Z value is -1.842 and p value is 0.066. Hence the null hypothesis is accepted. So, it is inferred that there is no significant difference in Perceived Service Quality among Frequencies of visit.

5.2.7. Duration of stay wise analysis of Perceived Service Quality

H0: There is no significant difference in Perceived Service Quality among Durations of stay.

H1: There is significant difference in Perceived Service Quality among Durations of stay.

Table 5.17

**Descriptive Statistics and Result of
Kruskal-Wallis Test of PSQ for Duration of stay**

Variable	*Duration of stay*	*N*	*Mean*	*SD*	*Chi-Square*	*p value*
Perceived Service Quality	Up to 10 days	671	222.07	22.67	9.083	0.028
	11-30 days	79	216.33	30.79		
	31-50 days	12	187.42	41.92		
	Above 50 days	8	215.25	10.98		

(Source: Primary data)

Mean, Standard Deviation and the Result of Kruskal-Wallis Test of the Perceived Service Quality with Duration of stay are presented in the table 5.17. It shows that the Mean score of Perceived Service Quality of patients stayed in the hospital up to 10 days is 222.07 with ϭ = 22.67, 11-30 days is 216.33 with ϭ = 30.79, 31-50 days is 187.42 with ϭ = 41.92 and Above 50 days is 215.25 with ϭ = 10.98. The result of Kruskal-Wallis Test shows that Chi- Square value is 0.083 and p value

is 0.028. Hence the null hypothesis is rejected. It is found that there is significant difference in Perceived Service Quality among different Duration of stay. Multiple comparisons are done by the researcher using Mann-Whitney Test and the results are exhibited in the table 5.18.

Table 5.18

Result of Mann-Whitney Tests of
PSQ for Duration of stay- Multiple Comparisons

PSQ for Duration of stay	Up to 10 days	11-30 days	31-50 days	Above 50 days
Up to 10 days		U 24676.000 W 27836.000 Z -1.004 Sig .315	U 2141.500 W 2219.500 Z -2.783 Sig .005	U 2217.500 W 2253.500 Z -8.46 Sig .397
11-30 days			U 291.500 W 369.500 Z -2.142 Sig .032	U 294.000 W 330.000 Z -.323 Sig .776
31-50 days				U 31.500 W 109.500 Z -1.275 Sig .202
Above 50 days				

(Source: Primary data)

It is clear from the table 5.18 that the difference in the Mean score of Perceived Service Quality is found between patients who have stayed Up to 10 days and patients who have stayed for 31-50 days (U 2141.500, Z -2.783, Sig .005) and between patients who have stayed for 31-50 days and patients who have stayed for 11-30 days (U 291.500, Z -2.142, Sig .032). It is concluded that patients who have stayed Up to 10 days have high Perception on Service Quality and patients who have stayed for 31-50 days have low Perception on Service Quality.

5.2.8. Ward wise analysis of Perceived Service Quality

H0: There is no significant difference in Perceived Service Quality among Wards.

H1: There is significant difference in Perceived Service Quality among Wards.

Table 5.19

Descriptive Statistics and Result of Kruskal-Wallis Test of PSQ for Ward

Variable	*Ward*	*N*	*Mean*	*SD*	*Chi-Square*	*p value*
Perceived Service Quality	General Medicine	233	222.49	21.97	27.304	<0.001
	General Surgery	188	214.97	27.04		
	Urology	76	227.43	20.70		
	Gynecology	97	227.30	27.83		
	Orthopedic	103	216.60	24.64		
	Pediatrics	38	221.63	16.96		
	Nephrology	18	220.56	19.51		
	Neurology	17	222.47	15.78		

(Source: Primary data)

The Mean and Standard Deviation of Perceived Service Quality with Ward are given in the above table 5.19. The Chi-Square value and p value of Kruskal-Wallis Tests are also given. It is noted from the table that the Mean of Perceived Service Quality of patients admitted in General Medicine ward, General Surgery ward, Urology ward, Gynaecology ward, Orthopaedic ward, Paediatrics ward, Nephrology ward and Neurology ward are 222.49 (σ = 21.97), 214.97 (σ = 27.04), 227.43 (σ = 20.70), 227.30 (σ = 27.83), 216.60 (σ = 24.64), 221.63 (σ = 16.96), 220.56 (σ = 19.51) and 222.47 (σ = 15.78) respectively. The Chi-Square value is 27.304 and p value obtained is <0.001. So the null hypothesis is rejected. It is concluded that there is significant difference in Perceived Service Quality among Wards.

Table 5.20

Result of Mann-Whitney Test of PSQ for Ward- Multiple Comparisons

PSQ for Ward	General Medicine	General Surgery	Urology	Gynecology	Orthopedics	Pediatrics	Nephrology	Neurology
General Medicine		U 18013.500 W 35779.500 Z -3.134 Sig .002	U 7670.000 W 34931.000 Z -1.751 Sig .080	U 9640.500 W 36901.500 Z -2.104 Sig .035	U 10401.000 W 15757.000 Z -1.948 Sig .051	U 4087.500 W 4828.500 Z -.758 Sig .448	U 1841.000 W 2012.000 Z -.863 Sig .388	U 1897.000 W 2050.000 Z -.290 Sig .772
General Surgery			U 5088.000 W 22854.000 Z -3.662 Sig .000	U 6755.000 W 24521.000 Z -3.587 Sig .000	U 9342.000 W 27108.000 Z -.496 Sig .620	U 3007.000 W 20773.000 Z -1.538 Sig .124	U 1540.500 W 19306.500 Z -.627 Sig .530	U 1273.000 W 19039.000 Z -1.388 Sig .165
Urology				U 3458.000 W 6384.000 Z -.699 Sig .485	U 2864.000 W 8220.000 Z -3.066 Sig .002	U 1172.000 W 1913.000 Z -1.636 Sig .102	U 535.000 W 706.000 Z -1.432 Sig .152	U 536.000 W 689.000 Z -1.094 Sig .274
Gynecology					U 3823.500 W 9179.500 Z -2.869 Sig .004	U 1572.500 W 2313.500 Z -1.327 Sig .185	U 704.500 W 875.500 Z -1.301 Sig .193	U 709.000 W 862.000 Z -.921 Sig .357
Orthopedics						U 1743.000 W 7099.000 Z -.995 Sig .320	U 884.000 W 6240.000 Z -.313 Sig .754	U 760.500 W 6116.500 Z -.866 Sig .387
Pediatrics							U 304.500 W 475.500 Z -.658 Sig .510	U 301.500 W 1042.500 Z -.392 Sig .695
Nephrology								U 126.000 W 297.000 Z -.892 Sig .372
Neurology								

(Source: Primary data)

Table 5.20 shows the result of Mann-Whitney Tests conducted for multiple comparisons analysis of Perceived Service Quality of patients admitted in different Wards. It shows that significant difference in Mean of Perceived Service Quality is found between General Medicine ward and General surgery ward (U 18013.500, Z -3.134, Sig .002), between General Medicine ward and Gynaecology ward (U 9640.500, Z -2.104, Sig .035), between General Surgery ward and Urology ward (U 5088.000, Z -3.662, Sig .000), between General Surgery ward and Gynaecology ward (U 6755.000, Z -3.587, Sig .000), between Urology ward and Orthopaedic ward (U 2864.000, Z -3.066, Sig .002), and between Gynaecology ward and Orthopaedic ward (U 3823.500, Z -2.869, Sig .004). It is further inferred that patients in Urology ward have high Perception on Service Quality and patients in General Surgery ward have low Perception on Service Quality.

5.2.9.   Preference of sector wise analysis of Perceived Service Quality

H0: There is no significant difference in Perceived Service Quality among Preferences of sector.

H1: There is significant difference in Perceived Service Quality among Preferences of sector.

Table 5.21

**Descriptive Statistics and Result of
Kruskal-Wallis Test of PSQ for Preference of sector**

Variable	*Preference of sector*	*N*	*Mean*	*SD*	*Chi-Square*	*p value*
Perceived Service Quality	Govt. Hospitals	275	213.05	24.88	40.641	<0.001
	Pvt. Hospitals	202	232.36	20.03		
	Both Govt. and Pvt. Hospitals	293	220.30	23.47		

(Source: Primary data)

Table 5.21 presents the Mean and Standard Deviation of Perceived Service Quality according to patients' Preference of sector. It also shows the Chi-Square value and p value obtained from Kruskal-Wallis Test to Test the difference in Mean is significant or not. The Mean score of Perceived Service Quality of patients who prefer Government Hospitals is 213.05 with σ = 24.88, patients prefer Private Hospitals is 232.36 with σ = 20.03 and those prefer both Government and Private Hospitals is 220.30 with σ = 23.47. It is further noted from the table that Chi-Square value is 40.641 and the p value is <0.001. Hence the null hypothesis is rejected. So it is found that there is significant difference in Perceived Service Quality among Preference of sector.

Table 5.22

Result of Mann-Whitney Test of PSQ for Preference- Multiple Comparisons

PQS for Preference of sector	Govt. Hospitals	Pvt. Hospitals	Both Govt. and Pvt. Hospitals
Govt. Hospitals		U 13649.000 W 51599.000 Z -9.501 Sig .000	U 32884.500 W 70834.500 Z -3.789 Sig .000
Pvt. Hospitals			U 20256.000 W 63327.000 Z -5.975 Sig .000
Both Govt. and Pvt. Hospitals			

(Source: Primary data)

Table 5.22 shows the results of multiple comparisons done using Mann-Whitney Test. It is noted from the table that the difference in the Mean score of Perceived Service Quality is found between patients who prefer Government Hospitals and those who prefer Private hospitals (U 13649.000, Z -9.501, Sig .000), between patients who prefer Government hospitals and those who prefer Both Government and Private Hospitals (U 32884.500, Z -3.789, Sig .000) and between patients who prefer Private Hospital and those who prefer Both Government and Private Hospitals (U 20256.000, Z -5.975, Sig .000). It is concluded that the patients who prefer Private Hospitals have high Perceived Service Quality and patients who prefer Government Hospitals have low Perceived Service Quality.

5.3.   Demographic analysis of Perceived Value for Money

The Perceived Value for Money of the patients may be influenced by their demographic variables. Hence, the researcher has conducted demographic analyses of Perceived Value for Money and the results are discussed as under.

5.3.1. Age wise analysis of Perceived Value for Money

H0: There is no significant difference in Perceived Value for Money among Age groups.

H1: There is significant difference in Perceived Value for Money among Age groups.

Table 5.23

Descriptive Statistics and Result of Kruskal-Wallis Test of PVM for Age

Variable	Age	N	Mean	SD	Chi-Square	p value
Perceived Value for Money	Up to 40 yrs.	359	16.18	2.69	10.893	0.004
	41-60 yrs.	331	15.25	3.24		
	Above 60 yrs.	80	15.84	3.26		

(Source: Primary data)

Table 5.23 depicts the Mean, Standard Deviation and the result of Kruskal-Wallis Test of Perceived Value for Money of patients among different Age groups. It shows that Perceived Value for Money of Age group Up to 40 years has a Mean score of 16.18 (б =2.69), Age group 41-60 years has a Mean score of 15.25 (б =3.24) and Age group Above 60 years has a Mean score of 15.84 (б =3.26). The Chi- Square value is 10.893 and p value of Kruskal-Wallis Test is 0.004. Hence the null hypothesis is rejected. It shows that the difference in Perceived Value for Money among Age groups is statistically significant. Multiple comparisons have been done by the researcher and the results are exhibited in the following table.

Table 5.24

Result of Mann-Whitney Test of PVM for Age- Multiple Comparisons

PVM for Age	Up to 40 yrs.	41-60 yrs.	Above 60 yrs.
Up to 40 yrs.		U 51165.000 W 106111.000 Z -3.228 Sig .001	U 14096.500 W 17336.500 Z -.263 Sig .793
41-60 yrs.			U 11649.500 W 66595.500 Z -1.696 Sig .090
Above 60 yrs.			

(Source: Primary data)

It is clear from the table 5.24 that the difference in the Mean score of Perceived Value for Money is found between Up to 40 years and 41-60 years (U 51165.000, Z -3.228, Sig .001). It is concluded that patients in the Age group Up to 40 years i.e. youngsters have high Perception on Value for Money while patients in the Age group 41-60 years i.e. middle aged have low Perception on Value for Money.

5.3.2. Gender wise analysis of Perceived Value for Money

H0: There is no significant difference in Perceived Value for Money between Genders.

H1: There is significant difference in Perceived Value for Money between Genders.

Table 5.25

Descriptive Statistics and Result of Mann-Whitney Test of PVM for Gender

Variable	*Gender*	*N*	*Mean*	*SD*	*Z*	*p value*
Perceived Value for Money	Female	422	15.80	2.78	-0.333	0.739
	Male	348	15.68	3.30		

(Source: Primary data)

From the table 5.25 it is clear that the Mean score of Perceived Value for Money of Female patients is 15.80 with ɕ =2.78 and Mean score of Perceived Value for Money of Male patients is 15.68 with ɕ =3.30. Mann-Whitney Test result shows that Z value is -0.333 and p value is 0.739. The null hypothesis is accepted and therefore there is no significant difference in Perceived Value for Money between Genders.

5.3.3. Educational qualification wise analysis of Perceived Value for Money

H0: There is no significant difference in Perceived Value for Money among Educational qualifications.

H1: There is significant difference in Perceived Value for Money among Educational qualification.

Table 5.26
Descriptive Statistics and Result of
Kruskal-Wallis Test of PVM for Educational qualification

Variable	Educational qualification	N	Mean	SD	Chi-Square	p value
Perceived Value for Money	Primary education	397	15.36	3.19	14.158	0.007
	SSLC	204	16.11	2.86		
	Plus Two	77	16.47	2.63		
	Graduation	69	15.91	2.66		
	Post-Graduation	23	16.22	3.15		

(Source: Primary data)

Table 5.26 shows that Mean score of Perceived Value for Money is 15.36 with σ = 3.19 for patients with Primary education, 16.11 with σ = 2.86 for patients with SSLC qualification, 16.47 with σ = 2.63 for patients with Plus Two qualification, 15.91 with σ = 2.66 for patients who are Graduates and 16.22 with σ = 3.15 for patients who are Post-Graduates. The result of Kruskal-Wallis Test shows that Chi-Square value is 14.158 and p value obtained is 0.007. So the null hypothesis is rejected. It is found that there is significant difference Perceived Value for Money among Educational qualification. Multiple comparisons are done and the results are presented in the following table.

Table 5.27
Result of Mann-Whitney Test of PVM
for Educational qualification- Multiple Comparisons

PVM for Educational qualification	Primary education	SSLC	Plus Two	Graduation	Post-Graduation
Primary education		U 35377.000 W 114380.000 Z -2.594 Sig .009	U 12091.000 W 91094.000 Z -2.961 Sig .003	U 12948.000 W 91951.000 Z -.743 Sig .458	U 3668.500 W 82671.500 Z -1.620 Sig .105
SSLC			U 7159.000 W 28678.500 Z -.143 Sig .886	U 6516.500 W 8931.500 Z -.943 Sig .346	U 2154.000 W 23064.000 Z -.657 Sig .511
Plus Two				U 2210.000 W 4625.000 Z -1.786 Sig .074	U 873.000 W 1149.000 Z -.104 Sig .917
Graduation					U 660.500 W 3075.500 Z -1.238 Sig .216
Post-Graduation					

(Source: Primary data)

It is clear from the table 5.27 that the difference in the Mean score of Perceived Value for Money is found between patients who have Primary education and those who have SSLC qualification (U 35377.000, Z -2.594, Sig .009) and between patients who have Primary education and patients who have Plus Two qualification (U 12091.000, Z -2.961, Sig .003). It is inferred that patients who have Plus Two qualification have high Perception on Value for Money and patients with Primary education have low Perception on Value for Money.

5.3.4. Occupation wise analysis of Perceived Value for Money

H0: There is no significant difference in Perceived Value for Money among Occupations.

H1: There is significant difference in Perceived Value for Money among Occupations.

Table 5.28

**Descriptive Statistics and Result of
Kruskal-Wallis Test of PVM for Occupation**

Variable	*Occupation*	*N*	*Mean*	*SD*	*Chi-Square*	*p value*
Perceived Value for Money	Student	33	15.21	2.90	8.384	0.136
	Daily wage	322	15.46	3.10		
	Salaried	136	15.94	3.16		
	Self employed	86	16.21	2.54		
	Business	53	15.51	3.43		
	Home makers	140	16.15	2.79		

(Source: Primary data)

It is noted from the table 5.28 that Mean score of Perceived Value for Money of Students is 15.21(σ = 2.90) where that of Daily wage workers is 15.46 (σ = 3.10), Salaried people is 15.94 (σ = 3.16), Self-employed people is 16.21 (σ = 2.54), Business persons is 15.51 (σ = 3.43) and Home makers is 16.15 (σ = 2.79). Kruskal-Wallis Test result shows Chi-Square value 8.384 and p value 0.136. Null Hypothesis

is accepted and it is concluded that there is no significant difference in Perceived Value for Money among Occupations.

5.3.5. Poverty line wise analysis of Perceived Value for Money

H0: There is no significant difference in Perceived Value for Money between Poverty lines.

H1: There is significant difference in Perceived Value for Money between Poverty lines.

Table 5.29

**Descriptive Statistics and Result of
Mann-Whitney Test of PVM for Poverty line**

Variable	Poverty line	N	Mean	SD	Z	p value
Perceived Value for Money	APL	376	15.82	3.12	-0.826	0.411
	BPL	394	15.67	2.93		

(Source: Primary data)

Table 5.29 shows Mean and Standard Deviation of Perceived Value for Money with Poverty line and the result of Mann-Whitney Test to check the significance of Mean difference. Perceived Value for Money of patients in APL category has a Mean score of 15.82 with $\sigma = 3.12$ while BPL category has Mean score of 15.67 with $\sigma = 2.93$. The result of Mann Whitney Test shows that Z value is -0.826 and p value is 0.411. Hence the null hypothesis is accepted and therefore it is inferred that there is no significant difference in Perceived Value for Money between Poverty lines.

5.3.6. Frequency of visit wise analysis of Perceived value for Money

H0: There is no significant difference in Perceived Value for Money between Frequencies of visit.

H1: There is significant difference in Perceived Value for Money between Frequencies of visit.

Table 5.30
Descriptive Statistics and Result of
Mann-Whitney Test of PVM for Frequency of visit

Variable	*Frequency of visit*	*N*	*Mean*	*SD*	*Z*	*p value*
Perceived Value for Money	First time	302	15.31	3.22	-3.161	0.002
	More than once	468	16.03	2.86		

(Source: Primary data)

Table 5.30 demonstrates the Mean, Standard Deviation and result of Mann-Whitney Test of Perceived Value for Money with Frequency of visit. It is shown that Perceived Value for Money of patients admitted for the First time has a Mean score of 15.31 with $\sigma = 3.22$ and those admitted for More than once has a Mean score of 16.03 with $\sigma = 2.86$. Mann Whitney Test result shows that the difference in Mean of Perceived Value for Money with Frequency of visit is statistically significant (P value = 0.002). The null hypothesis is rejected and it is concluded that Perceived Value for Money of patients admitted for More than once is higher than those who come for the First time.

5.3.7. Duration of stay wise analysis of Perceived Value for Money

H0: There is no significant difference in Perceived Value for Money among Durations of stay.

H1: There is significant difference in Perceived Value for Money among Durations of stay.

Table 5.31
Descriptive Statistics and Result of
Kruskal-Wallis Test of PVM for Duration of stay

Variable	*Duration of stay*	*N*	*Mean*	*SD*	*Chi-Square*	*p value*
Perceived Value for Money	Up to 10 days	671	15.76	3.01	4.167	0.244
	11-30 days	79	15.68	3.28		
	31-50 days	12	14.67	2.81		
	Above 50 days	8	17.13	1.36		

(Source: Primary data)

Table 5.31 depicts that the Mean score of Perceived Value for Money of patients stayed in the hospital Up to 10 days is 15.76 with $\sigma = 3.01$, 11-30 days is 15.68 with $\sigma = 3.28$ and Above 50 days is 17.13 with $\sigma = 1.36$. The result of Kruskal-Wallis Test shows that Chi- Square value is 4.167 and p value is 0.244. Hence the null hypothesis is accepted. It is found that there is no significant difference in Perceived Value for Money among Durations of stay.

5.3.8. Ward wise analysis of Perceived Value for Money

H0: There is no significant difference in Perceived Value for Money among Ward.

H1: There is significant difference in Perceived Value for Money among Ward.

Table 5.32

Descriptive Statistics and Result of Kruskal-Wallis Test of PVM for Ward

Variable	*Ward*	*N*	*Mean*	*SD*	*Chi-Square*	*p value*
Perceived Value for Money	General medicine	233	15.89	3.02	14.811	0.038
	General Surgery	188	15.35	3.24		
	Urology	76	15.54	3.37		
	Gynecology	97	16.68	2.38		
	Orthopedic	103	15.38	3.20		
	Pediatrics	38	16.05	1.66		
	Nephrology	18	15.72	2.52		
	Neurology	17	15.24	3.27		

(Source: Primary data)

From the table 5.32, it is clear that the Mean score of Perceived Value for Money of patients admitted in General Medicine ward, General Surgery ward, Urology ward, Gynaecology ward, Orthopaedic ward, Paediatrics ward, Nephrology ward and Neurology ward are 15.89 ($\sigma = 3.02$), 15.35 ($\sigma = 3.24$), 15.54 ($\sigma = 3.37$), 16.68 ($\sigma = 2.38$), 15.38 ($\sigma = 3.20$), 16.05 ($\sigma = 1.66$), 15.72 ($\sigma = 2.52$) and 15.24 ($\sigma = 3.27$) respectively. The Chi-Square value and p value obtained in Kruskal-Wallis Test is 14.811 and 0.038 respectively. The null hypothesis is rejected which means that there is significant difference in Perceived Value for Money among Ward.

Researcher conducted multiple comparisons analysis and the results are shown in the following table.

Table 5.33

Result of Mann-Whitney Test of PVM for Ward- Multiple Comparisons

PVM for Ward	General Medicine	General Surgery	Urology	Gynecology	Orthopedics	Pediatrics	Nephrology	Neurology
General Medicine		U 19447.500 W 37213.500 Z -2.020 Sig .043	U 8252.500 W 11178.500 Z -.902 Sig .367	U 9953.000 W 37214.000 Z -1.735 Sig .083	U 10604.500 W 15960.500 Z -1.727 Sig .084	U 3910.500 W 4651.500 Z -1.172 Sig .241	U 1917.000 W 2088.000 Z -.616 Sig .538	U 1996.500 W 1949.500 Z -.648 Sig .517
General Surgery			U 7006.000 W 24772.000 Z -.253 Sig .800	U 7023.500 W 24789.500 Z -3.280 Sig .001	U 9628.000 W 14984.000 Z -.081 Sig .935	U 3489.500 W 4230.500 Z -.233 Sig .816	U 1643.500 W 19409.500 Z -.208 Sig .835	U 1552.000 W 19318.000 Z -.203 Sig .839
Urology				U 2989.000 W 5915.000 Z -2.175 Sig .030	U 3833.500 W 9189.500 Z -.239 Sig .811	U 1430.500 W 4356.500 Z -.083 Sig .934	U 681.000 W 3607.000 Z -.029 Sig .977	U 620.000 W 773.000 Z -.262 Sig .764
Gynecology					U 3823.500 W 9179.500 Z -2.935 Sig .003	U 1370.000 W 2111.000 Z -2.384 Sig .017	U 82.500 W 853.500 Z -1.505 Sig .132	U 649.500 W 802.500 Z -1.421 Sig .155
Orthopedic						U 1937.000 W 2678.000 Z -.096 Sig .924	U 892.500 W 6248.500 Z -.258 Sig .797	U 847.500 W 6203.500 Z -.931 Sig .352
Pediatrics							U 326.000 W 1067.000 Z -.294 Sig .769	U 322.500 W 475.500 Z -.009 Sig .993
Nephrology								U 149.000 W 302.000 Z -.135 Sig .892
Neurology								

(Source: Primary data)

Table 5.33 shows that difference in Mean of Perceived Value for Money is significant in between the General Medicine ward and General Surgery ward (U 19447.500, Z -2.020, Sig .043), between General Surgery ward and Gynaecology ward (U 7023.500, Z -3.280, Sig .001), between Urology ward and Gynaecology ward (U 2989.000, Z -2.175, Sig .030), between Gynaecology ward and Orthopaedic ward (U 3823.500, Z -2.935, Sig .003) and between Gynaecology ward and Paediatrics ward (U 1370.000, Z -2.384, Sig .017). It is further inferred that patients in Gynaecology ward have high Perception on Value for Money and patients in General Surgery ward have low Perception on Value for Money.

5.3.9. Preference of sector wise analysis of Perceived Value for Money

H0: There is no significant difference in Perceived Value for Money among Preferences of sector.

H1: There is significant difference in Perceived Value for Money among Preferences of sector.

Table 5.34

Descriptive Statistics and Result of
Kruskal-Wallis Test of PVM for Preference of sector

Variable	*Preference of sector*	*N*	*Mean*	*SD*	*Chi-Square*	*p value*
Perceived Value for Money	Govt. Hospitals	275	15.93	2.79	10.280	<0.001
	Pvt. Hospitals	202	16.35	3.03		
	Both Govt. and Pvt. Hospitals	293	15.16	3.14		

(Source: Primary data)

It is noted from the table 5.34 that the Mean score of Perceived Value for Money of patients who prefer Government Hospitals is 15.93 with σ = 2.79, patients who prefer Private Hospitals is 16.35 with σ = 3.03 and those prefer both Government and Private Hospitals is 15.16 with σ = 3.14. It is further found from the results of Kruskal-Wallis Test that there is significant difference in Perceived Value for Money with Preference of sector (Chi- Square value is 0.280 and p value is <0.001). Hence the null hypothesis is rejected and it is inferred that there is significant difference in Perceived Value for Money among Preferences of sector. Mann-Whitney Tests have been performed for multiple comparisons analysis and the results are presented in the following table.

Table 5.35

Result of Mann-Whitney Test of
PVM for Preference of sector- Multiple Comparisons

PVM for Preference of sector	*Govt. Hospitals*	*Pvt. Hospitals*	*Both Govt. and Pvt. Hospitals*
Govt. Hospitals		U 25372.000 W 63322.000 Z -1.657 Sig .098	U 33822.500 W 76893.500 Z -3.391 Sig .001
Pvt. Hospitals			U 22704.000 W 65775.000 Z -4.471 Sig .000
Both Govt. and Pvt. Hospitals			

(Source: Primary data)

It is clear from the table 5.35 that the difference in the Mean score of Perceived Value for Money is found between patients who prefer Government hospitals and those who prefer Both Government and Private Hospitals (U 33822.500, Z -3.391, Sig .001) and between patients who prefer Private Hospitals and those who prefer Both Government and Private Hospitals (U 22704.000, Z -4.471, Sig .000). Hence it is inferred that patients who prefer Private Hospitals have high Perception on Value for Money and patients who prefer Both Government and Private Hospitals have low Perception on Value for Money.

5.4. Demographic analysis of Perceived Waiting Time

Perception on Waiting Times is the element with which patients express greatest dissatisfaction in hospitals. Demographic wise analyses are done on the Perceived Waiting Time and the results are discussed as under.

5.4.1. Age wise analysis of Perceived Waiting Time

H0: There is no significant difference in Perceived Waiting Time among Age groups.

H1: There is significant difference in Perceived Waiting Time among Age groups.

Table 5.36

Descriptive Statistics and Result of Kruskal-Wallis Test of PWT for Age

Variable	Age	N	Mean	SD	Chi-Square	p value
Perceived Waiting Time	Up to 40 yrs.	359	16.14	2.90	4.302	0.116
	41-60 yrs.	331	16.47	2.51		
	Above 60 yrs.	80	16.94	2.26		

(Source: Primary data)

Table 5.36 shows the Mean, Standard Deviation and the result of Kruskal-Wallis Test of Perceived Waiting Time for Age. Mean score for Age group up to 40 years is 16.14 with σ = 2.90, 41-60 years is 16.47 with σ = 2.51 and above 60 years is 16.94 with σ = 2.26. It is found from the Kruskal-Wallis Test results that there is no significant difference in Perceived Waiting Time among Age groups (p value is 0.116). The null hypothesis is accepted.

5.4.2. Gender wise analysis of Perceived Waiting Time

H0: There is no significant difference in Perceived Waiting Time between Genders.

H1: There is significant difference in Perceived Waiting Time between Genders.

Table 5.37

Descriptive Statistics and Result of Mann-Whitney Test of PWT for Gender

Variable	Gender	N	Mean	SD	Z	p value
Perceived Waiting Time	Female	422	16.38	2.51	-0.757	0.449
	Male	348	16.34	2.88		

(Source: Primary data)

From the table 5.37, it is clear that Mean score of Perceived Waiting Time of Female patients is 16.38 with σ = 2.51 and that of Male patients is 16.34 with σ = 2.88. The result of Mann-Whitney Test shows that Z value is -0.757 and p value is 0.449. Hence, the null hypothesis that there is no significant difference in Perceived Waiting Time between Genders is accepted.

5.4.3. Educational qualification wise analysis of Perceived Waiting Time

H0: There is no significant difference in Perceived Waiting Time among Educational qualifications.

H1: There is significant difference in Perceived Waiting Time among Educational qualifications.

Table 5.38

Descriptive Statistics and Result of
Kruskal-Wallis Test PWT for Educational qualification

Variable	*Educational qualification*	*N*	*Mean*	*SD*	*Chi-Square*	*p value*
Perceived Waiting Time	Primary education	397	16.56	2.32	0.859	0.93
	SSLC	204	16.21	2.94		
	Plus Two	77	16.06	3.19		
	Graduation	69	16.17	3.27		
	Post-Graduation	23	15.83	2.17		

(Source: Primary data)

It is noted from the table 5.38 that Mean score of Perceived Waiting Time of patients with Primary education is 16.56 with $\sigma = 2.32$, SSLC is 16.21 with $\sigma = 2.94$, Plus Two is 16.06 with $\sigma = 3.19$, Graduation is 16.17 with $\sigma = 3.27$ and Post-Graduation is 15.83 with $\sigma = 2.17$. Kruskal-Wallis Test result shows a Chi-Square value of 0.859 and with a p value of 0.535. Hence the null hypothesis is accepted. It is found that the difference in mean of Perceived Waiting Time among Educational Qualification is not significant.

5.4.4. Occupation wise analysis of Perceived Waiting Time

H0: There is no significant difference in Perceived Waiting Time among Occupations.

H1: There is significant difference in Perceived Waiting Time among Occupations.

Table 5.39

**Descriptive Statistics and Result of
Kruskal-Wallis Test of PWT for Occupation**

Variable	Occupation	N	Mean	SD	Chi-Square	p value
Perceived Waiting Time	Student	33	15.85	2.83	16.488	0.006
	Daily wage	322	16.14	2.56		
	Salaried	136	16.29	3.31		
	Self employed	86	16.34	2.45		
	Business	53	17.38	2.10		
	Home Makers	140	16.70	2.49		

(Source: Primary data)

In the table 5.39, it is clear that the Mean score of Perceived Waiting Time of patients with different occupation are as follows: Student 15.85 (σ = 2.83), Daily wage worker 16.14 (σ = 2.56), Salaried people 16.29 (σ = 3.31), Self-employed people 16.34 (σ = 2.45), Business person 17.38 (σ = 2.10) and Home Maker 16.70 (σ = 2.49). The result of Kruskal-Wallis Test shows Chi- Square value 16.488 and p value 0.006. The null hypothesis is rejected and so it is inferred that there is significant difference in Perceived Waiting Time among Occupations.

Table 5.40
Result of Mann-Whitney Test of PWT for Occupation- Multiple Comparisons

PWT for Occupation	Student	Daily Wage	Salaried	Self Employed	Business	Home maker
Student		U 5203.500 W 5764.500 Z -.203 Sig .839	U 1975.000 W 2536.000 Z -1.086 Sig .277	U 1302.000 W 1863.000 Z -.716 Sig .474	U 610.000 W 1171.000 Z -2.397 Sig .017	U 1958.000 W 2519.000 Z -1.390 Sig .165
Daily wage			U 19529.000 W 71532.000 Z -1.893 Sig .058	U 12752.000 W 64755.000 Z -1.178 Sig .239	U 6063.000 W 58066.000 Z -3.519 Sig .000	U 19451.500 W 71454.500 Z -2.428 Sig .015
Salaried				U 5508.500 W 9249.500 Z -.746 Sig .456	U 3050.000 W 12366.000 Z -1.675 Sig .094	U 9292.000 W 18608.000 Z -.352 Sig .725
Self employed					U 1749.500 W 5490.500 Z -2.368 Sig .018	U 5595.500 W 9338.500 Z -910 Sig .363
Business						U 3162.500 W 13032.500 Z -1.620 Sig .105
Home maker						

(Source: Primary data)

Multiple comparisons of Perceived Waiting Time of patients with different Occupations have been done by the researcher using Mann-Whitney Test and the results are shown in the table 5.40. It is visible in the table that the difference in Mean of Perceived Waiting Time is significant in between Students and Business persons (U 610.000, Z -2.397, Sig .017), between Daily wage workers and Business persons (U 6063.000, Z -3.519, Sig .000), between Daily wage workers and Home makers (U 19451.500, Z -2.428, Sig .015) and between Self-employed people and Business persons (U 1749.500, Z -2.368, Sig .018). It is further inferred from the table that Business persons have high Perception on Waiting Time and Students have low Perception on Waiting Time.

5.4.5. Poverty line wise analysis of Perceived Waiting Time

H0: There is no significant difference in Perceived Waiting Time between Poverty lines.

H1: There is significant difference in Perceived Waiting Time between Poverty lines.

Table 5.41

Descriptive Statistics and Result of
Mann-Whitney Test of PWT for Poverty line

Variable	*Poverty line*	*N*	*Mean*	*SD*	*Z*	*p value*
Perceived Waiting Time	APL	376	16.47	2.94	-2.116	0.034
	BPL	394	16.26	2.41		

(Source: Primary data)

Table 5.41 shows the Mean score, Standard Deviation and the Result of Mann-Whitney Test of Perceived Waiting Time for Poverty line. The Mean score of Perceived Waiting Time of patients in APL category is 16.47 with $\sigma = 2.94$ and those patients in BPL category is 16.26 with $\sigma = 2.41$. Mann-Whitney Test results shows Z value -2.116 with p value 0.034 and the null hypothesis is rejected. It indicates that there is significant difference in Perceived Waiting Time with Poverty line. It can be concluded that patients in APL category have High Perception on Waiting Time than patients in BPL category.

5.4.6. Frequency of visit wise analysis of Perceived Waiting Time

H0: There is no significant difference in Perceived Waiting Time between Frequencies of visit.

H1: There is significant difference in Perceived Waiting Time between Frequencies of visit.

Table 5.42

**Descriptive Statistics and Result of
Mann-Whitney Test of PWT for Frequency of visit**

Variable	*Frequency of visit*	*N*	*Mean*	*SD*	*Z*	*p value*
Perceived Waiting Time	First time	302	16.32	2.66	-0.738	0.461
	More than once	468	16.39	2.70		

(Source: Primary data)

From the table 5.42 it is noted that the Mean of Perceived Waiting Time of patients admitted for the First time is 16.32 with σ = 2.66 and that of patients admitted for More than once is 16.39 with σ = 2.70. Result of Mann-Whitney Test shows that Z value is -0.738 with p value 0.461 and the null hypothesis is accepted. It is concluded that there is no significant difference in Perceived Waiting Time among Frequencies of visit.

5.4.7. Duration of stay wise analysis of Perceived Waiting Time

H0: There is no significant difference in Perceived Waiting Time among Durations of stay.

H1: There is significant difference in Perceived Waiting Time among Durations of stay.

Table 5.43

**Descriptive Statistics and Result of
Kruskal-Wallis Test of PWT for Duration of stay**

Variable	Duration of stay	N	Mean	SD	Chi-Square	p value
Perceived Waiting Time	Up to 10 days	671	16.44	2.71	9.908	0.019
	11-30 days	79	15.95	2.63		
	31-50 days	12	15.25	1.29		
	Above 50 days	8	16.00	0.93		

(Source: Primary data)

Table 5.43 shows that the Mean scores of Perceived Waiting Time of patients stayed in the hospital up to 10 days are 16.44 (σ = 2.71), 11-30 days are 15.95 (σ = 2.63), for 31-50 days are 15.25 (σ = 1.29) and for Above 50 days are 16.00 (σ = 0.93). The result of Kruskal-Wallis Test shows Chi- Square value of 9.908 with p value 0.019. Hence the null hypothesis is rejected. It is found that there is significant difference in Perceived Waiting Time among Durations of stay. Multiple comparisons have been done and the results are given in the following table.

Table 5.44

**Result of Mann-Whitney Test of
PWT for Duration of stay- Multiple Comparisons**

PWT for Duration of Stay	Up to 10 days	11-30 days	31-50 days	Above 50 days
Up to 10 days		U 23000.000 W 26160.000 Z -1.981 Sig .048	U 2450.500 W 2528.500 Z -2.392 Sig .017	U 2199.500 W 2235.500 Z -.904 Sig .366
11-30 days			U 358.500 W 436.500 Z -1.415 Sig .157	U 313.500 W 3473.500 Z -.038 Sig .969
31-50 days				U 30.500 W 108.500 Z -1.483 Sig .138
Above 50 days				

(Source: Primary data)

It is clear from the table 5.44 that the difference in Mean score of Perceived Waiting Time is found between patients who stayed in the hospital up to 10 days and those who stayed for 11-30 days (U 23000.000, Z -1.981, Sig .048) and between patients who have stayed up to 10 days and those who stayed for 31 -50 days (U 2450.500, Z -2.392, Sig .017). Hence it is inferred that patients who have stayed up to 10 days have high Perception on Waiting Time and patients who have stayed for 31-50 days have low Perception on Waiting Time.

5.4.8. Ward wise analysis of Perceived Waiting Time

H0: There is no significant difference in Perceived Waiting Time among Wards.

H1: There is significant difference in Perceived Waiting Time among Wards.

Table 5.45

Descriptive Statistics and Result of Kruskal-Wallis Test of PWT for Ward

Variable	*Ward*	*N*	*Mean*	*SD*	*Chi-Square*	*p value*
Perceived Waiting Time	General medicine	233	16.48	2.73	19.022	0.008
	General Surgery	188	15.70	2.72		
	Urology	76	16.63	2.70		
	Gynecology	97	16.70	2.57		
	Orthopedics	103	16.40	2.96		
	Pediatrics	38	17.21	1.45		
	Nephrology	18	16.11	1.91		
	Neurology	17	17.06	1.98		

(Source: Primary data)

It is noted from the table 5.45 that the Mean score of Perceived Waiting Time of patients admitted in General Medicine ward, General Surgery ward, Urology ward, Gynaecology ward, Orthopaedic ward, Paediatrics ward, Nephrology ward and Neurology ward are 16.48 (ɵ = 2.73), 15.70 (ɵ = 2.72), 16.63 (ɵ = 2.70), 16.70 (ɵ = 2.57), 16.40 (ɵ = 2.96), 17.21 (ɵ = 1.45), 16.11 (ɵ = 1.91) and 17.06 (ɵ =

1.98) respectively. The Kruskal-Wallis Test result shows Chi- Square value of 10.022 with p value 0.008 and hence the null hypothesis is rejected. It means that there is significant difference in Perceived Waiting Time among Wards. The researcher conducted multiple comparisons analyses with Mann-Whitney Test and the results are shown in the following table.

Table 5.46

Result of Mann-Whitney Test of PWT for Ward- Multiple Comparisons

Ward	General Medicine	General Surgery	Urology	Gynecology	Orthopedics	Pediatrics	Nephrology	Neurology
General medicine		U 18072.000 W 35838.000 Z -3.172 Sig .002	U 8778.000 W 36039.000 Z -.115 Sig .909	U 11014.000 W 38275.000 Z -.371 Sig .710	U 11788.500 W 17144.500 Z -.262 Sig .793	U 3939.500 W 31200.500 Z -1.113 Sig .266	U 1755.000 W 1926.000 Z -1.178 Sig .239	U 1855.500 W 29116.500 Z -.443 Sig .658
General Surgery			U 5924.000 W 23690.000 Z -2.256 Sig .024	U 7268.500 W 25034.500 Z -2.923 Sig .003	U 8192.500 W 25958.500 Z -2.248 Sig .025	U 2392.500 W 20158.500 Z -3.372 Sig .001	U 1662.000 W 19428.000 Z -.131 Sig .896	U 1193.000 W 18959.000 Z -1.810 Sig .070
Urology				U 3598.500 W 6524.500 Z -.276 Sig .782	U 3816.500 W 9172.500 Z -.292 Sig .771	U 1296.000 W 4222.000 Z -.922 Sig .356	U 577.000 W 749.500 Z -1.039 Sig .299	U 608.500 W 3534.500 Z -.384 Sig .701
Gynecology					U 4774.000 W 10130.000 Z -.557 Sig .577	U 1677.500 W 6430.500 Z -.844 Sig .399	U 695.000 W 866.000 Z -1.428 Sig .153	U 798.500 W 5551.500 Z -.214 Sig .830
Orthopedics						U 1711.000 W 7067.000 Z -1.179 Sig .238	U 789.500 W 960.500 Z -1.031 .Sig 302	U 807.500 W 6163.500 Z -.525 Sig .600
Pediatrics							U 226.000 W 397.000 Z -2.222 Sig .026	U 306.000 W 459.000 Z -.329 Sig .742
Nephrology								U 113.500 W 284.500 Z -1.405 Sig .160
Neurology								

(Source: Primary data)

Table 5.46 shows that there is significant difference in Mean of Perceived Waiting Time between General Medicine ward and General Surgery ward (U 18072.000, Z -3.172, Sig .002), between General Surgery ward and Urology ward (U 5924.000, Z -2.256, Sig .024), between General Surgery ward and Gynaecology ward (U 7268.500, Z -2.923, Sig .003), between General Surgery ward and Orthopaedic ward (U 8192.500, Z -2.248, Sig .025), between General Surgery ward and Paediatrics ward (U 2392.500, Z -3.372, Sig .001) and between Paediatrics ward and Nephrology ward (U 226.000, Z -2.222, Sig .026). It is concluded that patients in Paediatrics ward have high Perception on Waiting Time and patients in General Surgery ward have low Perception on Waiting Time.

5.4.9. Preference of sector wise analysis of Perceived Waiting Time

H0: There is no significant difference in Perceived Waiting Time among Preferences of sector.

H1: There is significant difference in Perceived Waiting Time among Preferences of sector.

Table 5.47

Descriptive Statistics and Result of
Kruskal-Wallis Test of PWT for preference of sector

Variable	*Preference of sector*	*N*	*Mean*	*SD*	*Chi-Square*	*p value*
Perceived waiting time	Govt. hospitals	275	15.77	2.57	15.296	<0.001
	Private hospitals	202	17.12	2.46		
	Both govt. and Pvt. Hospitals	293	16.40	2.81		

(Source: Primary data)

It is clear from the table 5.47 that the Mean score of Perceived Waiting Time of patients who prefer Government Hospitals is 15.77 with $\sigma = 2.57$, patients who prefer Private Hospitals is 17.12 with $\sigma = 2.46$ and those who prefer both Government and Private Hospitals is 16.40 with $\sigma = 2.81$. Kruskal-Wallis Test result shows that Chi- Square value is 15.296 with p value <0.001. Hence the null hypothesis is rejected and is found that there is significant difference in Perceived Waiting Time among Preferences of sector. Therefore multiple comparisons have been done by the researcher and the results are discussed below.

Table 5.48

**Result of Mann-Whitney Test of
PWT for preference of sector- Multiple Comparisons**

PWT for Preference of sector	Govt. Hospitals	Pvt. Hospitals	Both Govt. and Pvt. Hospitals
Govt. Hospitals		U 18832.500 W 56782.500 Z -6.214 Sig .000	U 33589.500 W 71539.500 Z -3.535 Sig .000
Pvt. Hospitals			U 25366.500 W 68437.500 Z -2.774 Sig .006
Both Govt. and Pvt. Hospitals			

It is clear from the table 5.48 that the difference in the Mean score of Perceived Waiting Time is found between patients who prefer Government Hospitals and those who prefer Private Hospitals (U 18832.500, Z -6.214, Sig .000), between patients who prefer Government Hospital and those who prefer Both Government and Private Hospitals (U 33589.500, Z -3.535, Sig .000) and between patients who prefer Private Hospitals and those who prefer Both Government and Private Hospitals (U 25366.500, Z -2.774, Sig .006). It is concluded that patients who prefer Private Hospitals have high Perception on Waiting Time and patients who prefer Government Hospitals have low Perception on Waiting Time.

5.5. Demographic analysis of Patients' Satisfaction

Patients' Satisfaction is that state of mind when a patient feels that his needs are fulfilled. The level of satisfaction of patients with different demographics may be different from each other. So there is a need to do demographic analyses on Patients' Satisfaction. The results are discussed under.

5.5.1. Age wise analysis of Patients' Satisfaction

H0: There is no significant difference in Patients' Satisfaction between Age groups.

H1: There is significant difference in Patients' Satisfaction between Age groups.

Table 5.49

Descriptive Statistics and Result of Kruskal-Wallis Test of PS for Age

Variable	Age	N	Mean	SD	Chi-Square	p value
Patients' Satisfaction	Up to 40 yrs.	359	26.04	3.33	3.483	0.175
	41-60 yrs.	331	25.90	3.35		
	Above 60yrs.	80	26.70	2.73		

(Source: Primary data)

Table 5.49 presents the Mean, Standard Deviation and result of Kruskal-Wallis Test of Patients' Satisfaction with Age groups. For Age group Up to 40 years, Mean score is 26.04 ($\sigma = 3.33$), for Age group 41-60 years, Mean score is 25.90 ($\sigma = 3.35$) and for Age group above 60 years, Mean score is 26.70 ($\sigma = 2.73$). Chi- Square value and p value resulted from Kruskal-Wallis Test are 3.483 and 0.175 respectively. Hence the null hypothesis is accepted. Therefore it is concluded that there is no significant difference in Patients' Satisfaction among Age groups.

5.5.2. Gender wise analysis of Patients' Satisfaction

H0: There is no significant difference in Patients' Satisfaction between Genders.

H1: There is significant difference in Patients' Satisfaction between Genders.

Table 5.50

Descriptive Statistics and Result of Mann-Whitney Test of PS for Gender

Variable	Gender	N	Mean	SD	Z	p value
Patients' Satisfaction	Female	422	26.13	3.14	-0.398	0.691
	Male	348	25.96	3.46		

(Source: Primary data)

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From the table 5.50 it is clear that the Mean score of Patient's Satisfaction of Female patients is 26.13 with σ =3.14 while the Mean score of Male patients is 25.96 with σ = 3.46. It is further seen from the result of Mann-Whitney Test that Z value is -0.398 and the p value is 0.691. Hence the null hypothesis that there is no significant difference in Patients' Satisfaction between Genders is accepted.

5.5.3. Educational qualification wise analysis of Patients' Satisfaction

H0: There is no significant difference in Patients' Satisfaction among Educational qualifications.

H1: There is significant difference in Patients' Satisfaction among Educational qualifications.

Table 5.51

**Descriptive Statistics and Result of
Kruskal-Wallis Test of PS for Educational Qualification**

Variable	*Educational qualification*	*N*	*Mean*	*SD*	*Chi-Square*	*p value*
Patients' Satisfaction	Primary education	397	25.98	3.01	4.368	0.359
	SSLC	204	26.29	3.43		
	Plus Two	77	25.84	4.02		
	Graduation	69	25.71	3.63		
	Post-Graduation	23	26.87	2.74		

(Source: Primary data)

It is noted from the table 5.51 that the Mean score of satisfaction of patients who have Primary education is 25.98 with σ = 3.01, SSLC is 26.29 with σ = 3.43, Plus Two is 25.84 with σ = 4.02, Graduation is 25.71 with σ = 3.63 and Post-Graduation is 26.87 with σ = 2.74. From the result of Kruskal-Wallis Test, it is found that Chi- Square value is 4.368 with p value 0.359. Hence the null hypothesis is accepted and it is concluded that there is no significant difference in Patients' Satisfaction among Educational qualifications.

5.5.4. Occupation wise analysis of Patients' Satisfaction

H0: There is no significant difference in Patients' Satisfaction among Occupations.

H1: There is significant difference in Patients' Satisfaction among Occupations.

Table 5.52

Descriptive Statistics and Result of Kruskal-Wallis Test of PS for Occupation

Variable	Occupation	N	Mean	SD	Chi-Square	p value
Patients' Satisfaction	Student	33	25.97	3.22	26.554	<0.001
	Daily wage	322	25.55	3.32		
	Salaried	136	25.90	3.87		
	Self employed	86	26.41	2.44		
	Business	53	27.08	2.60		
	Home makers	140	26.77	3.09		

(Source: Primary data)

Table 5.52 shows the Mean and Standard Deviation of Patients' Satisfaction with Occupation and the result of Kruskal-Wallis Test. Different Mean scores are obtained for the satisfaction of patients with different occupation. The mean score of satisfaction of Students is 25.97 ($6 = 3.22$), Daily wage workers is 25.55 ($6 = 3.32$), Salaried people is 25.90 ($6 = 3.87$), Self-employed people is 26.41($6 = 2.44$), Business persons is 27.08 ($6 = 2.60$) and Home Makers is 26.77 ($6 = 3.09$). Chi-Square value obtained in Kruskal-Wallis Test is 26.554 with p value <0.001. It is found that the null hypothesis is rejected and so there is significant difference in Patients Satisfaction among Occupations. The result of multiple comparisons is shown in the following table.

Table 5.53

Result of Mann-Whitney Test of PS for Occupation- Multiple Comparisons

PS for Occupation	Student	Daily Wage	Salaried	Self employed	Business	Home maker
Student		U 4757.500 W 56760.500 Z -1.007 Sig .314	U 2188.500 W 2749.500 Z -.223 Sig .824	U 1322.000 W 1883.000 Z -.582 Sig .561	U 672.500 W 1233.500 Z -1.822 Sig .068	U 1924.500 W 2485.500 Z -1.508 Sig .131
Daily wage			U 19498.000 W 71501.000 Z -1.880 Sig .060	U 11557.500 W 63560.500 Z -2.389 Sig .017	U 5892.500 W 57895.500 Z -3.667 Sig .000	U 17161.000 W 69164.000 Z -4.134 Sig .000
Salaried				U 5675.000 W 14991.000 Z -.375 Sig .708	U 2962.000 W 12278.000 Z -1.926 Sig .054	U 8369.000 W 17685.000 Z -1.758 Sig .079
Self employed					U 1879.500 W 5620.500 Z -1.755 Sig .079	U 5263.000 W 9004.000 Z -1.604 Sig .109
Business						U 3571.000 W 13441.000 Z -.407 Sig .684
Home makers						

(Source: Primary data)

It is noted from the table 5.53 that there is significant difference in Mean of Patients' Satisfaction between Daily wage workers and Self-employed people (U 11557.500, Z -2.389, Sig .017), between Daily wage workers and Business persons (U 5892.500, Z -3.667, Sig .000) and between Daily wage workers and Home makers (U 17161.000, Z -4.134, Sig .000). It is inferred from the table that Business persons are highly satisfied and Daily wage workers are less satisfied.

5.5.5. Poverty line wise analysis of Patients' Satisfaction

H0: There is no significant difference in Patients' Satisfaction between Poverty lines.

H1: There is significant difference in Patients' Satisfaction between Poverty lines.

Table 5.54

Descriptive Statistics and Result of Mann-Whitney Test of PS for Poverty line

Variable	Poverty line	N	Mean	SD	Z	p value
Patients' Satisfaction	APL	376	26.04	3.63	-0.994	0.320
	BPL	394	26.06	2.93		

(Source: Primary data)

Table 5.54 presents the Mean and Standard Deviation of Patients' Satisfaction with Poverty line and the Result of Mann-Whitney Test. It is noted from the table that APL Patients' Satisfaction has a Mean score of 26.04 with σ = 3.63 and BPL Patients' Satisfaction has Mean score of 26.06 with σ = 2.93. Mann-Whitney Test result shows that Z value is -0.994 with p value 0.320 and hence the null hypothesis is accepted. It reveals that there is no significant difference in Patients' Satisfaction between Poverty lines.

5.5.6. Frequency of visit wise analysis of Patients' Satisfaction

H0: There is no significant difference in Patients' Satisfaction between Frequencies of visit.

H1: There is significant difference in Patients' Satisfaction between Frequencies of visit.

Table 5.55

**Descriptive Statistics and Result of
Mann-Whitney Test of PS for Frequency of visit**

Variable	Frequency of visit	N	Mean	SD	Z	p value
Patients' Satisfaction	First time	302	25.44	3.32	-4.384	<0.001
	More than once	468	26.44	3.21		

(Source: Primary data)

Table 5.55 depicts the Mean and Standard Deviation of Patients' Satisfaction with Frequency of visit. It also shows the result of Mann-Whitney Test. Patients admitted for the First time scored a Mean value of 25.44 (σ = 3.32) and patients admitted for More than once scored a Mean value of 26.44 (σ = 3.21). Z value obtained from Mann-Whitney Test is -4.384 with p value <0.001 and hence the null

hypothesis is rejected. Therefore it is concluded that there is significant difference in Patients' Satisfaction between Frequencies of visit. It is further concluded that patients who are admitted More than once are more satisfied than those who are admitted for the First time.

5.5.7. Duration of stay wise analysis of Patients' Satisfaction

H0: There is no significant difference in Patients' Satisfaction among Durations of stay.

H1: There is significant difference in Patients' Satisfaction among Durations of stay.

Table 5.56

**Descriptive Statistics and Result of
Kruskal-Wallis Test of PS for Duration of stay**

Variable	*Duration of stay*	*N*	*Mean*	*SD*	*Chi-Square*	*p value*
Patients' Satisfaction	Up to 10 days	671	26.13	3.20	3.895	0.273
	11-30 days	79	25.86	3.62		
	31-50 days	12	23.33	5.12		
	Above 50 days	8	25.63	2.45		

(Source: Primary data)

It is clear from the table 5.56 that the Mean score of Patients' Satisfaction of patients stayed in the hospital up to 10 days is 26.13 with $\sigma = 3.20$, 11-30 days is 25.86 with $\sigma = 3.62$, 31-60 days is 23.33 with $\sigma = 5.12$ and Above 50 days is 25.63 with $\sigma = 2.45$. From the result of Kruskal-Wallis Test, it is found that Chi- Square value is 3.895 with p value 0.273. The null hypothesis is accepted and it can be concluded that there is no significant difference in Patients' Satisfaction among Duration of stay.

5.5.8. Ward wise analysis of Patients' Satisfaction

H0: There is no significant difference in Patients' Satisfaction among Wards.

H1: There is significant difference in Patients' Satisfaction among Wards.

Table 5.57

Descriptive Statistics and Result of Kruskal-Wallis Test of PS for Ward

Variable	*Ward*	*N*	*Mean*	*SD*	*Chi-Square*	*p value*
Patients' Satisfaction	General Medicine	233	26.51	3.03	17.887	0.012
	General Surgery	188	25.33	3.80		
	Urology	76	26.57	2.80		
	Gynecology	97	26.43	3.40		
	Orthopedic	103	25.52	3.53		
	Pediatrics	38	26.21	1.80		
	Nephrology	18	26.06	2.60		
	Neurology	17	26.06	1.68		

(Source: Primary data)

The Mean scores with Standard Deviation of satisfaction of patients admitted in different wards and the result of Kruskal-Wallis Test are depicted in the table 5.57. The Mean of Patients' Satisfaction of patients admitted in General Medicine ward, General Surgery ward, Urology ward, Gynaecology ward, Orthopaedic ward, Paediatrics ward, Nephrology ward and Neurology ward are 26.51 (σ = 3.03), 25.33 (σ = 3.80), 26.57 (σ = 2.80), 26.43 (σ = 3.40), 25.52 (σ = 3.53), 26.21 (σ = 1.80), 26.06 (σ = 2.60) and 26.06 (σ = 1.68) respectively. The Kruskal-Wallis Test results show a Chi- Square value of 17.887 with p value 0.012. Hence the null hypothesis is rejected. It means that the difference in Patients Satisfaction among Wards is statistically significant. The results of multiple comparisons are shown in the table 5.58.

Table 5.58

Result of Mann-Whitney Test of PS for Ward- Multiple Comparisons

Ward	General Medicine	General Surgery	Urology	Gynecology	Orthopedic	Pediatrics	Nephrology	Neurology
General Medicine		U 17385.000 W 35601.000 Z -3.312 Sig .001	U 8807.000 W 11733.000 Z -.070 Sig .944	U 11043.000 W 38307.000 Z -.326 Sig .744	U 1001.000 W 15357.000 Z -2.462 Sig .014	U 3929.000 W 4664.000 Z -1.136 Sig .256	U 1750.000 W 1921.000 Z -1.183 Sig .237	U 1687.500 W 1840.500 Z -1.029 Sig .303
General Surgery			U 5888.000 W 23654.000 Z -2.268 Sig .023	U 7369.000 W 25135.000 Z -2.686 Sig .007	U 9470.500 W 27236.500 Z -.312 Sig .755	U 3145.500 W 20911.500 Z -1.173 Sig .241	U 1635.500 W 19401.500 Z -.237 Sig .812	U 1438.000 W 19204.000 Z -.691 Sig .489
Urology				U 3612.500 W 6538.500 Z -.229 Sig .819	U 3312.000 W 8668.000 Z -1.788 Sig .074	U 1338.000 W 2079.000 Z -.646 Sig .518	U 578.500 W 749.500 Z -1.039 Sig .299	U 570.000 W 723.000 Z -.770 Sig .441
Gynecology					U 4147.000 W 9503.000 Z -2.104 Sig .035	U 1622.000 W 2363.000 Z -1.094 Sig .274	U 724.000 W 895.000 Z -1.168 Sig .243	U 688.000 W 841.000 Z -1.103 Sig .270
Orthopedic						U 1765.500 W 7121.500 Z -.901 Sig .368	U 922.000 W 6278.000 Z -.037 Sig .970	U 819.500 W 6175.500 Z -.428 Sig .669
Pediatrics							U 299.000 W 470.000 Z -.764 Sig .445	U 301.000 W 454.000 Z -.407 Sig .684
Nephrology								U 135.500 W 306.500 Z -.595 Sig .552
Neurology								

(Source: Primary data)

It is noted from the table 5.58 that the significant difference in Mean of Patients' Satisfaction is found between General Medicine ward and General Surgery ward (U 17385.000, Z -3.312, Sig .001), between General Medicine ward and Orthopaedic Ward (U 1001.000, Z -2.462, Sig .014), between General Surgery ward and Urology ward (U 5888.000, Z -2.268, Sig .023), between General Surgery ward and Gynaecology ward (U 7369.000, Z -2.686, Sig .007) and between Gynaecology ward and Orthopaedic ward (U 4147.000, Z -2.104, Sig .035). It is concluded that

patients in Urology ward are highly satisfied and patients in General Surgery ward are less satisfied.

5.5.9. Preference of sector wise analysis of Patients' Satisfaction

H0: There is no significant difference in Patients' Satisfaction among Preferences of sector.

H1: There is significant difference in Patients' Satisfaction among Preferences of sector.

Table 5.59

**Descriptive Statistics and Result of
Kruskal-Wallis Test of PS for Preference of sector**

Variable	*Preference of sector*	*N*	*Means*	*SD*	*Chi-Square*	*p value*
Patients' Satisfaction	Govt. hospitals	275	25.56	3.58	14.770	<0.001
	Pvt. hospitals	202	27.10	2.80		
	Both Govt. and Pvt. Hospitals	293	25.78	3.16		

(Source: Primary data)

Table 5.59 presents the Mean and Standard Deviation of Patients' Satisfaction with Preference of sector and the result of Kruskal-Wallis Test. It is noted from the table that the Mean scores of satisfaction of patients who prefer Government Hospitals is 25.56 with σ = 3.58, patients who prefer Private Hospitals is 27.10 with σ = 2.80 and those who prefer both Government and Private Hospitals is 25.78 with σ = 3.16. It is further found that the Chi- Square value obtained from Kruskal-Wallis Test is 14.770 with p value <0.001. Hence the null hypothesis is rejected. It is found that there is significant difference in Patients Satisfaction among Preference of sector.

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Table 5.60

Result of Mann-Whitney Test of PS
for Preference of sector- Multiple Comparisons

PS for Preference of sector	*Govt. Hospitals*	*Pvt. Hospitals*	*Both Govt. and Pvt. Hospitals*
Govt. hospitals		U 20207.000 W 58157.000 Z -5.164 Sig .000	U 38884.500 W 76834.500 Z -.727 Sig .467
Pvt. hospitals			U 21872.500 W 64943.500 Z -4.990 Sig .000
Both Govt. and Pvt. Hospitals			

(Source: Primary data)

Table 5.60 presents the result of Mann-Whitney Test conducted for multiple comparisons. It shows that that the difference in the Mean score of Patients' Satisfaction is found between Patients who prefer Government Hospitals and those who prefer Private Hospitals (U 20207.000, Z -5.164, Sig .000) and between Patients who prefer Private Hospitals and those who prefer Both Government and Private Hospitals (U 21872.500, Z -4.990, Sig .000). It is further inferred that patients who prefer Private Hospitals are highly satisfied and patients who prefer Government Hospitals are less satisfied.

5.6.   Demographic analysis of Patients Loyalty

When the patients are highly satisfied with the provider, they may likely to remain as the loyal customers of the hospitals. Patients' loyalty is influenced by patients' demography. So, the demographic analyses of Patients' loyalty are done and the results are discussed under.

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5.6.1. Age wise analysis of Patients' Loyalty

H0: There is no significant difference in Patients' Loyalty among Age groups.

H1: There is significant difference in Patients' Loyalty among Age groups.

Table 5.61

Descriptive Statistics and Result of Kruskal-Wallis Test of PL for Age

Variable	Age	N	Mean	SD	Chi-Square	p value
Patients' Loyalty	Up to 40 yrs.	359	15.89	2.68	8.486	0.014
	41-60 yrs.	331	15.46	2.60		
	Above 60 yrs.	80	16.03	2.00		

(Source: Primary data)

Table 5.61 shows the Mean and Standard Deviation of Patients' Loyalty with Age. It also shows the result of Kruskal-Wallis Test to check the significance of Mean difference. Mean score of loyalty of patients in the Age group Up to 40 is 15.89 with σ = 2.68, 41-60 years is 15.46 with σ = 2.60 and above 60 years is 16.03 with σ = 2.00. Chi- Square value and p value obtained in the Kruskal-Wallis Test is 8.486 and 0.014 respectively. Hence null hypothesis is rejected which means that there is significant difference in Patients' Loyalty among Age groups.

Table 5.62

Result of Mann-Whitney Test of PL for Age- Multiple Comparisons

PL for Age	Up to 40 yrs.	41-60 yrs.	Above 60 yrs.
Up to 40 yrs.		U 52279.000 W 107225.000 Z -2.766 Sig .006	U 14180.000 W 17420.000 Z -.178 Sig .859
41-60 yrs.			U 11611.000 W 66557.000 Z -1.737 Sig .082
Above 60 yrs.			

(Source: Primary data)

Table 5.62 presents the result of Mann-Whitney Tests conducted for multiple comparisons of Patients' Loyalty for Age groups. It shows that there is significant difference in Patients' Loyalty between the patients in the Age group Up to 40 years and patients in the Age group 41-60 years (U 52279.000, Z -2.766, Sig .006). It is found from the analysis that patients in the Age group Up to 40 years show high level of Loyalty and patients who are in the Age group 41-60 show low level of Loyalty.

5.6.2. Gender wise analysis of Patients' Loyalty

H0: There is no significant difference in Patients' Loyalty between Genders.

H1: There is significant difference in Patients' Loyalty between Genders.

Table 5.63

Descriptive Statistics and Result of Mann-Whitney Test of PL for Gender

Variable	*Gender*	*N*	*Mean*	*SD*	*Z*	*p value*
Patients' Loyalty	Female	422	15.77	2.45	-0.410	0.682
	Male	348	15.66	2.75		

(Source: Primary data)

From the table 5.63, it is clear that Female Patient's Loyalty has a Mean score 15.77 with $\sigma = 2.45$ and Male Patient's Loyalty has a mean score of 15.66 with $\sigma = 2.75$. It is further seen in the table that Mann-Whitney Test result shows Z value -0.410 with p value 0.682 and hence the null hypothesis is accepted. Therefore it can be concluded that there is no significant difference in Patients Loyalty between Genders.

5.6.3. Educational qualification wise analysis of Patients' Loyalty

H0: There is no significant difference in Patients' Loyalty among Educational qualifications

H1: There is significant difference in Patients' Loyalty among Educational qualifications

Table 5.64

Descriptive Statistics and Result of
Kruskal-Wallis Test of PL for Educational qualification

Variable	Educational qualification	N	Mean	SD	Chi-Square	p value
Patients' Loyalty	Primary education	397	15.58	2.32	9.699	0.046
	SSLC	204	16.00	2.90		
	Plus Two	77	15.83	2.94		
	Graduation	69	15.58	2.85		
	Post-Graduation	23	15.57	2.06		

(Source: Primary data)

Mean, Standard Deviation and the result of Kruskal-Wallis Test are depicted in the table 5.64. It is noted from table that Loyalty of patients with Primary education scored Mean of 15.58 with $\sigma = 2.32$, SSLC is 16.00 with $\sigma = 2.90$, Plus Two is 15.83 with $\sigma = 2.94$, Graduation is 15.58 with $\sigma = 2.85$ and Post-Graduation is 15.57 with $\sigma = 2.06$. Chi- Square value and p value obtained are 9.699 and 0.046 respectively. Hence the null hypothesis is rejected. It means that there is significant difference in Patients' Loyalty among Educational qualifications.

Table 6.65

Result of Mann-Whitney Test of PL for
Educational Qualification- Multiple Comparisons

PL for Educational qualification	Primary education	SSLC	Plus Two	Graduation	PG
Primary education		U 34590.500 W 113593.500 Z -2/973 Sig .003	U 13860.500 W 92863.500 Z -1.316 Sig .188	U 12599.000 W 91602.000 Z -1.082 Sig .279	U 4521.000 W 83524.000 Z -.080 Sig .936
SSLC			U 7494.500 W 10497.500 Z -.599 Sig .549	U 6478.000 W 8893.000 Z -1.002 Sig .316	U 1992.500 W 2268.500 Z -1.198 Sig .231
Plus Two				U 2582.500 W 4997.500 Z -.295 Sig .768	U 799.000 W 1075.000 Z -.717 Sig .473
Graduation					U 734.000 W 1010.000 Z -.551 Sig .582
Post-Graduation					

(Source: Primary data)

Researcher conducted multiple comparisons of Patients' Loyalty with different Educational qualifications. The results of Mann-Whitney Tests are presented in the table 6.65. It is noted from the table that there is significant difference in Patients' Loyalty between the patients with Primary education and those patients who have SSLC qualification (U 34590.500, Z -2.973, Sig .003). It is concluded from the analysis that patients who have SSLC qualification show high Loyalty and patients who have Primary Education show low Loyalty.

5.6.4. Occupation wise analysis of Patients' Loyalty

H0: There is no significant difference in Patients' Loyalty among Occupations.

H1: There is significant difference in Patients' Loyalty among Occupations.

Table 5.66

Descriptive Statistics and Result of Kruskal-Wallis Test of PL for Occupation

Variable	*Occupation*	*N*	*Mean*	*SD*	*Chi-Square*	*p value*
Patients' Loyalty	Student	33	15.12	2.96	18.771	0.002
	Daily wage	322	15.38	2.50		
	Salaried	136	15.68	3.10		
	Self employed	86	16.12	2.21		
	Business	53	16.43	2.17		
	Home Maker	140	16.16	2.39		

(Source: Primary data)

Table 5.66 presents the Mean, Standard Deviation and the result of Kruskal-Wallis Test of Patients' Loyalty with Occupation. It shows that the Mean scores of loyalty of Students is 15.12 ($6 = 2.96$), Daily wage workers is 15.38 ($6 = 2.50$), Salaried people is 16.12 ($6 = 2.21$), Business persons is 16.43 ($6 = 2.17$) and Home Makers 16.16 ($6 = 2.39$). The Chi- Square value and p value obtained from Kruskal-Wallis Test is 18.771 and 0.002 respectively and hence the null hypothesis is rejected. It is concluded that there is significant difference in Patients' Loyalty

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among Occupations. The results of multiple comparisons are shown in the following table.

Table 5.67

Result of Mann-Whitney Test of PL for Occupation- Multiple Comparisons

PL for Occupation	Student	Daily wage	Salaried	Self employed	Business	Home maker
Student		U 5183.500 W 5744.500 Z -.234 Sig .815	U 1927.500 W 2488.500 Z -1.275 Sig .202	U 1161.000 W 1722.000 Z -1.550 Sig .121	U 650.500 W 1211.500 Z -2.025 Sig .043	U 1839.500 W 2400.500 Z -1.841 Sig .066
Daily wage			U 19123.000 W 71126.000 Z -2.177 Sig .030	U 11660.000 W 63663.000 Z -2.285 Sig .022	U 6527.000 W 58530.000 Z -2.791 Sig .005	U 18205.000 W 70208.000 Z -3.360 Sig .001
Salaried				U 5725.500 W 15041.500 Z -.267 Sig .790	U 3289.000 W 12605.000 Z -.953 Sig .341	U 8951.500 W 18267.500 Z -.872 Sig .383
Self employed					U 2087.500 W 5828.500 Z -.845 Sig .398	U 5794.500 W 9535.500 Z -.479 Sig .632
Business						U 3581.000 W 13451.000 Z -.379 Sig .705
Home Makers						

(Source: Primary data)

It is clear from the table 5.67 that the there is significant difference in Mean of Patients' Loyalty in between Students and Business persons (U 650.500, Z -2.025, Sig .043), between Daily wage workers and Salaried people (U 19123.000, Z -2.177, Sig .030), between Daily wage workers and Self-employed (U 11660.000, Z -2.285, Sig .022), between Daily wage workers and Business persons (U 650.500, Z -2.025, Sig .043) and between Daily wage workers and Home makers (U 18205.000, Z -3.360, Sig .001). It is inferred that Business persons show high Loyalty and Students show low loyalty.

5.6.5. Poverty line wise analysis of Patients' Loyalty

H0: There is no significant difference in Patients' Loyalty between Poverty lines.

H1: There is significant difference in Patients' Loyalty between Poverty lines.

Table 5.68

Descriptive Statistics and result of Mann-Whitney Test of PL for Poverty line

Variable	Poverty line	N	Mean	SD	Z	p value
Patients' Loyalty	APL	376	15.73	2.85	-1.485	0.138
	BPL	394	15.70	2.32		

(Source: Primary data)

Table 5.68 shows the Poverty line wise analysis of Patients' Loyalty. From the table it is noted that Mean score of Loyalty of patients in APL category is 15.73 with $\sigma = 2.85$ and in BPL category is 15.70 with $\sigma = 2.32$. Mann-Whitney Test result shows that Z value is -1.485 with p value 0.138. Hence the null hypothesis is accepted. So it is inferred that there is no significant difference in Patients' Loyalty among Poverty lines.

5.6.6. Frequency of visit wise analysis of Patients' Loyalty

H0: There is no significant difference in Patients' Loyalty between Frequencies of visit.

H1: There is significant difference in Patients' Loyalty between Frequencies of visit.

Table 5.69

**Descriptive Statistics and Result of
Mann-Whitney Test of PL for Frequency of visit**

Variable	Frequency of visit	N	Mean	SD	Z	p value
Patients' Loyalty	First time	302	15.18	2.72	-4.529	<0.001
	More than once	468	16.07	2.44		

(Source: Primary data)

Mean, Standard Deviation and the result of Mann-Whitney Test of Patients' Loyalty with Frequency of visit are shown in the table 5.69. Patients who are admitted for the First time scored a Mean of 15.18 (σ = 2.72) and those who are admitted for More than once scored a Mean of 16.07 (σ = 2.44). From the Mann Whitney Test results it is found Z value is -4.529 with p value <0.001 and the null hypothesis is rejected. Therefore it is concluded that there is significant difference in Patients' Loyalty between Frequencies of visit. It is further inferred that Patients admitted for More than once show more loyalty than those who are admitted for First time.

5.6.7. Duration of stay wise analysis of Patients' Loyalty

H0: There is no significant difference in Patients' Loyalty among Durations of stay.

H1: There is significant difference in Patients' Loyalty among Durations of stay.

Table 5.70

**Descriptive Statistics and Result of
Kruskal-Wallis Test of PL for Duration of stay**

Variable	Duration of stay	N	Mean	SD	Chi-Square	p value
Patients' Loyalty	Up to 10 days	671	15.75	2.53	3.038	0.386
	11-30 days	79	15.67	2.87		
	31-50 days	12	14.00	3.91		
	Above 50 days	8	16.00	1.31		

(Source: Primary data)

It is noted from the table 5.70 that the Mean scores of Patients' Loyalty of patients who have stayed in the hospital up to 10 days is 15.75 (σ = 2.53), for 11-30 days is 15.67 (σ = 2.87), for 31-50 days is 14.00 (σ = 3.91) and Above 50 days is 16.00 (σ = 1.31). The result of Kruskal-Wallis shows that Chi- Square value is 3.038 with p value 0.386. The null hypothesis is accepted and therefore it is found that there is no significant difference in Patients' Loyalty among Durations of stay.

5.6.8. Ward wise analysis of Patients' Loyalty

H0: There is no significant difference in Patients' Loyalty among Wards.

H1: There is significant difference in Patients' Loyalty among Wards.

Table 5.71

Descriptive Statistics and Result of Kruskal-Wallis Test of PL for Ward

Variable	Ward	N	Mean	SD	Chi-Square	p value
Patients' Loyalty	General Medicine	233	15.92	2.60	16.150	0.024
	General Surgery	188	15.30	2.66		
	Urology	76	16.03	2.55		
	Gynecology	97	16.27	2.46		
	Orthopedic	103	15.23	2.76		
	Pediatrics	38	15.79	2.44		
	Nephrology	18	16.33	1.94		
	Neurology	17	15.24	1.15		

(Source: Primary data)

Ward wise analysis of Patients' Loyalty is done and the results are shown in the table 5.71. The Mean of Patients' Loyalty of those who are admitted in General Medicine ward, General Surgery ward, Urology ward, Gynaecology ward, Orthopaedic ward, Paediatrics ward, Nephrology ward and Neurology ward are 15.92 (σ = 2.60), 15.30 (σ = 2.66), 16.03 (σ = 2.55), 16.27 (σ = 2.46), 15.23 (σ = 2.76), 15.79 (σ = 2.44), 16.33 (σ = 1.94), 15.24 (σ = 1.15) and 6.20 (σ = 1.21) respectively. The Chi- Square value and p value obtained are 16.150 and 0.024 respectively. Hence the null hypothesis is rejected which means that there is significant difference in Patients' Loyalty with Ward. Researcher has performed Mann-Whitney Tests for multiple comparisons and the results are shown in the table 5.72.

Table 5.72

Result of Mann-Whitney Test of PL for Ward- Multiple Comparisons

PL for Ward	General Medicine	General Surgery	Urology	Gynecology	Orthopedic	Pediatrics	Nephrology	Neurology
General Medicine		U 19213.000 W 36979.000 Z -2.197 Sig .028	U 8716.500 W 35977.500 Z -.206 Sig .837	U 10285.500 W 37546.500 Z -1.301 Sig .193	U 10269.000 W 15625.000 Z -2.134 Sig .033	U 4211.000 W 4952.000 Z -.488 Sig .626	U 2044.500 W 29305.500 Z -.179 Sig .858	U 1588.500 W 1741.500 Z -1.379 Sig .168
General Surgery			U 6167.500 W 23933.500 Z -1.772 Sig .076	U 7134.000 W 24900.000 Z -3.060 Sig .002	U 9431.500 W 14787.500 Z -.371 Sig .710	U 3294.500 W 21060.500 Z -.768 Sig .443	U 1456.500 W 19222.500 Z -.995 Sig .320	U 1503.500W 1656.500 Z -.412 Sig .680
Urology				U 3403.000 W 6329.000 Z -.880 Sig .379	U 3261.000 W 8617.000 Z -1.939 Sig .052	U 1349.000 W 2090.000 Z -.580 Sig .562	U 681.500 W 852.500 Z -.025 Sig .980	U 512.000 W 665.000 Z -1.366 Sig .172
Gynecology					U 3830.000 W 9186.000 Z -2.890 Sig .004	U 1598.500 W 2339.500 Z -1.212 Sig .226	U 798.000 W 969.000 Z -.587 Sig .557	U 556.500 W 709.500 Z -2.170 Sig .030
Orthopedic						U 1775.000 W 7131.000 Z -.857 Sig .391	U 760.000 W 6116.000 Z -1.241 Sig .215	U 861.000 W 1014.000 Z -.111 Sig .911
Pediatrics							U 316.500 W 1057.500 Z -.456 Sig .648	U 279.000 W 432.000 Z -.816 Sig .414
Nephrology								U 124.000 W 277.000 Z -1.010 Sig .312
Neurology								

(Source: Primary data)

It is found that the significant difference in mean of Patients' Loyalty is found in between General Medicine ward and General Surgery ward (U 19213.000, Z -2.197, Sig .028), between General Medicine ward and Orthopaedic ward (U 10269.000, Z -2.134, Sig .033), between General Surgery ward and Gynaecology ward (U 7134.000, Z -3.060, Sig .002), between Gynaecology ward and Orthopaedic ward (U 3830.000, Z -2.890, Sig .004) and between Gynaecology ward and Neurology ward (U 556.500, Z -2.170, Sig .030). It is inferred that patients in Gynaecology ward show high loyalty and patients in Orthopaedic ward show less loyalty.

5.6.9. Preference of sector wise analysis of Patients' Loyalty

H0: There is no significant difference in Patients' Loyalty among Preferences of sector.

H1: There is significant difference in Patients' Loyalty among Preferences of sector.

Table 5.73

**Descriptive Statistics and Result of
Kruskal-Wallis Test of PL for Preference of sector**

Variable	Preference of sector	N	Mean	SD	Chi-Square	p value
Patients' Loyalty	Govt. Hospitals	275	15.68	2.67	6.716	0.001
	Pvt. Hospitals	202	16.25	2.43		
	Both Govt. and Pvt. Hospitals	293	15.39	2.57		

(Source: Primary data)

It is clear from the table 5.73 that the Mean scores of Patients' Loyalty of patients who prefer Government Hospitals is 15.68 with ϭ = 2.67, patients who prefer Private Hospitals is 16.25 with ϭ = 2.43 and those prefer both Government and Private Hospitals is 15.39 with ϭ = 2.57. From Kruskal-Wallis Test result it is found Chi- Square value is 6.716 with p value 0.001 and the null hypothesis is rejected. It is found that there is significant difference in Patients' Loyalty among Preferences of sector.

Table 5.74

Result of Mann-Whitney Test of PL
for Preference of sector- Multiple Comparisons

PL for Preference of sector	Govt. Hospitals	Pvt. Hospitals	Both Govt. and Pvt. Hospitals
Govt. Hospitals		U 23683.500 W 61633.500 Z -2.796 Sig .005	U 38395.500 W 81466.500 Z -.981 Sig .327
Private Hospitals			U 23487.500 W 66558.500 Z -3.966 Sig .000
Both Govt. and Pvt. Hospitals			

(Source: Primary data)

Table 5.74 presents that result of multiple comparisons analysis. It shows that the difference in the Mean score of Patients' Loyalty is found between patients who prefer Government Hospitals and those who prefer Private Hospitals (U 23683.500, Z -2.796, Sig .005) and between patients who prefer Private Hospitals and those who prefer Both Government and Private Hospitals (U 23487.500, Z -3.966, Sig .000). It is inferred that the patients who prefer Private Hospitals show high loyalty and patients who prefer both Government and Private Hospitals show low loyalty.

5.7.   Demographic analysis of Patients' Complaint Behaviour

Dissatisfied customers who experience service failure will exhibit Complaint Behaviour in many ways. Patients with different demographics may show different level of Complaint Behaviour. Hence the researcher did demographic analysis of Patients' Complaint Behaviour and the results are discussed below.

5.7.1. Age wise analysis of Patients' Complaint Behaviour

H0: There is no significant difference in Patients' Complaint Behaviour among Age groups.

H1: There is significant difference in Patients' Complaint Behaviour among Age groups.

Table 5.75

Descriptive Statistics and Result of Kruskal-Wallis Test of PCB for Age

Variable	*Age*	*N*	*Mean*	*SD*	*Chi-Square*	*p value*
Patients' Complaint Behaviour	Up to 40 yrs.	359	6.43	1.20	24.655	<0.001
	41-60 yrs.	331	6.04	1.16		
	Above 60 yrs.	80	5.84	1.17		

(Source: Primary data)

Table 5.75 shows that Mean score of Patient's Complaint Behaviour of Age group Up to 40 years is 6.43 (σ = 1.20), for Age group 41-60 years, it is 6.04 (σ = 1.16) and for Age group Above 60 years, it is 5.84 (σ = 1.17). The result of Kruskal-Wallis Test shows that Chi- Square value is 24.655 with p value <0.001 and hence the null hypothesis is rejected. So, it is found that there is significant difference in Patients' Complaint Behaviour with Age. Researcher performed a multiple comparisons analysis between the patients of different Age groups and the results are given in the table 5.76.

Table 5.76

Result of Mann-Whitney Test of PCB for Age- Multiple Comparisons

PCB for Age	*Up to 40 yrs.*	*41-60 yrs*	*Above 60 yrs*
Up to 40 yrs.		U 48666.000 W 103612.000 Z -4.263 Sig .000	U 10722.000 W 13962.000 Z -3.671 Sig .000
41-60 yrs.			U 12209.000 W 15449.000 Z -1.124 Sig .261
Above 60 yrs.			

(Source: Primary data)

It is clear from the table 5.76 that the difference in the Mean score of Patients' Complaint Behaviour is found between patients in the Age group Up to 40 years and patients in the Age group 41-60 years (U 48666.000, Z -4.263, Sig .000) and between patients in the age group Up to 40 years and those in the age group Above 60 years (U 10722.000, Z -3.671, Sig .000). It is concluded that the patients in the Age group Up to 40 years show high Complaint Behaviour and patients in the Age group Above 60 years show low Complaint Behaviour.

5.7.2. Gender wise analysis of Patients' Complaint Behaviour

H0: There is no significant difference in Patients' Complaint Behaviour between Genders.

H1: There is significant difference in Patients' Complaint Behaviour between Genders.

Table 5.77

Descriptive Statistics and Result of Mann-Whitney Test of PCB for Gender

Variable	Gender	N	Mean	SD	Z	p value
Patients' Complaint Behaviour	Female	422	6.02	1.16	-4.599	<0.001
	Male	348	6.43	1.22		

(Source: Primary data)

Table 5.77 shows the Mean, Standard Deviation and the result of Mann-Whitney Test of Patients' Complaint Behaviour for Gender. From the table, it is clear that Mean score of Patient's Complaint Behaviour of Female is 6.02 with ϭ = 1.16 when that of Male patients is 6.43 with ϭ = 1.22. Z value obtained from Mann-Whitney Test is -4.599 with p value <0.001. Hence the null hypothesis is rejected. It means that there is significant difference in Patients' Complaint Behaviour with Gender. It is concluded that Male patients show high level of Complaint Behaviour than Female Patients.

5.7.3. Educational qualification wise analysis of Patients' Complaint Behaviour

H0: There is no significant difference in Patients' Complaint Behaviour among Educational Qualifications.

H1: There is significant difference in Patients' Complaint Behaviour among Educational Qualifications.

Table 5.78

**Descriptive Statistics and Result of
Kruskal-Wallis Test of PCB for Educational qualification**

Variable	*Educational qualification*	*N*	*Mean*	*SD*	*Chi-Square*	*p value*
Patients' Complaint Behaviour	Primary Education	397	5.89	1.16	65.066	<0.001
	SSLC	204	6.37	1.11		
	Plus Two	77	6.62	1.08		
	Graduation	69	6.74	1.28		
	Post-Graduation	23	7.13	1.18		

(Source: Primary data)

It is noted from the table 5.78 that the Mean score of Complaint Behaviour of patients who have Primary education is 5.89 with σ =1.16, SSLC is 6.37 with σ =1.11, Plus Two is 6.62 with σ =1.08, Graduation is 6.74 with σ =1.28 and Post-Graduation is 7.13 with σ =1.18. Kruskal-Wallis Test result shows Chi- Square value 65.066 with p value <0.001. Hence the null hypothesis is rejected and it is concluded that there is significant difference in Patients' Complaint Behaviour with Educational qualification.

Table 5.79

**Result of Mann-Whitney Test of
PCB for Educational qualification- Multiple Comparisons**

PCB for Educational qualification	Primary education	SSLC	Plus Two	Graduation	Post-Graduation
Primary education		U 31397.500 W 110400.500 Z -4.690 Sig .000	U 10026.000 W 89029.000 Z -4.965 Sig .000	U 8684.500 W 87687.500 Z -5.027 Sig .000	U 2081.500 W 81084.500 Z -4.551 Sig .000
SSLC			U 6889.500 W 27799.500 Z -1.657 Sig .097	U 5821.500 W 26731.500 Z -2.230 Sig .026	U 1480.000 W 22390.000 Z -3.021 Sig .003
Plus Two				U 2484.000 W 5487.000 Z -.702 Sig .482	U 648.000 W 3651.000 Z -2.030 Sig .042
Graduation					U 651.500 W 3066.500 Z -1.337 Sig .181
Post-Graduation					

(Source: Primary data)

Multiple comparisons analysis has been conducted by the researcher using Mann-Whitney Test and the results are shown in the table 5.79. It is noted from the table that the difference in the Mean score of Patients' Complaint Behaviour is found between patients who have Primary education and those who have SSLC qualification (U 31397.500, Z -4.690, Sig .000), between patients who have Primary education and those who have Plus Two qualification (U 10026.000, Z -4.965, Sig .000), between patients who have Primary education and those who have Graduation (U 8684.500, Z -5.027, Sig .000), between patients who have Primary education and those who have Post-Graduation (U 2081.500, Z -4.551, Sig .000), between patients who have SSLC qualification and those who have Graduation (U 5821.500, Z -2.230, Sig .026), between patients who have SSLC qualification and those who have Post-Graduation (U 1480.000, Z -3.021, Sig .003) and between patients with Plus Two qualification and patients with Post Graduation (U 648.000, Z -2.030, Sig .042). It is inferred that patients who have Post-Graduation show high Complaint

Behaviour while patients who have only Primary education show low Complaint Behaviour.

5.7.4. Occupation wise analysis of Patients' Complaint Behaviour

H0: There is no significant difference in Patients' Complaint Behaviour among Occupations.

H1: There is significant difference in Patients' Complaint Behaviour among Occupations.

Table 5.80

Descriptive Statistics and Result of Kruskal-Wallis Test of PCB for Occupation

Variable	Occupation	N	Mean	SD	Chi-Square	p value
Patients' Complaint Behaviour	Students	33	6.64	1.22	61.012	<0.001
	Daily wage	322	5.97	1.06		
	Salaried	136	6.78	1.13		
	Self employed	86	6.49	1.34		
	Business	53	6.32	1.30		
	Home maker	140	5.87	1.18		

(Source: Primary data)

Table 5.80 exhibits Means, Standard deviation and the result of Kruskal-Wallis Test of Patients' Complaint Behaviour for Occupation. It shows that Patients' Complaint Behaviour varies with their Occupation. The Mean score obtained for patients of different Occupation are Student 6.64 with $\sigma = 1.22$, Daily wage workers 5.97 with $\sigma = 1.06$, Salaried people 6.78 with $\sigma = 1.13$, Self-employed 6.49 with $\sigma = 1.34$, Business persons 6.32 with $\sigma = 1.30$ and Home makers 5.87 with $\sigma = 1.18$. The result of Kruskal-Wallis Test show Chi- Square value 61.012 with p value <0.001 and the null hypothesis is rejected. It is concluded that there is significant difference in Patients' Complaint Behaviour with Occupation. Thus the researcher performed

Mann-Whitney Test for multiple comparisons of Complaint Behaviour of patients with different Occupation. The results are exhibited in the table below.

Table 5.81

Result of Mann-Whitney Test of PCB for Occupation- Multiple Comparisons

PCB for Occupation	Student	Daily wage	Salaried	Self employed	Business	Home makers
Students		U 3688.500 W 55691.500 Z -3.027 Sig .002	U 2100.000 W 2661.000 Z -.596 Sig .551	U 1300.000 W 5041.000 Z -.724 Sig .469	U 757.500 W 2188.500 Z -1.068 Sig .285	U 1545.500 W 11415.500 Z -3.060 Sig .002
Daily wage			U 13320.500 W 65323.500 Z -6.921 Sig .000	U 11073.000 W 63076.000 Z -2.976 Sig .003	U 7176.500 W 59179.500 Z -1.938 Sig .053	U 21724.500 W 31594.500 Z -.648 Sig .517
Salaried				U 4939.500 W 8680.500 Z -2.015 Sig .044	U 2885.000 W 4316.000 Z -2.211 Sig .027	U 5598.000 W 15468.000 Z -6.143 Sig .000
Self employed					U 2169.000 W 3600.000 Z -489 Sig .625	U 4637.500 W 14507.500 Z -2.993 Sig .003
Business						U 3009.500 W 12879.500 Z -2.092 Sig .036
Home makers						

(Source: Primary data)

From the table it is found that there is significant difference in Mean of Patients' Complaint Behaviour between Students and Daily wage workers (U 3688.500, Z -3.027, Sig .002), between Students and Home makers (U 1545.500, Z -3.060, Sig .002), between Daily wage workers and Salaried people (U 13320.500, Z -6.921, Sig .000), between Daily wage workers and Self-employed people (U 11073.000, Z -2.976, Sig .003), between Salaried people and Self-employed people (U 4939.500, Z -2.015, Sig .044), between Salaried people and Business persons (U 2885.000, Z -2.211, Sig .027), between Salaried people and Home makers (U 5598.000, Z -6.143, Sig .000), between Self-employed and Home makers (U 4637.500, Z -2.993, Sig .003) and between Business persons and Home makers (U

3009.500, Z -2.092, Sig .036). It is concluded that Salaried people show high Complaint Behaviour and Home makers show low Complaint Behaviour.

5.7.5. Poverty line wise analysis of Patients' Complaint Behaviour

H0: There is no significant difference in Patients' Complaint Behaviour between Poverty lines.

H1: There is significant difference in Patients' Complaint Behaviour between Poverty lines.

Table 5.82

Descriptive Statistics and Result of Mann-Whitney Test of PCB for Poverty line

Variable	*Poverty line*	*N*	*Mean*	*SD*	*Z*	*p value*
Patient's Complaint Behaviour	APL	376	6.44	1.23	-5.207	<0.001
	BPL	394	5.97	1.12		

(Source: Primary data)

Table 5.82 presents the Mean and Standard Deviation of Patients' Complaint Behaviour with Poverty line and the result of Mann-Whitney Test. It is noted from the table that The Mean score of APL Patients' Complaint Behaviour is 6.44 with σ = 1.23 while that of BPL patients is 5.97 with σ = 1.12. Z value obtained from the Mann-Whitney Test is -5.207 with p value <0.001 and hence the null hypothesis is rejected. It is concluded that there is significant difference in Patients' Complaint Behaviour with Poverty line. It is further inferred that APL patients show high Complaint Behaviour than BPL patients.

5.7.6. Frequency of visit wise analysis of Patients' Complaint Behaviour

H0: There is no significant difference in Patients' Complaint Behaviour between Frequencies of visit.

H1: There is significant difference in Patients' Complaint Behaviour between Frequencies of visit.

Table 5.83

**Descriptive Statistics and Result of
Mann-Whitney Test of PCB for Frequency of visit**

Variable	*Frequency of visit*	*N*	*Mean*	*SD*	*Z*	*p value*
Patients' Complaint Behaviour	First time	302	6.10	1.20	-2.049	0.040
	More than once	468	6.27	1.20		

(Source: Primary data)

Mean and Standard Deviation of Patients' Complaint Behaviour with Frequency of visit and the result of Mann-Whitney Test are shown in the table 5.83. The Mean score of Complaint Behaviour of patients who are admitted for the First time is 6.10 with $\sigma = 1.20$ and of those who are admitted for More than once is 6.27 with $\sigma = 1.20$. The result of Mann Whitney Test shows a Z value -2.049 with p value 0.040. Hence the null hypothesis is rejected. It is found that there is significant difference in Patients' Complaint Behaviour with Frequency of visit. Therefore it can be concluded that Patients who are admitted for More than once show high Complaint Behaviour than those who are admitted for the First time.

5.7.7. Duration of stay wise analysis of Patients' Complaint Behaviour

H0: There is no significant difference in Patients' Complaint Behaviour among Durations of stay.

H1: There is significant difference in Patients' Complaint Behaviour among Durations of stay.

Table 5.84

**Descriptive Statistics and Result of
Kruskal-Wallis Test of PCB for Duration of stay**

Variable	*Duration of stay*	*N*	*Mean*	*SD*	*Chi-Square*	*p value*
Patients' Complaint Behaviour	Up to 10 days	671	6.17	1.22	5.401	0.145
	11-30 days	79	6.48	1.06		
	31-50 days	12	6.33	0.78		
	Above 50 days	8	6.13	0.35		

(Source: Primary data)

Table 5.84 depicts the Duration of stay wise analysis of Patients' Complaint Behaviour. It shows that the Mean score of Complaint Behaviour of patients who have stayed in the hospital Up to 10 days is 6.17 with $\sigma = 1.22$, 11-30 days is 6.48 with $\sigma = 1.06$, 31-50 days is 6.33 with $\sigma = 0.78$ and Above 50 days is 6.13 with $\sigma = 0.35$. The result of Kruskal-Wallis shows a Chi-Square value 5.401 with p value 0.145. Hence, the null hypothesis is accepted and it is found that there is no significant difference in Patients' Complaint Behaviour with Duration of stay.

5.7.8. Ward wise analysis of Patients' Complaint Behaviour

H0: There is no significant difference in Patients' Complaint Behaviour among Wards.

H1: There is significant difference in Patients' Complaint Behaviour among Wards.

Table 5.85

Descriptive Statistics and Result of Kruskal-Wallis Test of PCB for Ward

Variable	Ward	N	Mean	SD	Chi-Square	p value
Patients' Complaint Behaviour	General medicine	233	6.20	1.21	14.310	0.046
	General Surgery	188	6.23	1.09		
	Urology	76	6.20	1.32		
	Gynecology	97	6.40	1.19		
	Orthopedic	103	6.46	1.23		
	Pediatrics	38	6.32	1.12		
	Nephrology	18	6.22	1.11		
	Neurology	17	5.82	1.42		

(Source: Primary data)

Table 5.85 shows the Ward wise analysis of Patients' Complaint Behaviour. The Mean of Complaint Behaviour of patients admitted in General Medicine ward, General Surgery ward, Urology ward, Gynaecology ward, Orthopaedic ward, Paediatrics ward, Nephrology ward and Neurology ward are 6.20 (σ =1.21), 6.23 (σ = 1.09), 6.20 (σ = 1.32), 6.40 (σ = 1.19), 6.46 (σ = 1.23), 6.32 (σ = 1.12), 6.22 (σ =

1.11) and 5.82 (ϭ = 1.42) respectively. The result of Kruskal-Wallis Test shows a Chi-Square value 14.310 with p value 0.046. Hence the null hypothesis is rejected. It means that there is significant difference in Patients' Complaint Behaviour with Ward. Researcher conducted Mann Whitney Tests for multiple comparisons analysis and the results are shown in the table below.

Table 5.86

Result of Mann-Whitney Test of PCB for Ward- Multiple Comparisons

PCB for Ward	General Medicine	General Surgery	Urology	Gynecology	Orthopedic	Pediatrics	Nephrology	Neurology
General medicine		U 19728.500 W 46989.500 Z -1.828 Sig .068	U 7983.000 W 35244.000 Z -1.331 Sig .183	U 9362.000 W 36623.000 Z -2.546 Sig .011	U 9571.000 W 36832.000 Z -3.062 Sig .002	U 3740.000 W 31001.000 Z -1.586 Sig .113	U 1893.500 W 29154.500 Z -.709 Sig .478	U 1860.000 W 2013.000 Z -.433 Sig .665
General Surgery			U 7089.000 W 24855.000 Z -.103 Sig .918	U 8398.500 W 26164.500 Z -1.147 Sig .251	U 8586.000 W 26352.000 Z -1.675 Sig .094	U 3352.500 W 21118.500 Z -.626 Sig .531	U 1679.500 W 1850.500 Z -.054 Sig .925	U 1350.000 W 1503.000 Z -1.114 Sig .265
Urology				U 3450.500 W 6376.500 Z -.746 Sig .456	U 3521.000 W 6447.000 Z -1.186 Sig .235	U 1384.000 W 4310.000 Z -.371 Sig .711	U 674.500 W 845.500 Z -.094 Sig .925	U 549.000 W 702.000 Z -.990 Sig .322
Gynecology					U 4802.500 W 9555.500 Z -.490 Sig .624	U 1810.500 W 2551.500 Z -.165 Sig .869	U 803.500 W 974.500 Z -.554 Sig .580	U 644.000 W 797.000 Z -1.488 Sig .137
Orthopedic						U 1830.000 W 2571.000 Z -.610 Sig .542	U 810.500 W 981.500 Z -.876 Sig .381	U 656.500 W 809.500 Z -1.7-05 Sig .088
Pediatrics							U 324.000 W 495.000 Z -.329 Sig .742	U 257.000 W 412.000 Z -1.203 Sig .229
Nephrology								U 130.000 W 283.000 Z -.786 Sig .432
Neurology								

(Source: Primary data)

From the table 5.86, it is clear that the Mean difference is significant in between General Medicine ward and Gynaecology ward (U 9362.000, Z -2.546, Sig .011) and in between General Medicine ward and Orthopaedic ward (U 9571.000, Z -3.062, Sig .002). It is concluded that patients in Orthopaedic ward show high Complaint Behaviour and patients in General Medicine ward show low Complaint Behaviour.

5.7.9. Preference of sector wise analysis of Patients' Complaint Behaviour

H0: There is no significant difference in Patients' Complaint Behaviour among Preferences of sector.

H1: There is significant difference in Patients' Complaint Behaviour among Preferences of sector.

Table 5.87

**Descriptive Statistics and Result of
Kruskal-Wallis Test of PCB for Preference of sector**

Variable	Preference of sector	N	Mean	SD	Chi-Square	p value
Patients' Complaint Behaviour	Govt. hospitals	275	6.12	1.01	6.627	0.001
	Pvt. hospitals	202	6.47	1.23		
	Both Govt. and Pvt. Hospitals	293	6.10	1.31		

(Source: Primary data)

Table 5.87 presents the Preference of sector wise analysis of Patients' Complaint Behaviour. It is noted from the table that the Mean scores of Patients' Complaint Behaviour of those who prefer Government Hospitals is 6.12 with $\sigma = 1.01$, patients who prefer Private Hospitals is 6.47 with $\sigma = 1.23$ and those who prefer Both Government and Private Hospitals is 6.10 with $\sigma = 1.31$. It is further noted from the table that Chi-Square value obtained from Kruskal-Wallis Test is 6.627 with p value 0.001. Hence the null hypothesis is rejected. It is found that there is significant difference in Patients Complaint Behaviour among Preferences of sector.

Table 5.88

Result of Mann-Whitney Test of
PCB for Preference of sector- Multiple Comparisons

PCB for Preference of sector	Govt. Hospitals	Pvt. Hospitals	Both Govt. and Pvt. Hospitals
Govt. Hospitals		U 22930.500 W 60880.500 Z -3.388 Sig .001	U 39856.000 W 82927.000 Z -.229 Sig .819
Pvt. Hospitals			U 24764.000 W 67835.000 Z -3.189 Sig .001
Both Govt. and Pvt. Hospitals			

(Source: Primary data)

Table 5.88 shows the result of Mann-Whitney Tests conducted for multiple comparisons of Patients' Complaint Behaviour of patients with different Preference of sector. It is clear from the table that the difference in the Mean score of Patients' Complaint Behaviour is found between patients who prefer Government Hospitals and those who prefer Private Hospitals (U 22930.500, Z -3.388, Sig .001) and between patients who prefer Private Hospitals and those who prefer Both Government and Private Hospitals (U 24764.000, Z -3.189, Sig .001). It is concluded that patients who prefer Private Hospitals show high Complaint Behaviour and patients who prefer Both Government and Private Hospitals show low Complaint Behaviour.

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PERCEIVED SERVICE QUALITY AND PATIENTS' SATISFACTION - COMPARISON BETWEEN GOVERNMENT MEDICAL COLLEGE HOSPITALS AND PRIVATE MEDICAL COLLEGE HOSPITALS

CHAPTER 6

PERCEIVED SERVICE QUALITY AND PATIENTS' SATISFACTION – COMPARISON BETWEEN GOVERNMENT MEDICAL COLLEGE HOSPITALS AND PRIVATE MEDICAL COLLEGE HOSPITALS

6.1.   Perceived Service Quality in Government and Private Medical College Hospitals

The first objective of the study was to compare the patients' perception on service quality in government and private medical college hospitals. Perceived Service Quality is the quality of services perceived/experienced by patients during hospital stay. Researcher has done the comparative analysis on overall Perceived Service Quality and on each dimensions of Perceived Service Quality. Since the data being non-normal, researcher used Mann-Whitney Test to compare the score of Government Medical College Hospitals and Private Medical College Hospitals and results are discussed under.

6.1.1. Patients' Perception on Service Quality

The respondents were asked a set of 51 questions in the five point Likert scale regarding the various aspects of the service quality in the hospitals.   The responses are then scored as 1 for 'Strongly Disagree', 2 for 'Disagree', 3 for 'Neutral', 4 for 'Agree' and 5 for 'Strongly Agree'. The total score of the questions for   all   770   respondents   is   found   out,   based   on   which

the $$MPS = \frac{\text{Mean score of the variable} \times 100}{\text{Maximum possible score}}$$ of the Perceived Service Quality is

calculated. This score is classified into one of the five groups as 'Poor' if the Mean Percentage Score is less than 20 %, 'Fair' if the Mean Percentage Score is between 20 % to 40 %, 'Good' if the Mean Percentage Score lies in the interval 40 % to 60 %, 'Very good' if the Mean Percentage Score lies in the interval 60 % to 80 % and 'Excellent' if the Mean Percentage Score is above 80 %.

Table 6.1

Level of Perceived Service Quality

Sector of MCHs	N	Mean	SD	MPS	CV	Level of PSQ
Government	385	209.17	25.04	82.02	11.97	Excellent
Private	385	232.58	16.80	91.20	7.22	Excellent

(Source: Primary data)

Table 6.1 shows that the Mean Percentage Score of the Perceived Service Quality for the Government Medical College Hospitals is 82.02 % and that of Private Medical College Hospitals is 91.20 %. It indicates that level of Perceived Service quality is excellent for both Government Medical College Hospitals and Private Medical College Hospitals. The CV$= \dfrac{\text{Standard deviation}*100}{\text{Mean}}$ indicate that this score is stable as the value is less than 20%. Here CV for Government Medical College Hospitals is 11.97 and that for Private Medical College Hospitals is 7.22. Hence the values are stable.

Though patients of Medical College Hospitals in both sectors reported excellent level of Perceived Service Quality, Mean score is higher to Private Medical College Hospitals than Government Medical College Hospitals. Hence there is a need to Test whether the difference in Mean of Perceived Service Quality is statistically significant or not. For that the following hypothesis is formulated.

H0: There is no significant difference in Perceived Service Quality between Sectors.

H1: There is significant difference in Perceived Service Quality between Sectors.

Mann-Whitney Test is performed and the result is exhibited in the following Table.

Table 6.2

Result of Mann-Whitney Test of Perceived Service Quality for Sector

Variable	*Sector of MCHs*	*N*	*Means*	*SD*	*Z*	*p value*
Perceived Service Quality	Government	385	209.17	25.04	-14.608	<0.001
	Private	385	232.58	16.80		

(Source: Primary data)

Table 6.2 depicts that the Mean score of the Perceived Service Quality of the Government Medical College Hospitals is 209.17 with ϭ 25.04 and that of Private Medical College Hospitals is 232.58 with ϭ 16.80, which indicate that the Mean score of Perceived Service Quality for the Private Medical College hospitals is higher than the Government Medical College Hospitals. The Mann-Whitney Test conducted to find out whether this variation is significant or not is found significant as the p value is <0.001. Hence the null hypothesis is rejected. So it can be concluded that Private Medical College Hospitals have more Perceived Service Quality than Government Medical College Hospitals. The following box plot gives the spread and variation of the Perceived Service Quality of the Government and Private Medical College Hospitals.

Figure 6.1

Box Plot of Perceived Service Quality
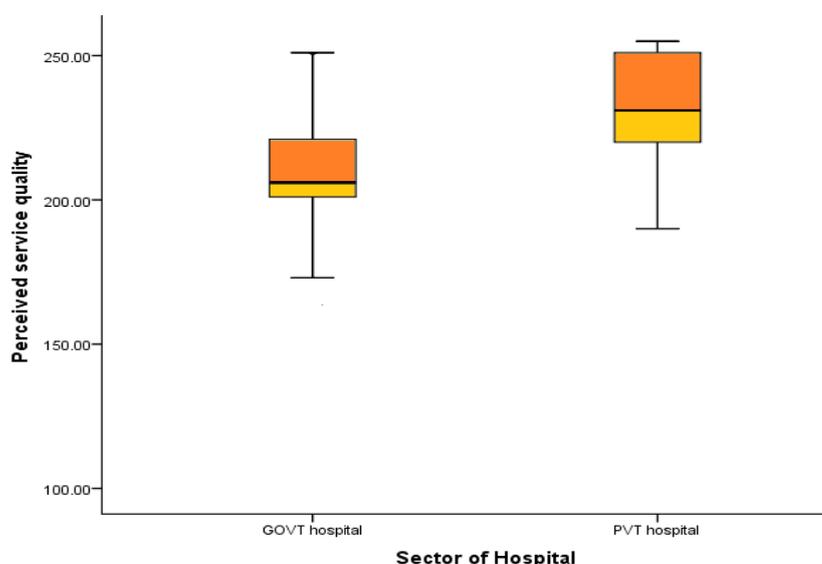
Since there is significant difference in Perceived Service Quality of Government and Private Medical College Hospitals, it is essential to perform comparative analyses on each dimensions of Service Quality. The results of the analyses are discussed below.

6.1.2. Patients' Perception on Reliability

The respondents were asked a set of 2 questions in the five point Likert scale regarding different aspects of Reliability. The responses are then scored as 1 for 'Strongly Disagree', 2 for 'Disagree', 3 for 'Neutral', 4 for 'Agree' and 5 for 'Strongly Agree'. The total score of the questions for all 770 respondents is found out, based on which the Mean Percentage Score of Reliability is calculated. This score is classified into one of the five groups as 'Poor' if the Mean Percentage Score is less than 20 %, 'Fair' if the Mean Percentage Score is between 20 % to 40 %, 'Good' if the Mean Percentage Score lies in the interval 40 % to 60 %, 'Very good' if the Mean Percentage Score lies in the interval 60 % to 80 % and 'Excellent' if the Mean Percentage Score is above 80 %.

Table 6.3

Level of Reliability

Sector of MCHs	N	Mean	SD	MPS	CV	Level of Reliability
Government	385	8.40	1.25	84.00	14.88	Excellent
Private	385	9.20	0.86	92.00	9.35	Excellent

(Source: Primary data)

From the table 6.3, it is noted that the Mean Percentage Score of the Reliability of Government Medical College Hospitals is 84% and that of Private Medical College Hospitals is 92 %. It indicates that level of Reliability is Excellent for both Government Medical College Hospitals and Private Medical College Hospitals. The CV indicates that these scores are stable as the values are less than 20%.

Though patients of Medical College Hospitals in both sectors reported excellent level of Reliability, Mean score is higher for Private Medical College Hospitals than Government Medical College Hospitals. Hence there is a need to Test whether Reliability significantly varies between sectors. For that the following hypothesis is formulated.

H0: There is no significant difference in Reliability between Sectors.

H1: There is significant difference in Reliability between Sectors.

Mann-Whitney Test is performed and the result is exhibited in the following Table.

Table 6.4

Result of Mann-Whitney Test of Reliability for Sector

Variable	*Sector of MCHs*	*N*	*Mean*	*SD*	*Z*	*p value*
Reliability	Government	385	8.40	1.25	-10.334	<0.001
	Private	385	9.20	0.86		

(Source: Primary data)

Table 6.4 shows the Mean and Standard Deviation, Z value and p value of Mann-Whitney Test. Patients in Private Medical College Hospitals perceive high Reliability (Mean 9.20 with σ 0.86) than the patients in Government Medical College hospital (Mean 8.40 with σ 1.25). The result of the Mann-Whitney Test shows Z value -10.334 with p value <0.001. Hence the null hypothesis is rejected and it is concluded that the difference is statistically significant. It concludes that Private medical college hospitals are more reliable than Government Medical College Hospitals. The following box plot gives the spread and variation of the Reliability of the Government and Private Medical College Hospitals.

Figure 6.2

Box Plot - Reliability
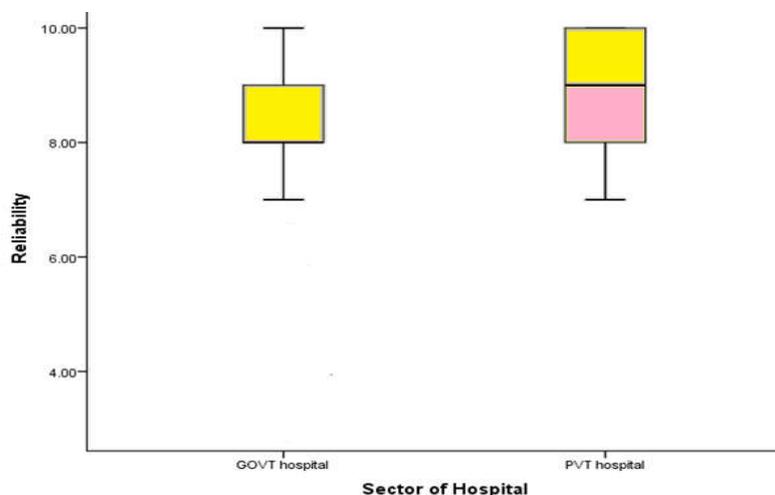
6.1.3. Patients' Perception on Assurance

The respondents were asked a set of 5 questions in the five point Likert scale regarding the different aspects of Assurance. The responses are then scored as 1 for 'Strongly Disagree', 2 for 'Disagree', 3 for 'Neutral', 4 for 'Agree' and 5 for 'Strongly Agree'. The total score of the questions for all 770 respondents is found out, based on which the Mean Percentage Score of Assurance is calculated. This score is classified into one of the five groups as 'Poor' if the Mean Percentage Score is less than 20 %, 'Fair' if the Mean Percentage Score is between 20 % to 40 %, 'Good' if the Mean Percentage Score lies in the interval 40 % to 60 %, 'Very good' if the Mean Percentage Score lies in the interval 60 % to 80 % and 'Excellent' if the Mean Percentage Score is above 80 %.

Table 6.5

Level of Assurance

Sector of MCHs	N	Mean	SD	MPS	CV	Level of Assurance
Government	385	21.15	3.09	84.6	14.61	Excellent
Private	385	22.35	2.01	89.4	8.99	Excellent

(Source: Primary data)

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It is noted from the table 6.4 that the Mean Percentage Score of Assurance of Government Medical College Hospitals is 84.6% and that of Private Medical College Hospitals is 89.4%. It indicates that level of Assurance is Excellent for both Government and Private Medical College Hospitals. The CV indicates that these scores are stable as the values are less than 20%.

Though patients of Medical College Hospitals in both sectors reported excellent level of Assurance, Mean score is higher to Private Medical College Hospitals than Government Medical College Hospitals. Hence it is needed to Test whether Assurance significantly varies between sectors. The following hypothesis is formulated.

H0: There is no significant difference in Assurance between Sectors.

H1: There is significant difference in Assurance between Sectors.

Mann-Whitney Test is performed and the result is exhibited in the following Table.

Table 6.6

Result of Mann-Whitney Test of Assurance for Sector

Variable	Sector of MCHs	N	Mean	SD	Z	p value
Assurance	Government	385	21.15	3.09	-6.420	<0.001
	Private	385	22.35	2.01		

(Source: Primary data)

From the table 6.6, it is clear that the Mean score of Assurance of Government Medical College Hospitals is 21.15 with σ 3.09 and that of Private Medical College Hospitals is 22.35 with σ 2.01. It indicates that the Mean score of Assurance for the Private Medical College Hospitals is higher than the Government Medical College Hospitals. Z value (-6.420) resulted from Mann-Whitney Test conducted to find out whether this variation is significant or not is found significant as the p value is <0.001. So the null hypothesis is rejected and it is concluded that

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the Private Medical College Hospitals assure more than Government Medical College Hospitals. The following box plot gives the spread and variation of the Assurance of the Government and Private Medical College Hospitals.

Figure 6.3

Box Plot - Assurance

6.1.4. Patients' Perception on Empathy

The respondents were asked a set of 2 questions in the five point Likert scale regarding different aspects of Empathy. The responses are then scored as 1 for 'Strongly Disagree', 2 for 'Disagree', 3 for 'Neutral', 4 for 'Agree' and 5 for 'Strongly Agree'. The total score of the questions for all 770 respondents is found out, based on which the Mean Percentage Score of Empathy is calculated. This score is classified into one of the five groups as 'Poor' if the Mean Percentage Score is less than 20 %, 'Fair' if the Mean Percentage Score is between 20 % to 40 %, 'Good' if the Mean Percentage Score lies in the interval 40 % to 60 %, 'Very good' if the Mean Percentage Score lies in the interval 60 % to 80 % and 'Excellent' if the Mean Percentage Score is above 80 %.

Table 6.7

Level of Empathy

Sector of MCHs	N	Mean	SD	MPS	CV	Level of Empathy
Government	385	8.40	1.31	84	15.59	Excellent
Private	385	9.09	0.92	90.9	10.12	Excellent

(Source: Primary data)

The Mean Percentage Score of Empathy of Government Medical College Hospitals is 84 % and that of Private Medical College Hospitals is 90.9 %. It indicates that level of Empathy is Excellent for both Government and Private Medical College Hospitals. The CV indicates that these scores are stable as the values are less than 20%.

Though patients of Medical College Hospitals in both sectors reported excellent level of Empathy, Mean score is higher to Private Medical College Hospitals than Government Medical College Hospitals. Hence it is needed to Test whether the Empathy significantly varies between sectors. For that the following hypothesis is formulated.

H0: There is no significant difference in Empathy between Sectors.

H1: There is significant difference in Empathy between Sectors.

Mann-Whitney Test is performed and the result is exhibited in the following Table.

Table 6.8

**Result of Mann-Whitney Test of Empathy for Sector**

Variables	Sector of MCHs	N	Mean	SD	Z	p value
Empathy	Government	385	8.40	1.31	-8.520	<0.001
	Private	385	9.09	0.92		

(Source: Primary data)

Table 6.8 shows the Mean, Standard Deviation and the result of Mann-Whitney Test of Empathy for sector. Mean score of Empathy of Private Medical College Hospitals (9.20 with ϭ 0.86) is higher than that of Government Medical College Hospitals (8.40 with ϭ 1.25). The result of the Mann-Whitney Test indicates that the Z value -8.520 is significant as the p value is <0.001. Hence the null hypothesis is rejected and it is concluded that the Mean difference is statistically significant. It reveals that Private Medical College Hospitals show more Empathy than Government Medical College Hospitals. Figure 6.4 shows the box plot showing the spread and variation of Empathy of the Government and Private Medical College Hospitals.

Figure 6.4

Box Plot - Empathy
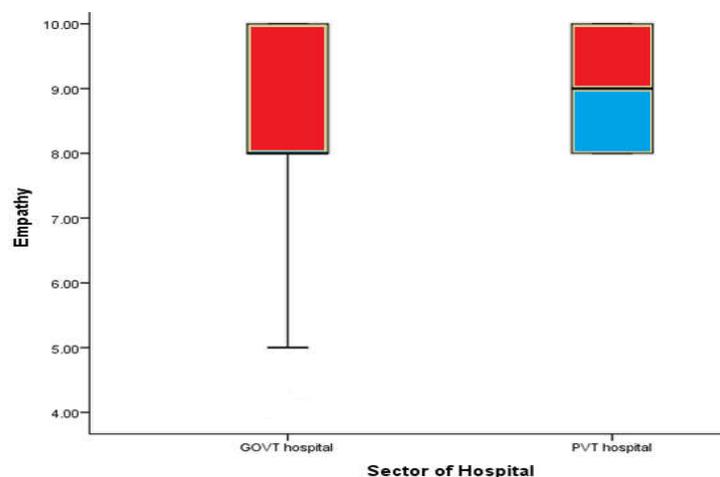
6.1.5. Patients' perception on Physical Environment

The respondents were asked a set of 5 questions in the five point Likert scale regarding different aspects of Physical Environment. The responses are then scored as 1 for 'Strongly Disagree', 2 for 'Disagree', 3 for 'Neutral', 4 for 'Agree' and 5 for 'Strongly Agree'. The total score of the questions for all 770 respondents is found out, based on which the Mean Percentage Score of Physical Environment is calculated. This score is classified into one of the five groups as 'Poor' if the Mean

Percentage Score is less than 20 %, 'Fair' if the Mean Percentage Score is between 20 % to 40 %, 'Good' if the Mean Percentage Score lies in the interval 40 % to 60 %, 'Very good' if the Mean Percentage Score lies in the interval 60 % to 80 % and 'Excellent' if the Mean Percentage Score is above 80 %.

Table 6.9

Level of Physical Environment

Sector of MCHs	*N*	*Mean*	*SD*	*MPS*	*CV*	*Level of Physical Environment*
Government	385	19.76	3.18	79.04	16.09	Very good
Private	385	23.36	1.70	93.44	7.27	Excellent

(Source: Primary data)

The Mean Percentage Score of the Physical Environment for the Government Medical College Hospitals is 79.04 % and that of Private Medical College Hospitals is 93.44 %. It indicates that level of Physical Environment is Very good in Government Medical College Hospitals while it is Excellent in Private Medial College Hospitals. The CV indicates that these scores are stable as the values are less than 20%.

As the patients of Government Medical College Hospitals reported very good level of Physical Environment and patients in Private Medical College Hospitals reported Excellent level of Physical Environment, it is needed to Test whether the mean difference of Physical Environment is significant or not. For that the following Hypothesis is formulated.

H0: There is no significant difference in Physical Environment between Sectors.

H1: There is significant difference in Physical Environment between Sectors.

Mann-Whitney Test is performed and the result is exhibited in the following Table.

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Table.6.10

Result of Mann-Whitney Test of Physical Environment for Sector

Variables	*Sector of MCHs*	*N*	*Mean*	*SD*	*Z*	*p value*
Physical Environment	Government	385	19.76	3.18	-19.583	<0.001
	Private	385	23.36	1.70		

(Source: Primary data)

From the table 6.10, it is clear that the Mean score of the Physical Environment of the Government Medical College Hospitals is 19.76 with ϭ 3.18 and that of Private Medical College Hospitals is 23.36 with ϭ 1.70. It specifies that the Mean score of Physical Environment of the Private Medical College Hospitals is higher than the Government Medical College Hospitals. Z value (-19.583) resulted from Mann-Whitney Test conducted to find out whether this variation is significant or not is found significant as the p value is <0.001. Hence the null hypothesis is rejected and it is concluded that Physical Environment of Private Medical College Hospitals is better than Government Medical College Hospitals. Figure 6.5 shows the box plot showing the spread and variation of the Physical Environment of the Government and Private Medical College Hospitals.

Figure 6.5

Box Plot - Physical Environment

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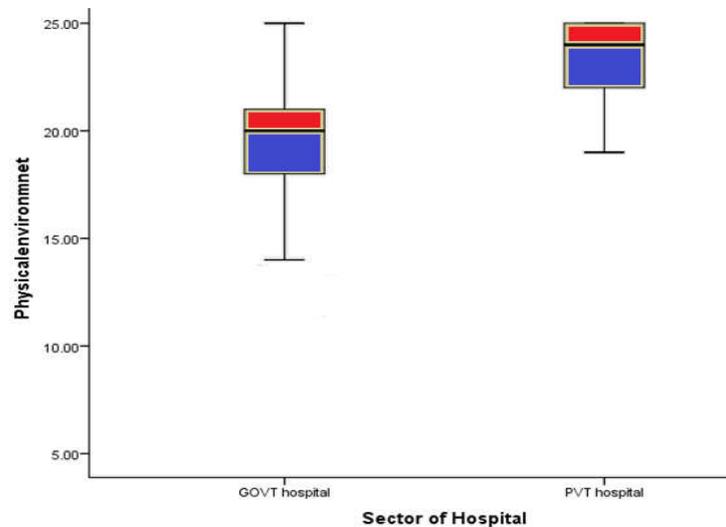
6.1.6. Patients' perception on Responsiveness

The respondents were asked a set of 3 questions in the five point Likert scale regarding different aspects of Responsiveness. The responses are then scored as 1 for 'Strongly Disagree', 2 for 'Disagree', 3 for 'Neutral', 4 for 'Agree' and 5 for 'Strongly Agree'. The total score of the questions for all 770 respondents is found out, based on which the Mean Percentage Score of Responsiveness is calculated. This score is classified into one of the five groups as 'Poor' if the Mean Percentage Score is less than 20 %, 'Fair' if the Mean Percentage Score is between 20 % to 40 %, 'Good' if the Mean Percentage Score lies in the interval 40 % to 60 %, 'Very good' if the Mean Percentage Score lies in the interval 60 % to 80 % and 'Excellent' if the Mean Percentage Score is above 80 %.

Table 6.11

Level of Responsiveness

Sector of MCHs	N	Mean	SD	MPS	CV	Level of Responsiveness
Government	385	12.30	1.77	82	14.39	Excellent
Private	385	13.64	1.31	90.93	9.60	Excellent

(Source: Primary data)

It is noted from the table 6.11 that the Mean Percentage Score of the Responsiveness of Government Medical College Hospitals is 82 % and that of Private Medical College Hospitals is 90.93%. It indicates that level of Responsiveness is Excellent for both Government and Private Medical College Hospitals. The CV indicates that these scores are stable as the values are less than 20%.

Though patients of Medical College Hospitals in both sectors reported excellent level of Responsiveness, Mean score is higher to Private Medical College Hospitals than Government Medical College Hospitals. Hence it is needed to Test whether the Responsiveness significantly varies between sectors. The following hypothesis is formulated.

H0: There is no significant difference in Responsiveness between Sectors.

H1: There is significant difference in Responsiveness between Sectors.

Mann-Whitney Test is performed and the result is exhibited in the following Table.

Table 6.12

Result of Mann-Whitney Test of Responsiveness for Sector

Variable	*Sector of MCHs*	*N*	*Mean*	*SD*	*Z*	*p value*
Responsiveness	Government	385	12.30	1.77	-11.937	<0.001
	Private	385	13.64	1.31		

(Source: Primary data)

Table 6.12 shows the Mean, Standard Deviation and the result of Mann-Whitney Test of Responsiveness for Sector. Mean score of Responsiveness of Private Medical College Hospitals is 13.64 with ϭ 1.31 and it is 12.30 with ϭ 1.77 in Government Medical College Hospitals. The result of Mann-Whitney Test indicates that the Z value -11.937 is significant (P value <0.001). So the null hypothesis is rejected and it is concluded that Responsiveness statistically differs between Government and Private Medical College Hospitals. It reveals that Private Medical College Hospitals are more responsive than Government Medical College Hospitals. Figure 6.6 presents the box plot showing the spread and variation of the Responsiveness of the Government and Private Medical College Hospitals.

Figure 6.6

Box Plot- Responsiveness
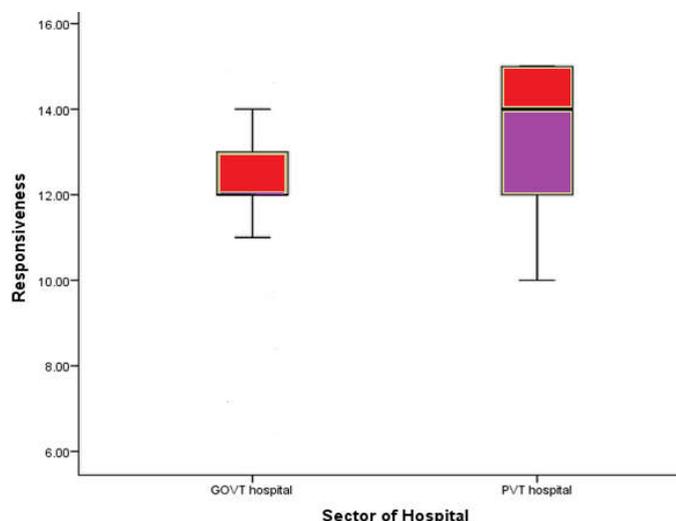
6.1.7. Patients' perception on Interaction

The respondents were asked a set of 5 questions in the five point Likert scale regarding different aspects of Interaction. The responses are then scored as 1 for 'Strongly Disagree', 2 for 'Disagree', 3 for 'Neutral', 4 for 'Agree' and 5 for 'Strongly Agree'. The total score of the questions for all 770 respondents is found out, based on which the Mean Percentage Score of Interaction is calculated. This score is classified into one of the five groups as 'Poor' if the Mean Percentage Score is less than 20 %, 'Fair' if the Mean Percentage Score is between 20 % to 40 %, 'Good' if the Mean Percentage Score lies in the interval 40 % to 60 %, 'Very good' if the Mean Percentage Score lies in the interval 60 % to 80 % and 'Excellent' if the Mean Percentage Score is above 80 %.

Table 6.13

Level of Interaction

Sector of MCHs	N	Mean	SD	MPS	CV	Level of Interaction
Government	385	20.74	2.97	82.96	14.32	Excellent
Private	385	22.29	2.30	89.16	10.31	Excellent

(Source: Primary data)

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It is noted from the table 6.13 that the Mean Percentage Score of Interaction of Government Medical College Hospitals is 82.96 % and that of Private Medical College Hospitals is 89.16 % which indicate that level of Interaction is Excellent in both Government and Private Medical College Hospitals. The CV indicates that these scores are stable as the values are less than 20%.

Though patients of Medical College Hospitals in both sectors reported excellent level of Interaction, Mean score is higher to Private Medical College Hospitals than Government Medical College Hospitals. Hence there is a need to Test whether the Interaction significantly varies between the sectors. For that the researcher formulated the following Hypothesis.

H0: There is no significant difference in Interaction between Sectors.

H1: There is significant difference in Interaction between Sectors.

Mann-Whitney Test is performed and the result is exhibited in the following Table.

Table 6.14

Result of Mann-Whitney Test of Interaction for Sector

Variable	*Sector of MCHs*	*N*	*Mean*	*SD*	*Z*	*p value*
Interaction	Government	385	20.74	2.97	-8.096	<0.001
	Private	385	22.29	2.30		

(Source: Primary data)

It is noted from the table 6.14 that the Mean score of Interaction of Government Medical College Hospitals is 20.74 with ϭ 2.97 while that of Private Medical College Hospitals is 22.29 with ϭ 2.30. Z value obtained in Mann-Whitney Test is -8.096 with p value <0.001. Hence the null hypothesis is rejected. It is found that there is significant difference in Interaction between the sectors. It reveals that Interaction of Private Medical College Hospitals is better than Government Medical College Hospitals. Figure 6.7 presents the box plot showing the spread and variation of the Interaction of the Government and Private Medical College Hospitals.

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Figure 6.7

Box Plot - Interaction
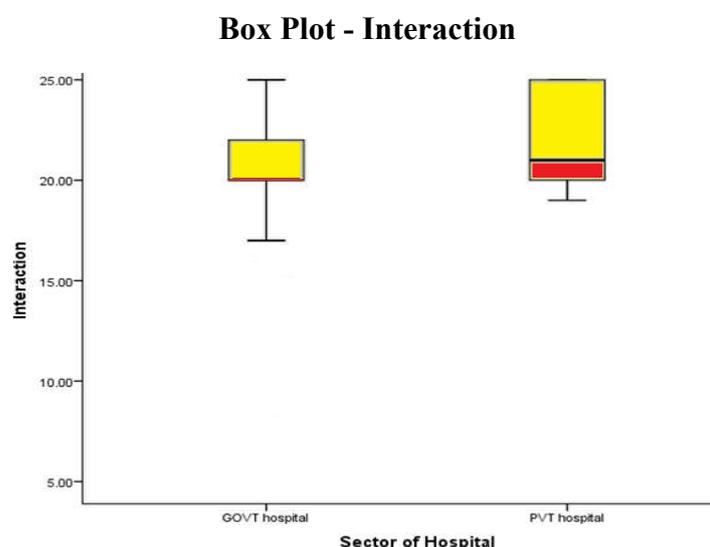
6.1.8. Patients' perception on Communication

The respondents were asked a set of 7 questions in the five point Likert scale regarding different aspects of Communication. The responses are then scored as 1 for 'Strongly Disagree', 2 for 'Disagree', 3 for 'Neutral', 4 for 'Agree' and 5 for 'Strongly Agree'. The total score of the questions for all 770 respondents is found out, based on which the Mean Percentage Score of Communication is calculated. This score is classified into one of the five groups as 'Poor' if the Mean Percentage Score is less than 20 %, 'Fair' if the Mean Percentage Score is between 20 % to 40 %, 'Good' if the Mean Percentage Score lies in the interval 40 % to 60 %, 'Very good' if the Mean Percentage Score lies in the interval 60 % to 80 % and 'Excellent' if the Mean Percentage Score is above 80 %.

Table 6.15

Level of communication

Sector of MCHs	N	Mean	SD	MPS	CV	Level of Communication
Government	385	28.61	3.78	81.74	13.21	Excellent
Private	385	31.08	2.94	88.8	9.46	Excellent

(Source: Primary data)

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From the table 6.15 it is clear that the Mean Percentage Score of Communication of Government Medical College Hospitals is 81.74% and that of Private Medical College Hospitals is 88.8%. It indicates that level of Communication is Excellent for both Government and Private Medical college Hospitals. The CV indicates that these scores are stable as the values are less than 20%.

Though the patients of Medical College Hospitals in both sector reported excellent level of Communication, Mean score is higher to Private Medical College Hospitals than Government Medical College Hospitals. Hence it is needed to Test whether the Communication significantly varies between sectors. For that the researcher formulated the following hypothesis.

H0: There is no significant difference in Communication between Sectors.

H1: There is significant difference in Communication between Sectors.

Mann-Whitney Test is performed and the result is exhibited in the following Table.

Table 6.16

Result of Mann-Whitney Test of Communication for Sector

Variable	Sector of MCHs	N	Mean	SD	Z	p value
Communication	Government	385	28.61	3.78	-10.130	<0.001
	Private	385	31.08	2.94		

(Source: Primary data)

From the table 6.16, it is clear that the Mean score of Communication of Government Medical College Hospitals is 28.61 with ϭ 3.78 and that of Private Medical College Hospitals is 31.08 with ϭ 2.94. It specifies that the Mean score of Communication of the Private Medical College Hospitals is higher than that of Government Medical College Hospitals. Z value (-10.130) resulted from Mann-Whitney Test conducted to find out whether this variation is significant or not is found significant as the p value is <0.001. Hence the null hypothesis is rejected and

it is concluded that Communication in Private Medical College Hospitals is better than Government Medical College Hospitals. Figure 6.8 presents the box plot showing the spread and variation of Communication of Government and Private Medical College Hospitals.

Figure 6.8

Box Plot - Communication
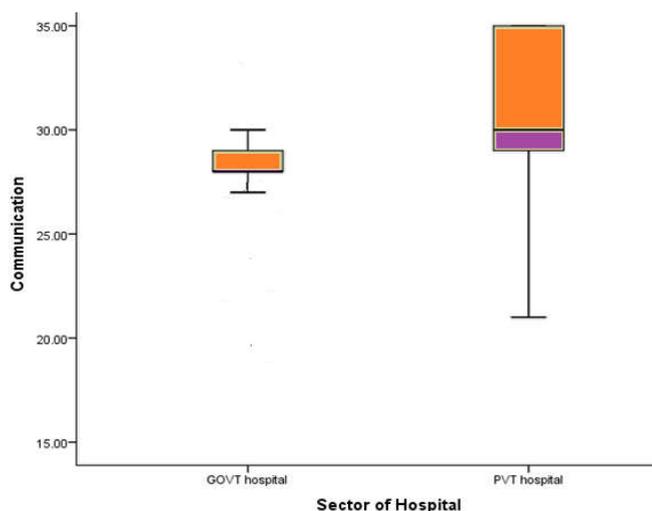
6.1.9. Patients' perception on Availability

The respondents were asked a set of 4 questions in the five point Likert scale regarding different aspects of Availability. The responses are then scored as 1 for 'Strongly Disagree', 2 for 'Disagree', 3 for 'Neutral', 4 for 'Agree' and 5 for 'Strongly Agree'. The total score of the questions for all 770 respondents is found out, based on which the Mean Percentage Score of Availability is calculated. This score is classified into one of the five groups as 'Poor' if the Mean Percentage Score is less than 20 %, 'Fair' if the Mean Percentage Score is between 20 % to 40 %, 'Good' if the Mean Percentage Score lies in the interval 40 % to 60 %, 'Very good' if the Mean Percentage Score lies in the interval 60 % to 80 % and 'Excellent' if the Mean Percentage Score is above 80 %.

Table 6.17

Level of Availability

Sector of MCHs	N	Mean	SD	MPS	CV	Level of Availability
Government	385	16.42	2.12	82.1	12.91	Excellent
Private	385	18.42	1.44	92.1	7.82	Excellent

(Source: Primary data)

It is noted from the table 6.17 that the Mean Percentage Score of Availability of Government Medical College Hospitals is 82.1% and that of Private Medical College Hospitals is 92.1%. It indicates that level of Availability is Excellent for both Government and Private Medical College Hospitals. The CV indicates that these scores are stable as the values are less than 20%.

Though the patients of Medical College Hospitals in both sectors reported excellent level of Availability, Mean score is higher to Private Medical College Hospitals than Government Medical College Hospitals. Hence it is needed to Test whether the Availability significantly varies between sectors. The following hypothesis is Tested.

H0: There is no significant difference in Availability between Sectors.

H1: There is significant difference in Availability between Sectors.

Mann-Whitney Test is performed and the result is exhibited in the following Table.

Table 6.18

Result of Mann-Whitney Test of Availability for Sector

Variable	Sector of MCHs	N	Mean	SD	Z	p value
Availability	Government	385	16.42	2.12	-15.354	<0.001
	Private	385	18.42	1.44		

(Source: Primary data)

It is noted from the table 6.18 that the Mean score of Availability in Private Medical College Hospitals is 18.42 with ϭ 1.44 while in Government Medical College Hospitals it is 16.42 with ϭ 2.12. Z value obtained in Mann-Whitney Test is -15.354 and p value is <0.001. Hence the null hypothesis is rejected. It is accepted that there is a significant difference in Availability between sectors. It reveals that Availability in Private Medical College Hospitals is more than Government Medical College Hospitals. The following box plot presents spread and variation of Availability of Government and Private Medical College Hospitals.

Figure 6.9

Box Plot - Availability
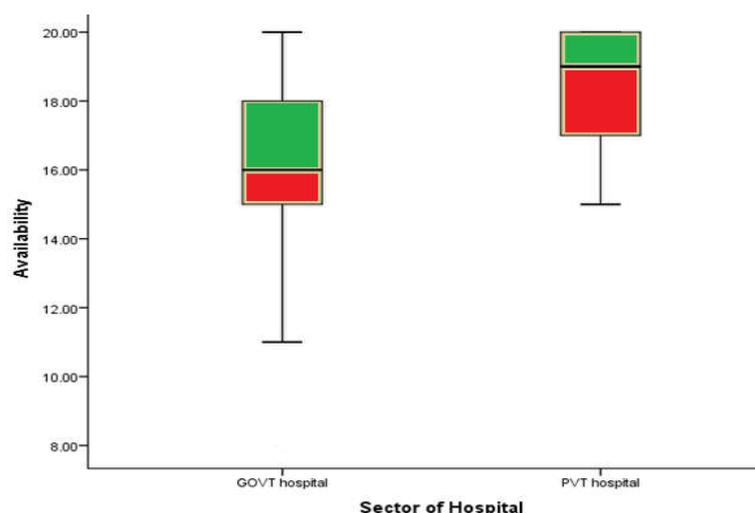
6.1.10. Patients' perception on Technical Quality

The respondents were asked a set of 5 questions in the five point Likert scale regarding different aspects of Technical Quality. The responses are then scored as 1 for 'Strongly Disagree', 2 for 'Disagree', 3 for 'Neutral', 4 for 'Agree' and 5 for 'Strongly Agree'. The total score of the questions for all 770 respondents is found out, based on which the Mean Percentage Score of Technical Quality is calculated. This score is classified into one of the five groups as 'Poor' if the Mean Percentage Score is less than 20 %, 'Fair' if the Mean Percentage Score is between 20 % to 40 %, 'Good' if the Mean Percentage Score lies in the interval 40 % to 60 %, 'Very

good' if the Mean Percentage Score lies in the interval 60 % to 80 % and 'Excellent' if the Mean Percentage Score is above 80 %.

Table 6.19
Level of Technical Quality

Sector of MCHs	*N*	*Mean*	*SD*	*MPS*	*CV*	*Level of Technical Quality*
Government	385	20.65	3.08	82.6	14.91	Excellent
Private	385	23.39	1.74	93.56	7.44	Excellent

(Source: Primary data)

It is clear from the table 6.19 that the Mean Percentage Score of Technical Quality of Government Medical College Hospitals is 82.6% and that of Private Medical College Hospitals is 93.56% which indicate that level of Technical Quality is Excellent for both Government and Private Medical College Hospitals. The CV indicates that these scores are stable as the values are less than 20%.

Though the patients of Medical College Hospitals in both sectors reported excellent level of Technical Quality, Mean score is higher to Private Medical College Hospitals than Government Medical College Hospitals. Hence it is needed to Test whether the Technical Quality significantly varies between sectors. The researcher formulated the following hypothesis for that.

H0: There is no significant difference in Technical Quality between Sectors.

H1: There is significant difference in Technical Quality between Sectors.

Mann-Whitney Test is performed and the result is exhibited in the following Table.

Table 6.20

Result of Mann-Whitney Test of Technical Quality for Sector

Variable	*Sector of MCHs*	*N*	*Mean*	*SD*	*Z*	*p value*
Technical Quality	Government	385	20.65	3.08	-15.168	<0.001
	Private	385	23.39	1.74		

(Source: Primary data)

From the table 6.20, it is clear that the Mean score of Technical Quality of the Government Medical College Hospitals is 20.65 with ϭ 3.08 and that of Private Medical College Hospitals is 23.39 with ϭ 1.74. It specifies that the Mean score of Technical Quality of Private Medical College Hospitals is higher than that of the Government Medical College Hospitals. Z value (-15.168) resulted from Mann-Whitney Test conducted to find out whether this variation is significant or not is found significant as the p value is <0.001. Hence the null hypothesis is rejected and it is concluded that Technical Quality of Private Medical College Hospitals is higher than Government Medical College Hospitals. Figure 6.10 illustrates box plot presents spread and variation of Technical Quality of Government and Private Medical College Hospitals.

Figure 6.10

Box Plot - Technical Quality
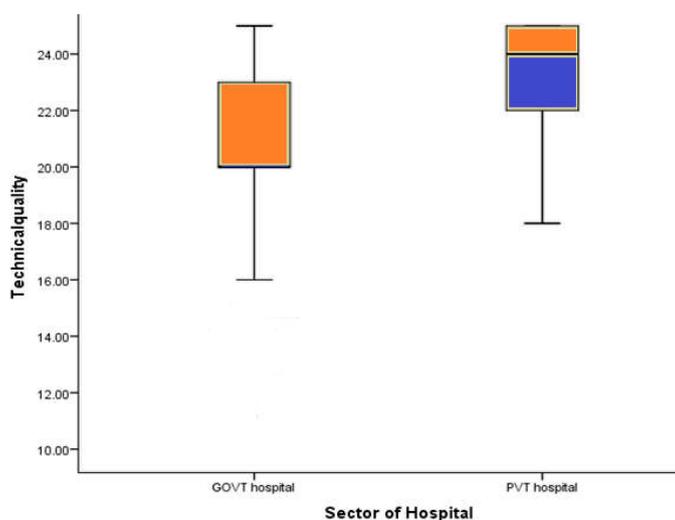
6.1.11. Patients' perception on Efficiency

The respondents were asked a set of 5 questions in the five point Likert scale regarding different aspects of Efficiency. The responses are then scored as 1 for 'Strongly Disagree', 2 for 'Disagree', 3 for 'Neutral', 4 for 'Agree' and 5 for 'Strongly Agree'. The total score of the questions for all 770 respondents is found out, based on which the Mean Percentage Score of Efficiency is calculated. This score is classified into one of the five groups as 'Poor' if the Mean Percentage Score

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is less than 20 %, 'Fair' if the Mean Percentage Score is between 20 to 40 %, 'Good' if the Mean Percentage Score lies in the interval 40 % to 60 %, 'Very good' if the Mean Percentage Score lies in the interval 60 % to 80 % and 'Excellent' if the Mean Percentage Score is above 80 %.

Table 6.21
Level of Efficiency

Sector of MCH	N	Mean	SD	MPS	CV	Level of Efficiency
Government	385	20.50	2.65	82	12.93	Excellent
Private	385	22.45	2.08	89.8	9.26	Excellent

(Source: Primary data)

The Mean Percentage Score of Efficiency of Government Medical College Hospitals is 82% and that of Private Medical College Hospitals is 89.8% which indicate that the level of Efficiency is Excellent in both Government and Private Medical College Hospitals. The CV indicates that these scores are stable as the values are less than 20%.

Though the patients of Medical college Hospitals in both sectors reported excellent level of Efficiency, Mean score is higher to Private Medical College Hospitals than Government Medical College Hospitals. Hence it is needed to Test whether the Efficiency significantly varies between sectors. The hypothesis formulated is as follows.

H0: There is no significant difference in Efficiency between Sectors.

H1: There is significant difference in Efficiency between Sectors.

Mann-Whitney Test is performed and the result is exhibited in the following Table.

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Table 6.22

Result of Mann-Whitney Test of Efficiency for Sector

Variable	Sector of MCHs	N	Mean	SD	Z	p value
Efficiency	Government	385	20.50	2.65	-11.346	<0.001
	Private	385	22.45	2.08		

(Source: Primary data)

From the table 6.22, it is clear that the Mean score of Efficiency of Government Medical College Hospitals is 20.50 with σ 2.65 and that of Private Medical College Hospitals is 22.45 with σ 2.08. It specifies that the Mean score of Efficiency of Private Medical College Hospitals is higher than that of Government Medical College Hospitals. Z value (-11.346) resulted from Mann-Whitney Test conducted to find out whether this variation is significant or not is found significant as the p value is <0.001. Hence the null hypothesis is rejected and thus there is significant difference in Efficiency between sectors. It is concluded that Private Medical College Hospitals are more efficient than Government Medical College Hospitals. Figure 6.11 illustrates box plot presents spread and variation of Efficiency of Government and Private Medical College Hospitals.

Figure 6.11

Box Plot - Efficiency
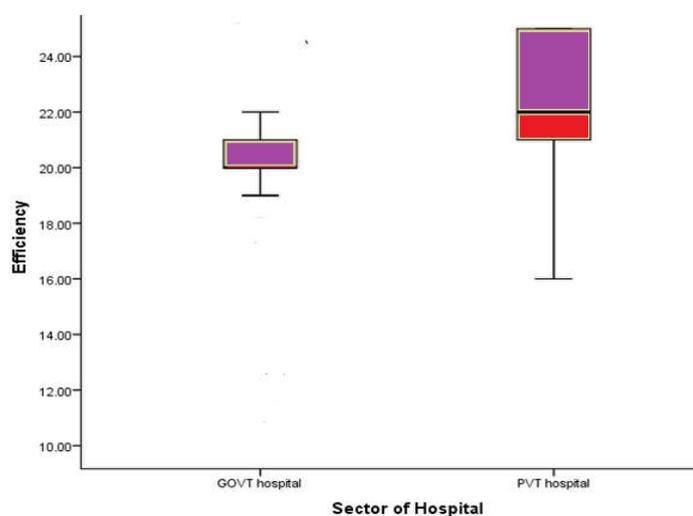
6.1.12. Patients' perception on Professionalism

The respondents were asked a set of 3 questions in the five point Likert scale regarding various aspects of professionalism. The responses are then scored as 1 for 'Strongly Disagree', 2 for 'Disagree', 3 for 'Neutral', 4 for 'Agree' and 5 for 'Strongly Agree'. The total score of the questions for all 770 respondents is found out, based on which the Mean Percentage Score of Professionalism is calculated. This score is classified into one of the five groups as 'Poor' if the Mean Percentage Score is less than 20 %, 'Fair' if the Mean Percentage Score is between 20 % to 40 %, 'Good' if the Mean Percentage Score lies in the interval 40 % to 60 %, 'Very good' if the Mean Percentage Score lies in the interval 60 % to 80 % and 'Excellent' if the Mean Percentage Score is above 80 %.

Table 6.23

Level of Professionalism

Sector of MCHs	N	Mean	SD	MPS	CV	Level of professionalism
Government	385	12.55	1.54	83.67	12.27	Excellent
Private	385	13.54	1.27	90.27	9.37	Excellent

(Source: Primary data)

Table 6.23 shows that the Mean Percentage Score of Professionalism of Government Medical College Hospitals is 83.67% and that of Private Medical College Hospitals is 90.27% which indicate that level of Professionalism is Excellent for both Government and Private Medical College Hospitals. The CV indicates that these scores are stable as the values are less than 20%.

Though the patients of Medical College Hospitals in both sectors reported excellent level of Professionalism, Mean score is higher to Private Medical College Hospitals than Government Medical College Hospitals. Hence it is needed to Test whether professionalism significantly varies between sectors. For testing this, the researcher formulated the following hypothesis.

H0: There is no significant difference in Professionalism between Sectors.

H1: There is significant difference in Professionalism between Sectors.

Mann-Whitney Test is performed and the result is exhibited in the following Table.

Table 6.24

**Result of Mann-Whitney Test of Professionalism for Sector**

Variable	Sector of MCHs	N	Mean	SD	Z	p value
Professionalism	Government	385	12.55	1.54	-9.756	<0.001
	Private	385	13.54	1.27		

(Source: Primary data)

From the table 6.24, it is clear that the Mean score of Professionalism of the Government Medical College Hospitals is 12.55 with ơ 1.54 and that of Private Medical College Hospitals is 13.54 with ơ 1.27. It specifies that the Mean score of Technical Quality of Private Medical College Hospitals is higher than that of the Government Medical College Hospitals. Z value (-9.756) resulted from Mann-Whitney Test conducted to find out whether this variation is significant or not is found significant as the p value is <0.001. Hence the null hypothesis is rejected and it is concluded that Private Medical College Hospitals have high Professionalism than Government Medical College Hospitals. Figure 6.12 illustrates box plot presents spread and variation of Professionalism of Government and Private Medical College Hospitals.

Figure 6.12

Box Plot - Professionalism
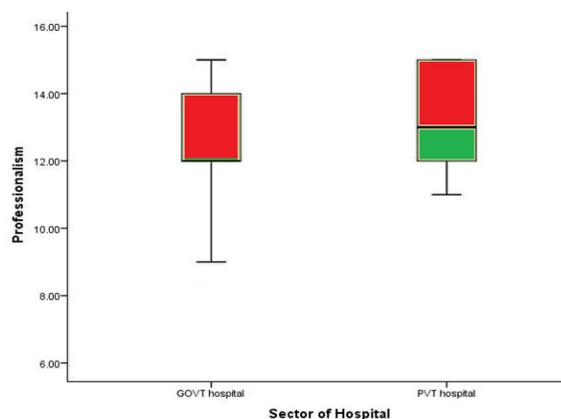
6.1.13. Patients' perception on Accessibility

The respondents were asked a set of 5 questions in the five point Likert scale regarding different aspects of Accessibility. The responses are then scored as 1 for 'Strongly Disagree', 2 for 'Disagree', 3 for 'Neutral', 4 for 'Agree' and 5 for 'Strongly Agree'. The total score of the questions for all 770 respondents is found out, based on which the Mean Percentage Score of Accessibility is calculated. This score is classified into one of the five groups as 'Poor' if the Mean Percentage Score is less than 20 %, 'Fair' if the Mean Percentage Score is between 20 % to 40 %, 'Good' if the Mean Percentage Score lies in the interval 40 % to 60 %, 'Very good' if the Mean Percentage Score lies in the interval 60 % to 80 % and 'Excellent' if the Mean Percentage Score is above 80 %.

Table 6.25
Level of Accessibility

Sector of MCHs	N	Mean	SD	MPS	CV	Level of Accessibility
Government	385	19.70	1.62	78.8	8.22	Very good
Private	385	23.77	1.65	95.08	6.94	Excellent

(Source: Primary data)

Table 6.25 shows that the Mean Percentage Score of Accessibility of Government Medical College Hospitals is 78.8% and that of Private Medical College Hospitals is 95.08% which indicate that level of Accessibility is Very good in Government Medical College Hospitals while it is Excellent in Private Medical College Hospitals. The CV indicates that these scores are stable as the values are is less than 20%.

As the patients of Government Medical College Hospitals reported very good level of Accessibility and patients in Private Medical College Hospitals reported excellent level of Accessibility, Mean score is higher to Private Medical College Hospitals than Government Medical College Hospitals. Hence it is needed to Test whether the Accessibility significantly varies between sectors. For that, the hypothesis formulated is below.

H0: There is no significant difference in Accessibility between Sectors.

H1: There is significant difference in Accessibility between Sectors.

Mann-Whitney Test is performed and the result is exhibited in the following Table.

Table 6.26

Result of Mann-Whitney Test of Accessibility for Sector

Variable	Sector of MCHs	N	Mean	SD	Z	p value
Accessibility	Government	385	19.70	1.62	-34.475	<0.001
	Private	385	23.77	1.65		

(Source: Primary data)

From the table 6.26, it is clear that the Mean score of the Accessibility of Government Medical College Hospitals is 19.70 with σ 1.62 and that of Private Medical College Hospitals is 23.77 with σ 1.65. It specifies that the Mean score of Accessibility of Private Medical College Hospitals is higher than that of Government Medical College Hospitals. Z value (-34.475) resulted from Mann-Whitney Test conducted to find out whether this variation is significant or not is found significant as the p value is <0.001. Hence the null hypothesis is rejected and it is concluded that Private Medical College Hospitals are more accessible than Government Medical College Hospitals. Figure 6.13 illustrates box plot presents spread and variation of Professionalism of Government and Private Medical College Hospitals.

Figure 6.13

Box Plot - Accessibility
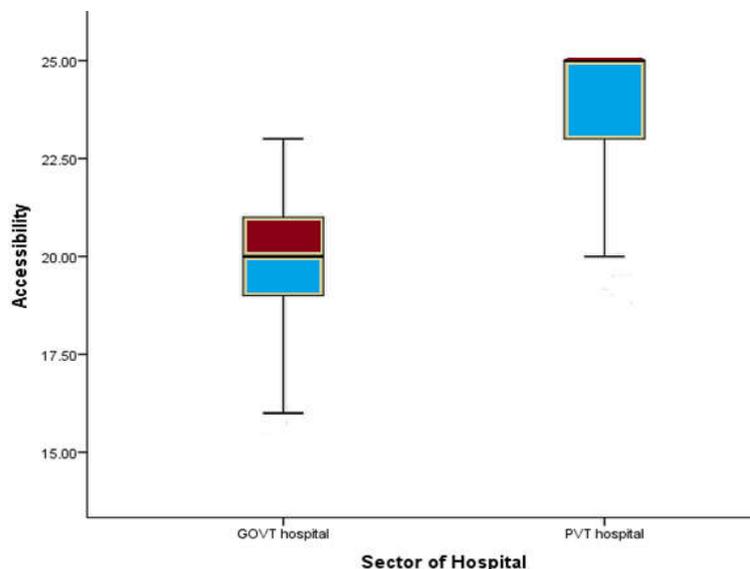
6.1.14. Ranking of dimensions of Perceived Service Quality

Researcher measured Perceived Service Quality using 12 dimensions namely Reliability, Assurance, Empathy, Physical Environment, Responsiveness, Interaction, Communication, Availability, Technical Quality, Efficiency, Professionalism and Accessibility. The contribution of each dimensions towards the total score of Perceived Service Quality are not equal. Hence it is needed to check which dimension contribute more and which dimension contribute less towards the total Perception of patients on Service Quality. Researcher calculated the Regression Coefficient Estimates of each dimension and ranked the dimensions on the basis of Estimates.

Table 6.27

Model fit Indices for Perceived Service Quality

Perceived Service Quality	Normed χ^2	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
	1.700	.994	.972	.998	.996	.999	.000	.030

(Source: Primary data)

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The Model fit indices of Perceived Service Quality is shown in the table 6.27. The Normed χ2 value 1.700 and the fit measures GFI (.994), AGFI (.972), NFI (.998), TLI (.996), CFI (.999), RMR (0.000) and RMSEA (.030) indicate that the model is fit to the data.

Table 6.28

The Regression Coefficients- Perceived Service Quality

Path	Estimate	Variance Explained	CR	p	Rank
Reliability →Perceived Service Quality	0.767	58.9	17.633	<0.001	10
Assurance → Perceived Service Quality	0.748	55.9	23.872	<0.001	11
Empathy → Perceived Service Quality	0.782	61.2	28.150	<0.001	9
Physical Environment → Perceived Service Quality	0.839	70.4	28.312	<0.001	8
Responsiveness → Perceived Service Quality	0.917	84.0	31.885	<0.001	3
Interaction → Perceived Service Quality	0.894	80.0	27.009	<0.001	5
Communication → Perceived Service Quality	0.931	86.7	29.670	<0.001	2
Availability → Perceived Service Quality	0.862	74.3	28.384	<0.001	6
Technical quality → Perceived Service Quality	0.968	93.8	28.926	<0.001	1
Efficiency → Perceived Service Quality	0.904	81.7	21.798	<0.001	4
Professionalism → Perceived Service Quality	0.840	70.5	29.556	<0.001	7
Accessibility → Perceived Service quality	0.673	45.3	33.482	<0.001	12

(Source: Primary data)

Table 6.28 shows the Regression Coefficient Estimates and Variance Explained of Perceived Service Quality. The p values for all Estimated values are <0.001 and it is found the values are significant. Ranks are assigned to each dimension on the basis of Estimates. Technical Quality is ranked 1 as it has the highest Regression Coefficient Estimate (0.968) and Communication ranked 2 as the Estimate value is 0.931. Responsiveness ranked 3 (0.917), Efficiency ranked 4 (0.904), Interaction ranked 5 (0.894), Availability ranked 6 (0.862), Professionalism ranked 7 (0.840), Physical Environment ranked 8 (0.839), Empathy ranked 9 (0.782), Reliability ranked 10 (0.767), Assurance ranked 11 (0.748) and Accessibility ranked 12 and the last as the estimated value is 0.673. Figure 6.14 demonstrate the diagram showing the Regression Coefficients of Perceived Service Quality.

Figure 6.14

Diagram of Regression Coefficients of Perceived Service Quality

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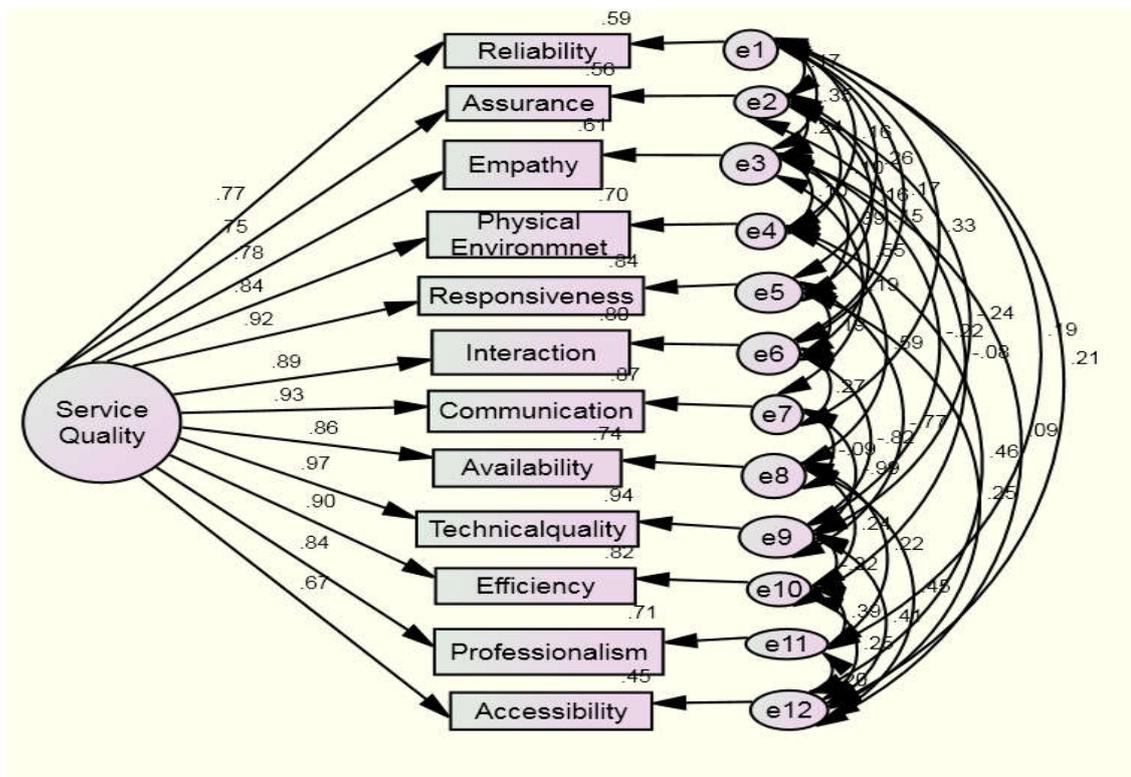
6.1.15. Ranking of dimensions of Perceived Service Quality of Government Medical College Hospitals

Table 6.29
Model fit Indices for Perceived Service
Quality of Government Medical College Hospitals

Perceived Service Quality	Normed χ2	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
	2.164	.985	.928	.994	.987	.997	.072	.055

(Source: Primary data)

The Model fit indices of Perceived Service Quality of Government Medical College Hospitals are explained in the table 6.29. The Normed χ2 value 2.164 and the fit measures like GFI (.985), AGFI (.928), NFI (.994), TLI (.987), CFI (.997), RMSEA (.055) and RMR (.072) indicate that the model is fit to the data.

Table 6.30

The Regression Coefficients –PSQ of Government Medical College Hospitals

Path	Estimate	Variance Explained	CR	p	Rank
Reliability →Perceived Service Quality	0.747	55.8	17.633	<0.001	11
Assurance → Perceived Service Quality	0.802	64.3	18.87	<0.001	9
Empathy →Perceived Service Quality	0.810	65.6	20.059	<0.001	8
Physical environment → Perceived Service Quality	0.798	63.6	17.683	<0.001	10
Responsiveness → Perceived Service Quality	0.922	85.0	23.131	<0.001	4
Interaction→ Perceived Service Quality	0.924	85.4	17.633	<0.001	3
Communication → Perceived Service Quality	0.943	88.9	20.674	<0.001	2
Availability → Perceived Service Quality	0.835	69.7	23.438	<0.001	7
Technical quality → Perceived Service Quality	0.979	95.9	20.186	<0.001	1
Efficiency → Perceived Service Quality	0.903	81.6	19.215	<0.001	5
Professionalism → Perceived Service Quality	0.845	71.5	20.324	<0.001	6
Accessibility→ Perceived Service Quality	0.692	47.8	15.896	<0.001	12

(Source: Primary data)

Table 6.30 illustrates the Regression Coefficient Estimates and Variance Explained of Perceived Service Quality of Government Medical College Hospitals. The p values for all Estimated values are <0.001 and they are found significant. Ranks are assigned to each dimension on the basis of Estimates. It is noted from the table that in the case of Government Medical college hospitals, Technical Quality ranked 1 as it has the highest Regression Coefficient Estimate of 0.979. Communication ranked 2 with an estimate value 0.943 and Interaction ranked 3 with an Estimate value 0.924 followed by Responsiveness (0.922), Efficiency (0.903), Professionalism (0.845), Availability (0.835), Empathy (0.810), Assurance (0.802), Physical Environment (0.798), Reliability (0.747) and Accessibility (0.692). Figure 6.15 demonstrate the diagram showing the Regression Coefficients of PSQ of Government Medical College Hospitals.

Figure 6.15

Diagram of Regression Coefficients for PSQ of Government Medical College Hospitals
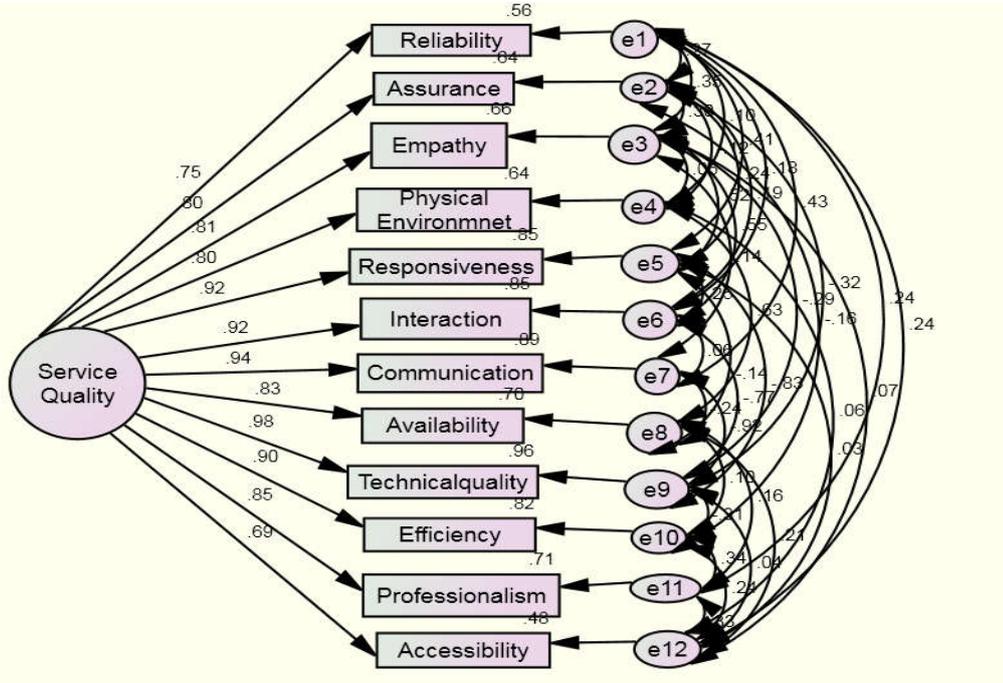
6.1.16. Ranking of dimensions of Perceived Service Quality of Private Medical College Hospitals

Table 6.31
Model fit Indices for Perceived
Service Quality of Private Medical College Hospitals

Perceived Service Quality	*Normed χ2*	*GFI*	*AGFI*	*NFI*	*TLI*	*CFI*	*RMR*	*RMSEA*
	1.340	.992	.955	.996	.995	.999	.026	.030

(Source: Primary data)

Table 6.31 shows the model fit indices of Perceived Service Quality of Private Medical College Hospitals. Normed χ2 value is 1.340 which indicates that the model is acceptable. The Model fit measures GFI (.992), AGFI (.955), NFI (.996), TLI (.995), CFI (.999), RMSEA (.030) and RMR (.026) show that the model is fit to the data.

Table 6.32
The Regression Coefficients - PSQ of Private Medical College Hospitals

Path	*Estimate*	*Variance Explained*	*CR*	*p*	*Rank*
Reliability → Perceived Service Quality	0.721	58.9	7.918	<0.001	9
Assurance → Perceived Service Quality	0.598	55.9	11.340	<0.001	12
Empathy → Perceived Service Quality	0.679	61.2	14.962	<0.001	10
Physical environment→ Perceived Service Quality	0.829	70.4	19.628	<0.001	7
Responsiveness→ Perceived Service Quality	0.860	84.0	16.682	<0.001	4
Interaction→ Perceived Service Quality	0.870	80.0	16.855	<0.001	3
Communication → Perceived Service Quality	0.905	86.7	18.603	<0.001	1
Availability → Perceived Service Quality	0.882	74.3	16.809	<0.001	2
Technical quality → Perceived Service Quality	0.857	93.8	15.902	<0.001	5
Efficiency → Perceived Service Quality	0.854	81.7	16.258	<0.001	6
Professionalism → Perceived Service Quality	0.810	70.5	16.907	<0.001	8
Accessibility→ Perceived Service Quality	0.651	45.3	13.454	<0.001	11

(Source: Primary data)

Table 6.32 illustrates the Regression Coefficient Estimates and Variance Explained of the Perceived Service Quality of Private Medical College Hospitals. The p values for all Estimated values are <0.001 and they are found significant. Ranks are assigned to each dimension on the basis of Estimates. It is clear from the table that in the case of Private Medical College Hospitals, Communication ranked 1st as it has the highest Regression Coefficient Estimate (0.905). Availability ranked 2nd with an Estimate value 0.882 and Interaction ranked 3rd with an Estimate value 0.870 followed by Responsiveness (0.860), Technical Quality (0.857), Efficiency (0.854), Physical Environment (0.829), Professionalism (0.810), Reliability (0.721), Empathy (0.679), Accessibility (0.651) and Assurance (0.598). Figure 6.16 demonstrate the diagram showing the Regression Coefficients of PSQ of Private Medical College Hospitals.

Figure 6.16

Diagram of Regression Coefficients for PSQ of Private Medical College Hospitals

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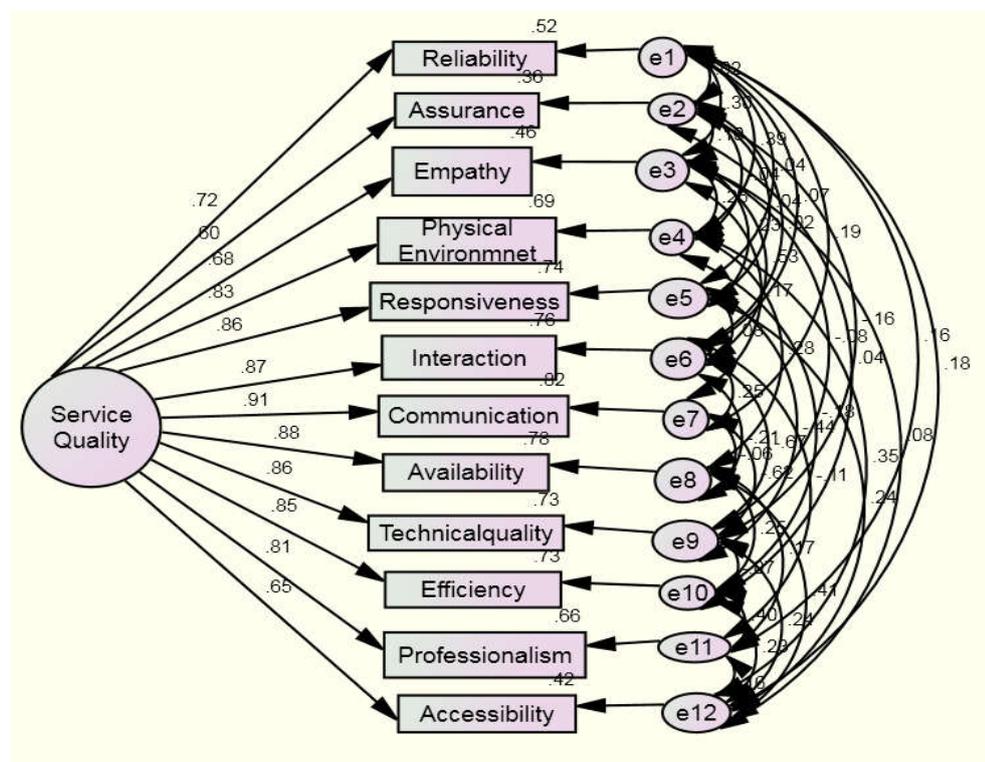
6.2. Perceived Value for Money in Government and Private Medical College Hospitals

Perceived Value for Money means the perception of patients on the monetary value of all services provided by the hospital during hospital stay. Researcher has done the comparative analysis on Perceived Value for Money of Government and Private Medical college Hospitals.

The respondents were asked a set of 4 questions in the five point Likert scale regarding different aspects of Perceived Value for Money. The responses are then scored as 1 for 'Strongly Disagree', 2 for 'Disagree', 3 for 'Neutral', 4 for 'Agree' and 5 for 'Strongly Agree'. The total score of the questions for all 770 respondents is found out, based on which the Mean Percentage Score of Perceived Value for Money is calculated. This score is classified into one of the five groups as 'Poor' if the Mean Percentage Score is less than 20 %, 'Fair' if the Mean Percentage Score is between 20 % to 40 %, 'Good' if the Mean Percentage Score lies in the interval 40 % to 60 %, 'Very good' if the Mean Percentage Score lies in the interval 60 % to 80 % and 'Excellent' if the Mean Percentage Score is above 80 %.

Table 6.33

Level of Perceived Value for Money

Sector of MCHs	N	Mean	SD	MPS	CV	Level of PVM
Government	385	16.22	2.61	81.1	16.09	Excellent
Private	385	15.28	3.33	76.4	21.79	Very good

(Source: Primary data)

From the table 6.33, it is clear that the Mean Percentage Score of Perceived Value for Money of Government Medical College Hospitals is 81.1% and that of Private Medical College Hospitals is 76.4%. It indicates that level of Perceived Value for Money is Excellent for Government Medical College hospital while it is Very good for Private Medical College Hospitals. The CV of Government Medical College Hospitals is 16.09 which is less than 20 % and so the MPS is stable. But CV of Private Medical College Hospitals is 21.79 which indicate that MPS is not stable.

Patients of Government Medical College Hospitals reported excellent level of Perceived Value for Money while the patients of Private Medical College Hospitals reported Very good level of Perceived Value for Money. Hence it is needed to Test whether the difference in Perceived Value for Money with sector is statistically significant or not. For that the researcher formulated the following hypothesis.

H0: There is no significant difference in Perceived Value for Money between Sectors.

H1: There is significant difference in Perceived Value for Money between Sectors.

Mann-Whitney Test is performed and the result is exhibited in the following Table.

Table 6.34

Result of Mann-Whitney Test of Perceived Value for Money for Sector

Variable	Sector of MCHs	N	Mean	SD	Z	p value
Perceived Value for Money	Government	385	16.22	2.61	-4.569	<0.001
	Private	385	15.28	3.33		

(Source: Primary data)

The table 6.34 shows that the Perceived Value for Money of Government Medical College Hospitals has a Mean score of 16.22 with ϭ 2.61 and that of Private Medical College Hospitals is 15.28 with ϭ 3.33. It indicates that the Mean score of Perceived Value of Government Medical College Hospitals is higher than that of Private Medical College Hospitals. The Mann-Whitney Test conducted to find out whether this variation is significant or not is found significant as the (Z value -4.569 with p value <0.001). So it is concluded that the Perceived Value for Money is more in Government Medical College Hospitals than Private Medical college hospitals. Figure 6.17 presents box plot showing the spread and variation of the Perceived value for Money of the Government and Private Medical College Hospitals.

Figure 6.17

Box Plot - Perceived Value for Money
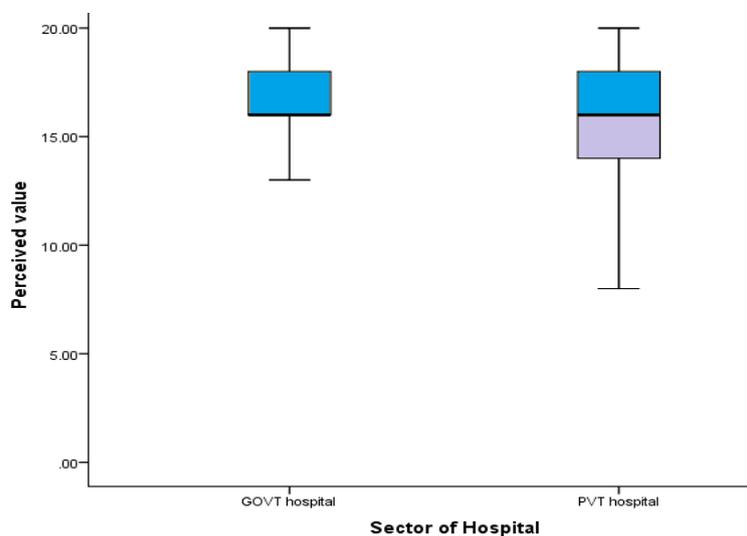
6.3. Perceived Waiting Time in Government and Private Medical College Hospitals

Perceived Waiting Time is the perception on time waited for getting service on different stages of treatment. Researcher has done the comparative analysis of Perceived Waiting Time of Government and Private Medical college Hospitals.

The respondents were asked a set of 4 questions in the five point Likert scale regarding various aspects of Perceived Waiting Time. The responses are then scored as 1 for 'Strongly Disagree', 2 for 'Disagree', 3 for 'Neutral', 4 for 'Agree' and 5 for 'Strongly Agree'. The total score of the questions for all 770 respondents is found out, based on which the Mean Percentage Score of Perceived Waiting Time is calculated. This score is classified into one of five groups as 'Poor' if the Mean Percentage Score is less than 20 %, 'Fair' if the Mean Percentage Score is between 20 % to 40 %, 'Good' if the Mean Percentage Score lies in the interval 40 % to 60 %, 'Very good' if the Mean Percentage Score lies in the interval 60 % to 80 % and 'Excellent' if the Mean Percentage Score is above 80 %.

Table 6.35

Level of Perceived waiting Time

Sector of MCHs	N	Mean	SD	MPS	CV	Level of PWT
Government	385	15.17	2.81	75.85	18.52	Very good
Private	385	17.56	1.91	87.8	10.87	Excellent

(Source: Primary data)

From the table 6.35, it is clear that the Mean Percentage Score of Perceived Waiting Time in Government Medical College Hospitals is 75.85% and in Private Medical College Hospitals, it is 87.8%. It indicates that level of Perceived Waiting Time is Very good in Government Medical College Hospitals while it is Excellent in Private Medical College hospitals. The CV indicates that MPS is stable for both Government and Private Medical College Hospitals.

Patients of Government Medical College Hospitals reported Very good level of Perceived Waiting Time while the patients of Private Medical College Hospitals reported Excellent level of Perceived Waiting Time. Hence it is needed to Test whether the difference in Perceived Waiting Time between sector is statistically significant or not. For that the researcher formulated the following hypothesis.

H0: There is no significant difference in Perceived Waiting Time between Sectors.

H1: There is significant difference in Perceived Waiting Time between Sectors.

Mann-Whitney Test is performed and the result is exhibited in the following Table.

Table 6.36

Result of Mann-Whitney Test of Perceived Waiting Time for Sector

Variable	Sector of MCHs	N	Mean	SD	Z	p value
Perceived waiting time	Government	385	15.17	2.81	-12.683	<0.001
	Private	385	17.56	1.91		

(Source: Primary data)

It is clear from the table 6.36 that the Mean score of Perceived Waiting Time in the Government Medical College Hospitals is 15.17 with ϭ 2.81 and that in Private Medical College Hospitals is 17.56 with ϭ 1.91. It shows that the Mean score of Perceived Waiting Time in the Private Medical College Hospitals is higher than the Government Medical College hospitals. The Mann-Whitney Test conducted to find out whether this variation is significant or not is found significant as the p value is <0.001. So it is concluded that Perceived Waiting time is high in Private Medical College hospitals which means that waiting time in Private Medical College Hospitals is comparatively less than that of Government Medical College Hospitals. The following figure presents box plot showing the spread and variation of the Perceived Waiting Time in Government and Private Medical College Hospitals.

Figure 6.18

Box Plot - Perceived Waiting Time
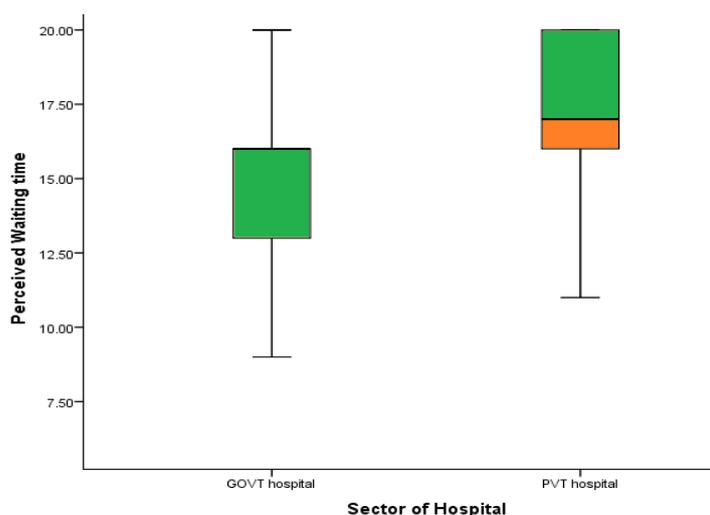
6.4. The level of Patients' Satisfaction in Government and Private Medical College Hospitals

Patients' Satisfaction is that state of mind when the patients feel that their wants and needs are fulfilled with the service they received. The second objective of the study was to examine the level of Patients' Satisfaction in Government and Private Medical College Hospitals. For this the respondents were asked a set of 6 questions in the five point Likert scale regarding various aspects of satisfaction on

the services of hospitals. The responses are then scored as 1 for 'Strongly Disagree', 2 for 'Disagree', 3 for 'Neutral', 4 for 'Agree' and 5 for 'Strongly Agree'. The total score of the questions for all 770 respondents is found out, based on which the Mean Percentage Score of Patients' Satisfaction is calculated. This score is classified into one of the five groups as 'Not at all satisfied' if the Mean Percentage Score is less than 20 %, 'Slightly satisfied' if the Mean Percentage Score is between 20 % to 40 %, 'Moderately Satisfied' if the Mean Percentage Score lies in the interval 40 % to 60 %, 'Very Satisfied' if the Mean Percentage Score lies in the interval 60 % to 80 % and 'Extremely Satisfied' if the Mean Percentage Score is above 80 %.

Table 6.37

Level of Patients' Satisfaction

Sector of MCHs	N	Mean	SD	MPS	CV	Level of PS
Government	385	25.09	3.84	83.63	15.3	Extremely Satisfied
Private	385	27.01	2.25	90.03	8.33	Extremely Satisfied

(Source: Primary data)

It is noted from the table 6.37 that the Mean Percentage Score of the Patient's Satisfaction of Government Medical College Hospitals is 83.63% and that of Private Medical College Hospitals is 90.03% which indicate that level of Patient's Satisfaction is extremely satisfied for both the hospitals. The CV indicates that these scores are stable as the values are less than 20%.

Though the patients of Medical College Hospitals in both sectors are extremely satisfied, the Mean Percentage Score is higher to Private Medical College Hospitals than Government Medical College Hospitals. Hence there is a need to Test the significance of this difference. The researcher formulated the following hypothesis

H0: There is no significant difference in Patients' Satisfaction between sectors.

H1: There is significant difference in Patients' Satisfaction between sectors.

Mann-Whitney Test is used and the result is exhibited in the following Table.

Table 6.38

**Result of Mann-Whitney Test of Perceived Waiting Time for Sector**

Variable	*Sector of MCHs*	*N*	*Mean*	*SD*	*Z*	*p value*
Patients' Satisfaction	Government	385	25.09	3.84	-7.482	<0.001
	Private	385	27.01	2.25		

(Source: Primary data)

From the table 6.38, it is clear that the Mean score of the Patient's Satisfaction of Government Medical College Hospitals is 25.09 with ϭ 3.84 and that of Private Medical College Hospitals is 27.01 with ϭ 2.25 which indicate that the Mean score of the Patient's Satisfaction for the Private Medical College Hospitals is higher than the Government Medical College Hospitals. The Mann-Whitney Test conducted to find out whether this variation is significant or not and is found significant as the p value is <0.001. So it is concluded that the patients of Private Medical College Hospitals are more satisfied than patients of Government Medical College Hospitals. Figure 6.19 shows the box plot showing the spread and variation of the Patients' Satisfaction of the Government and Private Medical College Hospitals.

Figure 6.19

Box Plot - Patients' Satisfaction
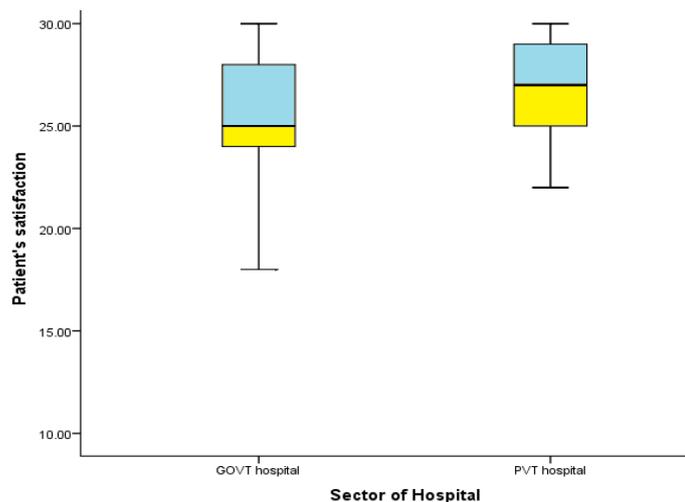
6.5. Patients' Behavioural Intensions in Government and Private Medical College Hospitals

Two types of Behavioural intensions are studied here. They are Patients' Loyalty and Patients' Complaint Behaviour. Satisfied patients are tending to be loyal towards the hospital while dissatisfied patients show complaint Behaviour. The level of Patients' Loyalty and Patients' Complaint Behaviour are assessed and discussed under.

6.5.1. Patients' Loyalty in Government and Private Medical College Hospitals

The respondents were asked to answer a set of 4 questions in the five point Likert scale regarding various aspects of loyalty towards the hospital. The responses are then scored as 1 for 'Strongly Disagree', 2 for 'Disagree', 3 for 'Neutral', 4 for 'Agree' and 5 for 'Strongly Agree'. The total score of the questions for all 770 respondents is found out, based on which the Mean Percentage Score of Patients' Loyalty is calculated. This score is classified into one of the five groups as 'Low' if the Mean Percentage Score is less than 20 %, 'Below Average' if the Mean Percentage Score is between 20 % to 40 %, 'Average' if the Mean Percentage Score lies in the interval 40 % to 60 %, 'Above average' if the Mean Percentage Score lies in the interval 60 % to 80 % and 'High' if the Mean Percentage Score is above 80 %.

Table 6.39

Level of Patients' Loyalty

Sector of MCHs	N	Mean	SD	MPS	CV	Level of PL
Government	385	15.40	3.05	77.01	19.79	Above average
Private	385	16.03	1.98	80.16	12.38	High

(Source: Primary data)

It is noted from the table 6.39 that the Mean Percentage Score of Patents' Loyalty in Government Medical College Hospitals is 77.01% and that in Private Medical College Hospitals is 80.16% which indicate that the loyalty of patients in Government medical college hospitals is above average and loyalty of patients in

Private Medical College Hospitals is high. The CV indicates that these scores are stable as the values are less than 20%.

It is noted from the analysis that patients of Government Medical College Hospitals reported above average level of loyalty while patients in Private Medical College Hospitals reported high level of loyalty. Hence there is a need to check the difference is significant or not. For that the following hypotheses are formulated.

H0: There is no significant difference in Patients' Loyalty between sectors.

H1: There is significant difference in Patients' Loyalty between sectors.

Mann-Whitney Test is performed and the result is exhibited in the following Table.

Table 6.40

Result of Mann-Whitney Test of Patients' Loyalty for Sector

Variable	*Sector of MCHs*	*N*	*Mean*	*SD*	*Z*	*p value*
Patients' Loyalty	Government	385	15.40	3.05	-1.980	<0.001
	Private	385	16.03	1.98		

(Source: Primary data)

The table 6.40 illustrates that Patients' Loyalty in Government Medical College Hospitals has a Mean score 15.40 with ϭ 3.05 and in Private Medical College Hospitals is 16.03 with ϭ 1.98 which indicate that the Mean score of Patients' Loyalty in Private Medical College Hospitals is higher than the Government Medical College Hospitals. The Mann-Whitney Test conducted to find out whether this variation is significant or not is found significant as the p value is <0.001. Hence it is concluded that Patients' Loyalty is more in Private Medical College Hospitals than in Government Medical College Hospitals. The following box plot gives the spread and variation of the Patients' loyalty in Government and Private Medical College Hospitals.

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Figure 6.20

Box Plot - Patients' Loyalty
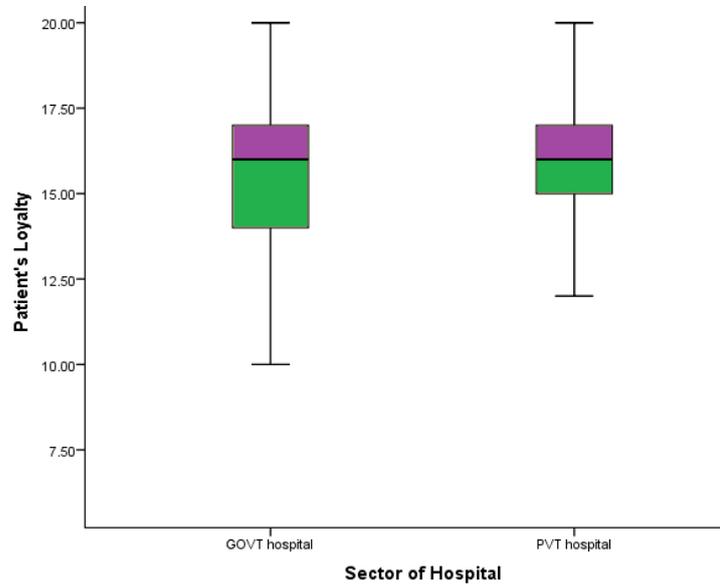
6.5.2. Patients' Complaint Behaviour in Government and Private Medical College Hospitals

The respondents were asked to answer a set of 2 questions in the five point Likert scale regarding different aspects of Patients' Complaint Behaviour. The responses are then scored as 1 for 'Strongly Disagree', 2 for 'Disagree', 3 for 'Neutral', 4 for 'Agree' and 5 for 'Strongly Agree'. The total score of the questions for all 770 respondents is found out, based on which the Mean Percentage Score of Patients' Complaint Behaviour is calculated. This score is classified into one of the five groups as 'Low' if the Mean Percentage Score is less than 20 %, 'Below Average' if the Mean Percentage Score is between 20 % to 40 %, 'Average' if the Mean Percentage Score lies in the interval 40 % to 60 %, 'Above average' if the Mean Percentage Score lies in the interval 60 % to 80 % and 'High' if the Mean Percentage Score is above 80 %.

Table 6.41

Level of Patients' Complaint Behaviour

Sector of MCHs	N	Mean	SD	MPS	CV	Level of PCB
Government	385	6.28	1.05	62.78	16.76	Above average
Private	385	6.13	1.33	61.30	21.67	Above average

(Source: Primary data)

It is noted from the table 6.41 that the Mean Percentage Score of Patients' Complaint Behaviour in Government Medical College Hospitals is 62.78% and that in Private Medical College Hospitals is 61.30 % which indicate that the level of Patients' Complaint Behaviour in both Government Medical College Hospital and Private Medical College Hospitals is Above average. The CV of Government Medical College Hospitals is 16.76 and so the MPS is stable. But CV of Private Medical College Hospitals is 21.67 which indicate that MPS is not stable.

It is clear from the analysis that patients of both Government and Private Medical College Hospitals show above average level of Complaint Behaviour. Though the level of Complaint Behaviour is same, the Mean scores are different. Hence there is a need to check the difference in mean is significant or not. For that the following hypothesis is formulated.

H0: There is no significant difference in Patients' Complaint Behaviour between Sectors.

H1: There is significant difference in Patients' Complaint Behaviour between Sectors.

Mann-Whitney Test is performed and the result is exhibited in the following Table.

Table 6.42

Result of Mann-Whitney Test of Complaint Behavior for Sector

Variable	Sector of MCHs	N	Mean	SD	Z	p value
Patients' Complaint Behaviour	Government	385	6.28	1.05	-1.450	0.147
	Private	385	6.13	1.33		

(Source: Primary data)

It is clear from the table 6.42 that the Mean score of Patients' Complaint Behaviour in the Government Medical College Hospitals is 6.28 with ʋ 1.05 and that in Private Medical College Hospitals is 6.13 with ʋ 1.33. It shows that the Mean score of Patients' Complaint Behaviour in the Government Medical College Hospitals is higher than that of Private Medical College Hospitals. The Mann-Whitney Test conducted to find out whether this variation is significant or not is found that it is not significant as the p value is 0.147. So it is concluded that the Patients' Complaint Behaviour in Government Medical College Hospitals and Private Medical College Hospitals are same. The following box plot gives the spread and variation of the Patients' Complaint Behaviour in Government and Private Medical College Hospitals.

Figure 6.21

Box Plot - Patients' Complaint Behaviour
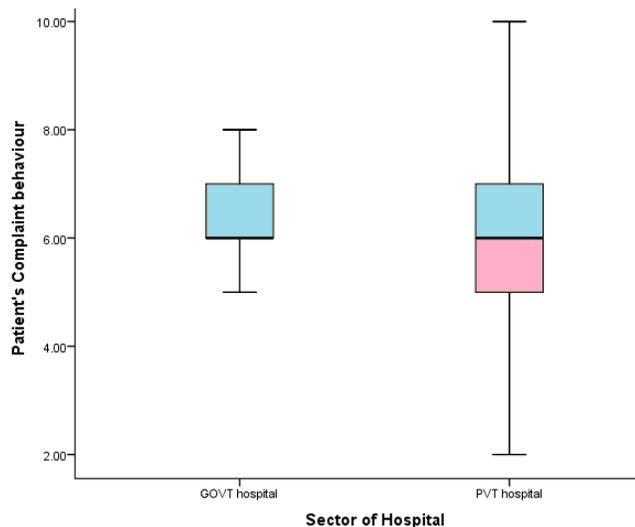
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RELATIONSHIP BETWEEN PERCEIVED SERVICE QUALITY, PATIENTS' SATISFACTION AND BEHAVIOURAL INTENTIONS

CHAPTER 7

RELATIONSHIP BETWEEN PERCEIVED SERVICE QUALITY, PATIENTS' SATISFACTION AND BEHAVIOURAL INTENTIONS

The third objective of this study was to examine the relationship between Perceived Service Quality, Patients' Satisfaction and Behavioral Intentions. This chapter is devoted to the results and discussions of Correlation Analysis and Regression Analysis done by the researcher for attaining the objective.

7.1. Relationship between Perceived Service Quality and Patients' Satisfaction

For examining the relationship between Perceived Service Quality and Patients' Satisfaction, Correlation between Perceived Service Quality and Patients' Satisfaction is found. Correlation was seen as appropriate to analyze the relationship between the two variables which were interval-scaled and ratio-scaled. Furthermore, correlation coefficients reveal magnitude and direction of relationships which are suitable for hypothesis testing. The researcher used Spearman's Rank Correlation to identify the relationship between Perceived Service Quality and Patients' Satisfaction and the result is exhibited in following table.

Table 7.1

Correlation between Perceived Service Quality and Patients' Satisfaction

Variables	Correlation (r Value)	p value
Perceived Service Quality and Patients Satisfaction	0.647	<0.001

(Source: Primary data)

From the table 7.1, it is clear that the Spearman's Correlation value of Perceived Service Quality and Patients' Satisfaction is 0.647. The p value (<0.001) indicates that the relationship between Perceived Service Quality and Patients' Satisfaction is statistically significant. The strength of correlation can be verbally

described as the absolute value of r: .00 -.19 "Very Weak", .20 -.39 "Weak", .40 - .59 "Moderate", .60 -.79 "Strong" and .80 -1.0 "Very Strong". Hence it is concluded that there is a Strong Positive Correlation between Perceived Service Quality and Patients' Satisfaction. Since there is a Strong Positive relationship between Perceived Service Quality and Patients' Satisfaction, the next step is to evaluate the mathematical relationship between Perceived Service Quality and Patients' Satisfaction. The best method to evaluate the mathematical relationship between Perceived Service Quality and Patients Satisfaction is SEM. Accordingly a full Structural Equation Model is considered to evaluate the effect of Perceived Service Quality and Patients' Satisfaction and the results are exhibited in the following Tables.

Table 7.2

Model Fit Indices for Perceived Service Quality and Patients' Satisfaction

Perceived Service Quality and Patients' Satisfaction	*Normed χ2*	*GFI*	*AGFI*	*NFI*	*TLI*	*CFI*	*RMR*	*RMSEA*
	1.857	.986	.955	.994	.992	.997	0.028	0.033

(Source: Primary data)

Table 7.2 shows the model fit indices for Perceived Service Quality and Patients' Satisfaction. All the fit measures are acceptable. GFI is near to 1.00 and it shows a better fit. RMSEA is <0.05 and RMR is <0.5 which also shows a good fit. The Incremental fit measures AGFI (.955), NFI (.994), TLI (.992) and CFI (.997) indicate that the model is fit to the data.

Table.7.3

The Regression Coefficients of
Perceived Service Quality and Patients' Satisfaction

Path	Estimate	Variance Explained	CR	p Value
Perceived Service Quality→ Patients' Satisfaction	1.000	31.4	12.665	<0.001
Reliability → Perceived Service Quality	0.580	33.7	14.191	<0.001
Assurance → Perceived Service Quality	0.670	44.9	21.467	<0.001
Empathy → Perceived Service Quality	0.718	51.5	24.632	<0.001
Physical Environment→ Perceived Service Quality	0.870	75.8	26.532	<0.001
Responsiveness →Perceived Service Quality	0.843	71.1	28.616	<0.001
Interaction→ Perceived Service Quality	0.832	69.3	27.995	<0.001
Communication →Perceived Service Quality	0.857	73.5	29.903	<0.001
Availability → Perceived Service Quality	0.904	81.8	27.171	<0.001
Technical quality → Perceived Service Quality	0.929	86.4	28.445	<0.001
Efficiency → Perceived Service Quality	0.904	81.7	27.625	<0.001
Professionalism → Perceived Service Quality	0.874	76.4	27.637	<0.001
Accessibility → Perceived Service Quality	0.733	53.8	22.254	<0.001
PS1 → Patient's Satisfaction	0.632	39.9	12.356	<0.001
PS2 → Patient's Satisfaction	0.708	50.1	21.949	<0.001
PS3 → Patient's Satisfaction	0.691	47.7	24.249	<0.001
PS4 → Patient's Satisfaction	0.683	46.7	20.146	<0.001
PS5 → Patient's Satisfaction	0.696	48.4	20.594	<0.001
PS6 →Patient's Satisfaction	0.689	47.4	20.766	<0.001

(Source: Primary data)

From the table 7.3, it is noted that the Regression Equation of Perceived Service Quality on Patients' Satisfaction is Patients' Satisfaction = Perceived Service Quality. That is one unit of increase in Perceived Service Quality result in one unit increase in Patients' Satisfaction. The relationships of Perceived Service Quality dimensions to Perceived Service Quality are Perceived Service quality = 0.580 Reliability, Perceived Service quality = 0.670 Assurance, Perceived Service Quality = 0.718 Empathy, Perceived Service Quality = 0.870 Physical Environment, Perceived Service Quality = 0.843 Responsiveness, Perceived Service Quality = 0.832 Interaction, Perceived Service Quality = 0.857 Communication, Perceived

Service Quality = 0.904 Availability, Perceived Service Quality = 0.929 Technical quality, Perceived Service Quality = 0.904 Efficiency, Perceived Service Quality = 0.874 Professionalism and Perceived Service Quality = 0.733 Accessibility.

The relationship of attributes of Patients' Satisfaction to Patients' Satisfaction are Patients' Satisfaction = 0.632 PS1, Patients' Satisfaction = 0.708 PS2, Patients' Satisfaction = 0.691 PS3, Patients' Satisfaction = 0.683 PS4, Patients' Satisfaction = 0.696 PS5 and Patients' Satisfaction =0.689 PS6.

Figure 7.1 illustrates the diagram showing mathematical relationship of Perceived Service Quality and Patients' Satisfaction

Figure 7.1

**Diagram for Regression Coefficients of
Perceived Service Quality and Patients' Satisfaction**
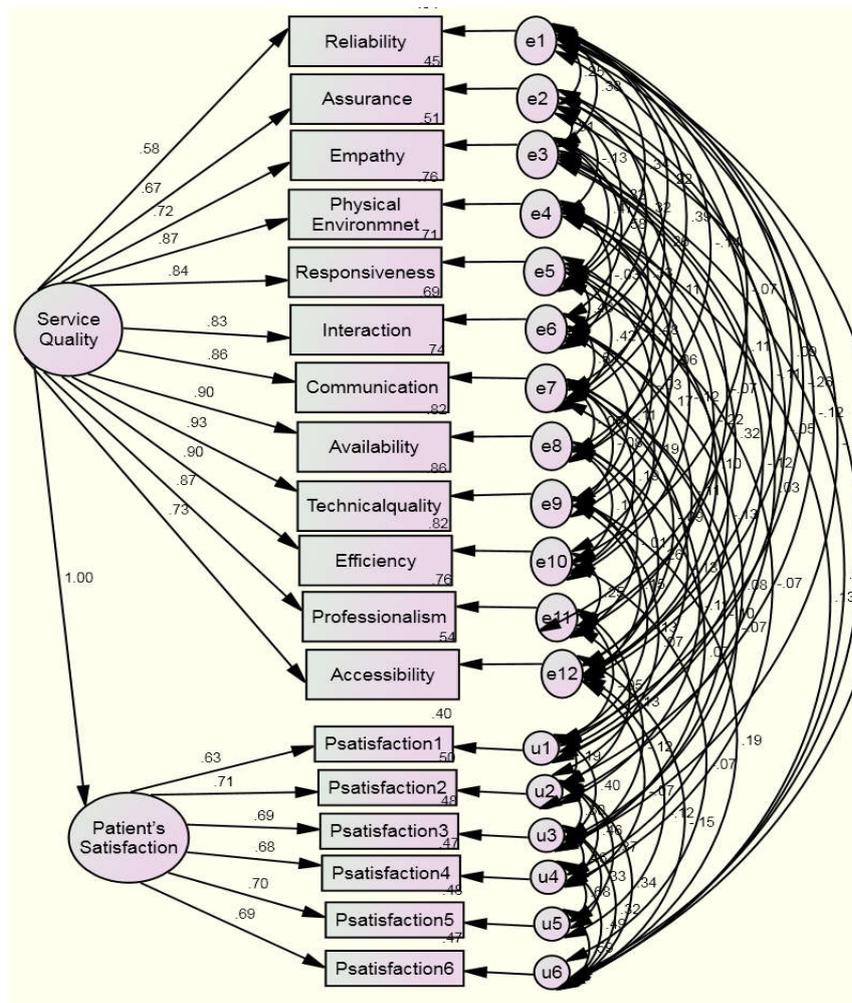
7.2. Relationship between Perceived Service Quality dimensions and Patients' Satisfaction

Each dimension of Perceived Service Quality has theoretical relationship with Patients' Satisfaction. Correlation analysis has been done with Spearman's Rank Correlation method to find the relationship of dimensions of Perceived Service Quality to Patients' satisfaction and the results are explained in the table below.

Table 7.4

**The Correlation between Dimensions of
Perceived Service Quality and Patients' Satisfaction**

	Correlation (r Value)	*p Value*
Patients' Satisfaction - Reliability	0.572	<0.001
Patients' Satisfaction - Assurance	0.576	<0.001
Patients' Satisfaction - Empathy	0.590	<0.001
Patients' Satisfaction - Physical Environment	0.656	<0.001
Patients' Satisfaction - Responsiveness	0.625	<0.001
Patients' Satisfaction - Interaction	0.637	<0.001
Patients' Satisfaction - Communication	0.631	<0.001
Patients' Satisfaction - Availability	0.683	<0.001
Patients' Satisfaction - Technical Quality	0.721	<0.001
Patients' Satisfaction - Efficiency	0.654	<0.001
Patients' Satisfaction - Professionalism	0.656	<0.001
Patients' Satisfaction - Accessibility	0.512	<0.001

(Source: Primary data)

Table 7.4 presents the Correlation values of each dimensions of Perceived Service Quality to Patients' Satisfaction. All the Correlation values are significant as the p value obtained for each dimensions is <0.001. The strength of correlation can be verbally described as the absolute value of r: .00 -.19 "Very Weak", .20 -.39

"Weak", .40 -.59 "Moderate", .60 -.79 "Strong" and .80 -1.0 "Very Strong". It is noted from the table that the Correlation value of Reliability and Patient's Satisfaction is 0.572 with p value <0.001. Correlation is significant and it indicates that there is a Moderate Positive Correlation between Reliability and Patients' Satisfaction. In case of Assurance, Correlation value is 0.576 with p value <0.001 which means there is Moderate Positive Correlation. There is a Moderate Positive Correlation between Empathy and Patient's Satisfaction (r value = 0.590 and p value <0.001).

It is also noted from the table that Physical Environment and Patients' Satisfaction have a Strong Positive Correlation as the value obtained is 0.656 with p value <0.001. There is a Strong Positive Correlation between Responsiveness and Patients' Satisfaction since the Correlation value is 0.625 with p value <0.001. In case of Interaction, the Correlation value is 0.637 with p value <0.001. It means that there is also a Strong Positive relationship between Interaction and Patients' Satisfaction. Communication and Patients' Satisfaction show a Strong Positive Correlation (r value is 0.631 with p value <0.001). Correlation value of Availability and Patients' Satisfaction is 0.683 with p value <0.001 which indicates that there is a Strong Positive Correlation between Availability and Patients' Satisfaction.

Technical Quality and Patients' Satisfaction have a Correlation value of 0.721 with p value <0.001 which means there is a Strong Positive Correlation between Technical Quality and Patients' Satisfaction. Correlation value of Efficiency with Patients' Satisfaction is 0.654 with p value <0.001. It indicates that the Correlation is Positive and Strong. It is also visible from the table that there exist a Strong Positive Correlation between Professionalism and Patients' Satisfaction (r value = 0.656 with p value <0.001). Accessibility and Patients' Satisfaction have a Moderate Positive Correlation as the Correlation value is 0.512. Correlation is significant as the p value <0.001.

7.3. Relationship between dimensions of Perceived Service Quality and Patients' Satisfaction in Government Medical College Hospitals

Though each dimension of Perceived Service Quality has theoretical relationship with Patients' Satisfaction, the strength of relationship may varies between the Sectors. So, there is a need to conduct Sector wise Correlation Analysis of dimensions of Perceived Service Quality and Patients' Satisfaction. Spearman's Rank Correlation analyses have been done to find the relationship of dimensions of Perceived Service Quality to Patients' satisfaction in Government Medical College Hospitals and the results are explained in the table below.

Table 7.5

**The Correlation between dimensions of
Perceived Service Quality and Patients'
Satisfaction in Government Medical College Hospitals**

	Correlation (r Value)	*p Value*
Patients' Satisfaction - Reliability	0.603	<0.001
Patients' Satisfaction - Assurance	0.647	<0.001
Patients' Satisfaction - Empathy	0.626	<0.001
Patients' Satisfaction - Physical environment	0.714	<0.001
Patients' Satisfaction - Responsiveness	0.705	<0.001
Patients' Satisfaction – Interaction	0.702	<0.001
Patients' Satisfaction - Communication	0.684	<0.001
Patients' Satisfaction - Availability	0.760	<0.001
Patients' Satisfaction - Technical quality	0.804	<0.001
Patients' Satisfaction - Efficiency	0.723	<0.001
Patients' Satisfaction - Professionalism	0.716	<0.001
Patients' Satisfaction - Accessibility	0.596	<0.001

(Source: Primary data)

Table 7.5 gives the result of Correlation Analysis performed to know the relationship of dimensions of Perceived Service Quality and Patients' Satisfaction in Government Medical College Hospitals. All the Correlation values are found to be statistically significant as p values are <0.001. The strength of Correlation can be verbally described as the absolute value of r: .00 -.19 "Very Weak", .20 -.39 "Weak", .40 -.59 "Moderate", .60 -.79 "Strong" and .80 -1.0 "Very Strong". It is noted from the table that there exist a Strong Positive Correlation between

Reliability and Patients' Satisfaction (r = 0.603), Assurance and Patients' Satisfaction (r = 0.647), Empathy and Patients' Satisfaction (r = 0.626), Communication and Patients' Satisfaction (r = 0.684), Physical Environment and Patients' Satisfaction (r = 0.714), Responsiveness and Patients' Satisfaction (r = 0.705), Interaction and Patients' Satisfaction (r = 0.702), Availability and Patients' Satisfaction (r = 0.760), Efficiency and Patients' Satisfaction (r = 0.723) and Professionalism and Patients' Satisfaction (r = 0.716).

It is further noted from the table that Technical quality and Patients' Satisfaction have Very Strong Positive Correlation (r = 0.804) while Accessibility and Patients' Satisfaction have only Moderate Positive Correlation (r = 0.596).

7.4. Relationship between dimensions of Perceived Service Quality and Patients' Satisfaction in Private Medical College Hospitals

Researcher performed Correlation Analysis with Spearman's Rank Correlation Method to find out the relationship of dimensions of Perceived Service Quality and Patients' Satisfaction in Private Medical College Hospitals and the results are explained in the table below.

Table 7.6

**The Correlation between dimensions of
Perceived Service Quality and Patients'
Satisfaction in Private Medical College Hospitals**

	Correlation (r Value)	p Value
Patients' Satisfaction - Reliability	0.335	<0.001
Patients' Satisfaction - Assurance	0.288	<0.001
Patients' Satisfaction - Empathy	0.375	<0.001
Patients' Satisfaction - Physical environment	0.342	<0.001
Patients' Satisfaction - Responsiveness	0.301	<0.001
Patients' Satisfaction - Interaction	0.406	<0.001
Patients' Satisfaction - Communication	0.403	<0.001
Patients' Satisfaction - Availability	0.369	<0.001
Patients' Satisfaction - Technical quality	0.355	<0.001
Patients' Satisfaction - Efficiency	0.394	<0.001
Patients' Satisfaction - Professionalism	0.444	<0.001
Patients' Satisfaction - Accessibility	0.316	<0.001

(Source: Primary data)

Table 7.6 shows the result of Correlation Analysis performed to know the relationship of dimensions of Perceived Service Quality and Patients' Satisfaction in Private Medical College Hospitals. All the Correlation values are found to be statistically significant as p values are <0.001. The strength of Correlation can be verbally described as the absolute value of r: .00 -.19 "Very Weak", .20 -.39 "Weak", .40 -.59 "Moderate", .60 -.79 "Strong" and .80 -1.0 "Very Strong". It is noted from the table that there is a Moderate Positive Correlation between Interaction and Patients' Satisfaction (r = 0.406), Communication and Patients' Satisfaction (r = 0.403) and Professionalism and Patients' Satisfaction (r = 0.444).

It is clear from the table that the Correlation values of relationship between Reliability and Patients' Satisfaction is 0.335, Assurance and Patients' Satisfaction is 0.288, Empathy and Patients' Satisfaction is 0.375, Physical Environment and Patients' Satisfaction is 0.342, Responsiveness and Patients' Satisfaction is 0.301, Availability and Patients' Satisfaction is 0.369, Technical Quality and Patients' Satisfaction is 0.355, Efficiency and Patients' Satisfaction is 0.394, and Accessibility and Patients' Satisfaction is 0.316. Hence it is said that all the above have Weak Positive Correlation.

7.5. Relationship between Perceived Service Quality, Patients' Satisfaction and Behavioural Intensions

Researcher conducted Spearman's Correlation Analysis to examine the relationship between Perceived Service Quality, Patients' Satisfaction and Behavioural Intensions. The results are exhibited in the following table.

Table 7.7

**Correlation between Perceived Service
Quality, Patients' Satisfaction and Behavioural Intensions**

Variables	*Correlation (r Value)*	*p Value*
Perceived Service Quality and Behavioural Intensions	0.576	0.000
Patients' Satisfaction and Behavioural Intensions	0.681	0.000

(Source: Primary data)

Table 7.7 presents the result of Correlation Analysis performed to know the relationship of Perceived Service Quality, Patients' Satisfaction and Behavioural Intentions. It is noted from the table that both the Correlation values are statistically significant as p values are 0.000. The strength of Correlation can be verbally described as the absolute value of r: .00 -.19 "Very Weak", .20 -.39 "Weak", .40 -.59 "Moderate", .60 -.79 "Strong" and .80 -1.0 "Very Strong". From the table it is clear that there is a Moderate Positive Correlation between Perceived Service Quality and Behavioural Intensions (r = 0.576) and a Strong Positive Correlation between Patients' Satisfaction and Behavioural Intensions (r = 0.681). Since the Correlation is found significant in both cases, SEM model is used to evaluate the mathematical relationship and the result is exhibited in the following tables.

Table 7.8

Model Fit Indices for Relationship between
Perceived Service Quality, Patients' Satisfaction and Behavioural Intensions

Perceived Service Quality, Patients' Satisfaction and Behavioural Intensions	Normed χ2	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
	8.995	.933	.825	.957	.909	.961	.762	.102

(Source: Primary data)

Table 7.8 presents the model fit indices of relationship between Perceived Service Quality, Patients' Satisfaction and Behavioural Intensions. The fit measure GFI (.933), AGFI (.825), NFI (.957), TLI (.909) and CFI (.961) indicates that the model is fit to the data.

Table 7.9
The Regression Coefficients of Perceived
Service Quality, Patients' Satisfaction and Behavioural Intensions

Path	Estimate	Variance explained	CR	p Value
Perceived Service Quality → Patients' Satisfaction	1.000	31.4	12.665	<0.001
Patients' Satisfaction → Behavioural Intentions	1.000	32.0	11.925	<0.001
Reliability → Perceived Service Quality	0.546	29.8	14.191	<0.001
Assurance → Perceived Service Quality	0.731	53.4	21.850	<0.001
Empathy → Perceived Service Quality	0.763	58.2	24.871	<0.001
Physical Environment → Perceived Service Quality	0.827	68.3	25.560	<0.001
Responsiveness → Perceived Service Quality	0.905	81.9	27.558	<0.001
Interaction → Perceived Service Quality	0.888	78.8	27.228	<0.001
Communication → Perceived Service Quality	0.924	85.4	28.882	<0.001
Availability → Perceived Service Quality	0.858	73.7	25.100	<0.001
Technical quality → Perceived Service Quality	0.973	94.8	26.534	<0.001
Efficiency → Perceived Service Quality	0.896	80.2	26.125	<0.001
Professionalism → Perceived Service Quality	0.830	68.9	26.571	<0.001
Accessibility → Perceived Service Quality	0.698	48.7	22.194	<0.001
PS1 → Patients' Satisfaction	0.603	36.3	12.356	<0.001
PS2 → Patients' Satisfaction	0.587	34.5	18.649	<0.001
PS3 → Patients' Satisfaction	0.561	31.5	19.761	<0.001
PS4 → Patients' Satisfaction	0.483	23.3	15.510	<0.001
PS5 → Patients' Satisfaction	0.469	22.0	15.716	<0.001
PS6 → Patients' Satisfaction	0.496	24.6	15.905	<0.001
Patients' Loyalty → Behavioural Intentions	0.231	5.3	15.546	<0.001
Patients' Complaint Behaviour → Behavioural Intentions	0.385	14.8	13.568	<0.001

(Source: Primary data)

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From the table 7.9 it is noted that the Regression Equation of Perceived Service Quality on Patient's Satisfaction is Patient's Satisfaction = Perceived Service Quality. That is one unit of increase in Perceived Service Quality result in one unit increase in Patients' Satisfaction. Similarly the Regression Equation of Patients' Satisfaction on Behavioural Intentions is Behavioural Intentions = Patients' Satisfaction. That is one unit of increase in Patients' Satisfaction result in one unit increase in Behavioural Intensions. Relationships of dimensions of Perceived Service Quality with Perceived Service Quality are Perceived Service Quality = 0.546 Reliability, Perceived Service Quality = 0.731 Assurance, Perceived Service Quality = 0.763 Empathy, Perceived Service Quality = 0.827 Physical Environment, Perceived Service Quality = 0.905 Responsiveness, Perceived Service Quality = 0.888 Interaction, Perceived Service Quality = 0.924 Communication, Perceived Service Quality = 0.858 Availability, Perceived Service Quality = 0.973 Technical Quality, Perceived Service Quality = 0.896 Efficiency, Perceived Service Quality = 0.830 Professionalism and Perceived Service Quality = 0.698 Accessibility.

Regarding Patients' Satisfaction, the relationships are Patients' Satisfaction = 0.603 PS1, Patients' Satisfaction = 0.587 PS2, Patients' Satisfaction = 0.561 PS3, Patients' Satisfaction = 0.483 PS4, Patients' Satisfaction = 0.469 PS5 and Patients' Satisfaction = 0.496 PS6. Regarding Behavioural Intensions, the relationships are Behavioural Intensions = 0.231 Loyalty and Behavioural Intensions = 0.385 Complaint Behavior.

Figure 7.2

**Diagram for Regression Coefficients of Perceived Service Quality, Patients'
Satisfaction and Behavioural Intensions**
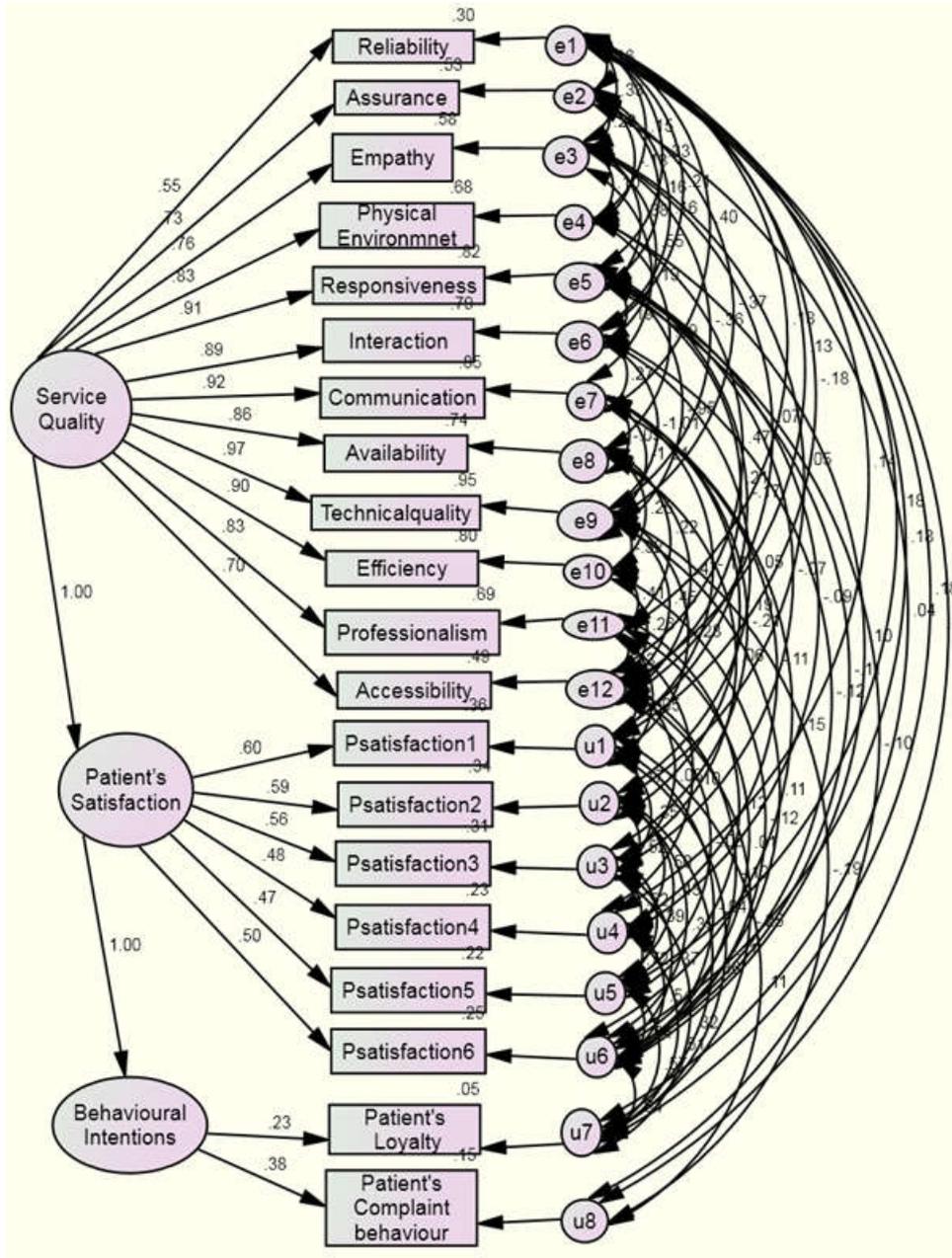
Figure 7.2 illustrates the diagram showing mathematical relationship of
Perceived Service Quality, Patients' Satisfaction and Behavioural Intensions.

7.6. **Mediating role of Perceived Value for Money and Perceived Waiting Time in the Relationship of Perceived Service Quality and Patients' Satisfaction**

The forth objective of the study was to examine the mediating role of Perceived Value for Money and Perceived Waiting Time in relationship of Perceived Service Quality and Patients' Satisfaction. Hence the researcher did Mediation Analysis using Sobel test to study whether the relationship between the Perceived Service Quality and Patients satisfaction has been significantly changed after inclusion of the Perceived value for Money and Perceived Waiting Time. A Mediation model is one that seeks to identify and explicate the mechanism or process that underlines an observed relationship between an independent variable and a dependent variable via the inclusion of a third hypothetical variable, known as a mediator variable.

A mediation or moderating model is one that seeks to identify and explicate the mechanism or process that underlines an observed relationship between an independent variable and a dependent variable via the inclusion of a third hypothetical variable, known as a mediator variable (also a mediating variable, intermediary variable, or intervening variable). Rather than a direct causal relationship between the independent variable and the dependent variable, a mediation model proposes that the independent variable influences the mediator variable, which in turn influences the dependent variable. Thus, the mediator variable serves to clarify the nature of the relationship between the independent and dependent variables. A path diagram as a model for developing a causal chain is diagrammed in the figure 7.3.

Figure 7.3

Mediation model
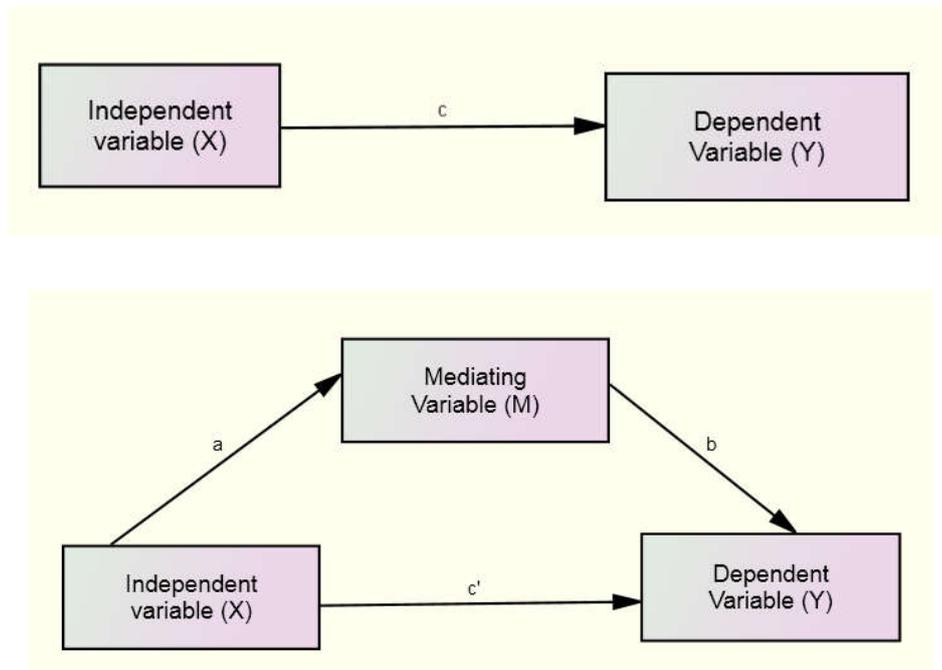
To perform mediation analysis, one has to regress the dependent variable on the independent variable. In other words, confirm that the independent variable is a significant predictor of the dependent variable (c in figure is significant). Then the mediator on the independent variable is regressed. In other words, confirm that the independent variable is a significant predictor of the mediator. If the mediator is not associated with the independent variable, then it couldn't possibly mediate anything (a in figure is significant). Finally the dependent variable on both the mediator and independent variable is regressed. In other words, confirm that the mediator is a significant predictor of the dependent variable, while controlling for the independent variable. This step involves demonstrating that when the mediator and the independent variable are used simultaneously to predict the dependent variable, the previously significant path between the independent and dependent variable (step 1) is now greatly reduced, if not non-significant (b in figure is significant). (c' in figure should be smaller in absolute value than the original mediation effect for mediation).

7.6.1. The Mediating effect of Perceived Value for Money (PVM) on Perceived Service Quality (PSQ) and Patients' Satisfaction (PS)

The result of Sobel test conducted by the researcher in order to determine if the relationship between the Perceived Service Quality and Patients' Satisfaction has been significantly changed after inclusion of the Perceived Value for Money are given in the table below.

Table 7.10
Result of Sobel Test- PVM

DERS -RB-SE	Value	Se	t	p
a=bmx	0.0391	0.0043	9.1580	<0.001
b=bym.x	0.2253	0.0271	9.4099	<0.001
c=byx	0.0973	0.0034	28.753	<0.001
c'=byx.m	0.0569	0.0873	25.8447	<0.001
Indirect effect	0.0100	0.0015	6.5440	<0.001
Sobel test			6.1357	<0.001

(Source: Primary data)

Perceived Value for Money increases the relationship between Perceived Service Quality and Patients' Satisfaction. Perceived Value for Money positively mediates the relation between Perceived Service Quality and Patients' Satisfaction which is further confirmed from result of Sobel test. It is clear from the table 7.10 that all the coefficients like a, b, c, c' are significant (p value <0.001). Sobal test is also significant as the t value obtained is 6.1357 with p value <0.001). Hence it is concluded that Perceived Value for Money (PVM) has significant mediating effect on Perceived Service Quality (PSQ) and Patients' Satisfaction (PS). The following figure shows the mediating effect of Perceived Value for Money (PVM) on Perceived Service Quality (PSQ) and Patients' Satisfaction (PS).

Figure 7.4

Diagram Showing the Mediating effect of Perceived Value for Money on Patients' Satisfaction
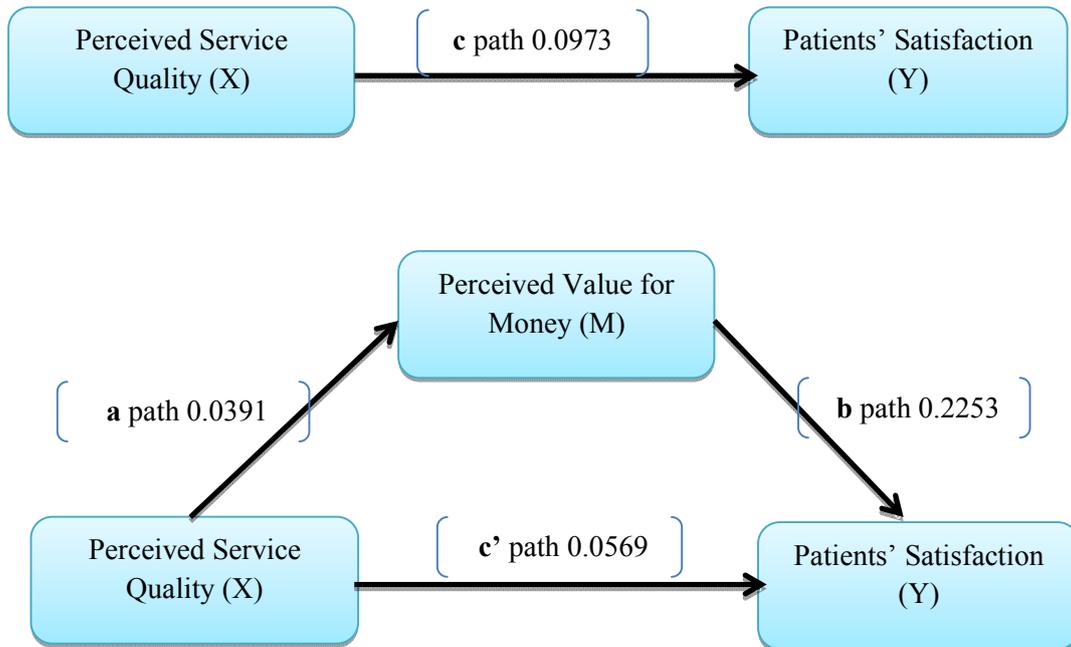
7.6.2. The Mediating effect of Perceived Waiting Time (PWT) on Perceived Service Quality (PSQ) and Patients' Satisfaction (PS)

The result of Sobel test conducted by the researcher in order to determine if the relationship between the Perceived Service Quality and Patients' Satisfaction has been significantly changed after inclusion of the Perceived Waiting Time (PWT) are given in the table below.

Table 7.11

Result of Sobel Test- PWT

DERS -RB-SE	Value	Se	t	p
a=bmx	0.4398	0.0248	17.7253	<0.001
b=bym.x	1.9237	0.2606	7.3811	<0.001
c=byx	5.3261	0.1854	28.7353	<0.001
c'=byx.m	4.4800	0.2127	21.0589	<0.001
Indirect effect	0.8461	0.1243	6.8047	<0.001
Sobel test			6.8150	<0.001

(Source: Primary data)

Perceived Waiting Time increases the relationship between Perceived Service Quality and Patients' Satisfaction. Perceived Waiting Time positively mediates the relation between Perceived Service Quality and Patients' Satisfaction which is further confirmed from result of Sobel test. It is clear from the table 7.11 that all the coefficients like a, b, c, c' are significant (p value <0.001). Sobel test is also significant as the t value obtained is 6.8150 with p value <0.001. Hence it is concluded that Perceived Waiting Time (PWT) has significant Mediating effect on Perceived Service Quality (PSQ) and Patients' Satisfaction (PS). The following figure shows mediating effect of Perceived Waiting Time (PWT) on Perceived Service Quality (PSQ) and Patients' Satisfaction (PS).

Figure 7.5

**Diagram showing Mediating effect of Perceived Waiting Time on Patients'
Satisfaction**
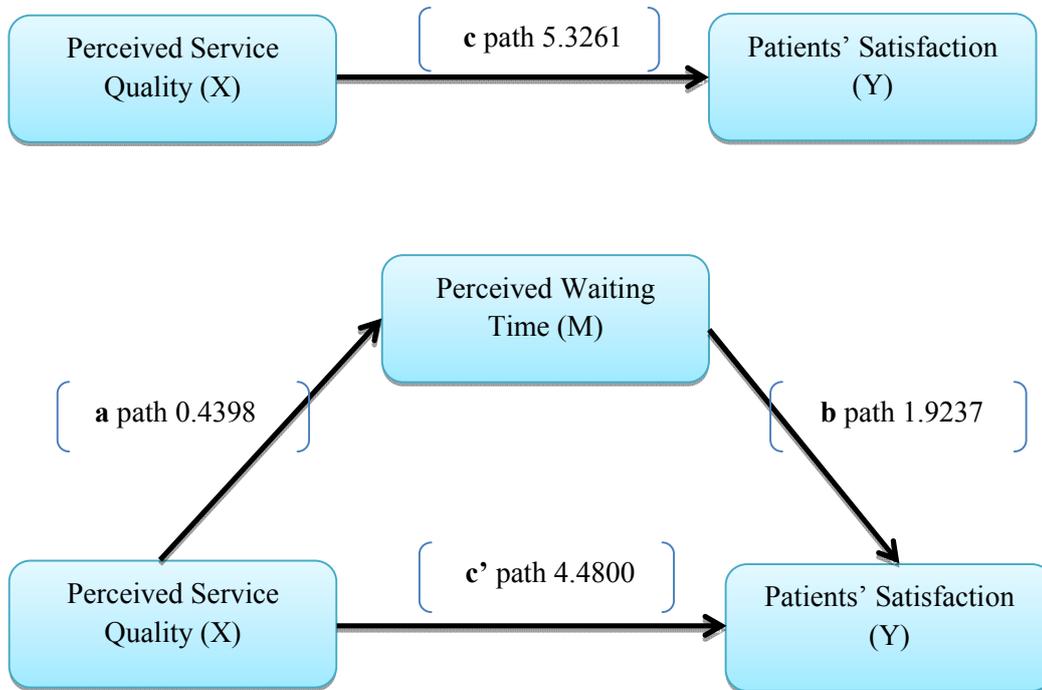
**7.6.3. The combined effect of Perceived Waiting Time (PWT) and Perceived
Value for Money (PVM) on Perceived Service Quality (PSQ) and
Patients Satisfaction (PS)**

Table 7.12

Independent Variable to Mediators (a paths)

Variable	Coefficient	SE	t	p
Perceived Value for Money	0.0391	0.0043	9.1580	<0.001
Perceived Waiting Time	0.0594	0.0034	17.708	<0.001

(Source: Primary data)

Table 7.13

Direct Effects of Mediators on Dependent Variable (b paths)

Variable	Coefficient	SE	t	p
Perceived Value for Money	0.2479	0.0262	9.4477	<0.001
Perceived Waiting Time	0.2489	0.0334	7.4616	<0.001

(Source: Primary data)

Table 7.14

Total effect and Direct effect of Independent variable to Dependent Variable

Variable	Coefficient	SE	t	p
Total Effect of IV on DV (c path)	0.0973	0.0034	28.7353	<0.001
Direct Effect of IV on DV (c-prime path)	0.0728	0.0038	19.1707	<0.001

(Source: Primary data)

Table 7.15

Indirect Effects of IV on DV through Proposed Mediators (ab paths)

Variable	Coefficient	SE	t	p
Total	0.245	0.0026	9.4648	<0.001
Perceived Value	0.0097	0.0015	6.5841	<0.001
Perceived Waiting Time	0.0148	0.0021	6.8882	<0.001

(Source: Primary data)

Perceived Waiting Time and Perceived Value for Money jointly increase the relationship between Perceived Service Quality and Patients' Satisfaction. Perceived Waiting Time and Perceived Value are positively mediates the relation between Perceived Service Quality and Patients' Satisfaction which is further confirmed from result of Sobel test. From the tables it is clear that all the direct and indirect effect of all the variables is significant (p value <0.001). It is concluded that the variables Perceived Waiting Time (PWT) and Perceived Value for Money (PVM) jointly

mediate the relationship between Perceived Service Quality (PSQ) and Patients' Satisfaction (PS). The following figure shows the combined effect of Perceived Waiting Time (PWT) and Perceived Value for Money (PVM) on Perceived Service Quality (PSQ) and Patients Satisfaction (PS).

Figure 7.6

Diagram showing the combined effect of Perceived Waiting Time and Perceived Value for Money on Patients Satisfaction
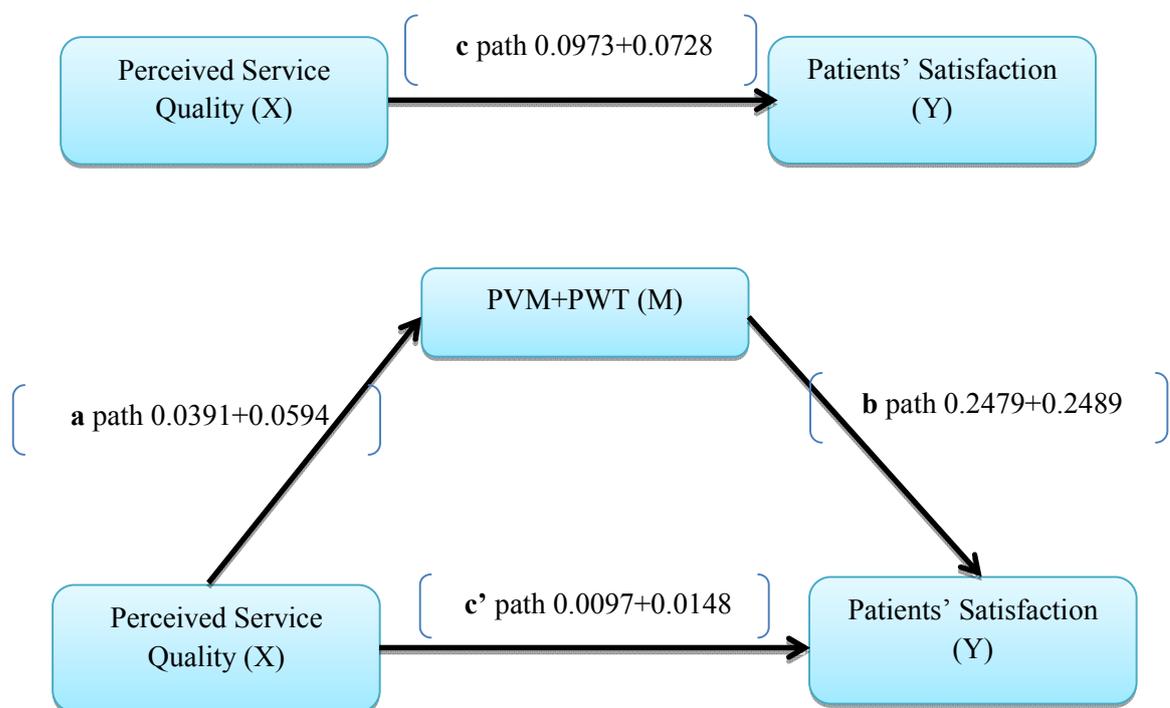
7.7.   Testing of Research model

Researcher carried out a full regression model or SEM Model to evaluate the mathematical relationship between Perceived service quality, Perceived value, Perceived Waiting time, Patient's satisfaction, Patient's Loyalty and Patient's Complaint behaviour. The result of the analysis is exhibited in the following table.

Table 7.16

The regression Coefficients of full model

Path	Regression coefficient	CR	P
Perceived Service Quality → Perceived Value for Money	0.908	27.355	<0.001
Perceived Service Quality → Perceived Waiting Time	1.284	19.609	<0.001
Perceived Value for Money → Patient's Satisfaction	3.245	19.924	<0.001
Perceived Waiting Time → Patient's Satisfaction	2.295	19.766	<0.001
Patient's Satisfaction → Patient's Loyalty	1.022	19.930	<0.001
Patient's Satisfaction → Patient's Complaint Behavior	2.705	23.625	<0.001

(Source: Primary data)

Table 7.16 shows the regression coefficients of the path between Perceived Service Quality, Perceived Value for Money, Perceived Waiting Time, Patient's Satisfaction, Patient's Loyalty and Patient's Complaint Behavior. The relationships are Perceived Value for Money = 0.908 Perceived Service Quality, Perceived Waiting Time = 1.284 Perceived Service Quality, Patient's Satisfaction = 3.425 Perceived Value for Money, Patient's Satisfaction = 2.295 Perceived Waiting Time, Patient's Loyalty = 1.022 Patient's Satisfaction, Patient's Complaint Behavior = 2.705 Patient's satisfaction. The full regression model is presented in the figure 7.7.

Figure 7.7

Full regression model of the study
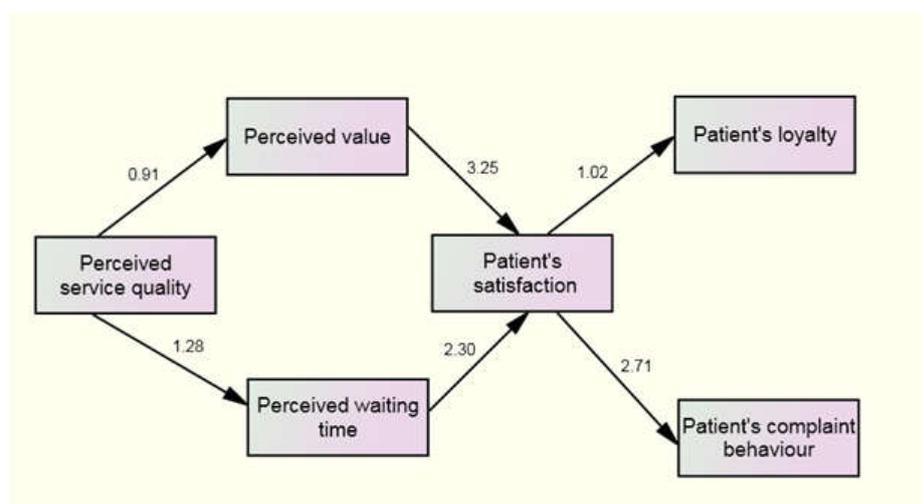
CONCLUSION

CHAPTER 8

CONCLUSION

8.1. Introduction

In the growing competitive world service managers face a number of challenges which raise the significance of research in service marketing. Health care sector is one of the major areas in service sector which contribute to social and economic welfare of society. The health care industry in India is reckoned to be the engine of the economy in the years to come as it is worth $17 billion and is anticipated to grow by 13% every year. Hospital is a unique service industry which deals with the services like diagnosis, treatment and preventing diseases, illness and injuries, physical and mental impairments in humans. The growth of hospitals as profit motive business entities and extensive competition with many new players in the field resulted in poor service quality as perceived by the customer. This situation made Service Quality a key differentiating factor for hospital service providers to improve their market and profit positions.

Hospitals are operating in an extremely competitive world where patient satisfaction has becomes key in gaining and maintaining market share. The patients of today expect personal attention, explanation of problems, assurances of relief and satisfaction of complaints. Patients' perception on services has a significant influence on their level of satisfaction. Thus, it is important for a hospital to provide quality services to its customers and also assess patients' satisfaction. Patient satisfaction studies help the hospitals to evaluate the health care system, the quality of care provided and hospital-patient relationships and to make positive changes in the services up to the patients' satisfaction to retain them as loyal customers. Results of patient satisfaction studies can even reveal the strength and weakness of the health care environment perceived by customers.

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8.2 Statement of the problem

Medical college hospitals are integral part of health care system which provides a wide range of medical services to a large group of patients and now serves an increasing population. Like any other industry medical educations too have private players in the field which is growing higher in numbers. The current health problems and issues in Kerala indicate that there is a need of research on medical college hospitals. It is necessary to understand how patients perceive services of medical college hospitals and which factors are influencing patients' satisfaction and retention.

Due to the increase in the hospital's size and complexity, medical college hospitals in government sector loose quality in many cases. Having become a large scale organization, medical college hospital requires more number of efficient workers and more medical equipment and aids for providing quality treatment. The cases which are complicated and severe are being referred to government medical college hospitals by the private practitioners. Thus government medical college hospitals are considered as the last resort to those who have severe ailment. There is also a need for improving the efficiency of performance of hospitals in government sector which is expected to be a model for the other hospitals by providing adequate, reliable, safe and economic services.

Medical college hospitals in private sector are not an exception in loosing quality. As a profit motive entity, many private hospitals reduce cost of services by compromising the quality of service. The pressure for institutional survival and cost containment force the managers to attempt to hold firmer control over what doctors do. This has caused unethical practices among physicians, loosing quality of treatment and insisting unwanted treatments in many situations. Many hospitals even lengthen hospital stay unnecessarily for maximising revenue.

This study can provide valuable information for the management which would help them to improve the quality of services they are providing, better functioning and thereby enhancing Productivity. The study would also provide them with insights into components of service quality which are related to satisfaction.

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The results obtained from this study can be used by the medical college hospitals to develop actions or plans and enhance service offered to patients.

8.3. Objectives of the study

The objectives of this study were as follows:

1.   To study and compare Patients' Perceived Service Quality in Government and Private Medical College Hospitals in Kerala

2.   To measure and compare the level of Patients' Satisfaction in Government and Private Medical College Hospitals in Kerala

3.   To examine the relationship between Perceived Service Quality, Patients' Satisfaction and Behavioural Intensions

4.   To study the mediating role of Perceived Value for Money and Perceived Waiting Time in the relationship of Perceived Service Quality and Patients' Satisfaction

5.   To suggest ways and means to improve the quality of services and patients' satisfaction of Government and Private Medical College Hospitals in Kerala

8.4. Research design in brief

Design of this research is descriptive. Both primary and secondary data were used for this study. Secondary data collection was done through desk research from research reports published by various Universities, Journals, Books, Government reports, E-resources. Primary data required for the study were collected from inpatients of medical college hospitals with a structured interview schedule.

Defined targeted population consists of inpatients who are admitted in all the Government and Private Medical College Hospitals in Kerala. 7 Private Medical College Hospitals and 5 Government Medical College Hospitals were selected. All these 12 selected hospitals are allopathic medical college hospitals which are established before 2007, involved in teaching with super speciality treatment and

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bed strength of more than 500 serving different districts of Kerala. Inpatients admitted to these 12 selected medical college hospitals were taken as sample frame.

Sample size is taken as 770. Among 770 respondents, 385 were from Government Medical College Hospitals and 385 were from Private Medical College Hospitals. Sampling method adapted in the study was multi stage sampling using non probability methods. A structured personal interview method was used for collecting primary data from the inpatients of selected medical college hospitals.

8.5 Summary of chapters

The research report contains eight chapters. The first chapter is the introduction chapter which deals with brief description about background of the study, statement of the problem, significance of the study, scope of the study, methodology applied for the research, limitations of the study and scheme of reporting. The second chapter deals with the literature survey conducted for the study. Literature review of related studies are done under five heads like review of literature on Patients' Satisfaction, review of literature on Perceived Service Quality and Patients' Satisfaction, review of literature on Perceived Value and Patients' Satisfaction, review of literature on Waiting Time and Patients' Satisfaction, review of literature on Patients' Behavioural Intentions. The third chapter deals with the theoretical overview of service quality and patients' satisfaction. It includes meaning and definition of service quality and patients' satisfaction, dimensions of service quality in hospitals and different models of service quality. The fourth chapter gives an overview on hospital industry. It gives brief description about the meaning and concepts of hospitals, history of hospitals, changing concept of hospitals, classification of hospitals, issues and problems in hospital industry in Kerala. Fifth chapter deals with the results of demographic analyses of Perceived Service Quality and Satisfaction. The results of the comparative analysis of Perceived Service Quality and Patients' Satisfaction in Government and Private Medical College Hospitals are presented in sixth chapter. Seventh chapter contains the results of analyses on the relationship between Perceived Service Quality, Patients' satisfaction and Behavioural Intensions. Eighth and the concluding chapter deals

with brief summary of the study, findings of the study, suggestions to management of medical college hospitals in both sector and to the policy makers. The avenues for further research are also discussed.

8.6 Findings of the study

The key research findings regarding the Perceive Service Quality and Patients' Satisfaction in Government and Private Medical College Hospitals in Kerala are as follows.

8.6.1. Comparison between Government and Private Medical College Hospitals

1. Private Medical College Hospitals have high Perceived Service Quality than Government Medical College Hospitals even though the level of Perceived Service Quality of both Government Medical College Hospitals and Private Medical College Hospitals are Excellent.

2. Private Medical College Hospitals are more reliable than Government Medical College Hospitals even though the level of Reliability of both Government Medical College Hospitals and Private Medical College Hospitals are Excellent. Compared to Government Medical College Hospitals, Private Medical College Hospitals are able to provide their service as promised.

3. Private Medical College Hospitals assure the patients more than Government Medical College Hospitals even though the level of Assurance of both Government Medical College Hospitals and Private Medical College Hospitals are Excellent. Compared to Government Medical College Hospitals, doctors and supporting staff of Private Medical College Hospitals are more courteous, friendly and polite. They are able to evoke trust and confidence in patients. They make the patient feel safe, secure and relaxed in their transactions.

4. Private Medical College Hospitals show more empathy than Government Medical College Hospitals even though the level of Empathy of both Government Medical College Hospitals and Private Medical College Hospitals are Excellent. Compared to Government Medical College Hospitals, Doctors in Private Medical College Hospitals have enough patience and they show good personal behaviour too.

5. Physical Environment of Private Medical College Hospitals is better than Government Medical College Hospitals. The level of Physical Environment of Private Medical College Hospitals is Excellent and that of Government Medical College Hospitals is Very good. Physical facilities in the Private Medical College Hospitals are more attractive and more comfortable than Government Medical College Hospitals. Peripherals, interiors and surrounding environment are very clean and hygienic in Private Medical College Hospitals.

6. Private Medical College Hospitals are highly responsive than Government Medical College Hospitals even though the level of Responsiveness of both Government Medical College Hospitals and Private Medical College Hospitals are Excellent. Compared to Government Medical College Hospitals, Private Medical College Hospitals provide services at the time promised. Staffs are always willing to help the patients and are always available to respond to the patients' requests.

7. Private Medical College Hospitals interact well to the patients than Government Medical College Hospitals even though the level of Interaction of both Government Medical College Hospitals and Private Medical College Hospitals are Excellent. Compared to Government Medical College Hospitals, staffs in Private Medical College Hospitals always listen to what the patients have to say and show good manner to the bystanders. Patients find it easy to discuss things with the staffs also.

8. Private Medical College Hospitals communicate well to the patients than Government Medical College Hospitals even though the level of

Communication of both Government Medical College Hospitals and Private Medical College Hospitals are Excellent. Compared to Government Medical College Hospitals, doctors and nurses in Private Medical College Hospitals explain things in a way patients can understand and give clear instructions for the continuing treatment in an understandable way.

9. Availability of services is more in Private Medical College Hospitals than Government Medical College Hospitals even though the level of Availability of both Government Medical College Hospitals and Private Medical College Hospitals are Excellent. The availability of supporting medical equipment and the provision of all types of laboratory tests are more in Private Medical College Hospitals than Government Medical College Hospitals.

10. Private Medical College Hospitals have high Technical Quality than Government Medical College Hospitals even though the level of Technical Quality of both Government Medical College Hospitals and Private Medical College Hospitals are Excellent. Patients reported that getting admitted to Private Medical College Hospitals reduced their level of pressure and having treatment there is worthwhile. Patients in Private Medical College Hospitals believe that the result of their treatment will be the best they can be and reported that the treatment increases their confidence towards life.

11. Private Medical College Hospitals are more efficient than Government Medical College Hospitals even though the level of Efficiency of both Government Medical College Hospitals and Private Medical College Hospitals are Excellent. Compared to Government Medical College Hospitals, there is coordination and integration of care, including clinical care, ancillary and support service, and front line patient care in Private Medical College Hospitals. An obvious flow and organization of the work is seen in the Private Medical College Hospitals.

12. Private Medical College Hospitals have high professionalism than Government Medical College Hospitals even though the level of Professionalism of both Government Medical College Hospitals and Private

Medical College Hospitals are Excellent. Compared to Government Medical College Hospitals, Private Medical College Hospitals have highly experienced efficient and skilled professionals. Doctors and nurses are familiar with the latest advances in the medical field and they carry out their tasks competently.

13. Private Medical College Hospitals are more accessible than Government Medical College Hospitals. The level of Accessibility of Private Medical College Hospitals is Excellent and that of Government Medical College Hospitals is Very good. Compared to Government Medical College Hospitals, Private Medical College Hospitals are accessible by telephone and they provide booking facilities too.

14. In the perception of patients, the most prominent dimension of service quality of medical college hospitals is Technical Quality and the least important dimension is Accessibility. The ranks of dimensions in the order of importance are Technical Quality, Communication, Responsiveness, Efficiency, Interaction, Availability, Professionalism, Physical Environment, Empathy, Reliability, Assurance and Accessibility.

15. In the perception of patients of Government Medical College Hospitals, the most prominent dimension of service quality is Technical Quality and the least important is Accessibility. The ranks of dimensions in the order of importance are Technical Quality, Communication, Interaction, Responsiveness, Efficiency, Professionalism, Availability, Empathy, Assurance, Physical Environment, Reliability and Accessibility.

16. In the perception of patients of Private Medical College Hospitals, the most prominent dimension of service quality is Communication and the least important is Assurance. The ranks of dimensions in the order of importance are Communication, Availability, Interactions, Responsiveness, Technical Quality, Efficiency, Physical Environment, Professionalism, Reliability, Empathy, Accessibility and Assurance.

17. Value for Money is more in Government Medical College Hospitals than Private Medical College Hospitals. The level of Perceived Value for Money of Government Medical College Hospitals is Excellent and that of Private Medical College Hospitals is Very good. Compared to Private Medical College Hospitals, Government Medical College Hospitals offer value for money and provide good services for the charges. Patients reported that fair and reasonable prices are being charged by Government Medical College Hospitals.

18. Perceived Waiting Time in Private Medical College Hospitals is better than Government Medical College Hospitals. The level of Perceived Waiting Time of Private Medical College Hospitals is Excellent and that of Government Medical College Hospitals is Very good. That means waiting time in Private Medical College Hospitals is comparatively less than that in Government Medical College Hospitals. Compared to Government Medical College Hospitals, the time spent for procedures and the time to get the first aid treatment is not long in Private Medical College Hospitals. The treatment is not delayed due to the absence of the doctor or lack of cooperation between various people and departments (ex: blood test report, X ray report, scanning report etc.).

19. Patients of Private Medical College Hospitals are more satisfied than patients of Government Medical College Hospitals even though the level of Patients' Satisfaction in both Government Medical College Hospitals and Private Medical College Hospitals are Extremely Satisfied. Compared to Government Medical College Hospitals, Private Medical College Hospitals have good image and reputation. The patients feel that the services are of good quality. They feel good about coming there for their treatment and feel satisfied that the result of their treatment is the best that they can get.

20. Patients of Private Medical College Hospitals show more loyalty than patients of Government Medical College Hospitals. The level of Patients' Loyalty in Private Medical College Hospitals is high and that of Government

Medical College Hospitals is above average. Compared to Government Medical College Hospitals, patients of Private Medical College Hospitals convey positive and fair things about the hospital and recommend that hospital when someone seeks their advice. They encourage friends and relatives to seek treatment in that hospital and consider that hospital as their first choice.

21. Patients' Complaint Behaviour in both Government Medical College Hospitals and Private Medical College Hospitals are same in nature. The level of Patients' Complaint Behaviour in both Government Medical College Hospitals and Private Medical College Hospitals are Above Average. Patients of Medical College Hospitals in both sector reported that they may complain to the hospital employees if they experience a problem with its service or may file a suit against that hospital if they experience a problem with its service.

22. There is a Strong Positive Correlation between Perceived Service Quality and Patients' Satisfaction. The dimension of Perceived Service Quality which is more correlated to Patients' Satisfaction is Technical Quality and the dimension which is less correlated to Patients' Satisfaction is Accessibility. There is a strong positive correlation between Physical Environment and Patients' Satisfaction, between Responsiveness and Patients' satisfaction, between Interaction and Patients' Satisfaction, between Communication and Patients' Satisfaction, between Availability and Patients' Satisfaction, between Technical Quality and Patients' Satisfaction, between Efficiency and Patients' Satisfaction, between Professionalism and Patients' Satisfaction. There is a moderate positive correlation between Reliability and Patients' Satisfaction, between Assurance and Patients' Satisfaction, between Empathy and Patients' Satisfaction and between Accessibility and Patients' Satisfaction.

23. In Government Medical College Hospitals, the dimension of Perceived Service Quality which is more correlated to Patients' Satisfaction is

Technical Quality and the dimension which is less correlated to Patients' Satisfaction is Accessibility. There is a strong positive correlation between Reliability and Patients' Satisfaction, between Assurance and Patients' Satisfaction, between Empathy and Patients' Satisfaction, between Communication and Patients' Satisfaction, between Physical Environment and Patients' Satisfaction, between Responsiveness and Patients' Satisfaction, between Interaction and Patients' Satisfaction, between Availability and Patients' Satisfaction, between Efficiency and Patients' Satisfaction and between Professionalism and Patients' Satisfaction. There is a very strong positive correlation between Technical Quality and Patients' Satisfaction while there is moderate positive correlation between Accessibility and Patients' Satisfaction.

24. In Private Medical College Hospitals, Professionalism is the more correlated dimension of Perceived Service Quality to Patients' Satisfaction while Assurance is the least correlated dimension of Perceived Service Quality to Patients' Satisfaction. None of the dimensions are strongly correlated to Patients' Satisfaction. There is a moderate positive correlation between Interaction and Patients' Satisfaction, between Communication and Patients' Satisfaction and between Professionalism and Patients' Satisfaction. There is weak positive correlation between Reliability and Patients' Satisfaction, between Assurance and Patients' Satisfaction, between Empathy and Patients' Satisfaction, between Physical Environment and Patients' Satisfaction, between Responsiveness and Patients' Satisfaction, between Availability and Patients' Satisfaction, between Technical Quality and Patients' Satisfaction, between Efficiency and Patients' Satisfaction and between Accessibility and Patients' Satisfaction.

25. Perceived Service Quality and Behavioural Intentions have moderate positive correlation while Patients' Satisfaction and Behavioural Intentions have strong positive correlation.

26. Perceived Value for Money has significant positive mediating effect on the relationship between Perceived Service Quality and Patients' Satisfaction.

27. Perceived Waiting Time has significant positive mediating effect on the relationship between Perceived Service Quality and Patients' Satisfaction.

28. Perceived Waiting Time and Perceived Value for Money jointly have significant positive mediating effect on the relationship between Perceived Service Quality and Patients' Satisfaction.

8.6.2. Perceived Service Quality

1. Patients in the age groups up to 40 years i.e. Youngsters, 41-60 years i.e. Middle aged and above 60 years i.e. Old people have same Perception on Service Quality.

2. Both Male patients and Female patients have same Perception on Service Quality.

3. Patients with different Educational qualification like Primary, SSLC, Plus Two, Graduation and Post-Graduation have same Perception on Service Quality.

4. Patients with different Occupations like Student, Daily wage, Salaried, Self-employed, Business and Home maker have different Perception on Service Quality. Business persons have high Perception on Service Quality and Daily wage workers have low Perception on Service Quality.

5. Patients in APL category and BPL category have different Perception on Service Quality. Patients in APL category have more perception on Service Quality than patients in BPL category.

6. Patients who are admitted for the first time and those who are admitted for more than once have same Perception on Service Quality.

7. Patients who have stayed in the ward up to 10 days, 11-30 days, 31-50 days and above 50 days have different Perception on Service Quality. Patients

who have stayed up to 10 days have high Perception on Service Quality and patients who have stayed for 31-50 days have low Perception on Service Quality.

8. Patients admitted in different wards like General Medicine ward, Surgery ward, Urology ward, Gynaecology ward, Orthopaedic ward, Paediatrics ward, Nephrology ward and Neurology ward have different Perception on Service Quality. Patients in Urology ward have high Perception on Service Quality and Patients in General Surgery ward have low Perception on Service Quality.

9. Patients who prefer Government Hospitals, those who prefer Private Hospitals and those who prefer Both Government and Private Hospitals have different Perception on Service Quality. Patients who prefer Private Hospitals have high Perception on Service Quality and patients who prefer Government Hospitals have low Perception on Service Quality.

8.6.3. Perceived Value for Money

1. Patients in the age group up to 40 years i.e. Youngsters, 41-60 years i.e. Middle aged and above 60 years i.e. Old people have different Perception on Value for Money. Patients in the Age group Up to 40 years i.e. Youngsters have high Perception on Value for Money while patients in the Age group 41-60 years i.e. Middle aged have low Perception on Value for Money.

2. Both Male patients and Female patients have same Perception on Value for Money.

3. Patients who have Primary education, SSLC qualification, Plus Two qualification, Graduation and Post-Graduation have different Perception on Value for Money. Patients who have Plus Two qualification have high Perception on Value for Money and patients with Primary education have low Perception on Value for Money.

4. Patients with different Occupations like Student, Daily wage, Salaried, Self-employed, Business, and Home maker have same Perception on Value for Money.

5. Patients in APL category and BPL category have same Perception on Value for Money.

6. Patients who are admitted for the first time and those who are admitted for more than once have different Perception on Value for Money. Patients who are admitted for more than once have more Perception on Value for Money than patients who are admitted for the first time.

7. Patients who have stayed in the ward Up to 10 days, 11-30 days, 31-50 days and above 50 days have same Perception on Value for Money.

8. Patients admitted in different wards like General Medicine ward, Surgery ward, Urology ward, Gynaecology ward, Orthopaedic ward, Paediatrics ward, Nephrology ward and Neurology ward have different Perception on Value for Money. Patients in Gynaecology ward have high Perception on Value for Money and patients in General Surgery ward have low Perception on Value for Money.

9. Patients who prefer Government Hospitals, who prefer Private Hospitals and those who prefer Both Government and Private Hospitals have different Perception on Value for Money. Patients who prefer Private Hospitals have high Perception on Value for Money and patients who prefer Both Government and Private Hospitals have low Perception on Value for Money.

8.6.4. Perceived Waiting Time

1. Patients in the age group Up to 40 years i.e. Youngsters, 41-60 years i.e. Middle aged and above 60 years i.e. Old people have same Perception on Waiting Time.

2. Both Male patients and Female patients have same Perception on Waiting Time.

3. Patients who have Primary education, SSLC qualification, Plus Two qualification, Graduation and Post-Graduation have same Perception on Waiting Time.

4. Patients with different Occupations like Student, Daily wage, Salaried, Self-employed, Business, and Home maker have different Perception on Waiting Time. Business persons have high Perception on Waiting Time and Students have low Perception on Waiting Time.

5. Patients in APL category and BPL category have different Perception on Waiting Time. Patients in APL category have High Perception on Waiting Time than patients in BPL category.

6. Patients who have admitted for the first time and those who have admitted for more than once have same Perception on Waiting Time.

7. Patients who have stayed in the ward Up to 10 days, 11-30 days, 31-50 days and above 50 days have different Perception on Waiting Time. Patients who have stayed up to 10 days have high Perception on Waiting Time and patients who have stayed for 31-50 days have low Perception on Waiting Time.

8. Patients admitted in different Wards like General Medicine ward, Surgery ward, Urology ward, Gynaecology ward, Orthopaedic ward, Paediatrics ward, Nephrology ward and Neurology ward have different Perception on Waiting Time. Patients in Paediatrics ward have high Perception on Waiting Time and patients in General Surgery ward have low Perception on Waiting Time.

9. Patients who prefer Government Hospitals, who prefer Private Hospitals and those who prefer Both Government and Private Hospitals have different Perception on Waiting Time. Patients who prefer Private Hospitals have high Perception on Waiting Time and patients who prefer Government Hospitals have low Perception on Waiting Time.

8.6.5. Patients' Satisfaction

1. Patients in the age group up to 40 years i.e. Youngsters, 41-60 years i.e. Middle aged and above 60 years i.e. Old people have same level of Satisfaction.

2. Both Male patients and Female patients have same level of Satisfaction.

3. Patients who have Primary education, SSLC qualification, Plus Two qualification, Graduation and Post-Graduation have same level of Satisfaction.

4. Patients with different Occupations like Student, Daily wage, Salaried, Self-employed, Business, and Home maker have different level of Satisfaction. Business persons are highly satisfied and Daily wage workers are less satisfied.

5. Patients in APL category and BPL category have same level of Satisfaction.

6. Patients who are admitted for the first time and those who are admitted for more than once have different level of Satisfaction. Patients who are admitted for more than once are more satisfied than those who are admitted for the First time.

7. Patients who have stayed in the ward up to 10 days, 11-30 days, 31-50 days and above 50 days have same level of Satisfaction.

8. Patients admitted in different wards like General Medicine ward, Surgery ward, Urology ward, Gynaecology ward, Orthopaedic ward, Paediatrics ward, Nephrology ward and Neurology ward have different levels of Satisfaction. Patients in Urology ward are highly satisfied and patients in General Surgery ward are less satisfied.

9. Patients who prefer Government Hospitals, who prefer Private Hospitals and those who prefer Both Government and Private Hospitals have different level

of Satisfaction. Patients who prefer Private Hospitals are highly satisfied and patients who prefer Government Hospitals are less satisfied.

8.6.6. Patients' Loyalty

1. Patients in the age group up to 40 years i.e. Youngsters, 41-60 years i.e. Middle aged and above 60 years i.e. Old people show different level of Loyalty. Patients in the Age group Up to 40 years show high level of Loyalty and patients who are in the Age group 41-60 show low level of Loyalty.

2. Both Male patients and Female patients show same level of Loyalty.

3. Patients who have Primary education, SSLC qualification, Plus Two qualification, Graduation and Post-Graduation show different level of Loyalty. Patients who have SSLC qualification show high Loyalty and patients who have Primary Education show low Loyalty.

4. Patients in different Occupations like Student, Daily wage, Salaried, Self-employed, Business, and Home maker show different level of Loyalty. Business persons show high Loyalty and Students show low loyalty.

5. Patients in APL category and BPL category show same level of Loyalty.

6. Patients who are admitted for the first time and those who are admitted for more than once show different level of Loyalty. Patients admitted for more than once show more Loyalty than those who are admitted for first time.

7. Patients who have stayed in the hospital up to 10 days, 11-30 days, 31-50 days and above 50 days show same level of Loyalty.

8. Patients admitted in different wards like General Medicine ward, Surgery ward, Urology ward, Gynaecology ward, Orthopaedic ward, Paediatrics ward, Nephrology ward and Neurology ward show different levels of Loyalty. Patients in Gynaecology ward show high Loyalty and patients in Orthopaedic ward show less Loyalty.

9.   Patients who prefer Government Hospitals, who prefer Private Hospitals and those who prefer Both Government and Private Hospitals show different level of Loyalty. Patients who prefer Private Hospitals show high Loyalty and patients who prefer Both Government and Private Hospitals show low Loyalty.

8.6.7. Patients' Complaint Behaviour

1.   Patients in the Age group like up to 40 years i.e. Youngsters, 41-60 years i.e. Middle aged and Above 60 years i.e. Old people shows different level of Complaint Behaviour. Patients in the Age group Up to 40 years show high Complaint Behaviour and patients in the Age group Above 60 years show low Complaint Behaviour.

2.   Male patients and Female patients have different level of Complaint Behaviour. Male patients show high level of Complaint Behaviour than Female Patients.

3.   Patients who have Primary education, SSLC qualification, Plus Two, Graduation and Post-Graduation show different level of Complaint Behaviour. Patients who have Post-Graduation show high Complaint Behaviour while patients who have only Primary education show low Complaint Behaviour.

4.   Patients with different Occupations like Student, Daily wage, Salaried, Self-employed, Business, and Home maker show different level of Complaint Behaviour. Salaried people show high Complaint Behaviour and Home makers show low Complaint Behaviour.

5.   Patients in APL category and patients in BPL category show different level of Complaint Behaviour. APL patients show high Complaint Behaviour than BPL patients.

6.   Patients who are admitted for the first time and those who are admitted for more than once have different level of Complaint Behaviour. Patients who

are admitted for More than once show high Complaint Behaviour than those who are admitted for the First time.

7. Patients who have stayed in the hospitals for up to 10 days, 11-20 days, 21-40 days, 41-60 days and above 60 days have same level of Complaint Behaviour.

8. Patients admitted in different wards like General Medicine ward, Surgery ward, Urology ward, Gynaecology ward, Orthopaedic ward, Paediatrics ward, Nephrology ward and Neurology ward show different levels of Complaint Behaviour. Patients in Orthopaedic ward show high Complaint Behaviour and patients in General Medicine ward show low Complaint Behaviour.

9. Patients who prefer Government Hospitals, who prefer Private Hospitals and those who prefer Both Government and Private Hospitals have different level of Complaint Behaviour. Patients who prefer Private Hospitals show high Complaint Behaviour and patients who prefer Both Government and Private Hospitals show low Complaint Behaviour.

8.7. Suggestions of the study

Based on the key findings of the study, the following suggestions are made to the Management of Government Medical College Hospitals, Management of Private Medical College Hospitals and Policy makers.

8.7.1. Suggestions to the management of Government Medical College Hospitals

1. By increasing the financing to improve facilities or equipment used in the hospital, more patients can be treated or the same number can be treated faster, better at lower cost.

2. By increasing the number of nursing staff, the work stress can be reduced.

3. Government Medical college Hospitals should take efforts to provide service as promised so that the hospital will become more reliable to the patients.

4.   People will feel the hospital is an assuring one only if the doctors, nurses and supporting staff are able to evoke trust and confidence in patients. Make sure that the patient is safe, secure and relaxed in their transaction.

5.   Patients and bystanders have the complaint that the supporting staffs are rough in their manner. Training and communication classes should be provided to attenders and security staff to enhance their interpersonal skills. Stress relief programmes such as yoga classes should be provided to the supporting staffs at least once in a month.

6.   Patients are font of doctors who show empathy towards them. Make sure the doctors and nurses show empathy and good personal behaviour.

7.   Government Medical College Hospitals should focus on improving the Physical Environment of the hospital so that the overall service quality and patients' satisfaction can be improved. The indoors and surroundings have to be kept little more clean and hygienic. The existing numbers of beds, wheel chairs, stretchers and screens have to be raised.

8.   Responsiveness of staff contributes to service quality and so the service should be provided on time promised. Nurses should be always willing to respond to the patients' requests.

9.   Staff interactions to bystanders have to be improved so that the people accompanying the patients feel comfortable in the hospital.

10.   Doctors should make sure that the patients and bystanders understand the instructions given for the treatment and provide explanations about the treatment.

11.   It is found that some laboratory tests are being done outside the hospital for that patients are send outside. Availability of all the type of laboratory tests should be there in Government Medical College Hospitals.

12.   Make sure that there is no lag in the process of care due to excessive waste of time.

13. Improve the professionalism of staff by providing development programs to make them familiar with the latest advances in medical field.

14. Government Medical College Hospitals should focus on increasing Accessibility of service to the patients so that the overall Service Quality and Patients Satisfaction can be improved. The measures to be taken are facilitate the patients to access the hospital by telephone, give proper directions to the patients to access services so that confusions due to the huge size of the hospital can be reduced.

15. Many doctors in Government Medical College Hospitals acknowledge that the quality of medicines and equipment are not up to the standard. Since medicines for these hospitals are brought by Kerala Medical Service Corporation Limited, the concerned authorities should take measure to improve the quality of medicines and equipment.

16. Quality Assurance Cells have to be formed and functioned in each Government Medical College Hospitals.

17. The rush in Government Medical College Hospitals can be reduced by limiting the admission only to referred cases, thus the waiting time can also be reduced.

18. Employee dissatisfaction may lead to patients' dissatisfaction. Hence the management should ensure employee satisfaction in the Hospital. Measures like salary revision of doctors and nurses, job rotation to supporting staff etc. should be done.

8.7.2. Suggestions to the Management of Private Medical College Hospitals

1. Marketing strategy of the Private Medical College Hospitals should focus on providing services which offer monetary value to the patients so that patients' satisfaction can be further improved.

2. The private hospitals are becoming unaffordable to the weaker sections of the society. The hospitals should aim at providing quality service at a

reasonable cost to the lower middle class customers so that they can widen their market.

3.   Imposing the burden of all medical tests for diagnosing the disease and charging for that will create negative perception in the mind of patients. Doctors should insist the patient only to undergo those tests which are needed. Unwanted surgeries are to be avoided.

4.   Too much influence of management in doctors' freedom and ethics cause mental distress in doctors. Such practices have to be avoided.

5.   The regular customers should be provided some sort of discount schemes so they will be more loyal to the hospital.

8.7.3. Suggestions to the Policy Makers

1.   The lower middle class patients who belong to APL category struggle as they don't get benefit of any of the government schemes and at the same time they don't have the purchasing power to access private services. Special focus should to given to those lower middle class in policy making.

2.   Equal amount is benefited to RSBY card holders irrespective of the nature of disease. It should to be flexible according to the severity of the disease. The scheme should be extended to lower middle class people by considering their income.

3.   As the private sector health care system is an unorganised one, quality and price are decided by the management of the concern. Even though Clinical Establishment Act passed in the year 2010 at the central level in order to make the private establishments under law or legalise the private settings, private sector health care system remain as an unorganised one. No efforts had been taken from the part of Government of Kerala. Immediate implementation of the provisions of the act is necessary in the State.

4.   Public-Private Partnership (PPP) in the provision of health services can improve the quality of services provided by medical college hospitals. The

practice of outsourcing of services between Private Medical College Hospitals and Government Medical college Hospitals will be benefited to the people a lot.

5. The rush in Medical Colleges cannot be controlled without improving the service offered by hospital in Primary level and District level. So, measures should be taken to improve the quality of service of PHCs, CHCs and General Hospitals. Deficiencies of professionals are seen in General Hospitals in Government sector. The posts which are remained vacant for years have to be filled immediately. Unavailability of medical equipment is one of the problems reported by many patients who were referred to medical college hospitals. The issue should be seriously taken care off.

6. Each district should have one medical college hospital so that people can access the services easily. So immediate initiatives have to be taken by the Ministry of Health to set up the same.

7. People are not aware on the complaint redressal mechanisms that are prevailing in the Country. Measures to be taken to educate the people regarding the complaint cells.

8. The patients of government hospitals have to complain in civil court while the patients of private hospitals file complain in consumer court. The people with already poor purchasing power hesitate to complain against service failure. Some alternative mechanism should be implemented in order to improve this situation.

8.8. Conclusion

Due to the intangible nature of service, the quality of service delivering process is what determines customers' impression about the service provider. Therefore, any service organisation that is keen to be successful has to understand the end users' perception of the quality of services offered by them. Excellence in hospital services will result in benefits to not only to the clients and provider but to the society at large.

The information generated by this study will enable the managers of medical college hospitals in both government and private sector to understand the distinctions of service quality and level of patients' satisfaction. The results give the management an idea of mediating role of waiting time and value for money in enhancing patients' satisfaction. The research gives an idea of the areas in which hospital should modify the service.

This research is a preliminary attempt to address the issues in medical college hospitals in Kerala. Apart from using the commonly used SERVQUAL scale, the study used another instrument which was the modified form of a model developed by Hong Qin (2009). Researcher studied relationship between Perceived Service Quality and Patients' Satisfaction along with mediating role of Perceived Value for Money and Perceived Waiting Time. Advanced statistical techniques like SEM and Sobel test were used in assessing the model. Research resulted in the modification of an instrument suitable for measuring the service quality of Kerala hospital industry. Academic researchers in the developing country like India can gain further by using this methodology for developing instrument for service quality measurement. Thus, this study turned out to be a unique in nature and hence the research implications from this study can be far reaching.

8.9. Scope for further research

1. By using the similar methodology in this study, service quality of other service industries can also be measured.

2. While measuring patients' satisfaction, outpatients' perception can also be included.

3. Only the perceptions of patients are studied here. In the same study, expectation of patients can also be included.

4. Only the patients' perceptions during hospital stay are studied here. Perception after discharge can also be studied.

5.   The above study can be done in a qualitative way so that more information can be generated by researchers.

6.   Patients' perception on waiting time in medical college hospitals has been studied here. This would further provide inputs for researchers to conduct further research on development of methods of waiting time reduction.

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APPENDICES

APPENDIX I

INTERVIEW SCHEDULE

SERVICE QUALITY PERCEPTION AND PATIENTS' SATISFACTION IN GOVERNMENT AND PRIVATE MEDICAL COLLEGE HOSPITALS IN KERALA

I, PREETHI T M, Research scholar of Department of Commerce and Management Studies, University of Calicut request your whole hearted cooperation for filling this interview schedule. I hereby declare that the data given by you will be kept highly confidential and will be used only for the research purpose.

<div align="right">

PREETHI T M
Research Scholar
Department of Commerce and
Management Studies
University of Calicut

</div>

I. <u>Personal Information:</u>

1. Age :

2. Gender :
   - ☐ Male
   - ☐ Female
   - ☐ Transgenders

3. Educational Qualification:
   - ☐ Primary education
   - ☐ SSLC
   - ☐ Plus Two
   - ☐ Graduation
   - ☐ Post-Graduation

4. Occupation:
   - ☐ Student
   - ☐ Daily wage
   - ☐ Salaried
   - ☐ Self Employed
   - ☐ Business
   - ☐ Home Maker

5. Poverty line   :   APL/BPL

6. Frequency of Visit: Fist Time / More than Once

7. Duration of Hospital stay:
8. In which department you are admitted:

- ☐ General Medicine
- ☐ General Surgery
- ☐ Urology
- ☐ Gynaecology
- ☐ Orthopaedics
- ☐ Paediatrics
- ☐ Neurology
- ☐ Nephrology

9. Your preference of sector of hospital:

- ☐ Government hospitals
- ☐ Private hospitals
- ☐ Both

II. **<u>Perceived Service Quality</u>**

The statements given below are framed to find out the perception of patients on the service quality and their satisfaction on Government and Private Medical College Hospitals in Kerala. Please listen to all the statements given below and reveal your response under any of the five categories SA (Strongly Agree), A (Agree), N (Neural), D (Disagree) and SD (Strongly Disagree) given against each statement. Be free in expressing your views. Your answer will be used for the research purpose only and it will be kept strictly confidential.

	Reliability	**SA**	A	N	D	SD
1	Hospital has a group of reputed doctors.					
2	Hospital provides their service as promised.					
3	Hospital has consistency of fees and other charges.					

	Assurance	SA	A	N	D	SD
1	Doctors and supporting staffs are courteous, friendly and polite.					
2	The doctors, nurses and supporting staffs are able to evoke trust and confidence in patients.					
3	Doctors have thoroughness in explanation of medical condition and treatment.					
4	Doctors and nurses make the patient feel safe, secure and relaxed in their transactions.					
5	Doctors and nurses are honest and dedicated.					

	Empathy	SA	A	N	D	SD
1	Doctors have enough patience.					
2	Doctors and nurses show good personal behaviour.					

	Physical environment	SA	A	N	D	SD
1	The physical facilities in the hospital are attractive and comfortable (waiting room, chair, table etc.)					
2	The design of the hospital is patient friendly.					
3	It is easy to find enquiry and get access to the information regarding the hospital.					
4	Peripherals, interiors and surrounding environment are clean and hygienic.					
5	The hospital has sophisticated and modern medical equipment.					

	Responsiveness	SA	A	N	D	SD
1	Hospital provides service at the time promised.					
2	Staffs are always willing to help patients.					
3	Staffs are available to respond to the patients' requests.					

	Interaction	SA	A	N	D	SD
1	You were involved in decision about your care.					
2	Hospital provides adequate information about your illness/ treatment.					
3	The staffs at the hospital always listen to what you have to say.					

4	You find it easy to discuss things with the staffs at the hospital.					
5	Doctors and staffs show good manner to the bystanders.					

	Communication	SA	A	N	D	SD
1	There is clarity of information about illness, medication, treatment, laboratory tests and outcome.					
2	Hospital provides information and education to facilitate autonomy, self-care, and health promotion.					
3	Hospital provides information regarding life style behaviour and preventive care.					
4	Possible side effects or adverse reactions are explained.					
5	Family and friends are always kept informed.					
6	Explain things in the way patients can understand.					
7	Instructions given for the continuing treatment are clear and understandable.					

	Availability	SA	A	N	D	SD
1.	Supporting medical equipments such as stretcher to the needy patients are available in the hospital.					
2.	Hospital provides laboratory tests such as blood tests, x-rays, scanning etc.					
3.	In general, the hospital working hours are convenient to you.					
4.	If necessary, you can be referred to another hospital or a specialist.					

	Technical quality	SA	A	N	D	SD
1.	You feel hopeful as a result of treatment at this hospital.					
2	Getting admitted to this hospital has reduced the level of your pressure.					
3	You believe having treatment at this hospital has been worthwhile.					
4	You believe the result of your treatment will be the best they can be.					
5	The treatment increases your confidence towards life.					

	Efficiency	SA	A	N	D	SD
1.	There is comprehensiveness in providing correct information regarding illness and treatment					
2.	There is coordination and integration of care, including clinical care, ancillary and support service, and front line patient care.					
3.	There is transition and continuity in information, coordination, planning and support.					
4.	Staffs arrange follow up of appointments, tests and referrals for the patients.					
5.	An obvious flow and organization of the work is seen in the hospital.					

	Professionalism	SA	A	N	D	SD
1	Hospital has highly experienced, efficient and skilled professionals such as doctors, nurses and other supporting staff.					
2	Doctors and nurses are familiar with the latest advances in the medical field.					
3	Doctors and nurses carry out their tasks competently.					

	Accessibility	SA	A	N	D	SD
1	Hospital is accessible to patients by phone.					
2	It was easy for you to find the hospital.					
3	Apt directions are provided to the patient for getting care.					
4	Transportation facility/ ambulance service is available for emergency services.					
5	Hospital is accessible by public transport.					

III. Perceived Value for Money

	Perceived Value for Money	SA	A	N	D	SD
1	Reasonable prices are charged for the treatment					
2	Hospital is providing good service for the charges.					
3	Hospital is offering value for the money.					
4	Fair price is charged for the service.					

IV.   Perceived Waiting Time

	Perceived Waiting Time	SA	A	N	D	SD
1	The time spent at the office for procedure was not long					
2	Actual time to get the first aid treatment was not long					
3	Your treatment has not been delayed due to the absence of the doctor.					
4	Your treatment has also not been delayed due to the lack of cooperation between various people and departments (ex: Your blood report, X ray report etc.)					

V.   Patient's Satisfaction

	Patient's Satisfaction	SA	A	N	D	SD
1	Your feel this hospital has good image and reputation					
2	You get good treatment from this hospital					
3	The services of this hospital are of good quality					
4	You feel good about coming to this hospital for your treatment					
5	You feel satisfied that the result of your treatment was the best that can get.					
6	On the whole, you are satisfied with this health care provider and its various services.					

VI.   Behavioural Intentions

	Patients' loyalty	SA	A	N	D	SD
1	You will convey positive and fair things about this hospital.					
2	Recommend this hospital when someone seeks your advice.					
3	Encourage friends and relatives to seek treatment in this hospital.					
4	Consider this hospital as your first choice always.					

	Complaint Behaviour	SA	A	N	D	SD
1	You may file a suit against this hospital if you experience a problem with its service.					
2	You may complain to the hospital employees if you experience a problem with its service.					

Thank you

APPENDIX II

LIST OF GOVERNMENT MEDICAL COLLEGE HOSPITLAS IN KERALA

No	Medical college Hospital Name	District	Estd Year
1	Trivandrum Medical College	Thiruvanathapuram	1951
2	Calicut Medical college	Kozhikode	1957
3	Kottayam Medical College	Kottayam	1962
4	Government T D Medical College, Alappuzha	Apappuzha	1963
5	Government Medical College, Thrissur	Thrissur	1981
6	Government Medical College, Palakkad	Palakkad	2014
7	Government Medical College, Painav, Idukki	Idukki	2014
8	Government Medical College, Ernakulam, Kalamassery	Ernakulam	2000
9	Government Medical College, Manjeri, Malappuram	Malappuram	2013
10	Academy of Medical Sciences, Pariyaram, Kannur (KNM)	Kannur	1995
11	Government Medical College, Kollam	Kollam	2016
12	Government Medical College, Konni, Pathanamthitta	Pathanamthitta	2016
13	Government Medical College, Madakkimala, Wayanad	Wayanad	Planned
14	Government Medical College, Kasaragod	Kasargod	Planned

Source: Compiled from various sources

- ESI Medical College, Parippally, Kollam is with ESIC. Kerala Government has a plan to take over the college from ESIC.
- Kerala Government has plans to take over Pariyaram medical college also

APPENDIX III

LIST OF PRIVATE MEDICAL COLLEGE HOSPITALS IN KERALA

No	College Name	District	E Year
1	Al Azhar Medical College, Thodupuzha	Idukki	2014
2	Amala Institute of Medical Sciences, Amala Nagar, Thrissur	Thrissur	2003
3	Amrita Institute of Medical Sciences and Research Centre, Ponnekara, Kochi	Ernakulam	1998
4	Azeezia Institute of Medical Sciences & Research, Meeyyannoor P O, Kollam	Kollam	2008
5	Believers Church Medical College Hospital, Kuttapuzha, Kerala	Pathanamthitta	2016
6	DM Wayanad Institute of Medical sciences, Meppadi, Wayanad	Wayanad	2013
7	Dr. Somervell Memorial CSI Medical College, Karakonam, Thiruvananthapuram	Thiruvananthapuram	2002
8	Jubilee Mission Medical College and Research Institute, Thrissur	Thrissur	2003
9	Kannur Medical College, Kannur	Kannur	2006
10	Karuna Medical College, Vilayodi, Palakkad	Palakkad	2006
11	Kerala Medical College, Cherupplasery, Palakkad	Palakkad	2016
12	KMCT Medical College, Mukkam, Kozhikode	Kozhikode	2008
13	Malabar Medical College, Kozhikode	Kozhikode	2008
14	Malankara Orthodox Syrian Church Medical College, Kolenchery	Ernakulum	2002
15	MES Medical College, Perinthalmanna, Malappuram	Malappuram	2002
16	Mount Zion Medical College, Adoor	Pathanamthitta	2012
17	PK Das Institute of Medical Sciences, Vaniyamkulam, Palakkad	palakkad	2014
18	Pushpagiri Institute of Medical Sciences & Research Centre, Thiruvalla, Pathanamthitta	Pathanamthitta	2002
19	Sree Gokulam Medical College & Research Foundation, Venjaramoodu P O, Thiruvananthapuram	Thiruvananthapuram	2005
20	Sree Narayana Institute of Medical Sciences, North Paravur, Ernakulam District	Ernakulam	2009
21	SUT Medical College, Vattappara, Thiruvananthapuram	Thiruvanathapuram	2006
22	Travancore Medical College Hospital, Kollam	Kollam	2009
23	SR Medical College Hospital, Varkala	Thiruvanathapuram	2016

Source: Compiled from various sources

APPENDIX IV
NORMALITY TESTING

It is very essential to test the normality of the data before conducting any statistical analysis as the statistical procedures and tests differs for normal data and non-normal data. In other words parametric test procedures are used for normal data and distribution free methods for non-normal data. To test normality, Kolmogorov-Smirnov test is used under which the hypothesis is:

H0: The given data is normal

H1: The given data is non-normal.

If p value is less than 0.05, we reject the normality assumption, and if p value is greater than 0.05 it indicates that the data is normal. The following table gives the result of the K-S test.

Result of K-S Test for Normality

Variable	N	Normal Parameters		Kolmogorov-Smirnov Z	p value
		Mean	Std. Deviation		
Perceived Service Quality	770	220.87	24.31	2.660	<0.001
Perceived Value for Money	770	15.75	3.03	6.948	<0.001
Perceived Waiting Time	770	16.36	2.68	6.576	<0.001
Patient's Satisfaction	770	26.05	3.29	4.290	<0.001
Patient's Loyalty	770	15.72	2.59	4.347	<0.001
Patient's Complaint Behaviour	770	6.20	1.20	5.191	<0.001

Table shows that p value for all the study variables are less than 0.001 and hence the normality assumption is rejected. The K-S test indicates that the data is non-normal so the researcher used non parametric method for analysis.

APPENDIX V
CONFIRMATORY FACTOR ANALYSIS (CFA)

Since the questionnaire being adopted from the past studies it is essential to test whether the factors stated under each of the variable or endogenous (dependent) variables measurers the exogenous (independent) variable correctly. Researcher tested the convergent validity of the endogenous (dependent) variables using measurement model of the CFA. As the data being an opinion converted into a score the answer may be subjected to random variation and is influenced by psychological factors. So it is better to use psychometric scale development approaches to evaluate the relationship. The best model for testing the convergent validity and for modelling is Structural equation Model or confirmatory factor analysis. Structural Equation Modelling (SEM) is a statistical technique that takes a confirmatory approach to the analysis of a structural theory bearing on some phenomenon. The hypothesized model is statistically tested simultaneously to examine its consistency with the data through goodness of fit measures. The structural Equation Modelling using Amos produces several indices of fit like Absolute Fit measures, Incremental fit measures, and Parsimonious fit measures etc. The most commonly used indices are explained below.

Table 1

Confirmatory Factor Analysis - Model Fit Indices

Sl. No.	Model fit Indices	Values of good fit
	Absolute fit measures	
1	Likelihood ratio Chi-square statistic (p)	p >0.05
2	Normal Chi-square (CMIN/DF)	<5
3	Goodness of fit index (GFI)	>.90

4	Root mean square error of approximation (RMSEA)	<0.05
5	Root Mean Square Residual(RMR)	<0.5
	Incremental fit measures	
6	Tuker-Lewis Index (TLI)	>0.90
7	Normal fit Index (NFI)	>0.90
8	Adjusted goodness –of –fit index (AGFI)	>0.90
9	Incremental Fit Index (IFI)	>0.90
10	Comparative Fit Index (CFI)	>0.90
11	Relative Fit Index (RFI)	>0.90
	Parsimonious fit measures	
12	Parsimonious goodness-of-fit index (PGFI)	>0.50
13	Parsimonious Normed fit Index (PNFI)	>0.50

Confirmatory factor analyses of each dimension of Perceived Service Quality, Perceived Value for Money, Perceived Waiting Time, Patients' Satisfaction, Patients' Loyalty and patients' Complaint Behaviour are discussed under.

1. **CFA of Reliability**

The model fit indices for CFA of reliability are presented in Table below

Table 2

Model fit indices for CFA- Reliability

	χ^2	DF	P	Normed χ^2	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
Reliability	.000	0			1.00		1.00		1.00	.000	.464

It is noted from the table 2 that χ^2value obtained is .000 which shows an acceptable fit. The absolute fit measure GFI shows a value of 1.00 which indicates a perfect fit. RMR value is less than 0.5. The incremental fit measures NFI (1.00) and CFI (1.00) also show that the model is perfectly fit to the data.

Table 3

The Regression Coefficients –Reliability

Factors/ Latent Variables (Dependent Variable)	Construct (Independent Variable)	Regression Coefficient	C.R.	p	Variance explained (%)	Cronbach Alpha coefficient before	
						Before	After
Reliability	Reliability 1	0.880			77.5		
	Reliability 2	0.755	7.599	<0.001	56.9	0.623	0.795
	Reliability 3	0.280	6.038	<0.001	7.9		

Table 3 depicts the regression coefficients of the construct Reliability. Regression coefficients of Reliability 1, Reliability 2 and Reliability 3 are 0.880, 0.755 and 0.280 respectively. In this case Reliability 3 has regression coefficient value less than 0.4. So this statement does not have significant impact on Reliability.

2. **CFA of Assurance**

Table 4

Model fit indices for CFA- Assurance

	χ^2	DF	P	Normed χ^2	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
Assurance	.000	0			1.00		1.00		1.00	.000	.647

Table 4 shows the model fit indices of the construct Assurance. The model is acceptable as the χ^2 value is .000 and RMR value is .000. The absolute fit measure GFI (1.00) and incremental fit measures CFI (1.00) and NFI (1.00) indicate that the model is perfectly fit to the data.

Table 5

The Regression Coefficients – Assurance

Factors/ Latent Variables (Dependent Variable)	Construct (Independent Variable)	Regression Coefficient	C.R.	p	Variance explained (%)	Cronbach Alpha coefficient before	
						Before	After
	Assurance1	0.720			51.9		
	Assurance2	0.881	23.571	<0.001	77.6		
Assurance	Assurance3	0.928	22.721	<0.001	86.0	0.930	0.930
	Assurance4	0.905	22.556	<0.001	81.9		
	Assurance5	0.869	23.478	<0.001	75.5		

Table 5 shows the regression coefficients of the construct Assurance. Regression coefficients of Assurance 1, Assurance 2, Assurance 3, Assurance 4 and Assurance 5 are 0.720, 0.881, 0.928, 0.905 and 0.869 respectively. In this case all the statements have significant impact on Assurance since regression coefficient value is more than 0.4.

3. **CFA of Empathy**

Table 6

Table Model fit indices for CFA- Empathy

	χ^2	DF	P	Normed $\chi2$	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
Empathy	.000	0			1.00		1.00		1.00	.000	1.084

It is clear from the table 6 that the model is acceptable as the χ^2 is .000, RMR value is .000. The model is found to be perfect fit as the absolute fit measure GFI is 1.00. Statistics of incremental fit also shows that the model is good fit (NFI is 1.00 and CFI is 1.00).

Table 7
The Regression Coefficients – Empathy

Factors/ Latent Variables (Dependent Variable)	Construct (Independent Variable)	Regression Coefficient	C.R.	p	Variance explained (%)	Cronbach Alpha coefficient before	
						Before	After
Empathy	Empathy1	0.899			80.8	0.908	0.908
	Empathy2	0.925	35.564	<0.001	85.6		

Table 7 presents that the regression coefficients of Empathy 1 and Empathy 2 are 0.899 and 0.925 respectively. It is clear that both the statements have significant impact on Empathy since the regression coefficient values are above 0.4.

4. CFA of Physical Environment

Table 8

Model fit indices for CFA- Physical Environment

	χ^2	DF	P	Normed χ^2	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
Physical Environment	5.016	2	.081	2.508	.997	.981	.998	.994	.999	.004	.044

Table 8 shows that model fit indices for CFA of Physical Environment. It is noted that χ^2 value is 5.016 with degrees of freedom 2 and the normed χ^2 is 2.508. It shows that the model is acceptable. The values of GFI, AGFI, NFI, TLI and CFI are greater than 0.9 and it can be concluded that the model is fit to the data.

Table 9

The Regression Coefficients - Physical Environment

Factors/ Latent Variables (Dependent Variable)	Construct (Independent Variable)	Regression Coefficient	C.R.	p	Variance explained (%)	Cronbach Alpha coefficient before	
						Before	After
Physical environment	Physical environment1	0.959			91.9		
	Physical environment2	0.705	22.469	<0.001	49.7		
	Physical environment3	0.619	18.815	<0.001	38.3	0.878	0.878
	Physical environment4	0.837	28.365	<0.001	70.1		
	Physical environment5	0.751	22.247	<0.001	56.4		

It is noted from the table 9 that the regression coefficients of Physical environment 1, Physical environment 2, Physical environment 3, Physical environment 4 and Physical environment 5 are 0.959, 0.705, 0.619, 0.837 and 0.751 respectively. All the statements have significant impact on Physical environment since regression coefficient values is more than 0.4.

5. **CFA of Responsiveness**

Table 10
Model fit indices for CFA- Responsiveness

	χ^2	DF	P	Normed $\chi2$	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
Responsiveness	.000	0			1.00		1.00		1.00	.000	.611

Table 10illustrates the model fit indices for CFA of the construct Responsiveness. It is noted from the table that χ^2 value is .000 and RMR value is .000 which indicates an acceptable fit. The values of GFI, NFI and CFI indicate a perfect model fit as the values are 1.00.

Table 11
The Regression Coefficients –Responsiveness

Factors/ Latent Variables (Dependent Variable)	Construct (Independent Variable)	Regression Coefficient	C.R.	p	Variance explained (%)	Cronbach Alpha coefficient before	
						Before	**After**
	Responsiveness1	0.723			52.3		
Responsiveness	Responsiveness2	0.849	18.991	<0.001	72.0	0.826	0.826
	Responsiveness3	0.781	18.894	<0.001	61.0		

Table 11 presents the values of the regression coefficients of Responsiveness1, Responsiveness 2, and Responsiveness 3. They are 0.723, 0.849 and 0.781 respectively. It is clear that all the statements have significant impact on Responsiveness since regression coefficient values are more than 0.4.

6. CFA of Interaction

Table 12
Model fit indices for CFA- Interaction

	χ^2	DF	P	Normed $\chi2$	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
Interaction	.031	1	.860	.031	1.000	1.000	1.000	1.002	1.000	.000	.000

Table 12 presents the model fit indices for CFA of the construct Interaction. It is noted from the table that χ^2 value is 0.31 with degrees of freedom 1 means that the model is acceptable. RMR (.000), RMSEA (.000) and GFI (1.00)showthat the model is perfectly fit. The value of incremental fit measures TLI, NFI and AGFI are 1.002, 1.000 and 1.000 respectively. All the measures indicate that the model is fit to the data.

Table 13
The Regression Coefficients –Interaction

Factors/ Latent Variables (Dependent Variable)	Construct (Independent Variable)	Regression Coefficient	C.R.	p	Variance explained (%)	Cronbach Alpha coefficient before	
						Before	After
Interaction	Interaction1	0.894			80.0		
	Interaction2	0.947	41.405	<0.001	89.7		
	Interaction3	0.898	37.548	<0.001	80.7	0.959	0.959
	Interaction4	0.884	37.841	<0.001	78.1		
	Interaction5	0.853	38.877	<0.001	72.7		

The regression coefficient of Interaction is shown in the table 13. The regression coefficient values of Interaction 1, Interaction 2, Interaction 3, Interaction 4 and Interaction 5 are 0.894, 0.947, 0.898, 0.884 and 0.853 respectively. It is noted that all the statements have significant impact on Interaction since regression coefficient values are more than 0.4.

7. **CFA of Communication**

Table 14
Model fit indices for CFA- Communication

	χ^2	DF	P	Normed χ^2	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
Communication	4.132	8	.845	.517	.998	.995	.999	1.002	1.000	.001	.000

From the table 14, it is noted that χ^2 value is 4.132 with degrees of freedom 8 and p value is .845. The normed χ^2 value is .517 shows that the model is acceptable. The absolute fit measure GFI is .998 which is near to 1.00. The incremental fit measures TLI (1.002), NFI (.999) and AGFI (.999) indicates that the model is fit to the data.

Table 15
The Regression Coefficients - Communication

Factors/ Latent Variables (Dependent Variable)	Construct (Independent Variable)	Regression Coefficient	C.R.	p	Variance explained (%)	Cronbach Alpha coefficient before	
						Before	After
Communication	Communication1	0.897			80.4		
	Communication2	0.850	32.649	<0.001	72.3		
	Communication3	0.739	26.265	<0.001	54.6	0.947	0.947
	Communication4	0.931	40.714	<0.001	86.7		
	Communication5	0.873	36.44	<0.001	76.2		
	Communication6	0.780	30.622	<0.001	60.8		
	Communication7	0.874	34.792	<0.001	76.4		

It is shown in the table 15that all the statements have significant impact on Communication since regression coefficient values for Communication 1, Communication 2, Communication 3, Communication 4 and Communication 5, Communication 6 and Communication 7 are more than 0.4.

8. CFA of Availability

Table 16
Model fit indices for CFA- Availability

	χ^2	DF	P	Normed $\chi2$	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
Availability	2.217	1	.136	2.217	.999	.986	.998	.992	.999	.003	.040

Model fit indices shown in the table 16indicates that the model is fit to the data. χ^2 value is 2.217 with degrees of freedom 1 and p value .136.RMR value is .003 and RMSEA value is .040. It shows that the model is acceptable. The normed χ^2 value is 2.217 and the values of GFI, AGFI, NFI, TLI and CFI are closer to 1.00 and means that the model is good fit.

Table 17

The Regression Coefficients – Availability

Factors/ Latent Variables (Dependent Variable)	Construct (Independent Variable)	Regression Coefficient	C.R.	p	Variance explained (%)	Cronbach Alpha coefficient before	
						Before	After
Availability	Availability1	0.650			42.3		
	Availability2	0.549	15.529	<0.001	30.1		
	Availability3	0.689	13.837	<0.001	47.5	0.777	0.777
	Availability4	0.780	13.700	<0.001	60.8		

The regression coefficient table 17 shows that all the statements have significant impact on Availability since regression coefficient values of Availability 1 is 0.650, Availability 2 is 0.549, Availability 3 is 0.689 and Availability 4 is 0.780.

9. **CFA of Technical Quality**

Table 18
Model fit indices for CFA- Technical Quality

	χ^2	DF	P	Normed χ^2	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
Technical Quality	3.574	2	.167	1.787	.998	.986	.999	.998	1.000	.001	.032

Table 18 shows the model fit indices of CFA of Technical Quality. It is noted that the χ^2 value is 3.574 with degrees of freedom 2 and p value .167 which found the model is acceptable. The normed χ^2 value is less than 5, RMR value is .001 and RMEA value is .032. The absolute model fit indices shows a better fit as GFI is .998. The incremental fit measures AGFI, NFI and TLI are greater than 0.9 and it found that the model is fit to the data.

Table 19

The Regression Coefficients - Technical Quality

Factors/ Latent Variables (Dependent Variable)	Construct (Independent Variable)	Regression Coefficient	C.R.	p	Variance explained (%)	Cronbach Alpha coefficient before	
						Before	After
Technical quality	Technical quality1	0.783			61.4		
	Technical quality2	0.949	30.505	<0.001	90.2		
	Technical quality3	0.929	29.883	<0.001	86.2	0.939	0.939
	Technical quality4	0.785	26.201	<0.001	61.7		
	Technical quality5	0.820	27.158	<0.001	67.2		

The regression coefficients of Technical quality are presented in the table 19. Technical quality 1, Technical quality 2, Technical quality 3, Technical quality 4 and Technical quality 5 have got the regression coefficient values 0.783, 0.949, 0.929, 0.785 and 0.820 respectively. All the statements have significant impact on Technical quality since regression coefficient value is more than 0.4.

10. CFA of Efficiency

Table 20

Model fit indices for CFA- Efficiency

	χ^2	DF	P	Normed χ^2	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
Efficiency	8.002	3	.046	2.667	.996	.979	.998	.995	.999	.002	.047

Model fit indices of CFA for Efficiency is shown in the table 20. The χ^2 value is 8.002 with degrees of freedom 3 and p value .046. The normed χ^2 value is 2.667 and is found that the model is acceptable. RMR (.002) and RMSEA (.047) also show a good fit. The absolute fit measure GFI is .996which shows a better fit. Incremental fit measures AGFI (.979), NFI (.998), TLI (.995) and CFI (.999) also indicate that the model is fit toe the data.

Table 21

The Regression Coefficients – Efficiency

Factors/ Latent Variables (Dependent Variable)	Construct (Independent Variable)	Regression Coefficient	C.R.	p	Variance explained (%)	Cronbach Alpha coefficient before	
						Before	After
Efficiency	Efficiency1	0.855			73.0		
	Efficiency2	0.875	26.974	<0.001	76.0		
	Efficiency3	0.875	26.954	<0.001	76.5		
	Efficiency4	0.894	34.689	<0.001	80.0	0.932	0.932
	Efficiency5	0.740	22.882	<0.001	54.7		

Regression coefficients of the construct Efficiency are presented in the table 21. In this case all the statements have significant impact on Efficiency since regression coefficient value is more than 0.4. The regression coefficient values are 0.855, 0.875, 0.875, 0.894 and 0.740 for Efficiency 1, Efficiency 2, Efficiency 3, Efficiency 4 and Efficiency 5 respectively.

11. CFA of Professionalism

Table 22
Model fit indices for CFA- Professionalism

	χ^2	DF	P	Normed χ^2	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
Professionalism	.000	0			1.00		1.00		1.00	.000	.736

Model fit indices for CFA of Professionalism are presented in table 22. It is clear from the table that the model is acceptable and found good fit as the χ^2 value is .000, RMR value is .000 and RMSEA value is .736. GFI, NFI and CFI are 1.00 and show a perfect fit.

Table 23

The Regression Coefficients – Professionalism

Factors/ Latent Variables (Dependent Variable)	Construct (Independent Variable)	Regression Coefficient	C.R.	p	Variance explained (%)	Cronbach Alpha coefficient before	
						Before	After
Professionalism	Professionalism1	0.864			74.6		
	Professionalism2	0.921	27.746	<0.001	84.8	0.869	0.869
	Professionalism3	0.721	22.726	<0.001	52.0		

Table 23 depicts the regression coefficients of the construct Professionalism. The regression coefficient values of Professionalism 1, Professionalism 2 and Professionalism 3 are 0.864, 0.921 and 0.721. Here all the statements have significant impact on Professionalism since regression coefficient value is more than 0.4.

12. CFA of Accessibility

Table 24
Model fit indices for CFA- Accessibility

	χ^2	DF	P	Normed χ^2	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
Accessibility	.533	1	.465	.533	1.000	.996	1.00	1.004	1.000	.003	.000

Model fit indices for CFA of Accessibility is shown in the table 24. It is noted from the table thatthe absolute goodness of fit measures like normed χ^2 value (.533), GFI (1.000), RMR (.003) and RMSEA (.000) indicate that the model is perfect and is acceptable. AGFI (.996), TLI (1.004), NFI (1.00) and CFI (1.000) indicate that the model is fit to the data.

Table 25

The Regression Coefficients – Accessibility

Factors/ Latent Variables (Dependent Variable)	Construct (Independent Variable)	Regression Coefficient	C.R.	p	Variance explained (%)	Cronbach Alpha coefficient before	
						Before	**After**
Accessibility	Accessibility1	0.541			29.3		
	Accessibility2	0.627	11.191	<0.001	39.4		
	Accessibility3	0.851	12.975	<0.001	72.4	0.644	0.644
	Accessibility4	0.682	12.705	<0.001	46.5		
	Accessibility5	0.505	9.688	<0.001	25.5		

Table 25 presents the regression coefficients of the Accessibility. The regression coefficient values of Accessibility 1, Accessibility 2, Accessibility 3, Accessibility 4 and Accessibility 5 are 0.541, 0.627, 0.851, 0.682 and 0.505 respectively. Here also all statements have significant impact on Accessibility since regression coefficient value is more than 0.4.

13. CFA of Perceived Value for Money

Table 26
Model fit indices for CFA- Perceived Value for Money

	χ^2	DF	P	Normed χ^2	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
Perceived value	.000	0			1.00		1.00		1.00	.000	.686

Table 26 shows the model fit indices for CFA of the construct Perceived Value for Money. It is noted from the table that χ^2 value is .000 which means the model is acceptable. The absolute fit measures GFI (1.00), RMR (.000) and RMSEA (.686) indicate the model is good fit to the data. The incremental fit measures NFI and CFI are also 1.00 which indicates that the model is perfectly fit.

Table 27

The Regression Coefficients – Perceived Value for Money

Factors/ Latent Variables (Dependent Variable)	Construct (Independent Variable)	Regression Coefficient	C.R.	p	Variance explained (%)	Cronbach Alpha coefficient before	
						Before	After
Perceived value	Perceived value1	0.894			79.8		
	Perceived value2	0.911	30.310	<0.001	83.0	0.900	0.900
	Perceived value3	0.721	22.064	<0.001	52.0		
	Perceived value4	0.739	24.280	<0.001	54.6		

The regression coefficients of Perceived Value for Money are given in the table 27. The values of regression coefficient of Perceived value 1, Perceived value 2, Perceived value3 and perceived value 4 are 0.894, 0.911, 0.721 and 0.739 respectively. All the values are more than 0.4 and so all statements have significant impact on Perceived value.

14. CFA of Perceived Waiting Time

Table 28

Model fit indices for CFA- Perceived Waiting Time

	χ^2	DF	P	Normed χ^2	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
Perceived waiting time	.000	0			1.00		1.00		1.00	.000	.515

Model fit indices for CFA of the construct Perceived Waiting Time is given in the table 28. The absolute fit indices χ^2 (.000), RMR (.000) and GFI (1.00) as well as incremental fit statistics NFI (1.00) and CFI (1.00) indicate that the model is perfectly fit to the data.

Table 29

The Regression Coefficients – Perceived Waiting Time

Factors/ Latent Variables (Dependent Variable)	Construct (Independent Variable)	Regression Coefficient	C.R.	p	Variance explained (%)	Cronbach Alpha coefficient before	
						Before	After
Perceived Waiting Time	Perceived waiting Time1	0.751			56.4		
	Perceived waiting time2	0.879	18.496	<0.001	77.3	0.827	0.827
	Perceived waiting Time3	0.689	17.78	<0.001	47.5		
	Perceived waiting Time4	0.548	15.112	<0.001	30.0		

The regression coefficients of the construct Perceived Waiting Time is shown in the table 29. The value of Perceived Waiting Time 1 is 0.751, Perceived Waiting Time 2 is 0.879, Perceived Waiting Time 3 is 0.689 and Perceived Waiting Time4 is 0.548. Here all statements have significant impact on Perceived Waiting Time since regression coefficient value is more than 0.4.

15. CFA of Patients' Satisfaction

Table 30

Model fit indices for CFA- Patient's satisfaction

	χ^2	DF	P	Normed χ^2	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
Patient's Satisfaction	.000	0			1.00		1.00		1.00	.000	.686

Table 30 gives the model fit indices of CFA of Patients' Satisfaction. It is noted from the table that χ^2 value is .000, RMR is .000, GFI is 1.00, NFI is 1.00 and CFI is 1.00. All the absolute model fit indices and incremental model fit indices pointed out that the model is perfectly fit to the data.

Table 31

The Regression Coefficients – Patient's Satisfaction

Factors/ Latent Variables (Dependent Variable)	Construct (Independent Variable)	Regression Coefficient	C.R.	p	Variance explained (%)	Cronbach Alpha coefficient before	
						Before	After
Patient's Satisfaction	Psatisfaction1	0.410			16.8		
	Psatisfaction2	0.801	12.013	<0.001	64.2		
	Psatisfaction3	0.792	13.051	<0.001	62.7	0.902	0.902
	Psatisfaction4	0.889	11.721	<0.001	79.0		
	Psatisfaction5	0.942	11.813	<0.001	88.7		
	Psatisfaction6	0.828	11.524	<0.001	68.6		

From the table 31 it is clear that the values of regression coefficients of Patients' Satisfaction1 is 0.410, Patients' Satisfaction 2 is 0.801, Patients' Satisfaction 3 is 0.792, Patients' Satisfaction4 is 0.889, Patients' Satisfaction 5 is 0.942 and Patients' Satisfaction 6 is 0.828. All the values are more than 0.4 and so all the constructs have significant impact on the construct Patient's Satisfaction.

16. CFA of Patients' Loyalty

Table 32
Model fit indices for CFA- Patients' Loyalty

	χ^2	DF	P	Normed χ^2	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
Patient's Loyalty	.663	1	.416	.663	1.000	.996	1.000	1.001	1.000	.002	.000

Table 32 shows that model fit indices of CFA of Patients' Loyalty. It is noted from the table that χ^2 is .663 with degrees of freedom 1 and p value is .416. Normed χ^2 value is found to be acceptable as it is .663. Absolute fit measure GFI (1.00), RME (.002) and RMSEA (.000) show a perfect fit. The incremental fit measures NFI (1.000), AGFI (.996), TLI (1.001) are also indicate that the model is good fit to data.

Table 33

The Regression Coefficients – Patients' Loyalty

Factors/ Latent Variables (Dependent Variable)	Construct (Independent Variable)	Regression Coefficient	C.R.	p	Variance explained (%)	Cronbach Alpha coefficient before	
						Before	After
Patient's loyalty	Loyalty1	0.837			70.0	0.892	0.892
	Loyalty2	0.978	35.564	<0.001	95.6		
	Loyalty3	0.883	32.16	<0.001	78.0		
	Loyalty4	0.568	17.09	<0.001	32.3		

The table 33 presents the regression coefficients of the construct patients' loyalty. The regression coefficient values of Loyalty 1, Loyalty 2, Loyalty 3 and Loyalty 4 are 0.837, 0.978, 0.883 and 0.568 respectively. In this case also all statements have significant impact on the construct Patient's Loyalty since regression coefficient values are more than 0.4.

17. CFA of Patients' Complaint Behaviour

Table 34

Model fit indices for CFA- Complaint Behaviour

	χ^2	DF	P	Normed χ^2	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
Complaint Behaviour	.000	0			1.00		1.00		1.00	.000	0.403

The model fit indices for CFA of Complaint Behaviour is exhibited in the table 34. It shows that χ^2 value is .000, RMR is .000 and RMSEA is 0.403 which mean the model shows a good fit. GFI (1.00), NFI (1.00) and CFI (1.00) establish a perfectly fit. Hence, all the model fit measures indicate that the model is perfectly fit to the data.

Table 35
The Regression Coefficients – Complaint Behavior

Factors/ Latent Variables (Dependent Variable)	Construct (Independent Variable)	Regression Coefficient	C.R.	p	Variance explained (%)	Cronbach Alpha coefficient before	
						Before	After
Complaint Behaviour	Complaint Behaviour1	0.609			37.1	0.560	0.560
	Complaint Behaviour2	0.639	12.839	<0.001	40.8		

Table 35 presents the regression coefficient values of the construct Complaint Behaviour. The values of Complaint Behaviour 1 and Complaint Behaviour 2 are 0.609 and 0,639 respectively. Both the values are more than 0.4 and hence the statements have significant impact on the construct Complaint Behaviour.