

# Research Journal of Pharmaceutical, Biological and Chemical Sciences

## Quality in Health care services: Perspective of the Public Versus Private teaching hospitals in India.

Ansuman Samal<sup>1\*</sup>, Bibhuti Bhusan Pradhan<sup>2</sup>, Kamal Kachhawa<sup>3</sup>, Divya Agrawal<sup>4</sup>, and Sanjay Kumar<sup>5</sup>.

<sup>1</sup>Assistant Professor, Siksha 'O' Anusandhan University, Bhubaneswar, India

<sup>2</sup>Professor & Registrar, Siksha 'O' Anusandhan University, Bhubaneswar, India

<sup>3</sup>Assistant Professor, Department of Biochemistry, Mahaveer Institute of Medical Sciences & Research, Bhopal, India.

<sup>4</sup>Associate Professor, Department of Anatomy, MIMS, MPMSU, Jabalpur, India.

<sup>5</sup>Professor & Head, Department of Pharmacology, MIMS, MPMSU, Jabalpur, India.

### ABSTRACT

The constitution of India has made the state responsible for raising the levels of nutrition and the standard of living of people in the republic of India and has stated to improve the public health as its primary duty. The Government both at the Central and State level are trying their best to strengthen the healthcare infrastructure of the country since independence. Many initiatives have been taken up over the years which have contributed to the betterment of the society and its people. But still, we need to go a long way down to make the dream of the constitution a reality. Recently the Make in India initiative launched by the Government of India is a hugely ambitious project through which various multi-national and national companies are being promoted to use India as their manufacturing base and also inviting foreign direct investment (FDI). On this line, the present study is an attempt to find out the perception of patients towards the quality of services by taking the cases of two reputed medical college hospitals of the state of Odisha which belongs to the public and private sectors. This research was conducted locally in the twin cities of Bhubaneswar and Cuttack, of the Indian state of Odisha. The teaching hospitals selected for the study were the SCB Medical College Hospital at Cuttack and IMS & SUM hospital in Bhubaneswar. A questionnaire was developed after thorough review of various literatures and the 22 set questions of SERVQUAL model was used in it. The perception and expectation of patients were recorded in a seven-point scale. The total sample size of 240 was taken for the study with 120 each for SCB medical college hospital and 120 for IMS & SUM Hospital. A Seven-point Likert Scale from entirely disagrees to the entirely agrees was used for empirical analysis. In case of Public hospitals, more no. of respondents were from rural areas compared to the private hospitals. Age wise, more respondents in Public teaching hospitals, were in the age group of 46 to 55 where as in Private hospitals, more respondents were in the younger age group of 36 to 45 years. Various other observations have been depicted and tabulated. From the above study, we got more of positive responses about the hospital and its services but there exist various areas where we can improvise. Based on the findings and stimulated by the suggestions of the customers, we can recommend some improvement measures for the services of the hospital. The study also suggests some measures for improving the service quality in both types of hospitals.

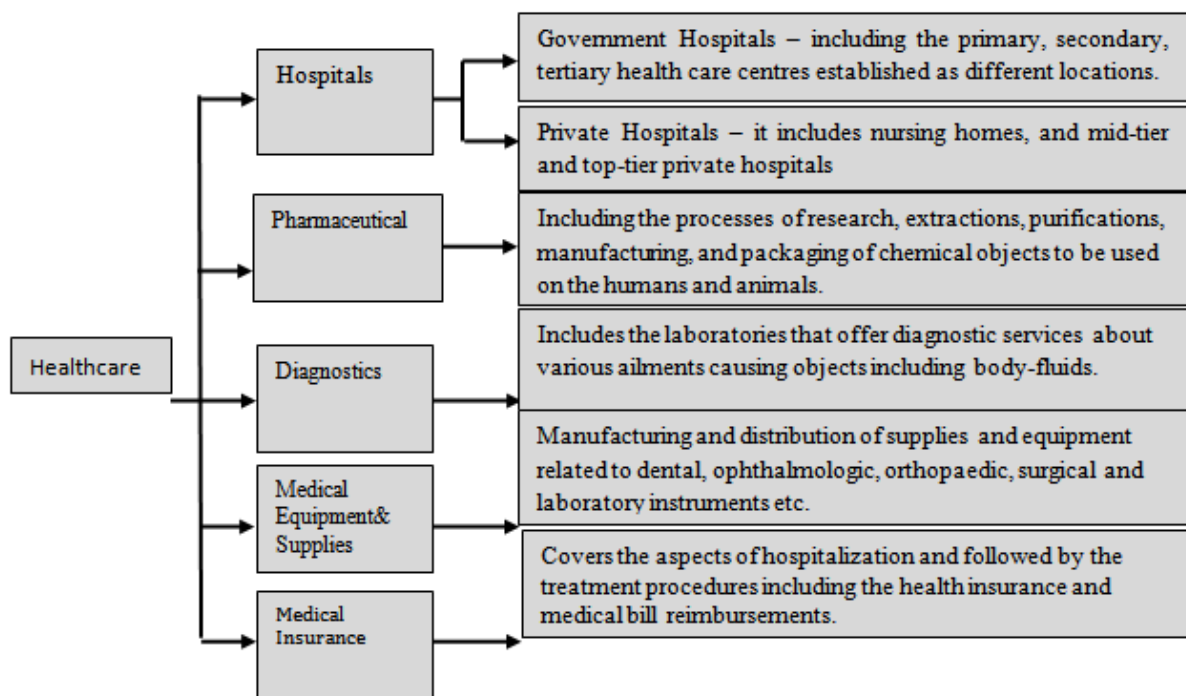
**Keywords:** Service, Quality, Make in India, healthcare.

*\*Corresponding author*

**INTRODUCTION**

India with its 5000 years old civilization comes at the centre stage when the discussion is on for health and wellness sector. Starting from the renowned scholars like Charaka and Sushruta till today, it has always shown the light to the world. With its unmatched heritage system associated with the ancient systems of medicine. It's a treasure house of knowledge. In the modern times, the healthcare sector has become India's largest sectors, in terms of revenue generation as well as employment creation. In this era of globalization where the market structure has become volatile, it can be counted as one of the sunshine sector, less affected by the ghost of recession. With a robust demand at the domestic market associated with the rise in alternative medicine sector, innovative healthcare, corporatization of healthcare facilities, inflow of medical tourists, government support etc. the healthcare sector in India today has been one of the sunshine industry today where others have ebbed and flowed.

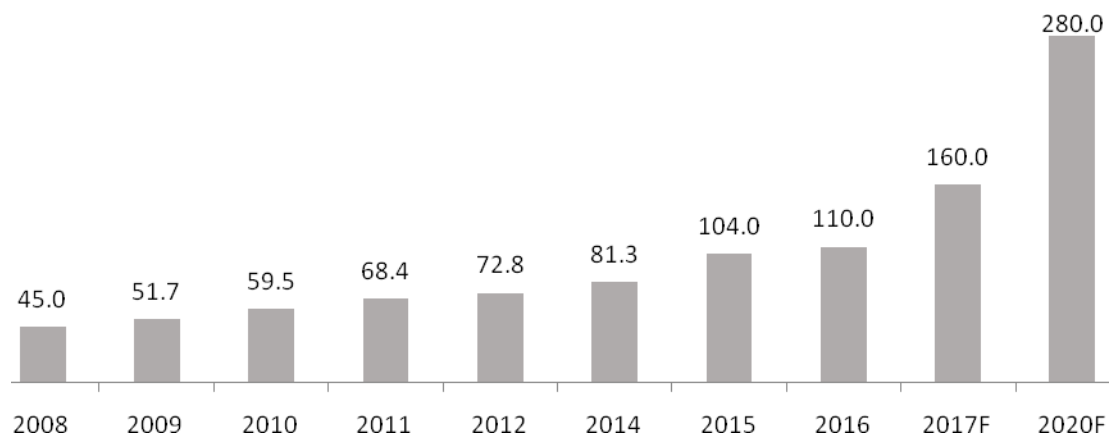
When we say healthcare sector, it includes hospitals, medical devices, clinical trials, outsourcing, telemedicine, medical tourism, health insurance and medical equipment etc. which can be grouped together as follows to give a prospective view.



**Figure 1: Source: Hospital Market-India by Research on India, Aranca Research**

According to Indian Brand Equity Foundation (IBEF), the total health care industry in India can be categorized into two major components of Public/Government and Private. The Government known as the public healthcare system consists of the secondary and tertiary care institutions in key places and majorly focuses on the provision of basic healthcare facilities in the form of primary healthcare centres (PHCs) in rural areas. In the other hand, the private sector provides the majority of secondary, tertiary and quaternary care institutions, which are majorly concentrated in the metro areas as well as in tier I and tier II cities. As per National Association of Software and Services Companies (NASSCOM) the current Indian health care market is worth around 100 billion US \$ and it will see a major growth in the coming years to get around 280 billion US \$ by 2020 at the Compound Annual Growth Rate (CAGR) of 22.9 percent.

**Graph 1: Source: Frost & Sullivan, LSI Financial Services, Deloitte, Tech. Sci. Research (F: Forecasting)**



Amongst the components, the healthcare delivery platform that includes hospitals, nursing homes etc. constitutes of around 65% of the share. Thus there exists an immense opportunity for the development of healthcare services infrastructure in a country like India. In the current era some of the significant factors that are contributed to the growth of health care industry in India can be listed as rising income level, ageing population, growing health awareness, changing attitude towards preventive healthcare, lower cost of medical facilities, low cost of clinical research, healthcare opportunities, favourable investment opportunities provided by the Government, tax benefits has established many growth prospects etc.

From the discussions above, we can comfortably derive that the healthcare has become a sunshine industry for India as it helps in the creation of employment and revenue generation. Even at the time when other industries are ebbed and flowed with debacle of recession, the opportunities at the health care sector is on steady growth in association with other features such as the ever growing domestic demand, increase in medical tourism, rise in innovative healthcare services, corporatization of healthcare facilities, and the support by the government towards healthcare innovation. What’s more the consistent influx of money into research and development and innovative healthcare practices, raise the bar for generation of the revenue and employment scenario.

**The Make in India Initiative and Scope of Growth:**

After the BJP led NDA alliance swept the general elections in 2014 and formed its Government at the Centre, the tech-savvy visionary Prime Minister has launched his much ambitious initiative called as the Make in India (MII) project whereby the national and multinational companies are encouraged to invest wholeheartedly in around 25 different Industry sectors. The major objectives of this initiative are as follows.

1. Creation of Employment
2. Enhancement of Job Skills.
3. Minimization of negative impact on the environment.
4. Increasing the quality standards of products / services.
5. To attract world-class companies across the globe to invest their capital and technological know-how in India etc.

Thus the make in India initiative is bolstered to facilitate investments, foster innovations, enhancement of skills, protection of intellectual properties as well as building world-class manufacturing infrastructure in India. But in order to do so, the brand India has to quickly move beyond the conventional ways of development of standards and enforcing them to act proactively to provide maximum customer satisfaction above a period of time.

With this in mind, if we analyze the current healthcare system in India, we find it more of paradoxical in nature. At one point we are trying to establish India as a world-class health destination which will attract medical tourist from across the globe whereas on the other front it is lagging far behind the developed nations in terms of provision of accessible, affordable quality health services for a large part of its population.

Therefore, it's high time for all of us to revisit the idea of Make in India (MII) which has become a symbol of aspiration and guarantee of the quality initiative taken by the participating firms. Launched in September 2014 to promote the manufacturing process and thus the creation of enormous jobs within India, it has become a national policy over the time. Therefore we need to understand and take initiatives accordingly to filling the gaps that exist in different parameters of it. In this regard, the present study regarding an assessment of satisfaction and thereby enhancement of quality policy in private medical college hospitals will certainly be helpful for those seeking an entrance into the field. As well as it will give a detailed insight into the existing players to about the way their customers perceive their idea of service delivery. Here, we have tried to consolidate the idea of enhancement of quality and thereby enhancing the satisfaction level of the customers to gain the sustainable competitive advantage over others.

**Literature Review:** (Grönroos, 1984) stated that the service quality is the difference between the perceived quality and the received quality[1]. So when someone asks about the quality of a product or service we need to make a comparison between what they want or expect and what they receive or perceive to receive (Berry, Parasuraman, and Zeithaml, 1988)[2]. Over the years, many researchers have tried to figure out the process of formation of expectations. (Oliver, 1980) described it as the beliefs / predictions of the consumers towards the outcome of a service[3]. Different from him, another study done by Cadotte, Woodruff, and Jenkins in 1987 considered it to be the base standard a product or service should offer[4]. Another study by Parasuraman, Zeithaml, and Berry (1988) suggested that expectations are the wants of the customers from the service providers and perceptions are the evaluation of the consumers towards the service provider[2].

The expectations are influenced by factors such as individual consumer characteristics (Oliver, 1980)[3], accepted marketing practices, advertising, word of mouth, and past service experiences (O'Connor, Trinh & Shewchuk, 2001)[5]. Though there are some other studies about the way expectations are formed, it basically acts as the means for evaluating service quality.

According to Grönroos (1990) further, expand the ambit of service quality dimensions by differentiating between functional and technical quality. The technical quality is the ability to perform the service delivery accurately whereas the functional quality is the effective delivery of services[6]. As the healthcare services come under the credence attributes of services, it is comparatively difficult to assess the technical quality. Thus, buyers tend to rely on the reputation of the brand name, testimonials from someone they know or respect, service quality, and price [7]. Services have some unique characteristics which separate them from the products [6,8]. They are intangibility, heterogeneous, perishability, simultaneous production and consumption. Due to these unique features, the measurement of service quality for health care has to be based on the perceived factor rather than the technical details of the services. Due to the difficulty in defining and measuring the service quality, it has become a subject of interest as well as the debate amongst the researchers over the last few decades [9].

The most popular model of measuring service quality is the scale known as SERVQUAL developed by A. Parasurman, Valarie Zeithaml and Leonard L. Berry in 1988[9]. It became a breakthrough in the measurement methods used for research on service quality. In this model, there is a list of 22 nos. of statements which revolve around 5 parameters namely

1. **Tangibles** - The appearance of the hospital's physical facilities, equipment, personnel and communication materials
2. **Reliability** - The hospital's ability to perform the promised service dependably and accurately.
3. **Responsibility** - The hospital's willingness to help the patients and provide a prompt service.
4. **Assurance** - The knowledge and courtesy of the hospital's employees and their ability to convey trust and confidence.
5. **Empathy** - The caring, individualized attention the hospital provides its patients.

Although the SERVQUAL has received many criticisms for its concept, generalization, and dimensions [10,11] but over the years, it has established itself as one of the robust scales to measure service quality across different sectors [12-14]. Numerous studies have been conducted using the SERVQUAL scale and the findings have given new knowledge and dimensions towards the concept [11,15-17]. Due to its universal acceptability and use across different segments, we have chosen the SERVQUAL scale for our study.

**Objectives:** The basic objectives of the study are as follows.

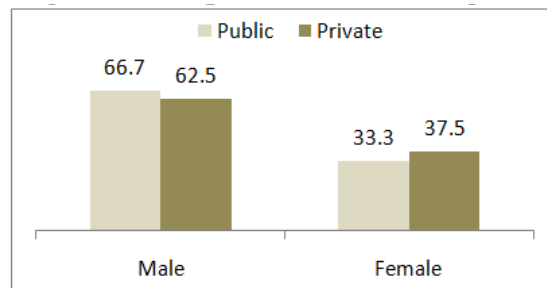
1. To analyze factors affecting selection of hospitals in case of public and private hospital users.
2. To assess comparative service quality of the hospitals.
3. To find out the level of satisfaction of customers towards various services at public and private sector hospitals.
4. To assess the views of patients regarding various aspects of hospital services such as pricing, ease of paper works, treatments etc.
5. To list their likings, disliking and gather their views for improvement of services.

### RESEARCH METHODOLOGY

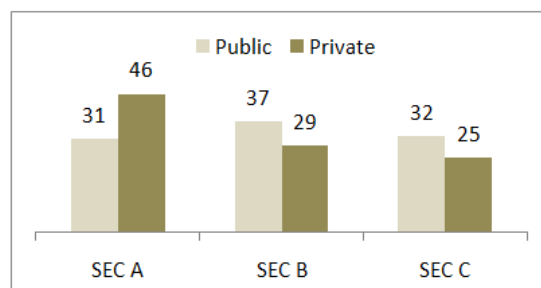
This research was conducted locally in the twin cities of Bhubaneswar and Cuttack, of the Indian state of Odisha. The teaching hospitals selected for the study were the SCB Medical College Hospital at Cuttack and IMS & SUM hospital in Bhubaneswar. A questionnaire was developed after thorough review of various literatures and the 22 set questions of SERVQUAL model was used in it[13]. The 22 items represents five service quality dimensions empathy, assurance, tangible, timeliness and responsiveness. The perception and expectation of patients were recorded in a seven point scale. The total sample size of 240 was taken for the study with 120 each for SCB medical college hospital and 120 for IMS & SUM Hospital. The target population considered for the study was all persons belonging to SEC A, B or C who had been admitted to the medical college hospitals. The sample was based on non-probability convenience sampling. A Seven-point Likert Scale from entirely disagrees to the entirely agrees was used for empirical analysis. The coding of the Likert scale was made as [1 = entirely disagree], [2 = mostly disagree], [3 = somewhat disagree], [4 = neither agree nor disagree], [5 = somewhat agree], [6 = mostly agree], [7 = entirely agree]. The descriptive statistics of the respondents of this study is given below.

#### Analysis and Interpretations:

**Graph 2: Profiling Part – Gender of Respondents.**

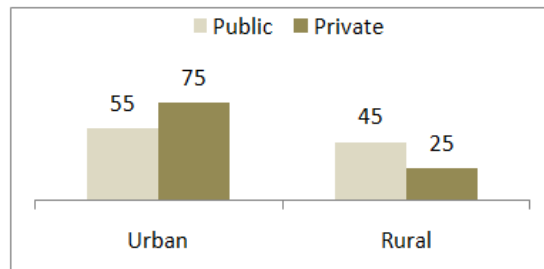


**Graph 3: Profiling Part – SEC Classification.**

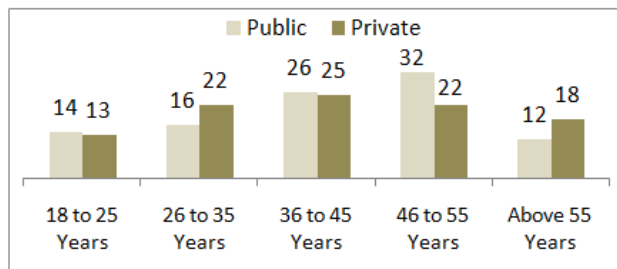


The target population in both the teaching hospitals was dominated by male respondents and the views from the SEC A, B and C were taken into consideration (Graph 2 & 3).

**Graph 4: Profiling Part – Rural Vs Urban respondents.**

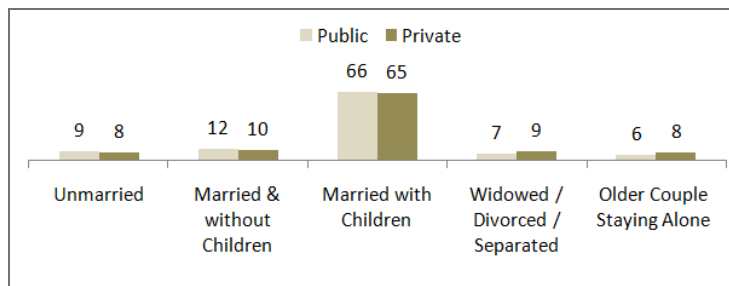


**Graph 5: Profiling Part – Age.**



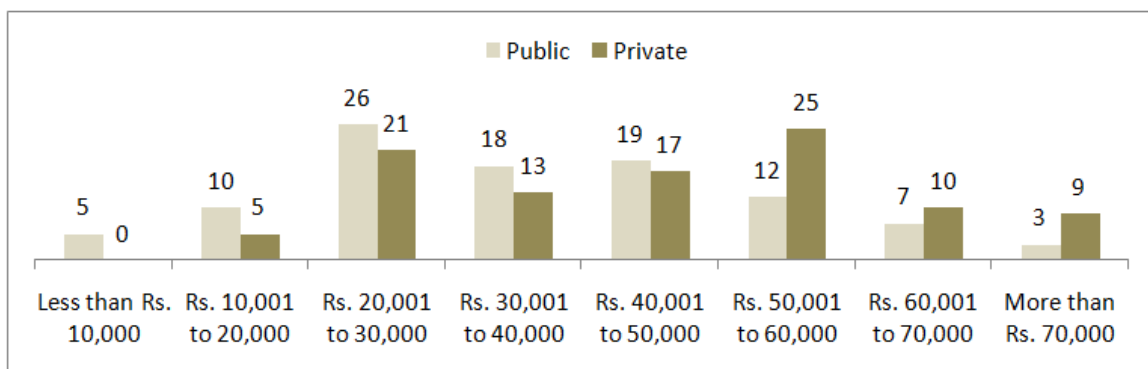
In case of Public hospitals, more no. of respondents were from rural areas compared to the private hospitals. Age wise, more respondents in Public teaching hospitals, were in the age group of 46 to 55 where as in Private hospitals, more respondents were in the younger age group of 36 to 45 years (Graph 4 & 5).

**Graph 6: Profiling Part – Marital Status.**



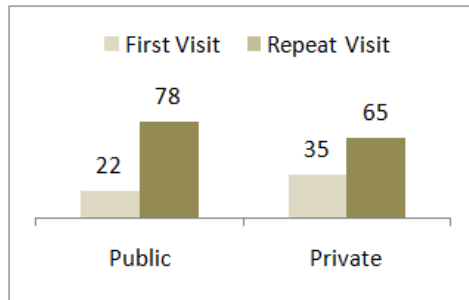
In both the hospitals, the majority of the respondents were married with children (graph 6).

**Graph 7: Profiling Part – MHI & MPI.**

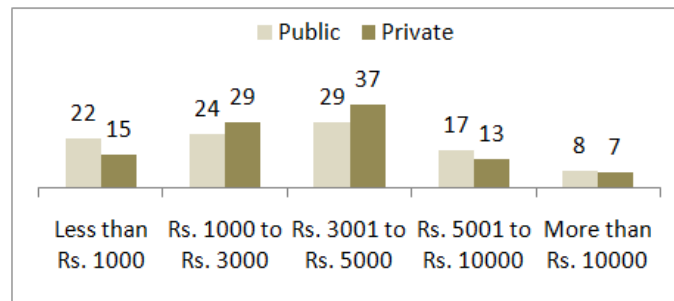


In case of MHI and MPI of people visiting the Public hospitals are relatively lower in comparison to people visiting Private hospitals (Graph 7).

**Graph 8: Profiling Part – Type of Visit.**

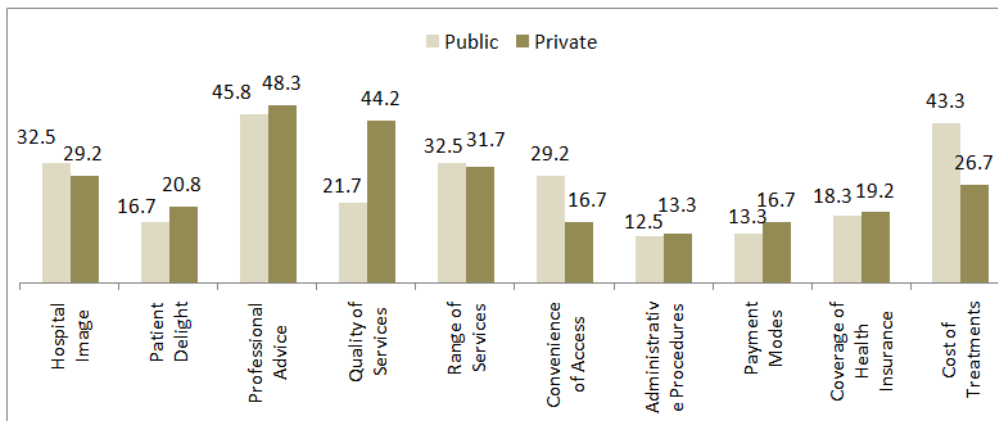


**Graph 9: Profiling Part – Average spending per Visit.**



Mostly in both the hospitals, majority of the people were having repeat visits. Majority of the people normally spend in the range of Rs. 3001/- to Rs 5,000/- only (Graph 8 & 9).

**Graph 10: Reasons for availing medical treatment in the particular medical college hospital.**

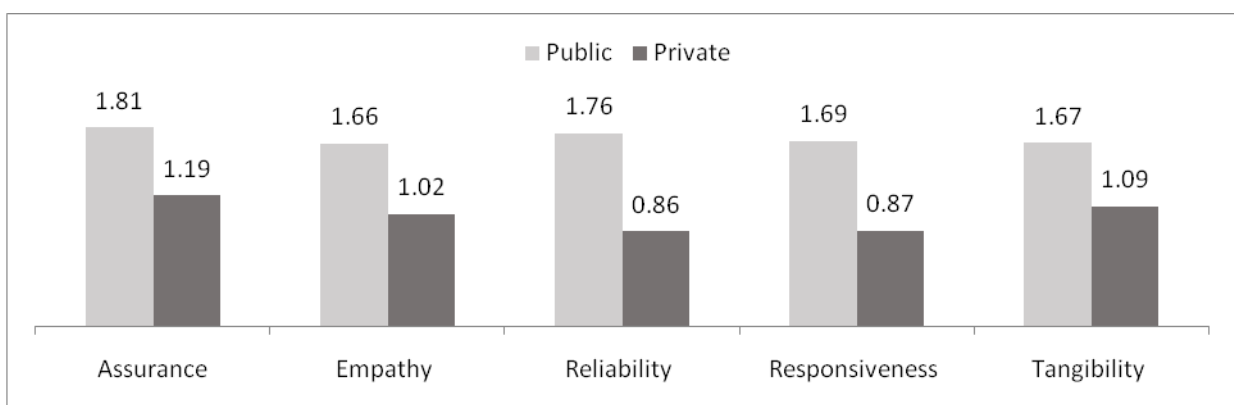


When asked about the reasons for availing treatment in the particular medical college hospital, we got more response for the reason of professional advice and cost of treatment in public sector hospital where as the private sector was chosen mostly for professional advice and quality of services (Graph 10).

**Table 1: The Quality Parameters – The SERVQUAL Statements.**

		Public	Private
		Gap	Gap
SERVQUAL Statements		Score	Score
<b>I. Assurance</b>		<b>1.81</b>	<b>1.19</b>
1	Courteous and friendly behavior by doctors and staffs	1.78	1.05
2	Possession of a wide spectrum of knowledge by the Doctors	1.95	1.11
3	Treatment of patients with dignity and respect	1.66	1.34
4	Thorough explanation of medical conditions to Patients	1.88	1.24
<b>II. Empathy</b>		<b>1.66</b>	<b>1.02</b>
5	Collection of Feedbacks from patients	1.92	1.5
6	Round the clock availability of services for convenience of patients	1.69	0.84
7	Patients’ best interests at heart of the doctors and staffs	1.22	0.9
8	The specific needs of patients are understood by the doctors and staffs	1.34	0.85
9	Personal attention is given to the patients by doctors and staffs	1.85	0.91
10	Patients are dealt in a caring fashion by doctors and staffs	1.96	1.1
<b>III. Reliability</b>		<b>1.76</b>	<b>0.86</b>
11	Services provided at the appointed time	1.72	0.88
12	Services to be carried out right at the first time	1.84	1.22
13	Professional and competency shown by the doctors and staffs	1.56	0.7
14	System of error free and fast retrieval of documents	1.99	1.09
15	Consistency of charges	1.73	0.43
<b>IV. Responsiveness</b>		<b>1.69</b>	<b>0.87</b>
16	Provision of Prompt services	1.55	0.43
17	Responsive doctors and staffs	1.68	1.02
18	Attitude of doctors and staff that instills confidence in patients	1.78	0.99
19	Waiting time does not exceed one hour	1.76	1.04
<b>V. Tangibility</b>		<b>1.67</b>	<b>1.09</b>
20	Up-to-date and well-maintained medical facilities and equipment	1.34	0.7
21	Clean and comfortable environment and with good directional signs	1.69	1.19
22	Neat appearance of doctors and staffs	1.98	1.38

**Graph 11: The Gap Scores amongst the Five Parameters.**



The service quality gap is described by the equation  $SQ = E_{jk} - P_{jk}$ , where  $E_{jk}$  = expectation of service dimension, J for respondent k and  $P_{jk}$  = perception of service dimension J for respondent k. The average mean score of expectation and perception is shown here with the calculation of Gap score. The mean score and gap score are available for all the 5 dimensions and associated 22 statements of quality parameters.

The Gap Score is comparatively higher between the expectations and perception levels people visiting to public and private medical college hospitals. This confers the idea that the people visiting the Private



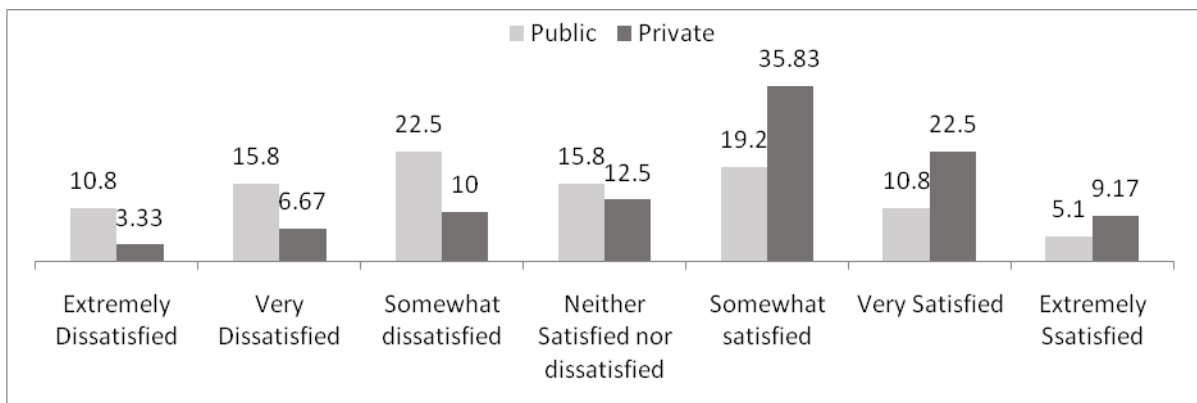
hospitals are comparatively more satisfied than the people who are availing services of the Public medical college hospitals.

From the table, we can derive that in case of both types of hospitals, comparatively the gap scores for the assurance and tangibility parameters are relatively higher from the other aspects. The gap is lowest for the parameters of reliability and responsiveness of the hospital staff for which they have rated for the first and second place. The parameter of empathy comes at the third place.

Decoding the table, it is found that there exist a comparatively high gap when it comes to obtaining feedbacks, employees' neat appearance, communication regarding services, problem in doing the right things for the first time, poor knowledge of the employees to answer the patients' questions and problems in personnel attention and offering a clean and comfortable environment.

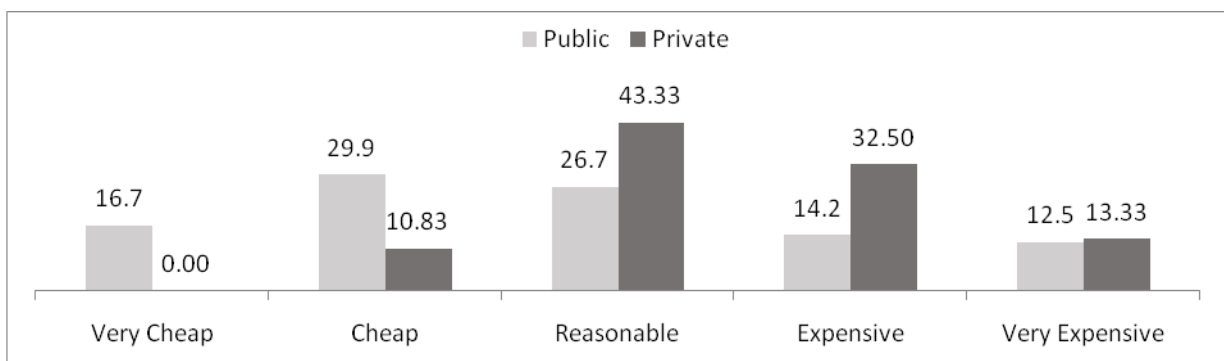
Similarly when it comes to offering prompt services, consistency in charges, up-to-date and well maintained equipments, professional and competent doctors, the gap becomes shortens as the perception is almost matches with the expectation of the customers.

**Graph 12: Overall level of satisfaction towards the services of this hospital.**



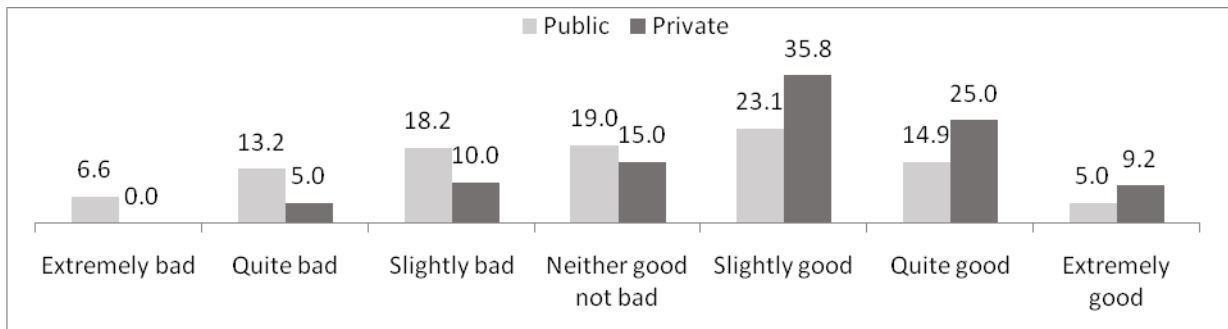
When asked about the overall level of satisfaction towards the particular hospital, around 68% of people in private hospitals were fairly satisfied where as it is only 35% for the public sector hospitals.

**Graph 13: View regarding the pricing of various services of this hospital:**



More than 40% of the respondents perceived the price structure of Private medical college hospitals to be expensive whereas around 46% perceived the pricing of the Public hospitals to be cheaper. Around 43% of the people visiting the private hospitals perceived its pricing as reasonable.

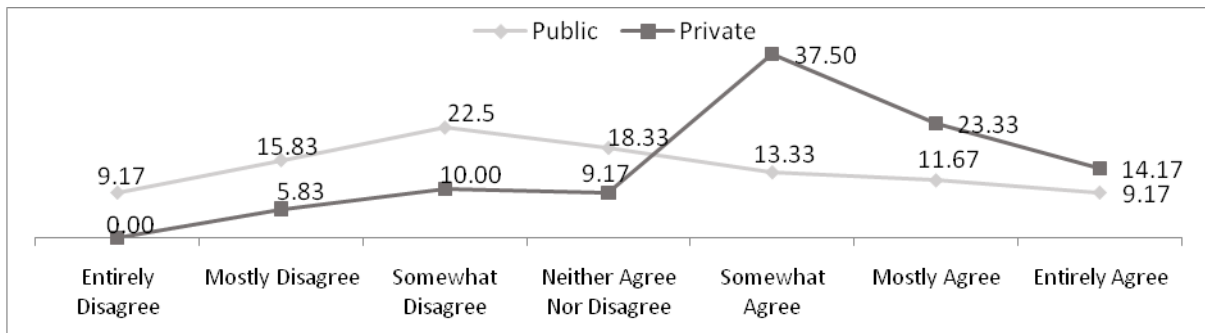
**Graph 14: Feelings towards this hospital.**



We got more positive feedbacks about the private hospital with around 70% of the people views them and their services as good whereas this figure for public hospitals stands at 43%.

**Attitudinal loyalty towards the hospital's services**

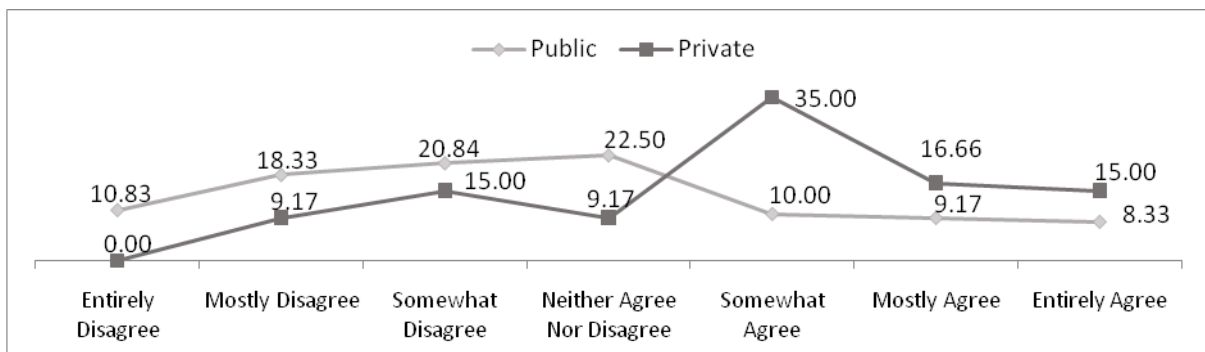
**Graph 15.1:**



**Statement 1- I consider this hospital's services are good.**

Around 75% of the respondents in the private hospital perceived the services as good and acceptable whereas this figure for public hospitals stands at 34.17%.

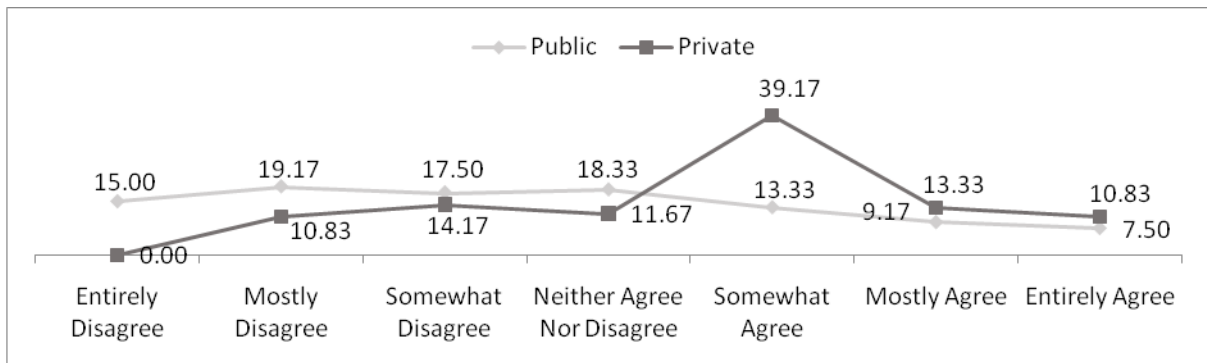
**Graph 15.2:**



**Statement – 2 - This hospital's services are better than those of other hospitals.**

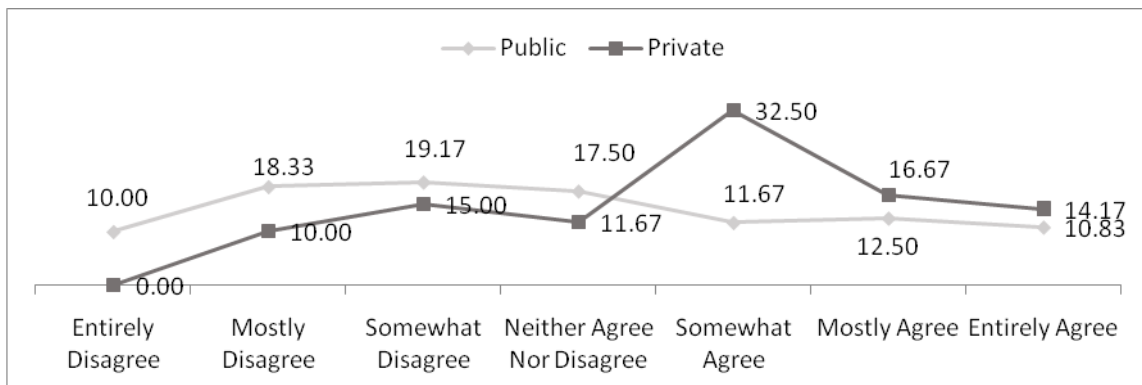
Around 66% of the respondents perceived the services offered by the private hospitals better than that of others whereas it is around 27.5% for public hospitals.

**Graph 15.3: Statement – 3 - In general, the quality of this hospital’s service is high**



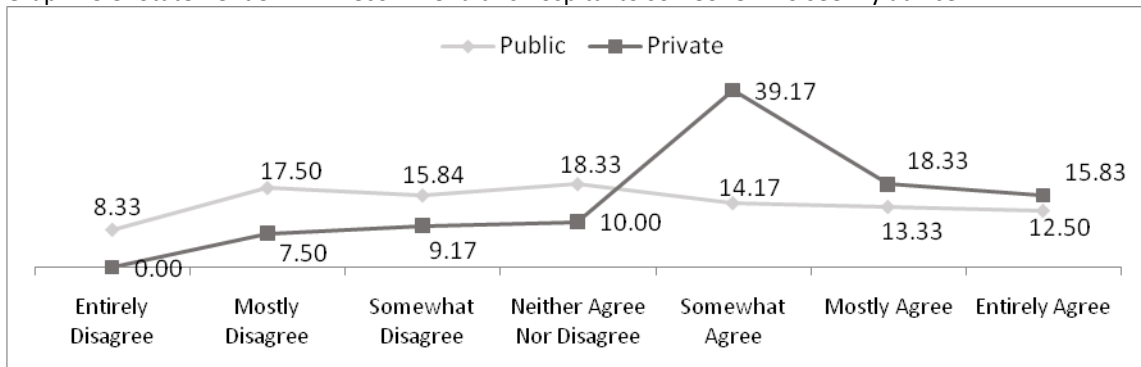
The overall quality of the hospital was highly acceptable by most of the respondents with around 63% perceived it as high in private hospitals whereas it stood at 30% for public hospitals.

**Graph 15.4: Statement 4- I will say positive things about this hospital**



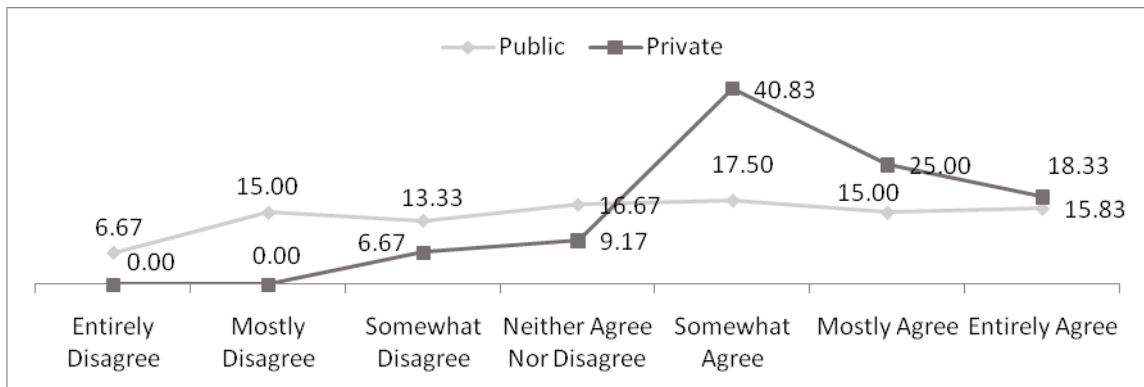
Around 35% of people visiting public hospitals said that they will give positive feedbacks about the hospitals whereas about 63.34% of the people visiting the private hospitals gave the same view about them.

**Graph 15.5: Statement 5- I will recommend this hospital to someone who see my advice.**



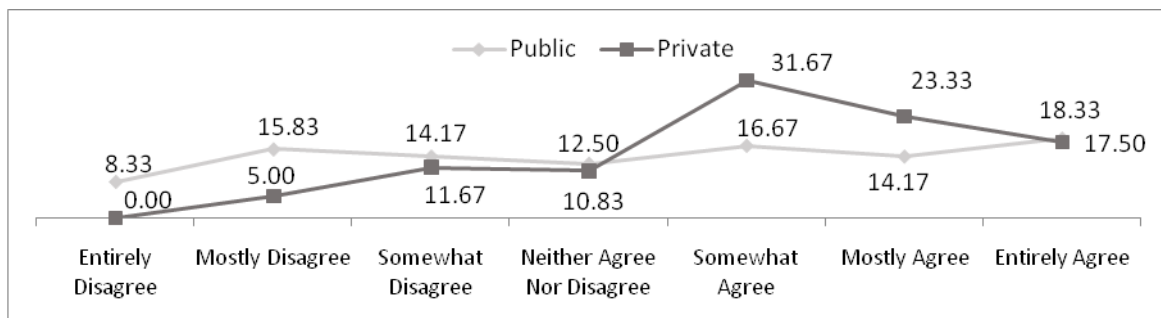
Around 73.33% of people visiting to private hospitals are ready to recommended the hospital to others where as this figure stands at 40% for the people visiting the public hospitals.

**Graph 15.6: Statement 6- I will encourage my friends and relatives to undergo medical treatment in this hospital**



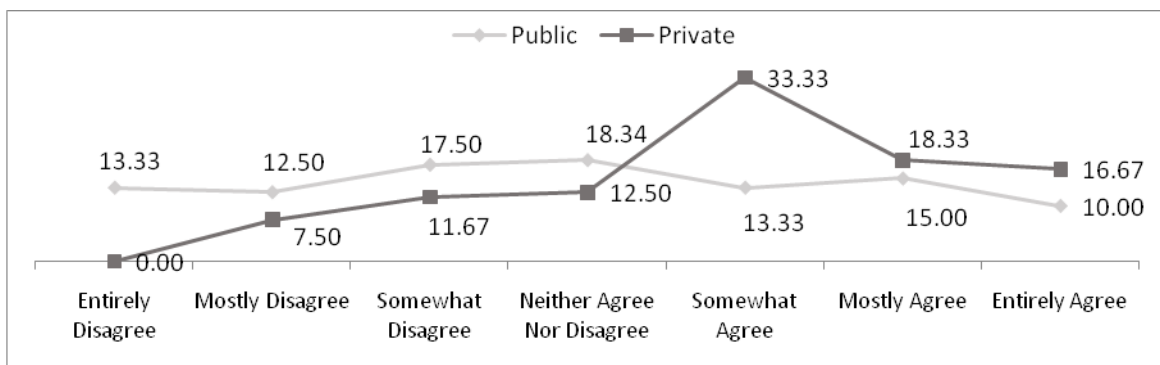
Due to the positive perception and subsequently generated attitude, most of respondents at the private hospitals (84.16%) are ready to encourage their friends and relatives to undergo medical treatment in the stated hospital whereas this percentage for the public hospitals is at 48.33%.

**Graph 15.7: Statement 7- I consider this hospital as the first choice for medical treatment.**



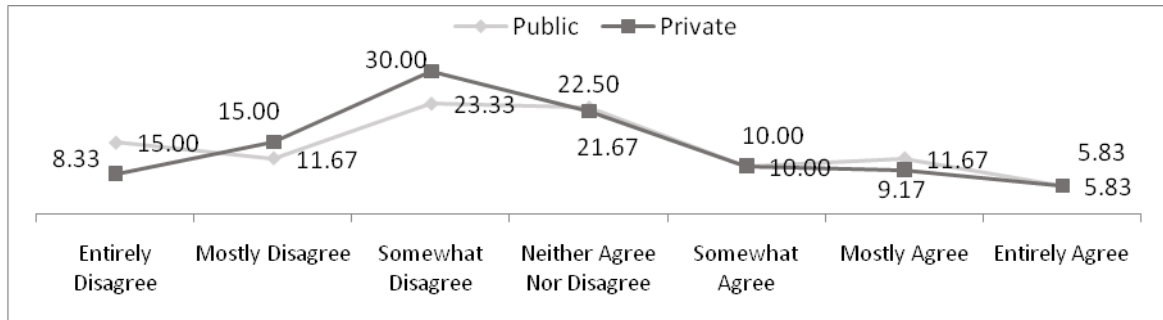
As the patients visiting to private hospitals are more satisfied with their services, around 73.33% of them said they would consider the hospital as their first choice for medical treatment. Around 48.34% of people visiting to public hospitals gave the equal answer for that hospital.

**Graph 15.8: Statement 8- I will do all medical treatments in this hospital in the future.**



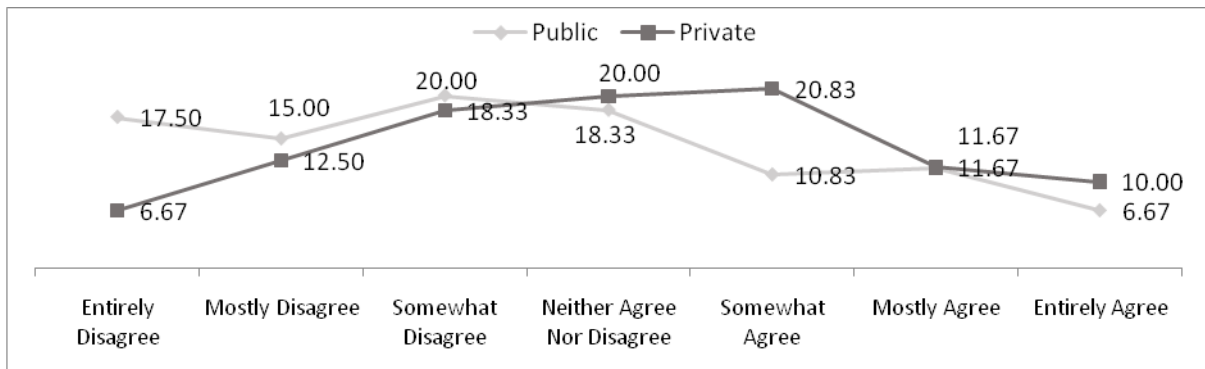
Amongst the people visiting private hospital, most of them were ready to do all their medical treatments in the stated hospital in future which is comparatively less amongst the people visiting public hospitals.

**Graph 15.9: Statement 9- I will continue my medical treatment in this hospital, in case I change my residence to any other locality.**



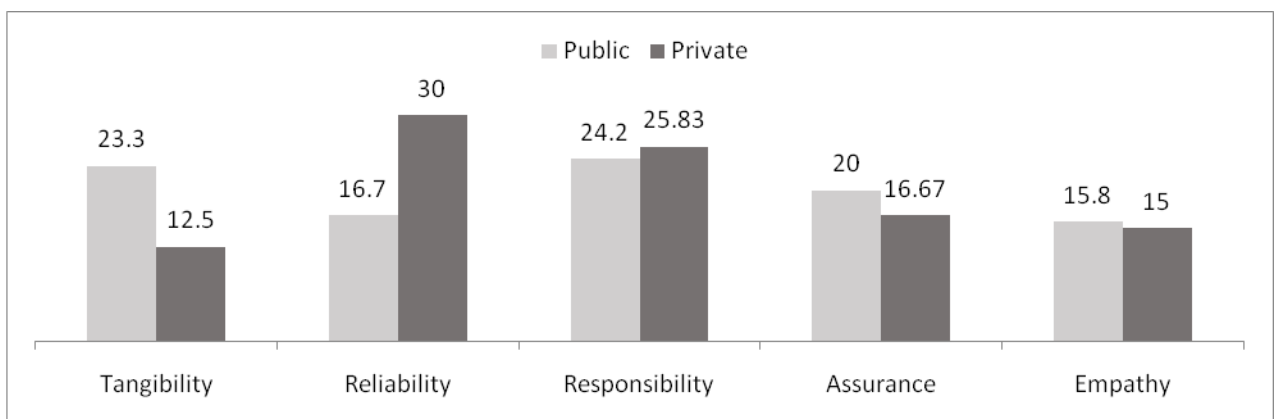
Here we can find some discrepancy when asked about their willingness to continue with the services of the particular hospital in case they change their residence to some other locality both the patients visiting private and public hospitals are reluctant to visit.

**Graph 15.10: Statement 10- In every visit, I find better quality in this hospital's service.**



Because of the satisfaction generated towards the service quality provided by the hospital, around 42.5% of people visiting private hospital gave feedbacks that they find better quality in each visit whereas only 29.17% of people visiting public hospital gave the same feedback.

**Graph 16: Ranking of Parameters that help evaluating the Hospital Services (Percentage of People given rank 1)**



When asked to rank the important parameters to evaluate the quality of hospitals, mostly factors like reliability, responsibilities as well as tangibility are choose as number 1 followed by assurance and empathy.

**Table 2: The voice of Customers (Suggestions for Improvement)**

Sl. No	Areas of Improvement	Percentage
1	Waiting Periods before consultations	53
2	Mismanagement near the test-labs	45
3	Hygiene & Sanitation conditions	39
4	Safety at night in the nearby areas and approaching roads	36
5	Proper lighting facility inside and outside of the premises	33
6	Parking facility (Shaded)	30
7	Inconvenient Parking spot	28
8	Attitude of the Staffs	25
9	Sufficient dormitories for Attendants	22

Quality is not only about self perception but it's the combination of various aspects that affect the service delivery system. Views from the reference group also comes to play as we can find the mentioning of factors like parking, waiting line management, safety, lighting of various areas in and around the premises are amongst the most suggested measures of improvement.

**Way forward:**

From the above study, we got more of positive responses about the hospital and its services but there exist various areas where we can improvise. Based on the findings and stimulated by the suggestions of the customers, we can recommend some improvement measures for the services of the hospital.

- a) From the above findings, we can derive that neutral and clear dialogue with the patients can generate trust amongst the people as they search for empathy when taking treatment in a hospital.
- b) Generally hospitals are associated with diseases, for which the management needs to concentrate more on the efforts to enhance the visual appearance of the hospital. Frequent cleaning of various areas, changing of bed sheets and pillow covers, cleaning of dustbins, use of gloves and masks, neat appearance of all the employees will generate more positive feelings amongst the patients over a period of time.
- c) Similarly by providing behavioural training to all the staffs working in the medical college hospital will generate more satisfaction amongst the customers. In this regard we need to install the concept of relationship marketing and mutual respect so that the doctor-patient relationship will flourish in future. Normally the patients believe the doctors as demigods for which the doctors also need to treat them with caring fashion.
- d) The patients should be explained about their problems and the services should be performed in the right direction from the beginning which will help reducing the patient's tension, worries and generate confidence for the hospital.
- e) The timing of provision of services also plays an important role as now a days the zone of tolerance amongst the customers are dramatically decreasing as the options are increasing.
- f) Apart from the core hospital services, other ancillary facilities like parking, lighting and safety measures in and around the premised should also be managed with equal efficiency.
- g) The concepts of operation management for running the premises 24X7 should be implemented effectively specifically for parameters like waiting line management and crowd control.

**The final words:**

In developing countries like India, where the needs are in great extents but resources are scare, we need to provide health care solutions that should be affordable, reliable, resilient, easy to distribute and easy-to-use. Innovation and constant striving for improvement of quality in this direction can come in handy when it comes to gain sustainable competitive advantage. The 'Make in India' campaign can act as a catalyst to make healthcare accessible and affordable in India. On this line we need to identify and understand the needs and requirement of the healthcare sector and try to make a difference when it comes to provision of healthcare initiatives.

**Conflict of Interest:** None.

**REFERENCES**

- [1] Gronroos C. A service quality model and its marketing implications. *European Journal of Marketing*. 1984;18(4):36–44.
- [2] Berry LL, Parasuramana A, Zeithaml VA. The Service – Quality Puzzle. *Business Horizons*. 1988;31(5):35-43.
- [3] Oliver RL. A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of marketing research*. 1980 Nov 1:460-9.
- [4] Cadotte ER, Woodruff RB, Jenkins RL. Expectations and norms in models of consumer satisfaction. *Journal of marketing Research*. 1987 Aug 1:305-14.
- [5] O'connor SJ, Trinh HQ, Shewchuk RM. Perceptual Gaps in Understanding Patient Expectations for Health Care Service Quality. *Quality Management in Healthcare*. 2001 Jan 1;9(2):26-42.
- [6] Gronroos C. *Service management and marketing: Managing the moments of truth in service competition*. Lexington books; 1990.
- [7] Sadiq Sohail M. Service quality in hospitals: more favourable than you might think. *Managing Service Quality: An International Journal*. 2003 Jun 1;13(3):197-206.
- [8] Parasuraman A, Zeithaml VA, Berry LL. A conceptual model of service quality and its implications for future research. *the Journal of Marketing*. 1985 Oct 1:41-50.
- [9] Parasuraman A, Zeithaml VA. SERVQUAL: A Multiple Item Scale for Measuring Customer Perceptions of Service Quality. *Journal of Retailing*. 1988:12-40.
- [10] Cronin Jr JJ, Taylor SA. Measuring service quality: a reexamination and extension. *The journal of marketing*. 1992 Jul 1:55-68.
- [11] Butler D, Oswald SL, Turner DE. The effects of demographics on determinants of perceived health-care service quality: the case of users and observers. *Journal of Management in Medicine*. 1996 Oct 1;10(5):8-20.
- [12] Jabnoun N, Chaker M. Comparing the quality of private and public hospitals. *Managing Service Quality: An International Journal*. 2003 Aug 1;13(4):290-9.
- [13] Youssef FN, Nel D. T. Bovaird. Health care quality in NHS hospitals. *International Journal of Health Care Quality Assurance*. 1996;9(1):15-28.
- [14] Solayappan A, Jayakrishnan J, Velmani S. Quality measurement for hospital services. *IPEDR*. 2011; 12:246-50.
- [15] Thiakarajan A, Sindhuja A, Krishnaraj R. Service Quality in Hospitals at Chennai. *International Journal of Pharmaceutical Sciences Review and Research*. 2015;34(1): 238-42.
- [16] Boshoff C, Gray B. The relationships between service quality, customer satisfaction and buying intentions in the private hospital industry. *South African journal of business management*. 2004 Dec 1;35(4):27-37.
- [17] Zeithaml VA, Berry LL, Parasuraman A. The behavioural consequences of service quality'*Journal of Marketing*, April 1960.