

SERVQUAL ANALYSIS ON HEALTHCARE

With Special reference to Public and Private Hospitals at Shivamogga City

By Mr. Anand M B^[a]

&

Dr. Sreenivas D L^[b]

Abstract

Hospitals across the country are searching for ways to improve quality of care and promote effective quality improvement strategies to be more efficient in serving the patients. Patients are willing to pay more to avail health care services of international standard. It has been observed that delivery of quality service is not according to the expectations. Keeping in view public and private hospital service quality, this paper examines and measures how the patients and patients attendants evaluate the quality of health care service. Empirical research is used to determine patients' expectations and perceptions of the quality of service, such an understanding facilitates hospital administration to enhance quality of service and satisfy patients to a great extent as well. Public and private hospitals needed to be more efficient to service the highly competitive industry. The article outlines an empirical study the service quality in Shivamogga public and private sector hospitals. The authors employ a stratified random sample from public and five private hospitals. Data were collected through questionnaire using the SERVQUAL scale. Data were analyzed using excel and appropriate descriptive and inferential statistical techniques.

Keywords: Hospitals, health care, patients, SERVQUAL

^[a] Mr. Anand M B Assistant Professor, PESITM Shivamogga, Karnataka, Karnataka State, India.	^[b] Dr. Sreenivas D L Director, SJC Institute of Technology, Chickballpur, Karnataka State, India.
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1. Introduction:

Hospitals across the country are searching for ways to improve quality of care and promote effective quality improvement (QI) strategies. There is mounting evidence of overuse, misuse, and under use of the health care system. Overuse, including unneeded surgeries, tests, and other procedures, unnecessarily puts patients at risk while driving up health care expenses. Misuse can be seen in the

failure of many hospitals to adopt information technology that reduces medical errors and in various forms of inappropriate care. The failure of the health care system to routinely provide certain preventive, screening, and acute care services leads to illnesses, relapses, complications.

Poor-quality care not only results in unnecessary deaths and injuries, but also adds significantly to the costs of patients and the organizations that finances for treatment. Unjustified variation in the use of certain services has been largely responsible for excessive costs in the medicare program, costs could be lowered with no impact on health outcomes, if risk - and age-adjusted spending were brought down.

A study by the Midwest Business Group on Health (conducted in collaboration with Juran Institute and The Severyn Group) estimates that 30 percent of all health care expenditures by public and private purchasers amounts roughly \$390 billion in 2000, are the direct result of poor-quality care. The study found that the indirect costs of poor quality (e.g., reduced productivity) are also substantial, adding an estimated 25 percent to 50 percent.

2. Objectives

- To measure the quality of service provided by hospitals
- To study the expectations and perceptions of respondents on quality (SERVOQUAL) dimensions
- To measure the service quality of core and selected services
- To identified the possible hurdles and solutions for quality improvement at hospitals

3. Research Design

Sampling Plan and Size: 200 respondents are randomly selected in Shivamogga which includes In patient and Out patients who are taking treatments in different hospitals in and around Shivamogga during the survey period.

Research Tools: The research has been conducted by using Structured Questionnaire method for collecting primary data.

Sources of Data: Primary data has been collected through personal interview method. Secondary data were also collected by different sources such as newspapers, journals, magazines, reference books and internet.

Statistical Tool: Weighted Average score used for analysis of data. The outcome of the research is depicted through tables.

The SERVQUAL instrument was designed to measure service quality using service quality dimensions. The original SERVQUAL contains 22 pairs of the Likert scale on five service quality dimensions and are defined as follows:

- 1. Tangibles:** The appearance of physical facilities, equipment, appearance of personnel, and communication materials.
- 2. Reliability:** The ability to perform the promised service dependably and accurately.
- 3. Responsiveness:** The willingness to help customers and provide prompt service.
- 4. Assurance:** The knowledge and courtesy of employees and their ability to inspire trust and confidence.
- 5. Empathy:** The caring, individualized attention the firm provides to its customers

Points on the Likert scale (strongly disagree = 1 to strongly agree = 5) are used to measure the data

4. Literature Review

Technical quality in health care is defined primarily on the basis of the technical accuracy of the diagnosis and procedures. Several techniques for measuring technical quality have been proposed and are currently in use in health-care organizations. Information relating to this is not generally available to the public, and remains within the purview of health-care professionals and administrators (Bopp, 1990). With competitive pressures and the increasing necessity to deliver patient satisfaction, the elements of quality control, quality of service, and effectiveness of medical treatment have become vitally important (Freedenberg, 1997). The quality of service—both technical and functional—is a key ingredient in the success of service organizations (Grönroos, 1984). Functional quality, in contrast, relates to the manner of delivery of health-care services.

SERVQUAL is a standardized and reliable instrument that identifies five different dimensions of service quality and validates those dimensions in different service situations (Rohini and Mahadevappa, 2006). Parasuraman et al. (1988), in their SERVQUAL model, identified five dimensions viz. responsiveness, reliability, assurance, tangibles and empathy on the basis of which customers' expectations and perceptions are measured. They explained all the above-mentioned dimensions with the help of twenty two statements that have been identified as attributes creating those five dimensions (Parasuraman et al., 1988, Bhattacharjee, 2010).

Babakus and Mangold (1992) identified SERVQUAL as a reliable and valid model in the hospital environment Service. Quality has become an important research topic in view of its significant relationship to costs (Crosby, 1979), profitability (Buzzell and Gale, 1987; Rust and Zahorik, 1993; Zahorik and Rust, 1992), customer satisfaction (Bolton and Drew 1991; Boulding et al, 1993), customer retention (Reichheld and Sasser, 1990), and service guarantee (Kandampully and Butler, 2001). Service quality has also become recognized as a driver of corporate marketing and financial performance (Buttle, 1996). Several studies indicate that a lower priority is placed on patients' non-clinical expectations of service quality. Carson et al. (1998) have stated that some professionals contend that

consumers' perception of quality service in health care is distorted due to the inability of patients to judge the technical competence of the medical practitioner with any accuracy.

The SERVQUAL instrument has been empirically evaluated in the hospital environment, and has been shown to be a reliable and valid instrument in that setting (Babakus and Mangold, 1992). Other studies of health-care quality measurement (Canel and Fletcher, 2001; Lam, 1997; Donthu, 1991) have also used the SERVQUAL method of analysis. Berman-Brown and Bell (1998) outlined a patient-centered audit that has been recognized as the first instrument to firmly establish the views of patients. However, as later acknowledged by the authors, even this measure is no more than an adaptation of the SERVQUAL framework (Parasuraman, Zeithaml and Berry 1988, In general, patient satisfaction surveys are used to examine the quality of the healthcare service provided (Lin and Kelly 1995). Much evidence has been documented for the service quality to satisfaction link in different consumer satisfaction studies including those in the area of health care marketing (Brady and Robertson 2001; Gotlieb, Grewal, and Brown 1994; Rust and Oliver 1994; Andaleeb 2001).

Chahal (2000), in his tri-component model, pointed out that the loyalty of patients towards particular provider of medical service can be measured on the basis of three dimensions viz. using providers again for the same treatment (UPAS), using providers again for different treatments (UPAD) and referring providers to others (RPO). In the tri-component model, Chahal proved that all the above-mentioned loyalty measures depend on the overall service quality. He explained service quality of medical care with three latent constructs. These are physicians' performance, nursing performance and operational quality.

Brady and Cronin (2001) suggested a hierarchical model to measure perceived service quality considering three primary dimensions viz. interaction quality, physical environment quality and outcome quality consist of attitude, behaviour, and experience (interaction quality); ambient conditions, design, and social factors (physical environment quality); waiting time, tangibles and value (outcome quality) respectively. In their approach, Brady and Cronin, emphasized on customers' expectation and perception of different dimensions of services in order to measure service quality.

Aragon et.al.(2003) conducted a research in emergency department of hospitals and suggested the primary provider theory to measure patient satisfaction considering three latent variables or constructs viz. physician service(SP), waiting time(SWT) and nursing care(SN). They applied multiple structural equation models for developing a hierarchical relationship between patient satisfaction and above-mentioned constructs. Three latent variables define the attributes of quality of health care service. They proved that overall patient satisfaction depends on SP, SN and SWT. They also pointed out that

overall satisfaction is positively associated with two indicators – likelihood of patients' recommendation of the health care unit and degree to which the service is worthwhile in terms of money paid by patients. Marrakchi et. al.(2008) developed the Tunisian Measurement Scale to determine patient satisfaction on the basis of seven latent variables viz. reception, nursing care, information, hygiene, comfort, food and invoice service in the Tunisian Patient Clinic. They identified some indicators for explaining and defining the abovementioned latent variables.

They conducted a survey with patients by asking them to rate the service quality in a five point likert scale ranging from 'very dissatisfied' to 'very satisfied'. They have done factor analysis with the data that they have obtained on the basis of likert scale. The result of factor analysis revealed that all the variables are independent barring the hygiene and comfort which were perceived as one factor by patients. Therefore, the number of factors has been reduced from seven to six. The researchers have proved that those six factors are positively correlated with patient satisfaction

5. Brief Overview on Healthcare Industry in India

The Indian healthcare sector is estimated to reach US\$ 100 billion by 2015, growing 20 per cent year-on-year (y-o-y), as per rating agency Fitch. The industry is expected to touch US\$ 280 billion by 2020, on the back of increasing demand for specialized and quality healthcare facilities. India is the most competitive destination with advantages of lower cost and sophisticated treatments, Private equity (PE) and venture capital (VC) investments in the healthcare industry in India are increasing rapidly. In 2012, the industry absorbed US\$ 1.2 billion across 48 deals, according to research firm Venture Intelligence. The hospital and diagnostic centre in India has attracted foreign direct investment (FDI) worth US\$ 1,542.35 million, while drugs & pharmaceutical and medical & surgical appliances industry has registered FDI worth US\$ 9,783.31 million and US\$ 584.14 million, respectively during April 2000 to December 2012, according to data provided by Department of Industrial Policy and Promotion (DIPP). Indian pharmaceutical industry is projected to show double-digit growth in near future owing to a rise in pharmaceutical outsourcing and rising investments by multinational companies, Healthcare providers in India plan to spend Rs 5,700 crore (US\$ 1.05 billion) on IT products and services in 2013, a 7 per cent rise over 2012 revenues worth Rs 5,300 crore (US\$ 981.50 million), according to a report by Gartner. It is expected to grow to 3.9 per cent to reach Rs 1,720 crore (US\$ 318.52 million) in 2013, with most of this growth coming from enterprise communication equipment. Further, the hospital services market, which represents one of the most important segments of the Indian healthcare industry, is expected to be worth US\$ 81.2 billion by 2015.

a. Factors determines Quality Hospital

Choosing the right hospital for your healthcare needs is never an easy decision. While some patients' choices may be limited by financial resources, insurance plans and geographical area, most people who need specialty treatment or hospitalization are naturally attracted to hospitals which have earned a reputation for providing top quality healthcare services. It is only natural that you place it in the hands of someone who will handle it with the most care. And while physicians' skills and professionalism weigh heavily on your decision, there are a few other factors you should consider when choosing a treatment center.

Patients and families know quality care when they experience it. A nurse's response time, a doctor's bedside manner, the hospital's atmosphere—all of these things affect how people feel about the quality of their healthcare. Quality measurement isn't always easy. Making ratings even more difficult to produce.

- a. **Safe:** Avoiding injuries to patients from the care that is intended to help them.
- b. **Effective:** Providing services based on scientific knowledge and best practice.
- c. **Patient-centered:** Providing care that is respectful of and responsive to individual patient preferences, needs and values, ensuring that patients' values guide all clinical decisions.
- d. **Timely:** Reducing waits and sometimes harmful delays for both those who receive and provide care.
- e. **Efficient:** Avoiding waste, including waste of equipment, supplies, ideas and energy.
- f. **Equitable:** Providing care that does not vary in quality because of personal characteristics such as gender, ethnicity, geographic location, and socio-economic status.
- g. **Clinical Excellence in Healthcare: Mortality** rates, post-operative complication and readmission rates, volume of surgical procedures performed, as well as procedure diversity and level of difficulty.
- h. **Hospital Maintenance:** Physical appearance of a healthcare center can also influence their decision. The best hospitals are usually neat and well-maintained. Healthcare centers which feature clean waiting areas and restrooms are more likely to have hygienic, well-endowed operatory rooms and patient rooms.
- i. **Healthcare Staff Attitude:** Patients look for more than knowledge and skill in a healthcare professional. In a competitive market where patients can choose between so many hospitals, attitude is as important as service. A personable, courteous medical staff can easily gain patients'.
- j. **Hospital Management:** As with any business, management greatly influences the efficiency and the quality of the services provided by a hospital. Management decisions determine how much a hospital invests in research and medical supplies.

4.2. Innovation in Healthcare

Telemedicine is an innovative concept that circumvents geography and the non-availability of trained medical personnel to offer immediate medical treatment and knowledge long distance. Hospitals are uses advanced telecommunications to administer affordable healthcare with speed and quality to large volumes of patients in distant areas. areas that often lack even basic medical facilities. With the same technology, it also shares medical expertise and information with other countries. Comprehensive medical solutions for emergencies, quick and accurate diagnoses and efficient patient care are the hallmarks of telemedicine programme. Senior specialists sitting in tertiary centre's guide paramedics and general physicians in remote areas to conduct screenings and stabilize critical patients. Free out-patient consultation is offered from afar to hundreds of patients each day through the network. Satellite connectivity is provided free of cost by the Indian Space Research Organization (ISRO), and high speed telephone or Integrated Services Digital Network connectivity is also used.

Telemedicine diagnoses are often the first point of contact with overseas patients entering our International Outreach Programme, and the technology is subsequently useful for follow-up consultations once they are back in their home countries post-treatment. ISRO network covers 332 hospitals – 299 remote/rural/district hospitals/health centers connected to 33 specialty hospitals located in major cities

4.3. Innovative Services offered

- I. **Tele-Consultation:** Patient requiring specialist consultation in any remote center can interact directly with the specialists through video conferencing.
- II. **TT ECG:** It is indigenous software to transmit ECGs with the help of Trans Telephonic ECG Machines. These TT ECG machines are distributed free of cost to General Practitioners. These GPs who find difficulty in assessing ECGs utilize the service free of cost by transferring the ECG to the hub hospitals.
- III. **Tele-Education:** Telemedicine facility to conduct academic teaching / training sessions.

5. Shivamogga-Gateway of Malnad

Shimoga lies in the Malnad region of the Western Ghats. Shimoga city is its administrative centre. As of 2011 Shimoga district has a population of 1,755,512. There are seven taluks: Bhadravati, Hosanagara, Sagara, Shimoga, Shikaripura, Soraba, Thirthahalli. Foundry, agriculture and animal husbandry are the major contributors to the economy of Shimoga district.

Table No 01 Brief Profile of Shivamogga District

Description	2011
Actual Population	1,752,753
Male	877,415
Female	875,338
Population Growth	6.71%
Area Sq. Km	8,478
Density/km ²	207
Proportion to Karnataka Population	2.87%
Sex Ratio (Per 1000)	998
Child Sex Ratio (0-6 Age)	960
Average Literacy	80.45
Male Literacy	86.07
Female Literacy	74.84
Total Child Population (0-6 Age)	182,751
Male Population (0-6 Age)	93,221
Female Population (0-6 Age)	89,530
Literates	1,263,016
Male Literates	674,938
Female Literates	588,078
Child Proportion (0-6 Age)	10.43%
Boys Proportion (0-6 Age)	10.62%
Girls Proportion (0-6 Age)	10.23%

Source: WWW.Shivamogga.Net

Table No 02 Profile of Rural and Urban Shivamogga District

Description	Rural	Urban
Population (%)	64.41%	35.59%
Total Population	1,129,026	623,727
Male Population	565,821	311,594
Female Population	563,205	312,133
Sex Ratio	995	1002
Child Sex Ratio (0-6)	958	966
Child Population (0-6)	119,703	63,048
Male Child(0-6)	61,149	32,072
Female Child(0-6)	58,554	30,976
Child Percentage (0-6)	10.60%	10.11%
Male Child Percentage	10.81%	10.29%
Female Child Percentage	10.40%	9.92%
Literates	770,817	492,199
Male Literates	419,590	255,348
Female Literates	351,227	236,851
Average Literacy	76.37%	87.79%
Male Literacy	83.14%	91.35%
Female Literacy	69.60%	84.24%

Source: WWW.Shivamogga.Net

Out of the total Shimogga population for 2011 census, 35.59 percent lives in urban regions of district. In total 623,727 people lives in urban areas of which males are 311,594 and females are 312,133. Sex Ratio in urban region of Shimogga district is 1002 as per 2011 census data. Similarly child sex ratio in Shimogga district was 966 in 2011 census. Child population (0-6) in urban region was 63,048 of which males and females were 32,072 and 30,976. This child population figure of Shimogga district is 10.29 % of total urban population. Average literacy rate in Shimogga district as per census 2011 is 87.79 % of which males and females are 91.35 % and 84.24 % literates respectively. In actual number 492,199 people are literate in urban region of which males and females are 255,348 and 236,851 respectively.

As per 2011 census, 64.41 % population of Shimogga districts lives in rural areas of villages. The total Shimogga district population living in rural areas is 1,129,026 of which males and females are 565,821 and 563,205 respectively. In rural areas of Shimogga district, sex ratio is 995 females per 1000 males. If child sex ratio data of Shimogga district is considered, figure is 958 girls per 1000 boys. Child population in the age 0-6 is 119,703 in rural areas of which males were 61,149 and females were 58,554. The child population comprises 10.81 % of total rural population of Shimogga district. Literacy rate in rural areas of Shimogga district is 76.37 % as per census data 2011. Gender wise, male and female

literacy stood at 83.14 and 69.60 percent respectively. In total, 770,817 people were literate of which males and females were 419,590 and 351,227 respectively.

Table No 03 Key Statistics of Shivamogga District

Particulars		Shimoga	Karnataka
No of Households		341224	10401918
Population	Persons	1642545	52850562
	Males	830559	26898918
	Females	811989	25951644
Decennial Population Growth Rate (1991-2001)		13.1	17.5
Sex Ratio		978	965
Population (0- 6 years)	Persons	208163	7182100
	Males	106423	3690958
	Females	101740	3491142
Scheduled Caste Population	Persons	269519	8563930
	Males	136299	4339745
	Females	133220	4224185
Scheduled Tribe Population	Persons	55997	3463986
	Males	28435	1756238
	Female	27562	1707748
Number of Literates	Persons	1068934	30434962
	Males	593890	17661211
	Female	475044	12773751
Literacy rate	Persons	74.5	66.6
	Males	82	76.1
	Female	66.9	56.9
Total Workers	Persons	714671	23534791
	Males	487349	15235355
	Female	227322	8299436
Total Non-Workers	Persons	927874	29315771
	Males	343210	11663563
	Female	584664	17652208

Source 2011 Censes

As at 2000, there are about 9800 Industrial units in Shimoga District (small, medium and large) employing more than 41000 employees. Major investments are made in food; beverages, engineering, and mechanical goods. Other rural industries in this district are carpentry, blacksmith, leather, pottery, beekeeping, stone cutting, handlooms, agarbathi, and sandalwood carving.

Table No 04 List of Hospitals

1	<u>City Hospital</u>
2	<u>MC Gann Hospital</u>
3	Sagar Road, Shimoga
4	<u>Nanjappa Hospital</u>
5	<u>Priyanka Hospital</u>
6	<u>Subbaiah Hospital</u>
7	<u>Hegde Health Hospital</u>
8	<u>Sindhi Urology Hospital</u>
9	<u>Sankara Eye Care Hospital</u>
10	<u>Sri Basaveshwara Hospital</u>
11	<u>Vivekananda Hospital And Maternity Home</u>
12	Malnad Hospital And Institute Of Oncology
13	Anuradha Nursing Home
14	Bhagwat Maternity And Nursing Home
15	Chandini Hospital
16	Gutti Medical Centre
17	K.G.P Hospital
18	Mallikarjuna Nursing Home
19	Meena Nursing Home
20	<u>Ravi Poly Clinic And Nursing Home</u>
21	<u>Sri Ragavendra Nursing Home</u>
22	<u>Swathi Ent Hospital</u>
23	<u>Usha Nursing Home</u>
24	<u>Vaatsalya Hospital</u>
25	Sahyadri narayana Hrudalaya

Source: WWW.Shivamogga.Net

6. Service quality in health sector

In healthcare organizations, service quality and patients satisfaction is getting considerable attentions and this issue is considered in their strategic planning process. Patients' perceptions about the services provided by a particular health care organizations also effects the image and profitability of the hospital (Donabedian, 1980; Williams and Calnan, 1991) and it also significantly effects the patient behavior in terms of their loyalty and word-of-mouth (Andaleeb, 2001). Moreover, increased patients expectations about the service quality had realized the healthcare service providers, to identify the key determinants that are necessary to improve healthcare services that causes patients satisfaction and it also helps the service providers to reduce time and money involved in handling patient's complaints (Pakdil & Harwood, 2005).The SERVQUAL instrument developed by Parasuraman et al. (1985) comprised of 22-items representing five dimensions had been widely used in health care to measure the service quality and in health care

Table No 05 Service Quality Models

1	Technical and functional quality model Groenroos
2	GAP model (Parasuraman et al.
3	Attribute service quality model (Haywood-Farmer)
4	Synthesized model of service quality (Brogowicz et al.)
5	Performance only model (SERVPERF) (Cronin and Taylor)
6	Ideal value model of service quality (Mattsson)
7	Evaluated performance and normed quality model (Teas)
8	IT alignment model (Berkley and Gupta)
9	Attribute and overall affect model (Dabholkar)
10	Model of perceived service quality and satisfaction (Spreng and Mackoy)
11	PCP attribute model (Philip and Hazlett)
12	Retail service quality and perceived value model (Sweeney et al. 1997)
13	Service quality customer value and customer satisfaction model (Oh, 1999)
14	Antecedents and mediator model (Dabholkar et al.)
15	Internal service quality model (Frost and Kumar)
16	Internal service quality DEA model (Soteriou and Stavrinides)
17	Internet banking model (Broderick and Vachirapornpuk)
18	IT-based model (Zhu et al.)
19	Model of e-service quality (Santos)

Source: Nitin Seth and Deshmukh (2005)

7. Measurement of Service quality

Empathy: Empathy is the first service quality construct in this study, which actually represents the individual concern of doctors, staff, nurses and the management for patients in order to provide comfort to patients.

Assurance: The second service quality construct comprise of 6 items which include doctors expertise and skills about the field of specialization, qualified nurses and supporting staff, accurate lab and medical test results, availability of experts and special attention to emergency patients.

Tangible: Third service quality construct consists of 6 items, which include hygienic conditions, sterilization of equipments, healthy environment, waiting facility for patients, healthy and clean environment, availability of labs and pharmacy within the hospital premises.

Timeliness: Fourth service quality construct consists of 3 items which includes observation of patients according to appointment, availability of the doctors according to promised time, and delivery of reports according to promised time.

Responsiveness: Fifth service quality construct comprised of 3 items which includes: how the doctors, nurses and supporting staff respond to patient call and availability of feedback mechanism and how the management respond to patient complaints.

8. Data analysis

The article study the service quality in Shivamogga public and private sector hospitals. The authors employ a stratified random sample (200 inpatients) from public and five private hospitals. Data were collected through questionnaire using the SERVQUAL scale. Data were analyzed using excel and appropriate descriptive and inferential statistical techniques.

The service quality of hospitals are measured among inpatient and out patient by using following factors and parameters

- I. Service qualities of selected services
- II. Ranking of Selected Services
- III. Probable problems and possible solutions

Table No 06 Demographic Profile

Classifications	Number	Percentage
Gender		
Male	136	68
Female	64	32
Education		0
High Schoolor Lower	59	29.5
Some College	67	33.5
College Graduate	46	23
Graduate School	28	14
Age		0
16-24	26	13
25-34	39	19.5
35-44	40	20
45-54	53	26.5
55-64	25	12.5
65 and Above	17	8.5
Frequency of using Hospital Service		0
Once in a Month	39	55.71
Once in a Week	19	27.14
2-5 times in a Week	8	11.43
Once in a day	4	5.71
Income per Month in Indian Rupees		0
Up to 10000	63	31.5
10001-20000	52	26
20001-30000	39	19.5
30001-40000	27	13.5
40001 and Above	19	9.5

Source: *Tabulated Data*

Out of total number of respondents 68% are male and 32% are female, majority of them are educated at college level,26% of respondent are belongs to the age group of 45-54 and out of total 70 patient 56% are visit the hospitals once in a month and 130 respondents are not a frequent visitors for the hospitals

and 60% belongs to outpatients and remaining belongs to inpatients and majority of respondents are belongs to below 10000 per month income group.

Table No 07 Service qualities of selected services

Sl.No	Services	WAS		AWAS
		In Patient	Out Patient	
1	<u>Behavioral Health</u>	2.775	2.785	2.78
2	<u>Cancer Care</u>	2.575	2.48	2.5275
3	<u>Cardiac & Vascular Services</u>	2.415	2.33	2.3725
4	<u>Emergency Care</u>	2.55	2.535	2.5425
5	<u>Maternity</u>	2.885	2.855	2.87
6	<u>Pediatrics</u>	2.935	2.86	2.8975
7	<u>Rehabilitation Services</u>	2.65	2.61	2.63
8	<u>Stroke Center</u>	2.595	2.56	2.5775
9	<u>Surgery</u>	2.58	2.5	2.54
10	<u>Nursing Care</u>	2.68	2.64	2.66
11	<u>Wound Care & Hyperbaric Medicine</u>	2.94	2.925	2.9325

Source: Tabulated Data

The qualities of core services offered by hospitals such as Behavioral Health ,Cancer Care, Cardiac & Vascular Services ,emergency Care ,Maternity ,Pediatrics ,Rehabilitation ,Stroke Center , Surgery Nursing Care ,Wound Care & Hyperbaric Medicine. Services are measured through Likert scale Likert scale on above mentioned dimensions and average weighted average score is 2.78 ,2.5275, 2.3725 ,2.5425,2.87 ,2.8975 ,, 2.63 ,2.5775 ,2.54 ,2.66 ,and 2.9325 respectively.

Table No 08 Ranking of Services

Sl.No	Services	WAS
1	The availability of healthcare,	2.77
2	Information source for patients.	2.55
3	Quality outcomes	2.565
4	Safety standards	2.96
5	Access to medication	2.385
6	Administrative procedures,	2.38
7	Complaints and appeals etc	2.68
8	Even price information	2.4
9	Comfort	2.36

10	Convenience	2.725
11	Capacity	2.475
12	Modernized system of treatment	2.715
13	Medical ethics	2.565
14	Commitment to the patient	2.96
15	Professional technology	2.245
16	Quality of drug	2.38
17	Quality of doctors,	2.72
18	Expense rationality etc.	2.375
19	Reception	2.32
20	Nursing care	2.625
21	Hygiene	2.575
22	Information	2.74
23	Comfort	2.385
24	Invoice Service	2.355
12	Modernized system of treatment	2.38
13	Medical ethics	2.68
14	Commitment to the patient	2.4
15	Professional technology	2.36
16	Quality of drug	2.725
17	Quality of doctors,	2.475
18	Expense rationality etc.	2.715
19	Reception	2.565
20	Nursing care	2.96
21	Hygiene	2.245
22	Information	2.74
23	Comfort	2.385
24	Invoice Service	2.355

Source: Tabulated Data

The qualities of selected services offered by the hospitals such as The availability of healthcare, Information source for patients. Quality outcomes ,Safety standards , Access to medication, Administrative procedures, Complaints and appeals etc , Even price information ,Comfort , Convenience Capacity ,Modernized system of treatment ,Medical ethics , Commitment to the patient ,Professional technology ,Quality of drug , Quality of doctors, Expense rationality etc. Reception , Nursing care ,Hygiene ,Information ,Comfort ,Invoice Service ,Modernized system of treatment ,Medical ethics ,

Commitment to the patient ,Professional technology Quality of drug Quality of doctors, Expense rationality etc. Reception , Nursing care ,Hygiene ,Information ,Comfort ,Invoice Service are measured through Likert scale on above mentioned dimensions and weighted average score is 2.77,2.55, 2.565, 2.96, 2.385, 2.38, 2.68, 2.4,2.36, 2.725, 2.475, 2.715, 2.565, 2.96, 2.245, 2.38, 2.72, 2.375, 2.32, 2.625, 2.575, 2.74, 2.385, 2.355,2.38, 2.68, 2.4, 2.36, 2.725, 2.475, 2.715, 2.565,2.96,2.245,2.74,2.385 and 2.355 respectively.

Table No 09 Probable problems and possible solutions

The problem	Possible solution
Too-strict visitor policies, hospital noise, and depressing freshman-dorm decor	The patient-designed <u>hospital</u> Plane tree model of hospital design. like liberal visitation, staff interaction, and facility aesthetics
Losing your way in the blizzard of post-diagnosis treatment options and insurance hassles	A full-time hospital navigator. "Patients may face multiple barriers to obtaining timely care," patient-navigation system
Long waits for test results and limited access to your medical records	Online reports

Source: primary Data

Table No 10 Quality of Hospitals – SERVOQUAL Model

Quality Dimensions	Expectations	Perceptions	Variance	%
	(Mean Value)	(Mean Value)		
Tangibles	8.99	7.02	1.97	21.91324
Reliability	8.93	6.14	2.79	31.243
Responsiveness	9.01	6.61	2.4	26.63707
Assurance	9.21	5.73	3.48	37.78502
Empathy:	8.03	6.4	1.63	20.29888

Source: Tabulated Data

The difference between the mean values of expectations and perceptions of the patients towards service quality in above mentioned dimensions is 1.97,2.79,2.4,3.48 and 1.63 respectively and average difference is 2.454.

9. Findings:

The knowledge, experience and handling of quires among doctors & medical assistants are not up to the expectation of the respondents. The core services and value addition services should be changed up to the expectations of the respondents and majority of the patients perceiving that they are cheated in terms of inferior quality of services provided by some of the hospitals. The expectation level of customers in Shivamogga is very high regarding the availability of doctors & medical assistants in private hospital health care services along with doctors & medical assistants, administration also plays an important role in keeping the customers satisfied. The private hospitals are able to meet the expectations of the customers regarding the fee, checkout procedures and behavior of clerical staff to a great extent. According to the findings, the customers are not happy regarding the cleanliness, parking facilities & controlling of mosquitoes. Facilities like proper ventilation, equipments used, eating places & outer & inner appearance.

10. Conclusion:

Due to the effect of privatization the health care sector is witnessing the growth of private sector. In other sectors, health sector is also increasingly becoming customer focused. As large numbers of hospitals are opening up and the people are becoming more aware and conscious of health, great competition has entered in this industry. So to retain their patients, hospitals have to provide better facilities & services to its customers. Various factors that can affect the patients' satisfaction include behavior of doctors, availability of specialist doctors, behavior of medical assistants, quality of administration, quality of atmosphere, availability of nursing facilities etc. So, if the hospitals want to satisfy their customers they have to provide better treatment facilities.

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