



SERVICE QUALITY ASSESSMENT OF GOVERNMENT & PRIVATE HOSPITALS USING EXTENDED HEALTHQUAL DIMENSIONS IN SURAT REGION

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Abstract: This study has been undertaken to measure service quality performance of public and private hospitals using extended HEALTHQUAL dimensions in the Surat region. Questionnaire survey method was used to collect the data by using non-probability convenience sampling method. The survey was conducted on a sample of 200 consumers through questionnaire using extended HEALTHQUAL dimensions. As a result, Dimensions are found out in which particular type of hospital is doing well. Also the dimension in which both kinds of Hospital needs immediate focus are also found out and listed. This study would help to understand customer perceptions towards performance of hospitals. Because of the intangibility of services, measurement and differentiation are very difficult. The research study attempts to develop appropriate dimensions and scales to measure the performance of the health care industry in India.

Key words: HEALTHQUAL, Government and Private Hospitals

I. INTRODUCTION

The healthcare industry is an aggregation and integration of sectors within the economic system that provides goods and services to treat patients with curative, preventive, rehabilitative, and palliative care. It includes the generation and commercialization of goods and services lending themselves to maintaining and re-establishing health. Increase in the total investments in healthtech start-ups.

In India, you can find hospitals, medical supplies, clinical research facilities, contract manufacturing, telemedicine, medical travelling, health insurance, and other elements of the healthcare sector. One of the largest industries, healthcare is anticipated to develop for a long time to come, with a number of factors guiding this growth. Key among them will be; technological innovation, integration of medicine and healthcare, smart healthcare data management, and a patient-centered restructuring. Improving access, coverage and quality of health services depends on the ways services are organized and managed, and on the

incentives influencing providers and users. India has a multi-payer universal health care model that is paid for by a combination of public and private health insurance funds along with the element of almost entirely tax-funded public hospitals. The public hospital system is essentially free for all Indian residents except for small, often symbolic co-payments in some services. The public sector includes government-funded hospitals and clinics, while the private sector includes private hospitals, clinics, and healthcare providers.

The healthcare industry in India faces several challenges, including inadequate infrastructure, uneven distribution of medical facilities between rural and urban areas, shortage of healthcare professionals, and high out-of-pocket expenses for patients. India has become a popular destination for medical tourism due to the availability of quality medical services at a lower cost compared to many Western countries. Procedures like heart surgery, organ transplantation, and cosmetic surgeries attract patients from around the world. The healthcare industry faced significant challenges during the COVID-19 pandemic. Hospitals and healthcare workers were under immense pressure to manage the crisis, and efforts were made to enhance testing, treatment, and vaccination campaigns.

THEORITICAL FRAMEWORK

The SERVQUAL instrument states the relative influence of dimensions like tangibility, reliability, responsibility, assurance and empathy, on customer perceptions, and can be used to track quality trends over time. HEALTHQUAL is an adaptation of the SERVQUAL model, which focuses on the processes and outcomes of care when measuring the quality of healthcare services. Empathy, tangibles, safety, efficiency, and the extent of care service improvements are its five constituent parts.

The SERVQUAL model has been employed as a multidimensional scale to assess quality in healthcare institutions for many years. The SERVQUAL scale is used to assess how patients feel about the level of care and services provided in hospitals and care facilities. Measuring quality requires an updated approach for collecting responses. For that HEALTHQUAL, a multidimensional scale has been adopted to measure the quality of services in hospital care from the patient's points of views. To effectively measure the quality of healthcare given to patients in various cultural contexts and geographic locations, HEALTHQUAL may require ongoing adjustments or alterations. When measuring perceived satisfaction, the HEALTHQUAL survey model is frequently used. It typically includes four dimensions, such as healthcare personnel, efficiency measures, non-healthcare personnel, and physical facilities. However, many researchers have also used five dimensions, such as empathy, tangibles, security, efficacy, and improvements in care service.

II. LITERATURE REVIEW

Lee, DonHee (2017) This study looks at the metrics for measuring healthcare service quality that have been suggested by earlier research, by quality recognition programs, and by systems of service quality accreditation and/or certification around the world. He created a thorough set of HEALTHQUAL (healthcare service quality) measurement measures with an emphasis on the methods and outcomes of care. The study looked at the relative importance of the nine measuring items that 368 patients and 389 members of the general public in South Korea had suggested. According to the findings, both groups ranked tangibles

as second most essential and the level of care improvements as first. The HEALTHQUAL model that was suggested included the following five elements: empathy, tangibles, safety, efficiency, and degree of care service improvements.

Md Shahed Mahmud et al (2021), proposed study to explore the outbound medical tourists' satisfaction and loyalty on the basis of the quality of the health-care service provided by foreign medical institutions. The medical tourists from Bangladesh who have got medical services from Indian medical institutions were taken as a sample by applying a purposive sampling technique. For the measurement of outbound medical tourists' satisfaction, the dimensions of the HEALTHQUAL model were adopted. A self-administrated questionnaire was the major tool for collecting data from the respondents. Using partial least square-structural equation model multivariate statistical technique and with the aid of SmartPLS software, primary data collected from 218 final respondents were analyzed. The findings of this study reveal that four dimensions of the HEALTHQUAL model, namely, empathy, tangibility, efficiency, and safety have a significant positive impact on building medical tourists' overall satisfaction, and then the overall satisfaction also has a positive level of significance on building loyalty towards foreign medical service providers.

At their study proposal from **2020, Fernando Barrios-Ipenza et al.** tested the correlation between user satisfaction, efficiency, and loyalty at two PPP hospitals in Peru, as well as validated and evaluated the use of the HEALTHQUAL scale to measure client satisfaction in outpatient services. At the end of 2018, a descriptive, cross-sectional study using the HEALTHQUAL scale was conducted. The measurement criteria included trust, perception of efficiency, contentment with facilities and equipment, satisfaction with non-healthcare workers, and satisfaction with healthcare professionals. A non-probability sample of 250 consumers who visited one of the two PPP hospitals—Barton or Kaelin—were given the scale. The use of partial least squares path modeling has had a considerable impact on how efficiently healthcare workers, non-healthcare workers, facilities, and equipment were judged to operate.

Aaron Abuosi et al (2013), proposed study to examine two key issues: to assess patients' hospital service quality perceptions and expectation using SERVQUAL; and to outline the distinct concepts used to assess patient perceptions. Questionnaires were administered to 250 patients on admission and follow-up visits. The 22 paired expectation and perception items from the SERVQUAL were used. The data were analyzed using factor analysis with Varimax rotation and repeated t tests. Results indicated that throughout medical treatment, patient expectations were not being satisfied. For all categories, perceived service quality was rated lower than expected.

Reza Nemati et al. (2020) proposed a study to compare the quality of hospital services provided by university and non-university hospitals in Iran using the HEALTHQUAL methodology and reliable nurses. The participants of a comparative cross-sectional study were 990 patients who were admitted to academic and non-academic hospitals in Bushehr Province, southern Iran. They were chosen using the stratified random selection approach. The 30 items of the HEALTHQUAL questionnaire were created to assess patients' views and expectations in relation to four dimensions: "environment" (11 items), "empathy" (12 items), "efficiency" (3 items), and "effectiveness" (4 items). The data were collected through the questionnaire. The study's findings showed that hospital service quality and nurse trust were greater at the

university hospital than at the non-university one, but that hospital service quality lagged behind patient expectations.

III. RESEARCH METHODOLOGY

In recent years, there has been a growing concern regarding the quality of healthcare services and patient experiences within the local healthcare system. Despite efforts to enhance healthcare delivery, there is a lack of comprehensive data and insights on patient perspectives, satisfaction levels, and areas of improvement. This knowledge gap hinders the healthcare providers' ability to address patient needs effectively and optimize healthcare services for improved outcomes. Therefore, there is a need to conduct a comprehensive healthcare survey to assess patient experiences, satisfaction, and preferences, in order to identify key areas for quality improvement and enhance patient-centered care delivery.

After the pandemic individual get a lot of attention towards their health and experienced the services of many hospital. In this study, the notions of hospital service quality, patient satisfaction, and patient behavioral intention were investigated. The study was helping us to know the satisfaction level of patient in public & private hospital.

Primary objective: To measure service quality performance of public & private hospitals with using extended HEALTHQUAL approach in varachha region.

Secondary objective:

- To know the services which require immediate concern to provide better healthcare services.
- To compare public & private hospital performance on healthcare services.
- To measure the overall satisfaction of customer for service quality of public & private hospital.

Research Design:

Type of research: Researcher has used descriptive research design because it requires direct & in depth experience/review of an individual also it requires more focus and concentration on given data.

Data collection:

Primary Data: The primary data were collected with the help of structured questionnaire.

Secondary Data: The researcher collected secondary data from literature review, internet, books and hospital itself.

Sampling design:

Sampling technique: non-probability convenience sampling technique.

Sample size: The researcher took 200 patients from public & private hospital as a sample size in Surat.

Sampling units: Patients of public & private hospitals

Sampling area: Surat region.

Sampling period: from January 2023 to March 2023.

Sampling Method: Structured questionnaire was developed through literature study. The respondents in the sample were given a questionnaire included HEALTHQUAL dimensions. The respondents were asked to indicate their extent of agreement with various statements describing ethnocentric attitude on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree).

IV. DATA ANALYSIS AND FINDINGS

Reliability Analysis: - Reliability refers to the fact that if the scale gives consistent results, if the measurement is repeated several times another way to look at the reliability is that two people, who are similar in terms of construction criteria, should meet the same score. Analysis on reliability is called reliability analysis. Reliability analysis is determined by obtaining the proportion of systematic variation in the scale, which can be done by determining the connection between the scores obtained from different administrations of the scale. Thus, if the connection in the reliability analysis is also high, the scale gives consistent results and is therefore reliable.

Cronbach was concerned with the reliability criteria for the test or instrument that can be obtained from a single administration that offers practical difficulties in obtaining test-retest data and he later tested equivalence criteria as opposed to tests such as test stability (lack of change over time). Is (whether different sets of test items will give the same measurement results) Does the analysis of the two parts give comparable results.

The minimum allowable value for Cronbach's Alpha CA 0.70; Below this value the internal consistency of the normal range is low, meanwhile, the maximum expected value is 0.90; This value is considered as redundancy or duplication above is an alpha value between 0.80 and 0.90 is usually preferred.

It is important to note that the value of alpha is directly influenced by the number of items that make up the scale.

The alpha coefficient of Cronbach is both an innate property of the response patterns of the population studied, without any typical ladder in itself; It is possible, the alpha value varies depending on the population in the scale: therefore, in studies where there is a scale the alpha coefficient of the Cronbach is more reliable when calculated on a scale of twenty items or less. For the main criteria that are measured, Alpha value has good relevance in other studies.

Reliability Statistics

Cronbach's Alpha = .827, N of Items = 43

Alpha values were described as excellent (0.93-0.94), strong (0.91-0.93), reliable (0.84-0.90), strong (0.81), fairly high (0.76-0.95), high (0.73-0.95), good (0.71-0.91), Relatively High (0.70-0.77), Slightly Low (0.68), Reasonable (0.67-0.87), Relevant (0.64-0.85), Average (0.61-0.65), Acceptable (0.58-0.97), Acceptable (0.45-0.98), adequate (0.45-0.96), unsatisfactory (0.4-0.55) and low (0.11).

respondents' profile

	Private	Government/public
GENDER		
Male	130	122
Female	70	78
AGE		
Less than 20	56	36
21-30	58	56
31-40	40	30
41-50	24	48
More than 51	22	30
EDUCATION LEVEL		
Less than or equal to HSC	50	74
Graduate	116	84
Postgraduate	34	42
OCCUPATION		
Self employed	34	54
Professional	22	32
Student	76	52
Businessman	22	26
Housewife	12	8
Service	34	28

1. How many times till now you have visited hospital?

Particular	Private	Government
1 To 5	182	164
6 To 10	14	28
11 and Above	4	8

2. What is your purpose behind visiting hospital?

Particular	Private	Government
Fore heart problem	10	6
Accident	46	62
Lung problem	22	20
Orthopedic problem	6	14
Gynecological problem	18	14
Cancer	12	12
Other	86	72

3. Till now, how many days you stay in particular hospital?

Particular	Private	Government
1 TO 5	176	156
5 TO 10	4	14
10 ABOVE	20	30

Primary objectives: To measure service quality performance of public & private hospitals with using extended HEALTHQUAL approach in varachha region.

Following are the variables found out in which respondents are nearly highly agree for the statements,

For private hospital

- Materials associated with the service are visually appealing in a hospital.
- All the department & services are conveniently available.
- Service provide by hospital are trustworthy.
- Employees of Hospital will give prompt service to patient in all cases.
- Employees of Hospital consistently courteous with patient.
- Hospital putting enough efforts for providing appropriate treatments.
- Hospital charges are appropriate.
- Hospital always for to make procedure convenient.

For public/government hospital

- Hospital billing statements are easy to understand.
- The behavior of employees of Hospital instils confidence in patient.
- Hospital has qualified staff to provide medical services.

Secondary objectives:

1. To know the services which require immediate concern to provide better healthcare services.

For private hospital

- Hospital has modern-looking equipment.
- When Hospital promises to do something by a certain time, they do so.
- Hospital gives patient individual attention.
- Hospitals have convenient operating hours.

For public/government hospital

- Doctor & staff have sense of closeness and friendliness.
- Doctor & staff understand and consider patients situation.
- Hospital has explained everything to patient to prevent diseases.
- Hospital performs the service right the first time.

2. To compare public & private hospital performance on healthcare services.

Here is the parameter listed in table which shows the satisfaction from both private and public hospital.

	STATEMENTS	Private hospitals	Public hospitals
TANGIBLES			
	The hospital's equipment appears to be modern.	3.7	4.43
	The Hospital's physical space is very pleasing.	4.25	4.88
	The Hospital's employees all look well-groomed.	4.74	4.4
	In a hospital, the service's materials are aesthetically pleasing.	5.06	4.49
	Hospital billing statements are easy to understand.	4.79	5.18
	Hospital infrastructures are neat & clean.	4.91	4.8
	All the department & services are conveniently available.	5.05	4.6
	Hospital has enough parking spaces.	4.51	4.29
RELIABILITY			
	Hospital keeps their word when they say they'll do something by a specified deadline.	3.96	4.5
	When a customer has an issue, the hospital genuinely wants to fix it.	4.46	4.37
	Hospital performs the service right the first time.	4.62	4.21
	Service provide by hospital are trustworthy.	5.29	4.57
	Hospital insists on error-free records.	4.8	4.89
RESPONSIVENESS			
	Employees of Hospital tell customers exactly when service would be performed.	4.24	4.84
	Employees of Hospital will give prompt service to patient in all cases.	5.08	4.66
	Hospital staff members are constantly willing to assist patients.	4.67	4.34
	Hospital staff members are never too busy to attend to patient needs.	4.31	4.87
	Employee of Hospital always communicates truly and in the best interest of patient.	4.12	4.82
ASSURANCE			
	The behavior of employees of Hospital instills confidence in patient.	4.04	5.55
	Hospital has qualified staff to provide medical services.	4.76	5.1
	Hospital staff members constantly treat patients with courtesy.	5.11	4.52
	Employees of Hospital have the knowledge to answer patient's questions.	4.89	4.49
	Hospital has comfortable and safe environment for providing treatment.	4.99	4.55
	Hospital never charges any hidden charges.	4.67	4.71
	Hospital is having medical proficiency.	4.24	4.68
EMPATHY			
	Hospital gives patient individual attention.	3.77	4.27
	Hospitals have convenient operating hours.	3.97	4.31
	Hospital sector & staff give customer personal attention.	4.2	4.86
	Hospital staff members are aware of the unique requirements of their clients.	4.27	4.59
	Doctor & staff explaining everything in detail to the patients.	4.28	4.91
	Doctor & staff understand and consider patients situation.	4.65	4.12
	Doctor & staff have sense of closeness and friendliness.	4.93	4
EFFICIENCY			
	Hospital never prescribes unnecessary medication.	4.72	4.5
	Hospital putting enough efforts for providing appropriate treatments.	5.08	5.02
	Hospital charges are appropriate.	5.31	4.87
	Hospital charges are appropriate.	5.12	4.4
	Hospital always for to make procedure convenient.	5.07	4.66
IMPROVEMENT OF CARE SERVICES			

	Hospital's care units are appropriate.	4.72	4.93
	Hospital put efforts for the best treatment.	4.58	4.57
	Hospital has always tried to improved patient conditions.	4.34	4.45
	Hospital has explained everything to patient to prevent diseases.	4.89	4.21
	Hospitals has listened the suggestion & try to improve in a best way.	4.68	4.37
	OVERALL SATISFACTION		
	Overall, I am satisfied with the service performance of hospital.	3.63	3.2

3. To measure the overall satisfaction of customer for service quality of public & private hospital.

It is to be found that patients who got services from private hospital were overall more satisfied than patient got services from various public/government hospitals.

Dimension wise satisfaction also found and average are listed in below table.

	HEALTHQUAL DIMENSIONS	Private hospitals	Public hospitals
1	Tangibles	4.63	4.63
2	Reliability	4.63	4.51
3	Responsiveness	4.48	4.71
4	Assurance	4.67	4.80
5	Empathy	4.30	4.44
6	Efficiency	5.06	4.69
7	Improvement Of Care Services	4.64	4.51

V. CONCLUSION

Healthcare companies should offer a secure and comfortable working environment to everyone who enters the facility, including patients, staff, and visitors. Patients should feel safe and at ease in the care setting when obtaining the necessary services for disease treatment, diagnosis, and prevention. To meet or surpass customers' expectations for service, the provider must work hard to comprehend what they require or want. In light of this, healthcare companies can achieve patient satisfaction by acting appropriately to provide high-quality care that meets or exceeds client expectations. According to the consumer and the type of care provider, this study proposed a set of HEALTHQUAL assessment questions and conducted comparative evaluations of quality measurement items. In this study, the researchers came to the conclusion that factors like patient trust, strong patient relations, and the provision of high-quality services using up-to-date technology at reasonable costs are those that matter most in the healthcare sector.

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