



## Hospital Service Quality and its Impact on Patient Satisfaction: The Case of Apollo Hospitals

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### ABSTRACT

This study investigates the relationship between hospital service quality and patient satisfaction at Apollo Hospitals, a prominent healthcare provider in India. Utilizing the HOSPITAL SERVQUAL (HSQ) model, The study assesses eight dimensions of hospital service quality: medical services, Nursing services, supportive services, administrative services, Patient safety, patient communication, hospital infrastructure, and patient satisfaction. Data were collected through patient surveys across various departments within Apollo Hospitals. The results indicate that high levels of reliability and all the dimensions are positively correlated and have a strong positive relationship with increased patient satisfaction. The study offers actionable recommendations for hospital management to enhance service quality and patient satisfaction. These findings contribute valuable insights for healthcare administrators aiming to optimize patient care and service delivery.

**Keywords:** Patient Safety, Hospital Service quality, Patient satisfaction, Health care management, patient communication.

### INTRODUCTION

The Indian healthcare sector is expanding rapidly due to its expanding coverage and services and rising expenditure by public and private players. The country's healthcare delivery system is divided into two main components: public and private. Rural communities rely on primary healthcare centers (PHCs) for their basic healthcare needs, while many larger urban centers offer secondary and tertiary treatment. This is all part of the publicly funded healthcare system. In recent years, healthcare in India has emerged as a significant economic driver in employment and revenue. In the ever-changing healthcare environment, delivering high-quality service and patient happiness is critical. The HOSPITAL SERVQUAL (HSQ) model offers a strong foundation for assessing hospital service quality across various dimensions. This model builds on the SERVQUAL framework, addressing the particular elements of healthcare service delivery. This study employs the HSQ model of Apollo Hospitals, a well-known healthcare provider in India, to investigate the relationship between crucial service quality characteristics and patient satisfaction. The study's focus on eight essential factors aims to uncover strengths and areas for improvement, providing hospital administrators with practical insights into improving service quality. The primary goal is to apply the HSQ model to assess the association between service quality and patient satisfaction. By focusing on eight distinct variables, the study aims to identify areas of strength and possibilities for improvement, ultimately giving actionable insights for hospital administration to improve overall service quality.

### LITERATURE REVIEW

**Mishra, S. (2024)** investigated various techniques, best practices, and case studies to improve the eminence of healthcare and protect patients within Indian hospitals. This study examines the current state of healthcare delivery in Indian hospitals, highlighting key challenges and areas for improvement. Along with the growing recognition of the importance of quality care and patient safety in achieving better health outcomes, this study dives into the current state of healthcare delivery in Indian hospitals. Drawing upon a comprehensive review of literature, data, and case studies, the paper identifies and examines various strategies for improving healthcare quality and patient safety, including standardization of processes, health information technology (HIT) adoption, continuous quality improvement (CQI) initiatives, fostering a patient safety culture, and promoting multidisciplinary teamwork. Furthermore, the research paper highlights the best practices implemented by leading hospitals in India, such as Apollo Hospitals, Narayana Health, and the Aravind Eye Care System. These hospitals have already demonstrated significant success in improving the quality of healthcare and the safety of patients through the implementation of innovative approaches and interventions supported by evidence. The study elucidates critical lessons learned and actionable insights that might inform future quality improvement initiatives in Indian healthcare settings by analyzing these case studies and the implications of those lessons.

**Mulya Wulandari, Susy Sriwahyuni, & Dahlan Gunawan. (2023)** established the relationship between patient satisfaction and the quality of healthcare provided by Montella Private Hospital in the West Aceh District. This research used simple linear regression, a statistical method, to determine the rectilinear relationship between two variables (X and Y). Also, the basic linear regression technique aims to find out how the link goes between the two

variables. Whether it's a positive or negative number, and to forecast the dependent variable's value based on the change in the independent variable. Information derived from the questionnaire's Likert-scale responses is utilized. The study's findings suggest that health service quality has a large and significant impact on patient happiness at Montella Private Hospital. The R Square value of 97.50% indicates that this variable is responsible for this effect, while the remaining 2.50% is attributable to variables not considered in this study.

**Abu-Rumman, A., Mhasnah, A. & Al-Zyout, T. (2021)** investigated the gap or SERVQUAL scale amongst the findings of the previous studies for missing investigations and the impression to apply for overall standard quality management of three variables such as independent variable (Service quality), mediator variable (Patients' Satisfaction) and dependent variable (Patients' Loyalty) in Jordanian health care sector. Moreover, the current study aims to clarify the effects of Total Quality Management (TQM), represented collectively by a specific strategy, leadership management, human resource focus information, client focus, method management, and analysis method management on customer loyalty. A random sample of 800 national and international patient expectations from the private and public hospitals in the central region of Jordan was collected to test the objectives. The quantitative analysis was designed to conduct the survey and questionnaires and gather the primary information to determine the data category and collection techniques. Multiple reliability results indicated that the dimensions of each experimental variable were considered reliable and satisfactory. Based on the outcome, this study verified that customer satisfaction carries a weak mediating effect. Moreover, the results showed that TQM significantly impacted customer loyalty and satisfaction.

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## STATEMENT OF THE PROBLEM

Health is essential for national development since high population health increases national GDP. Health and socioeconomic advancement are interdependent and considered well-being components. Family members or doctors choose hospitals. Life is at stake in health care. It deserves attention. Consumer happiness is crucial in health care as competition rises. Consumer retention is health care providers' most significant concern. Satisfied customers spread goodwill. Thus, service quality is the key to patient pleasure. Finding patient happiness and service quality in Chennai City Apollo hospitals is crucial. Hospitals and health plans prioritize patient satisfaction. Patient happiness is the most significant factor in hospital performance, and patients are the primary stakeholders. Patient happiness affects health outcomes, making patient experience assessment more important than in business. The success of multispecialty hospitals depends on service quality and patient satisfaction. This study focuses on Service Quality and Patient Satisfaction at Apollo Hospitals.

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## OBJECTIVES OF THE STUDY

- To assess the significant difference in mean ranks of different dimensions of Hospital service quality.
- to study the relationship between overall hospital service quality and patient satisfaction
- To suggest a suitable strategy for improving service quality and patient satisfaction.

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## RESEARCH METHODOLOGY

This study used a descriptive research design to assess service quality and its impact on patient happiness at Apollo Hospitals. The primary data will be gathered using standardized questionnaires distributed to patients. A structured questionnaire was used to evaluate the HOSPITAL SERVQUAL (HSQ) model, which has eight dimensions: medical services, nursing services, supportive services, administrative services, patient safety, communication, hospital infrastructure, and overall satisfaction. Each component will be evaluated using a Likert scale with multiple elements, such as 1 for strongly disagree and 5 for strongly agreeing. A minimum of 141 samples were chosen to verify the numerical validity and reliability of the findings using stratified random sampling.

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## DATA ANALYSIS AND RESULTS

**Table 1: Demographic Variables of the Respondents**

Age	Frequency	Percentage
Below 25 years	60	42
25 above -30 years	42	30
30 above – 40 years	21	15
40 above – 50 years	15	11
Above 50 years	03	02
<b>Gender</b>		

Male	52	37
Female	89	63
<b>Monthly Income</b>		
Below 30,000	40	28
30001 – 40000	35	25
40001 - 60000	45	32
Above 60001	21	15
<b>Qualification</b>		
Graduate	33	23
Postgraduate	41	29
Professional	28	20
Others	39	28
<b>Frequency of Visit</b>		
First Time	46	33
Second Time	40	28
Third Time	27	19
Fourth Time	10	07
Regularly	18	13

**Interpretation:**

From the above table, it is admitted to Apollo Hospital 25 years and between the that, 63% of the patients are

from the above table that the majority % of the respondents 32% have a monthly income of 40001 to 60000 rupees, and 29% of the respondent's qualification is postgraduate. Most of the respondents, 33%, are visiting the hospital for the first time.

inferred that patients are below the age group of ages of 25 and 30. Out of female. It is also observed

**Table 2: Friedman Test**

Dimensions of HSQ	Mean Ranks
Medical Services	4.56
Nursing services	4.46
Supportive services	4.35
Administrative services	4.00
Patient Safety	4.66
Patient Communication	4.51
Hospital Infrastructure	4.87
Patient Satisfaction	4.59

H<sub>0</sub>: There is no significant difference in mean ranks of different dimensions of Hospital service quality.

Test Statistics	
N	141
Chi-Square	16.152
df	7
Asymp. Sig.	.024

**Interpretation:**

The analysis shows that the p-value is less than 0.05, so the study's null hypothesis is rejected at the 5% significance level. This indicates a significant difference in the mean ranks across the various dimensions of hospital service quality.

**Table 3: Independent Sample Test**

Dimensions of HSQ	GEN	N	Mean	Std. Deviation
Medical Services	MALE	52	17.3269	6.40074
	FEMALE	89	17.5843	5.85780
Nursing services	MALE	52	17.0577	6.88110
	FEMALE	89	17.6966	6.01023
Supportive services	MALE	52	16.9808	6.20402
	FEMALE	89	17.4270	6.08442
Administrative services	MALE	52	16.6538	6.37669
	FEMALE	89	17.5056	5.80776
Patient Safety	MALE	52	17.7885	5.87563
	FEMALE	89	17.6854	6.12112
Patient Communication	MALE	52	17.5192	6.53044
	FEMALE	89	17.5618	6.25219
Hospital Infrastructure	MALE	52	18.1346	6.24038
	FEMALE	89	18.1685	6.13529
Patient Satisfaction	MALE	52	17.4615	6.39688
	FEMALE	89	17.8090	6.15127

H<sub>0</sub>: There is no a significant difference in the mean scores between males and females concerning different dimensions of hospital service quality.

Levene's Test for Equality of Variances		
Dimensions of HSQ	F	Sig.
Medical Services	.641	.425
Nursing services	3.115	.080
Supportive services	.161	.689
Administrative services	2.607	.109
Patient Safety	.262	.610
Patient Communication	.913	.341
Hospital Infrastructure	.158	.691
Patient Satisfaction	.473	.493

**Interpretation:**

The results of Levene's Test indicate that, for most groups, variances are not significantly different, supporting the assumption of equal variances for independent sample tests, except for Nursing services (p = 0.080) and administrative services (p=0.109), where variances differ. The p-value is more significant than 0.05 in all the dimensions of hospital service quality except the null hypothesis. Hence, there is no significant difference in the mean scores between males and females regarding the different dimensions of hospital service quality.

**Table 4: Correlation Analysis**

H0<sub>3</sub>: There is no relationship between overall hospital service quality and patient satisfaction

Correlations			
Relationship		Overall service Quality	Patient Satisfaction
Overall Service Quality	Person Correlation	I	.667
	Sig.(2-tailed)		.000
	N	141	141
Patient Satisfaction	Person Correlation	.667	I
	Sig.(2-tailed)	.000	
	N	141	141

**Interpretation:**

The Pearson correlation coefficient ( $r$ ) is 0.667, indicating a confident relationship between overall service quality and patient satisfaction. The p-value (Sig. (2-tailed) = 0.000) is less than 0.05, suggesting the relationship is statistically significant. Thus, we reject the null hypothesis (H0<sub>3</sub>) and conclude that there is a significant optimistic relationship between overall hospital service quality and patient satisfaction.

## SUGGESTION AND RECOMMENDATION

- It is suggested that Apollo Hospital create focused healthcare services and marketing tactics to appeal to the younger audience. Consider developing youth-friendly health programs, instructional workshops, and using social media to interact. Ensure that digital health services, such as telemedicine, are available, as these may appeal to younger people.
- It is recommended that the service provider implement inexpensive healthcare plans and financial support initiatives to meet the needs of low-income individuals. Consider forming relationships with non-profits and government programs to subsidize healthcare expenditures. To lower long-term healthcare costs for this cohort, emphasize preventative care and health education.
- Utilize respondents' higher education levels to promote advanced health literacy initiatives. Provide extensive and transparent information regarding medical issues, treatment alternatives, and preventative measures. Consider holding patient education workshops and using technology to disseminate health information.
- While there is no substantial variation in service quality perceptions between men and women, all services should be gender-sensitive and inclusive. As a result, service providers should examine and update service protocols regularly to maintain gender neutrality while also addressing growing gender-specific needs.
- Maintain high standards across all dimensions to maximize patient satisfaction and service quality. Implement continuous quality improvement programs, solicit patient feedback, and use data to make choices. Focus on patient satisfaction drivers to improve service.

## CONCLUSION

This study examines Apollo Hospitals' patient satisfaction and service quality using the Hospital Servqual Model. Youth-focused healthcare services and communication techniques to satisfy this demographic's demands and preferences are among the key results and opportunities for improvement. This requires focused tactics to recruit more male patients and make services seem inclusive and accessible to all genders. Apollo Hospitals should offer low-income people inexpensive healthcare and financial help. The large number of graduate-degreed answers indicates a well-educated patient base. Apollo Hospitals can improve patient education to help people make healthcare decisions. Many first-time users emphasize the necessity of an excellent first impression. Future researchers should study service quality and patient satisfaction by utilizing other variables and methods, such as the impact of patient characteristics on client happiness, by differentiating outpatient care from inpatient care.

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