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A study of Service Quality of Government Hospital and Satisfaction of Patients in Mumbai

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ABSTRACT
A study of service quality in government hospitals and patient satisfaction in Mumbai holds significant importance, particularly due to the critical role these institutions play in serving the city's large and diverse population. Government hospitals cater to the healthcare needs of low-income and underprivileged sections of society, where access to affordable medical care is a priority. Assessing service quality in areas such as timely medical assistance, hygiene standards, behavior of healthcare staff, and the availability of essential medicines can provide valuable insights into how well these hospitals are functioning. It also highlights whether they meet the expectations and needs of the patients they serve. Furthermore, understanding patient satisfaction is essential for improving healthcare delivery in government hospitals. Patient feedback can identify areas for improvement, such as reducing wait times, improving communication between staff and patients, or enhancing the overall hospital infrastructure. This study could serve as a valuable tool for healthcare administrators and policymakers to drive reforms, improve resource allocation, and ultimately elevate the standard of care in government hospitals. Enhancing service quality would lead to better patient outcomes and contribute to the overall health and well-being of Mumbai's population.

Keywords: Service quality, Government Hospital, satisfaction, Patients, Mumbai

Introduction:

A satisfaction in Mumbai is vital as these institutions are the primary healthcare providers for a significant portion of the population, particularly low-income and vulnerable groups. Government hospitals offer essential medical services at affordable rates or free of charge, making them crucial for public health. However, given the high patient inflow and limited resources, the quality of services provided can often fall short of expectations. Key aspects such as the availability of medical personnel, hospital cleanliness, diagnostic facilities, and overall hospital infrastructure are critical in determining the service quality.

Evaluating service quality through patient satisfaction can help identify areas where government hospitals need improvement. Patients' experiences, such as their interactions with healthcare providers, ease of access to medical services, treatment procedures, and the behavior of administrative staff, provide direct insights into the hospital's performance. Additionally, factors like waiting times, availability of beds, and pharmacy services can influence how patients perceive the quality of care. Understanding these factors can reveal gaps that may hinder patient recovery or worsen healthcare outcomes.

This is essential for driving meaningful reforms in Mumbai's government hospitals. By addressing patient concerns and improving service quality, healthcare administrators can create more patient-centric environments, which can improve patient satisfaction and trust in the public healthcare system. Moreover, such studies provide valuable data for policymakers, guiding them to allocate resources effectively and improve hospital management practices. Ultimately, enhancing service quality in government hospitals will lead to better health outcomes and strengthen the overall healthcare infrastructure in Mumbai.

Factors of Service Quality:

The five key factors of service quality, commonly represented by the SERVQUAL model, play a critical role in determining patient satisfaction in healthcare settings, including government hospitals. Here's a more detailed explanation of each:

1. **Reliability**: This factor refers to the hospital's ability to consistently deliver the services it promises, ensuring that medical procedures, treatments, and diagnoses are conducted accurately and efficiently. Patients expect consistent, dependable care from the hospital, and reliability involves meeting those expectations, whether it's following correct treatment protocols or providing accurate test results on time.
2. **Responsiveness**: This measures the willingness and ability of hospital staff to assist patients and provide prompt service. It includes factors such as how quickly patients are attended to, how swiftly staff respond to emergencies, and how efficiently they handle patient inquiries or complaints. Responsiveness is crucial in a healthcare setting, where delays in service can significantly impact patient outcomes and satisfaction.
3. **Assurance**: This factor involves the knowledge, competence, and professionalism of healthcare providers, including doctors, nurses, and support staff. Assurance also encompasses their ability to inspire confidence and trust in patients. For example, patients feel reassured when hospital staff display expertise, courtesy, and an understanding of their medical conditions, thus creating a sense of security.
4. **Empathy**: Empathy refers to the hospital's ability to provide caring, personalized attention to patients. It involves understanding individual patient needs, being compassionate, and offering emotional support. In a hospital setting, where patients often feel vulnerable, empathy from healthcare providers can significantly enhance their overall experience and satisfaction with the service.
5. **Tangibles**: This factor focuses on the physical aspects of the hospital, such as the appearance of the facilities, the quality of medical equipment, cleanliness, and the comfort of the environment. Tangibles also include the appearance of hospital staff and how well-maintained the hospital infrastructure is. A clean, well-organized hospital with modern equipment can create a positive impression and contribute to the perception of high-quality care.

Satisfaction of service quality:

The satisfaction with service quality in government hospitals in Mumbai is a crucial aspect of public healthcare, especially since these hospitals cater to a vast population, including lower-income groups who rely heavily on affordable medical services. Patients' satisfaction is influenced by various factors such as the availability of timely medical attention, staff behavior, hospital cleanliness, and the quality of treatment. In many cases, overcrowding and limited resources in government hospitals can lead to long waiting times, lack of personalized care, and inconsistent service delivery, which affects patient satisfaction. The ability of hospital staff to provide empathetic, responsive, and reliable services can significantly enhance patient experiences and their trust in the public healthcare system.

Additionally, the physical infrastructure, including the cleanliness of the hospital and the availability of modern medical equipment, plays an essential role in shaping patients' perceptions of service quality. While many government hospitals face challenges due to underfunding and high patient volumes, efforts to improve hygiene, ensure better communication with patients, and provide consistent, high-quality medical care can lead to greater satisfaction. Addressing these factors can help government hospitals in Mumbai improve their reputation, increase patient loyalty, and ensure better health outcomes for the city's population.

Review of Literature:

1. **Sharma, R. & Gupta, N. (2022).** In the research titled, "Assessing Service Quality in Public Healthcare: A Study of Mumbai's Government Hospitals". The study revealed that service quality in Mumbai's government hospitals is significantly impacted by resource constraints and high patient volumes. Key areas of concern include long wait times, suboptimal cleanliness, and inconsistent staff interactions. Improving patient satisfaction requires enhancing infrastructure, reducing waiting periods, and training staff to improve responsiveness and empathy. The study suggests that targeted interventions and better resource allocation could lead to notable improvements in patient care and overall satisfaction.
2. **Patel, S. (2021).** In the research titled, "Patient Satisfaction in Government Hospitals: A Case Study in Urban India". This research identified that patient dissatisfaction in government hospitals is primarily due to inadequate facilities, insufficient staff, and poor communication. Although these hospitals are accessible and affordable, the quality of service often falls short due to logistical and management issues. The study emphasizes the need for systemic reforms, including better infrastructure, enhanced staff training, and improved patient communication to boost satisfaction levels.
3. **Deshmukh, P. & Jain, M. (2020)**. In the research titled**, "Quality of Care and Patient Satisfaction in Mumbai's Government Hospitals"**. The study highlighted that while government hospitals in Mumbai provide essential services at low cost, patient satisfaction is hindered by issues such as overcrowding and outdated facilities. The research underscores the importance of upgrading medical equipment, improving cleanliness, and increasing staff numbers to address these challenges. Enhancing patient engagement and feedback mechanisms is also recommended to better understand and address patient needs.
4. **Mehta, A. & Khan, R. (2019).** In the research titled, **"Evaluating Service Quality in Public Health Institutions: Insights from Mumbai"**. Findings indicate that service quality in public health institutions in Mumbai is often affected by bureaucratic inefficiencies and limited resources. Patients frequently report dissatisfaction with wait times, staff responsiveness, and overall hospital environment. The study advocates for streamlined administrative processes, better resource management, and training programs for healthcare providers to enhance service quality and patient satisfaction.
5. **Srinivasan, S. (2018).** In the research titled, **"Patient Satisfaction and Service Quality in Government Healthcare Facilities: A Mumbai Perspective"**. The research concluded that patient satisfaction is closely linked to the quality of service delivery, which in government hospitals in Mumbai is often suboptimal due to factors like overcrowding and inadequate facilities. To improve patient experiences, the study recommends focusing on infrastructure upgrades, reducing patient load, and improving staff-patient interactions through better training and support systems.
6. **Joshi, R. & Kulkarni, V. (2017).** In the research titled, **"Service Quality and Patient Satisfaction in Public Sector Hospitals in Mumbai"**. The study found that while government hospitals provide essential services, patient satisfaction is frequently impacted by long waiting times, insufficient cleanliness, and staff shortages. It suggests that addressing these issues through improved management practices, enhanced cleaning protocols, and increased staff recruitment could lead to higher patient satisfaction and better health outcomes.
7. **Kumar, V. & Shah, N. (2016).** In the research titled, **"The Impact of Service Quality on Patient Satisfaction in Government Hospitals in Mumbai"**. The research identified significant gaps in service quality, including delays in service delivery and poor hospital amenities. The study recommends targeted improvements in service processes, increased investment in hospital infrastructure, and staff training to address these issues. Enhancing overall service quality is essential for improving patient satisfaction and maintaining trust in public healthcare services.
8. **Patil, S. & Reddy, G. (2015).** In the research titled,**" Assessing the Quality of Healthcare Services and Patient Satisfaction in Mumbai's Public Hospitals"**. This study highlighted the challenges faced by public hospitals in Mumbai, such as limited resources and high patient volumes, which contribute to lower patient satisfaction. Recommendations include improving hospital facilities, reducing wait times, and enhancing staff training to improve service quality. Implementing these changes could lead to a more satisfactory healthcare experience for patients.
9. **Singh, A. & Sharma, P. (2014).** In the research titled, **"Service Quality in Government Hospitals: A Study of Patient Satisfaction in Mumbai"**. The study found that while government hospitals are crucial for

providing affordable healthcare, patient satisfaction is often compromised due to outdated facilities, long wait times, and staff shortages. To address these issues, the study suggests investing in modernizing hospital infrastructure, improving operational efficiency, and increasing staff to better meet patient needs and expectations.

10. **Agarwal, M. & Choudhury, S. (2013).** In the research titled, **"Exploring Service Quality and Patient Satisfaction in Government Healthcare Institutions in Mumbai"**. The research indicated that patient dissatisfaction in government hospitals stems from several factors, including inadequate medical resources, poor service delivery, and insufficient staff training. The study recommends focusing on improving hospital infrastructure, streamlining service delivery processes, and investing in staff development to enhance patient satisfaction and overall service quality.

Research Gap:

The research on service quality and patient satisfaction in government hospitals in Mumbai has largely focused on identifying issues like overcrowding, resource constraints, inadequate infrastructure, and staff shortages. While these studies provide valuable insights, a significant research gap exists in understanding the impact of recent healthcare reforms, digitalization efforts, and patient feedback mechanisms on improving service quality in public hospitals. Additionally, there is limited research on the comparative analysis of service quality between government and private hospitals, as well as the role of specific patient demographics, such as socio-economic status and education level, in influencing perceptions of healthcare service quality. Future research could explore these aspects to provide a more comprehensive understanding of how to improve patient satisfaction in government hospitals.

Research Methodology:

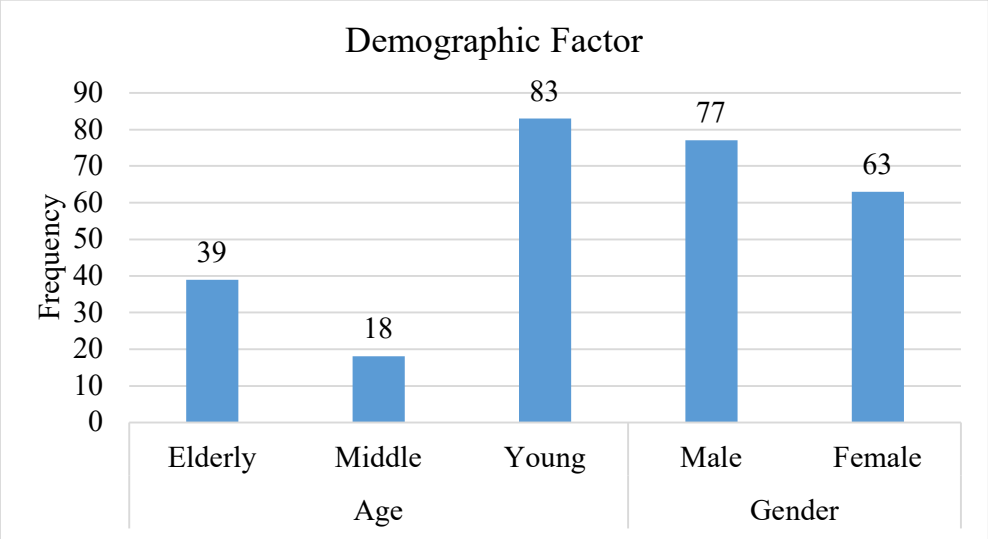
The research methodology involved surveying a sample of respondents to evaluate service quality in government hospitals across five dimensions: Tangible score, Reliability score, Response score, Assurance score, and Empathy score. The sample included participants from various age groups and genders to ensure diverse representation. Data was gathered through structured questionnaires and analyzed using descriptive statistics to determine mean scores for each service quality dimension. To test hypotheses, the Friedman test was employed to assess differences in service quality factors, and Pearson correlation analysis was used to explore the relationship between service quality dimensions and patient satisfaction.

Data Analysis:

The following table indicates the demographic factor of the study:

Sr.no	Demographic Factor	Category	Frequency	Percent
1	Age	Elderly	39	27.9
		Middle	18	12.9
		Young	83	59.3
2	Gender	Male	77	55.0
		Female	63	45.0

The demographic data shows that out of the total respondents, 83 respondents belong to the "Young" age group, 39 respondents are categorized as "Elderly," and 18 respondents fall into the "Middle" age group. In terms of gender, 77 respondents are male, while 63 respondents are female. This data highlights a greater number of young participants and a slight majority of male respondents in the survey.



Dependent Variable:

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Tangible score	140	27	100	68.76	16.546
Reliability score	140	20	100	73.29	16.554
Response score	140	20	100	66.38	14.100
Assurance score	140	20	100	74.52	16.059
Empathy score	140	20	93	63.52	14.559
Valid N (listwise)	140				

The mean scores for different service quality dimensions in the survey reveal important insights into patient perceptions. The highest mean score is for Assurance at 74.52, indicating that patients generally feel confident in the staff's knowledge and ability to instill trust. Reliability follows closely with a mean of 73.29, reflecting patient satisfaction with the hospital's ability to provide dependable and accurate services. The Tangible aspect, related to the hospital's physical facilities and equipment, has a mean score of 68.76. Responsiveness, which measures the promptness of service, has a slightly lower mean of 66.38. Finally, Empathy has the lowest mean score of 63.52, indicating room for improvement in terms of the hospital's ability to offer personalized care and attention to patients. Overall, the scores highlight assurance and reliability as strengths, while empathy is perceived as weaker.

Objective-1: To study and compare the factors towards service quality of government hospitals.

Null Hypothesis H_{01}: There is no significant difference in factors of service quality of government hospitals.

Alternate Hypothesis H_{11}: There is a significant difference in factors of service quality of government hospitals.

To test the above null hypothesis, Friedman test is applied and results are as follows:

Test Statistics[a]	
N	140
Chi-Square	47.178
df	4
P-value	.000
a. Friedman Test	

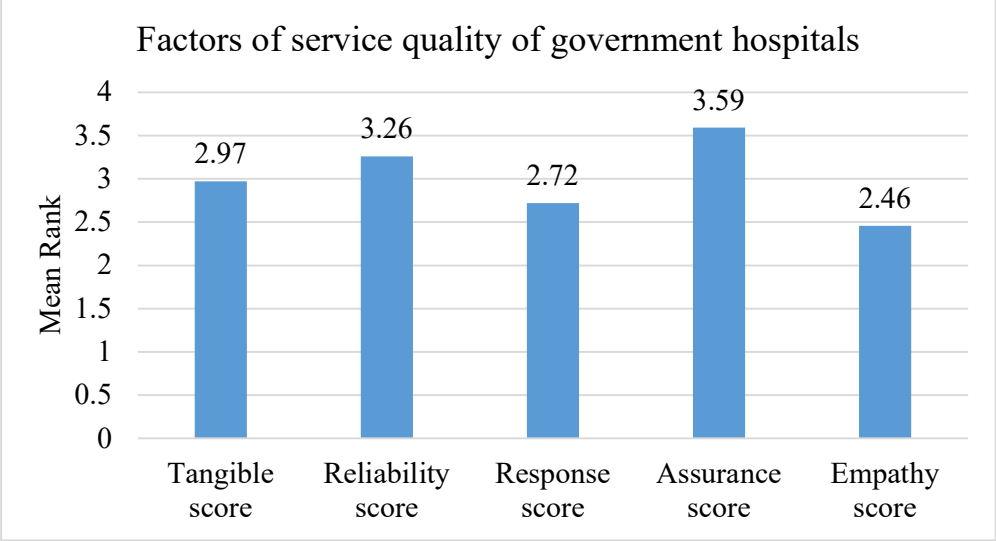
Interpretation: The above results indicate that calculated p-value is 0.000. It is less than 0.05. Therefore Friedman test is rejected. Hence Null hypothesis is rejected and Alternate hypothesis is accepted.

Conclusion: There is a significant difference in factors of service quality of government hospitals.

Finding: To understand the finding, mean ranks are obtained and presented in the following table:

Ranks	
	Mean Rank
Tangible score	2.97
Reliability score	3.26
Response score	2.72
Assurance score	3.59
Empathy score	2.46

The mean rank data provides insights into how different service quality dimensions are perceived relative to one another. Assurance has the highest mean rank of 3.59, indicating that patients place the most value on the hospital's ability to provide trust and confidence in its services. Reliability follows with a mean rank of 3.26, showing that patients appreciate consistent and dependable service. The Tangible aspects of the hospital (facilities and equipment) rank in the middle with 2.97. Responsiveness, or the speed of service, has a lower rank of 2.72, while Empathy, reflecting the hospital's ability to provide personalized care, has the lowest rank of 2.46. This suggests that empathy is viewed as the least satisfactory dimension of service quality among patients.



Objective-2: To study the relationship between service quality and satisfaction of government hospitals.
Null Hypothesis H_{02}: There is no relationship between service quality and satisfaction of government hospitals.
Alternate Hypothesis H_{12}: There is a relationship between service quality and satisfaction of government hospitals.
To test the above null hypothesis, Pearson Correlation test is applied and results are as follows:

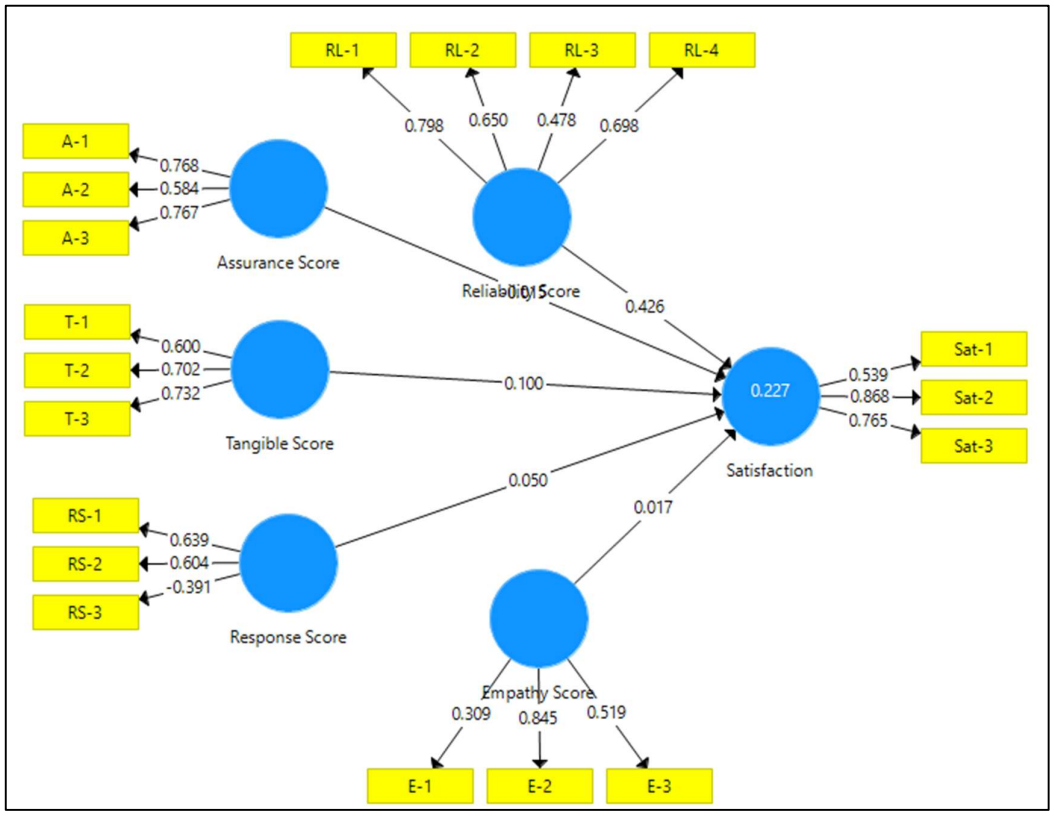
Correlations		
		Satisfaction
Satisfaction	Pearson Correlation	1
	P-value	
	N	140
Tangible score	Pearson Correlation	.170*
	P-value	0.044
	N	140
Reliability score	Pearson Correlation	.431**
	P-value	0.000
	N	140

Response score	Pearson Correlation	0.084
	P-value	0.321
	N	140
Assurance score	Pearson Correlation	0.104
	P-value	0.220
	N	140
Empathy score	Pearson Correlation	0.127
	P-value	0.135
	N	140
*. Correlation is significant at the 0.05 level (2-tailed).		
**. Correlation is significant at the 0.01 level (2-tailed).		

Interpretation: The above results indicate that calculated p-value is 0.000. It is less than 0.05. Therefore Pearson Correlation test is rejected. Hence Null hypothesis is rejected and Alternate hypothesis is accepted.

Conclusion: There is a relationship between service quality and satisfaction of government hospitals..

Finding: The p-values in the correlation analysis provide insight into the statistical significance of the relationships between service quality dimensions and patient satisfaction. A p-value of 0.044 for the Tangible score indicates a statistically significant positive correlation with satisfaction at the 0.05 level, meaning the physical aspects of the hospital somewhat influence satisfaction. The Reliability score shows a highly significant positive correlation with satisfaction, with a p-value of 0.000, indicating that reliability strongly impacts patient satisfaction. In contrast, the Response score (p = 0.321), Assurance score (p = 0.220), and Empathy score (p = 0.135) have p-values greater than 0.05, suggesting that these dimensions do not have statistically significant correlations with satisfaction in this study.



Path Coefficients:

	Satisfaction
Assurance Score	-0.015
Empathy Score	0.017
Reliability Score	0.426
Response Score	0.050
Satisfaction	
Tangible Score	0.100

Outer Loadings:

	Assurance Score	Empathy Score	Reliability Score	Response Score	Satisfaction	Tangible Score
A-1	**0.768**					
A-2	**0.584**					
A-3	**0.767**					
E-1		**0.309**				
E-2		**0.845**				
E-3		**0.519**				
RL-1			**0.798**			
RL-2			**0.650**			
RL-3			**0.478**			
RL-4			**0.698**			
RS-1				**0.639**		
RS-2				**0.604**		
RS-3				**-0.391**		
Sat-1					**0.539**	
Sat-2					**0.868**	
Sat-3					**0.765**	
T-1						**0.600**
T-2						**0.702**
T-3						**0.732**

Outer Weights:

	Assurance Score	Empathy Score	Reliability Score	Response Score	Satisfaction	Tangible Score
A-1	0.563					
A-2	0.146					
A-3	0.628					
E-1		0.186				
E-2		0.835				
E-3		0.456				
RL-1			0.501			
RL-2			0.327			
RL-3			0.234			
RL-4			0.396			
RS-1				0.663		

RS-2				0.618		
RS-3				-0.519		
Sat-1					0.260	
Sat-2					0.585	
Sat-3					0.461	
T-1						0.424
T-2						0.578
T-3						0.465

Summary Structural Equation Modelling:

The path coefficients reveal that Reliability (0.426) has the strongest positive impact on Satisfaction, indicating that reliability plays a significant role in influencing patient satisfaction. Tangible aspects also positively affect satisfaction with a coefficient of 0.100, while Response has a minor positive effect (0.050). However, Assurance (-0.015) slightly negatively affects satisfaction, and Empathy shows a minimal positive impact (0.017). The outer loadings highlight that specific indicators like A-1 (0.768), E-2 (0.845), and RL-1 (0.798) are highly representative of their respective constructs, particularly in Empathy and Reliability. The outer weights further confirm that these indicators strongly contribute to the overall construct, emphasizing the importance of factors like reliability and tangibility in service quality perceptions.

Conclusion:

The study concludes that among the various dimensions of service quality in government hospitals, Reliability has the most significant positive impact on patient satisfaction, as evidenced by its high path coefficient of 0.426 and strong correlation. Assurance and Empathy, however, have less influence on satisfaction, with Assurance showing a slight negative effect and Empathy having a minimal positive impact. The Tangible aspects of the hospital, while positively correlated with satisfaction, are less impactful compared to Reliability. The Friedman test confirms significant differences in the perception of service quality factors, and the Pearson correlation analysis highlights that only Reliability and Tangible aspects are statistically significant predictors of satisfaction. These findings underscore the importance of improving reliability and physical infrastructure to enhance patient satisfaction in government hospitals.

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