Comparing Public And Private Hospitals' Service Quality

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Abstract:
Background: Ujjain health care system has undergone major changes in recent years to enhance the quality of the services it renders to the community. This study is designed to measure the quality of health care services from the patients' perspective and to compare the service quality of public and private hospitals in Ujjain City.
Methods: The study has a quantitative cross-sectional design, with a questionnaire based on the SERVQUAL dimensional model. It was a random sample of 258 inpatients at private and public hospitals in Ujjain City.
Results: Patients at private hospitals perceived a higher level of quality of the health care services ($t = 3.390$, $p < 0.01$).
Conclusions: Further research on the financial and leadership dimensions of health care quality will contribute to improved planning for health care services.

Keywords: Health care service quality, Patient perception, Private hospitals, Public hospitals, SERVQUAL model.

Introduction:
Health care services in Ujjain City have improved and increased significantly during recent years. In previous 20 years, the first 5-year development plans were introduced to improve the Ujjain City health care system. After this 5-year plan, significant improvementwas observed in all sectors of the Ujjain City health system at thedispensary and hospital level.
Review of Literature: Globally, researchers have conducted many studies to measure the quality of health care services rendered by various health care systems.
Jabnoun and Chaker (2003) created and evaluated a revised SERVQUAL framework to analyze and contrast the services provided to patients that are admitted to hospitals in the UAE. The assessment also included evaluating the dependability of the aspects related to the quality of inpatient services. A survey was created and examined, using the framework from Parasuraman's research conducted in 2003. 205 out of 400 participants answered the survey. Interviews were also conducted with hospital managers. The survey consisted of five aspects: understanding and compassion, dependability, physical attributes, assistance abilities, and promptness in administrative tasks. The predictive validity of the method used is verified by factor analysis. An ANOVA test was employed to analyze and compare the quality of the service and hospital types. All 5 factors were reliable, as it was discovered. The regression model determined that the service quality was at its highest level. While comparing, a significant difference occurred. The demonstration highlighted the importance of private hospitals prioritizing patient-focused strategies to be able to effectively compete with government funded hospitals. The findings and consequences emphasized the necessity for healthcare industry managers to comprehend the specific areas that require their attention.
In a study carried out in Taiwan, **Cheng and Chen (2010)** put forward a model for service quality consisting of two dimensions: interpersonal competence and quality. In India, a number of scientific studies have suggested different aspects of service quality such as the quality of nursing care, infrastructure, the process of discharge, support services, the overall environment, administrative procedures, and corporate social responsibility.
According to **Aagja and Garg in 2010**, **Miranda and colleagues in 2012**, as well as **D 'Souza and Sequeira, in 2010**, it was proposed that in order to measure service quality effectively, it is necessary to consider the perceptions of both customers and service providers. This is because these services are meant to add value for both parties involved. While hospitals may have their own opinions and perspectives, it is crucial for them to prioritize the needs and preferences of customers and service providers. By leveraging their core strengths, hospitals are able to ensure they meet the requirements and expectations of their customers.
In **Japan, Eleuch (2019)** employed technical and functional quality criteria. Scientists from different nations have employed specific criteria based on the desires, requirements, and perspectives of the individuals and organizations within those particular societies.
Brahmbhatt and colleagues (2000) Private hospitals had superior communication processes, infrastructure, policies and procedures when compared with public hospitals, according to a study by (2011). When it comes to dependability, public hospitals outperformed private hospitals, but the overall quality of service in the SQ was lower in comparison. The research took place in the Indian state of Gujarat, specifically in the areas of Ahmedabad and Gandhinagar. Even though the hospital industry as a whole had better service quality, it still remained superior in comparison.
Sreenivas (2018) carried out a study involving seven hospitals to check out the level of service satisfaction among these

healthcare facilities. The interviews were carried out as planned, and it was discovered that just one hospital out of the ones being studied was delivering satisfactory service quality. A discovery was made indicating that every hospital required enhancements in the quality of their services. Patients were dissatisfied with the level of service provided in a number of aspects, including the doctor-patient relationship, regular delivery of laboratory reports, hospital infrastructure such as buildings and ambulance services, as well as the hospital's outpatient pharmacy. The recommendation was made for hospitals to prioritize customer service and allocate their resources towards enhancing quality.

Methods:
This study is intended to compare the quality of health careservices rendered by public and private hospitals in Ujjain City. The following design andcriteria are meant to attain this objective.

This study has a quantitative cross-sectional design to detect the patients' perceptions regarding the quality of healthcare services provided in the hospitals to compare the performance of public and private hospitals. The dependent variable is the quality of health care services; it is measured using the international SERVQUAL dimensional model, which includes the following dimensions: tangibles, reliability, responsiveness, assurance and empathy. The independent variable is the hospital type (Public or Private). All the public and private hospitals located in the Ujjain City were included in the study. The study's sample includes inpatients who completed a web-based questionnaire after being hospitalized in a public or private facility within a year of the beginning of the study. Those who were hospitalized outside from Ujjain city were excluded from the study. The questionnaire was distributed in November 2022, and it included a consent form and an assurance regarding the confidentiality of the provided information.

From the 270 questionnaires that were completed, only 258were included in the study sample, as only those responses matched the inclusion criteria. For confidentiality, the collected data were stored and maintained using organized and protected data sets.

Results:
The questionnaire was distributed through an online surveyand consisted of five main parts based on SERVQUAL's five dimensions. The questionnaire included 30 items, divided asfollows: 9 items related to the participants' demographics, 4 items on each of the SERVQUAL dimensions and 1 item on the patients' overall satisfaction with the health care services they received. The participants answered each item using a 5- point Likert scale. The SERVQUAL questionnaire was the most suitable tool for this study, as it relates specifically to service quality and as many researchers in various fields have proven its effectiveness and validity.

The data were analyzed using the Statistical Package for the Social Sciences Software (IBM 2010), including the use of descriptive univariate statistics, frequencies and percentages to analyses the demographic data. Cronbach's alpha was used to test the instrument's reliability, the chi-squared test to assess the significance of associations between the demographic variables and outcome variable (type of health care facility). An independent-sample t-test was used to identify the mean difference between public and private health care facilities with regard to the individual quality dimensions and overall quality.

From the 258 participants, 40% were between 20 and 30 years old; 29% were between 31 and 40 years old, and only 5% were < 20 years old. Regarding nationality and gender, 99% were Indian and 80% were female. Exactly half of the participants held bachelor's degrees, and most (76%) were married. Table 1 presents the descriptive statistics of the study participants.

The reliability of the study's five dimensions was verified using Cronbach's alpha. Table 2 shows that all the dimensions were reliable and that assurance was the most reliable (with $\alpha = 0.932$). This proves that the items for each dimension were coherent and consistent.

The independent-sample t-test indicated evidence of a difference in perceived service quality between public and private hospitals. Table 3 shows a clear and significant difference (at the 0.01 level) between public and private hospitals in all the dimensions except for assurance (for which the difference was significant at the 0.05 level).

The private hospitals had higher scores than the public hospitals for all five dimensions. Therefore, the inpatients from the private hospitals were generally more satisfied thanthose from the public hospitals.

Discussion
This study's objective was to measure the service quality of hospitals in Ujjain City. A comparison of the means for each dimension reveals that consumers overall had neutral and satisfactory experiences. These results contrast with those of Emirati and Turkish studies, for which theresponses were generally negative regarding overall health care service quality (Al-Neyadi et al. 2016; Caha 2007). The dominance of free, government-funded care explains the relatively positive responses of this study's participants, as public hospitals allow for greater accessibility tospecialized care, often at no cost or at affordable prices, com-pared with private hospitals. This likely increased customersatisfaction in Ujjain City.

Table 1 Descriptive statistics of the study participants

Variables	Public health care setting	Private health care setting	Total	Bivariate statistics
	N = 131 (%)	*N* = 127 (%)		**2**
Nationality				
Indian	128 (98)	121 (95)	249	**1.135**
Non - Indian	3 (2)	6 (5)	9	
Gender				
Male	34 (26)	17 (13)	51	**6.423***
Female	97 (74)	110 (87)	207	
Marital status				
Single	32 (24)	18 (14)	50	**6.003**
Married	92 (70)	105 (83)	197	
Divorced	5 (4)	2 (2)	7	
Widowed	2 (2)	2 (2)	4	
Education level				
Illiterate	1 (1)	0 (0)	1	**9.024**
Elementary/intermediate	5 (4)	5 (4)	10	
Secondary school†	29 (22)	23 (18)	52	
Diploma	23 (18)	10(8)	33	
Bachelor	56 (43)	73 (57)	129	
Masters/PhD	17 (13)	16 (13)	33	
Age				
< 20 years old	11 (8)	3 (2)	14	**4.685**
20 to 30 years old	50 (38)	52 (41)	102	
31 to 40 years old	36 (27)	39 (31)	75	
> 40 years old	**34 (26)**	**33 (26)**	**67**	

*$P < 0.05$, **$P < 0.01$, ***$P < 0.001$ High school

Table 2 Measuring reliability of the Instrument dimension

Dimension **(s)**	**Factor loading**
Tangibles (α = 0.884)	
The hospital has modern-looking equipment	0.741
The physical facilities in the hospital are visually appealing	0.843
Personnel in the hospital are neat in appearance	0.691
Materials associated with the service (such as pamphlets or statements) are visually appealing	0.694
Reliability (α = 0.895)	
When the hospital promises to do something by a certain time it does so	0.645
When you have a problem, the hospital shows a sincere interest in solving it	0.723
The hospital gets things right the first time	0.652
The hospital insists on error-free records	0.529
Responsiveness (α = 0.910)	
The personnel in the hospital tell you exactly when services will be performed	0.649
Personnel in the hospital gives you prompt service	0.643
Personnel in the hospital are always willing to help you	0.758
Personnel in the hospital are never be too busy to respond to your requests	0.712
Assurance (α = 0.932)	
The behavior of personnel in the hospital instills confidence in you	0.769
You feel safe in your dealings with the hospital	0.797
Personnel in the hospital are consistently courteous with you	0.706
Personnel in the hospital have the knowledge to answer your questions	0.709
Empathy (α = 0.921)	
The hospital gives you individual attention	0.667
The hospital has operating hours convenient to all its patients	0.638
The hospital has your best interests at heart	0.761
The personnel of the hospital understand your specific needs	0.755

This study's participants are, married and female, and most hold a bachelor's degree. More than half (69%) of the participants were between 20 and 40 years old at the time of the study, which indicates that young adults are the heaviest consumers of health care services in the Eastern Province.

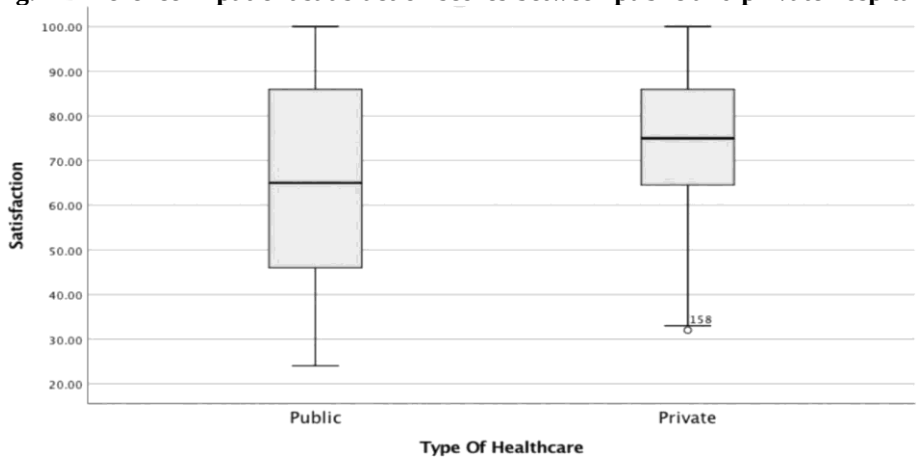
The public and private hospitals' mean service quality differs significantly in all five dimensions, with private care having higher scores in all dimensions. This finding supports the results from most of the published studies, including results from Lucknow, Madurai, Kolkata, Turkey and Saudi Arabia (Khan 2018; Shabbir et al. 2016; Taner and Antony 2006).

All these results indicate that private hospitals provide higher quality health care services than do public hospitals, particularly in the dimensions of tangibles and responsiveness. The public hospitals' non-profit nature may reduce their managers' focus on health care service quality, thus leading the private hospitals to produce better results in this measure, as their managers must concentrate on marketing their services to obtain greater profits.

Table. 3 Difference in the means of perceived service quality between public and private hospitals

	Mean (SD) Public	Private	Mean difference	t-test
	13.51 (4.33)	15.17 (3.58)	−1.662	−3.363**
Reliability	13.44 (4.94)	14.89 (3.79)	−1.44702	−2.646**
Responsiveness	12.49 (5.05)	14.44 (3.72)	−1.95240	−3.543***
Assurance	14.11 (4.64)	15.37 (3.67)	−1.25557	−2.414*
Empathy	12.60 (5.09)	14.38 (3.99)	−1.77490	−3.124**
Satisfaction	66.16 (21.94)	74.25 (16.03)	−8.09166	−3.390**

Fig. 2 Difference in patient satisfaction scores between public and private hospitals



Reliability tests were conducted to ensure the appropriateness of the dimensions included in the study. This test's results indicate that all the dimensions are reliable and consistent. In addition, the independent-sample t-test shows satisfactory results regarding the probability that this study's sample can be extrapolated to the entire population.

The distribution of public and private health care facilities in rural and urban areas is worth mentioning. According to Ahmed and Damrah (2014), the Ministry of Health care facilities provide basic services and some specialized services in some governmental centers, which is only available for Ujjain nationals except for emergency services and some specialized services.

One of the major strengths of this study is the relatively large sample size, which will give the study more precision. Furthermore, this is the first study in the region to assess the service quality between public and private hospitals.

Data were collected in this study through an online survey, which limited our ability to calculate the response rate. Also, one of the downsides of a quantitative survey is that it does not fully allow us to understand the reasons behind the finding in the study, i.e., why the services from private hospitals were perceived to be of better quality than public. In addition, using an online survey to extract data from respondents limits the ability to know if the respondents answered the survey themselves or someone else did.

Conclusion

As the Ujjain health care system moves towards privatization to improve the quality of its health care services, it is important for leaders to measure and compare the service quality provided by both public and private hospitals. The patients' perceptions, in particular, can help leaders to identify the aspects of health care that most require attention so that they can develop plans for quality improvements. This study's results indicate that, in Ujjain, private hospitals provide higher quality services than public hospitals, especially in terms of assurance. The study's limitations included a lack of time and the limited avail- ability of research assistants; as a result, a web-based questionnaire was used rather than a selected sample. Therefore, further investigations of public and private hospitals should be conducted to determine the underlying causes of certain hospitals' poor performance and of the service-quality gaps between hospitals. Furthermore, other factors need to be looked at in future similar studies in Ujjain, such as financial concerns and management insights, which will enhance the plans for improving Ujjain health care system.

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