

# ENHANCING PATIENT SATISFACTION THROUGH SERVICE QUALITY EXCELLENCE IN PUBLIC HEALTHCARE INSTITUTIONS: EVIDENCE FROM SELECTED DISTRICTS OF ODISHA

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## ABSTRACT

*In public healthcare facilities, the quality of healthcare services has become a crucial factor in determining patient satisfaction. With a focus on the districts of Cuttack, Khordha, and Jajpur, this study investigates the impact of service quality aspects on patient satisfaction in Odisha's public healthcare system. The SERVQUAL framework, which identifies tangibility, dependability, responsiveness, assurance, and empathy as the primary aspects of service quality, is used in this study. A standardized questionnaire was used to gather primary data from patients undergoing treatment in public healthcare facilities. The results show that all aspects of service quality have a substantial impact on patient satisfaction, with the best predictors being responsiveness and empathy. The study offers managerial and theoretical recommendations for enhancing patient-centered care procedures and healthcare service delivery in public hospitals. By offering concrete data from Odisha's public healthcare system, the study adds to the body of knowledge already available on healthcare service quality.*

**Keywords:** Service Quality, Patient Satisfaction, Public Healthcare, SERVQUAL, Odisha, Healthcare Management, Health Care Sector.

## INTRODUCTION

Globally, patient-centered healthcare delivery systems have gradually replaced treatment-oriented ones in healthcare systems. Patient happiness and service quality are regarded as significant measures of healthcare efficacy in modern healthcare administration.

In particular, public healthcare facilities struggle with overpopulation, inadequate infrastructure, a lack of medical staff, and delayed service delivery. These difficulties have a big impact on how patients view healthcare services and how satisfied they are. The degree to which healthcare services fulfill or beyond patient expectations is referred to as service quality. The SERVQUAL model, created by (Parasuraman, Zeithaml & Berry, 1988), identifies five aspects of service quality: tangibility, assurance, responsiveness, empathy, and dependability. Healthcare research has made considerable use of these characteristics to assess how patients perceive the provision of healthcare services (Yesilada & Direktör, 2010).

A psychological assessment of patients' experiences with healthcare services is known as patient satisfaction. Patients who are satisfied are more likely to follow medical advice, return to healthcare facilities, and refer others to them. Improving patient happiness has become crucial for increasing healthcare utilization and institutional legitimacy in the public healthcare sector.

Although Odisha's public healthcare system has significantly improved over time, district-to-district differences in healthcare facilities and service quality still exist. Important healthcare areas with differing degrees of infrastructure and accessibility are Cuttack, Khordha, and Jajpur. It is therefore essential to comprehend how aspects of service quality impact patient satisfaction in these districts. The current study is to look into how patient satisfaction in public healthcare facilities in Odisha is affected by aspects of service quality. In particular, the research aims to:

1. Analyze the connection between patient happiness and aspects of service quality.
2. Examine how patient satisfaction is affected by tangibility, dependability, assurance, responsiveness, and empathy.
3. Create and verify a structural model that explains patient satisfaction in public health facilities.

### Research Hypotheses

**H1:** *There is no significant association between service quality and patient satisfaction.*

**H2:** *There is no significant relationship between service quality dimensions and patient satisfaction.*

**H3:** *There is no significant difference in patient satisfaction among different age groups.*

**H4:** *There is no significant difference in patient satisfaction between male and female respondents.*

## REVIEW OF LITERATURE

### Service Quality

The SERVQUAL model was created by (Parasuraman, Zeithaml & Berry, 1988), who identified tangibility, assurance, responsiveness, empathy, and reliability as the five main characteristics of service quality. The disparity between client expectations and views of actual service performance is what determines service quality, according to their study. Later on, the SERVQUAL model emerged as one of the most used frameworks for studying healthcareservicequality.

The SERVPERF model was presented by (Cronin & Taylor, 1992) as a substitute for SERVQUAL. According to their research, performance perceptions rather than expectation-performance gaps should be used to gauge service excellence. The study came to the conclusion that customer satisfaction and behavioral intentions are directly impacted by service performance (Prakash, 2010).

SERVQUAL dimensions may alter depending on service contexts, according to (Carman's, 1990) analysis of service quality characteristics across several service industries. The study emphasized the significance of tailoring service quality metrics to patient expectations and healthcare contexts.

According to (Grönroos, 1984), technical quality and functional quality make up service quality. Functional quality is about how services are provided, whereas technical quality is about what clients receive. His research made a substantial contribution to our knowledge of healthcare service experiences. A hierarchical model of service quality that included interaction quality, physical environment quality, and outcome quality was put out by (Brady & Cronin, 2001). According to their research, customer happiness is greatly impacted by multifaceted views of service quality.

## Service Quality in the Health Care Sector

Physician communication, staff responsiveness, and hospital atmosphere have a significant impact on patient satisfaction, according to (Andaleeb, 2001) study on healthcare service quality in developing nations. The significance of patient-centered healthcare services was underlined in the study. After applying the SERVQUAL scale to hospital services, (Babakus & Mangold, 1992) came to the conclusion that patients' opinions of the quality of their care are greatly impacted by responsiveness and dependability. In their investigation of hospital service quality, (Pakdil & Harwood, 2005) found that assurance and empathy were important indicators of patient satisfaction. The significance of staff professionalism and compassionate care was emphasized by their findings. According to (Dagger, Sweeney & Johnson, 2007) hierarchical healthcare service quality model, patient satisfaction is greatly impacted by the interpersonal interactions between patients and healthcare providers. Infrastructure, communication, responsiveness, and staff competency are critical elements impacting patient satisfaction, according to (Mosadeghrad, 2014) thorough analysis of healthcare service quality determinants.

### Patient Satisfaction

According to (Oliver's, 1980) Expectancy Disconfirmation Theory, client pleasure arises when perceived service performance either meets or surpasses their expectations. Research on patient satisfaction now heavily relies on this notion. Using the SERVQUAL paradigm, (Zarei et al., 2012) investigated hospital service quality and discovered notable discrepancies between patient expectations and perceptions in every aspect of service quality. Reliability and empathy have a major impact on patient trust and satisfaction, according to (Al-Borie & Damanhour, 2013) study on patient satisfaction in Saudi hospitals. According to (Chahal & Kumari, 2012), patient satisfaction and loyalty in healthcare facilities are significantly influenced by assurance and empathy. (Meesala & Paul, 2018) looked at the quality of healthcare services in Indian hospitals and found that responsiveness, assurance, and empathy were important factors in determining patient loyalty and satisfaction (Choi et al., 2004)

## RESEARCH METHODOLOGY

In order to investigate how service quality factors, affect patient satisfaction in public healthcare facilities, the current study used a descriptive and analytical research approach. While the analytical approach was utilized to examine the causal relationship between service quality measures and patient satisfaction, the descriptive design was utilized to comprehend individuals' opinions of healthcare services. Because quantitative approaches enable statistical analysis and objective interpretation of correlations among variables, the study used a quantitative research strategy. The study concentrated on public health facilities in the Odisha districts of Cuttack, Khordha, and Jajpur. The study utilized both primary and secondary data sources. Using a standardized questionnaire, primary data was obtained directly from individuals undergoing treatment at public hospitals. Statements about tangibility, dependability, certainty, responsiveness, empathy, and patient satisfaction were included in the questionnaire. Secondary data were collected from Research journals, Books, Government healthcare reports, WHO publications, Hospital records, Published theses and dissertations. Patients receiving care from public healthcare facilities in particular Odisha districts made up the study's target group. A probability sampling method called stratified random sampling was used in the investigation. To guarantee appropriate representation of respondents from a range of healthcare facilities, the population was split into several strata

according to hospital classifications and districts. The strata comprised by Classification by district, Healthcare facility type and In-patient and out-patient classifications. Simple random sampling procedures were used to choose respondents from each stratum. Stratified random sampling decreased sampling bias and enhanced representativeness (Rohini & Mahadevappa, 2006).

Cochran's Sample Size Formula has been used, which is frequently used for research involving huge populations, was utilized to properly calculate the sample size for the current study. The formula aids in determining a sufficient sample size to guarantee the correctness and dependability of the study's conclusions. A total of 450 questionnaires were sent to respondents in order to increase the study's dependability and make up for incomplete and non-response surveys. 387 valid questionnaires were kept and used for the final analysis following data screening and the elimination of partial replies. For statistical analysis and structural equation modeling using IBM SPSS Amos, this final sample size was deemed sufficient. Cuttack, Khordha Jajpur districts of Odisha were used for the study. These districts were chosen because of their varied patient population and healthcare infrastructure. The SERVQUAL paradigm put forth by (Parasuraman, Zeithaml & Berry, 1988) served as the foundation for the questionnaire's development. There were two parts to the instrument i.e Respondents' demographic data and Statements about patient satisfaction and service quality. A five-point Likert scale ranging from Strongly Disagree to Strongly Agree (Fatima, Malik & Shabbir, 2018) (TABLE 1).

<b>District</b>	<b>Questionnaires Distributed</b>	<b>Valid Responses</b>
Cuttack	160	138
Khordha	155	134
Jajpur	135	115
<b>Total</b>	<b>450</b>	<b>387</b>

Source: Primary data

## Analysis and Interpretation

The demographics of the respondents, including gender, age, education level, and frequency of hospital visits, were examined using percentage analysis. This analysis aids in comprehending the makeup of the study sample and gives a summary of the respondent profile (TABLE 2).

<b>Demographic Variable</b>	<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Gender	Male	217	56.1%
Gender	Female	170	43.9%
<b>Total</b>		<b>387</b>	<b>100%</b>
Age	18–30 Years	124	32.0%

Age	31–45 Years	147	38.0%
Age	Above 45 Years	116	30.0%
<b>Total</b>		<b>387</b>	<b>100%</b>
Educational Qualification	School Level	112	28.9%
Educational Qualification	Graduate	178	46.0%
Educational Qualification	Postgraduate	97	25.1%
<b>Total</b>		<b>387</b>	<b>100%</b>
Frequency of Hospital Visit	Monthly	136	35.1%
Frequency of Hospital Visit	Quarterly	158	40.8%
Frequency of Hospital Visit	Rarely	93	24.1%
<b>Total</b>		<b>387</b>	<b>100%</b>

Source: Primary data

According to the percentage analysis, male respondents made up 56.1% of the sample, while female respondents made up 43.9%. The majority of responders were between the ages of 31 and 45, suggesting that middle-aged patients regularly use public health facilities. With 46%, graduates made up the largest educational group, indicating that people with higher levels of education are more conscious of the quality of healthcare services. A moderate reliance on public healthcare facilities is indicated by the majority of respondents' quarterly hospital visits.

### Hypothesis Testing Using Statistical Tools

Four main statistical tests were used to investigate the connection between patient satisfaction and service quality dimensions by using Chi-Square Test, Rank Correlation Analysis, ANOVA, and Independent Sample t-Test

#### Chi-Square Test

The relationship between patients' perceptions of service quality and their degree of satisfaction was investigated using the Chi-Square test.

#### Hypothesis

*H1: There is no significant association between service quality and patient satisfaction (TABLE 3).*

TABLE 3 CHI-SQUARE TEST RESULTS				
Variables	Chi-Square Value	df	p-value	Result
Service Quality × Patient Satisfaction	42.617	12	0.000	Significant

Source: Primary data

With a p-value of less than 0.05, the computed Chi-Square value was 42.617. As a result, the alternative hypothesis was accepted and the null hypothesis was rejected. This suggests that patient happiness in public healthcare facilities is significantly correlated with service quality. Patients expressed more pleasure when they thought the services were of a better caliber.

#### Rank Correlation Analysis

The association between patient satisfaction and aspects of service quality was investigated using Spearman Rank Correlation.

### Hypothesis

**H2:** *There is no significant relationship between service quality dimensions and patient satisfaction (TABLE 4).*

Variables	Correlation Coefficient (r)	p-value	Interpretation
Tangibility and Satisfaction	0.524	0.000	Moderate Positive Relationship
Reliability and Satisfaction	0.618	0.000	Strong Positive Relationship
Responsiveness and Satisfaction	0.702	0.000	Strong Positive Relationship
Assurance and Satisfaction	0.641	0.000	Strong Positive Relationship
Empathy and Satisfaction	0.736	0.000	Strong Positive Relationship

Source: Primary data

All aspects of service quality and patient satisfaction were found to be positively and significantly correlated by the rank correlation analysis. Patient satisfaction was most strongly correlated with empathy, which was followed by assurance and responsiveness. This suggests that patients favor timely healthcare services, compassionate behavior, and individualized attention.

### Analysis of Variance (ANOVA)

To ascertain whether patient satisfaction varies significantly among age groups, an ANOVA was used.

### Hypothesis

**H3:** *There is no significant difference in patient satisfaction among different age groups (TABLE 5).*

Source of Variation	Sum of Squares	df	Mean Square	F-value	p-value
Between Groups	28.614	2	14.307	6.842	0.001
Within Groups	803.928	384	2.094		
Total	832.542	386			

Source: Primary data

An F-value of 6.842 and a significance value of 0.001, which is less than 0.05, are displayed in the ANOVA results. The null hypothesis was thus disproved. This suggests that there are notable differences in patient satisfaction between different age groups. Compared to older respondents, younger and middle-aged respondents had relatively higher levels of satisfaction.

## Independent Sample t-Test

To determine whether there is a significant difference in patient satisfaction between male and female respondents, the Independent Sample t-Test was used.

### Hypothesis

**H4:** *There is no significant difference in patient satisfaction between male and female respondents (TABLE 6).*

TABLE 6				
INDEPENDENT SAMPLE T-TEST RESULTS				
Gender	Mean Score	Standard Deviation	t-value	p-value
Male	4.08	0.684	2.316	0.021
Female	3.89	0.712		

Source: Primary data

A p-value of 0.021, which is less than 0.05, was found in the t-test result. The null hypothesis was thus disproved. This suggests that male and female responders' levels of patient satisfaction varied significantly. Compared to female respondents, male respondents expressed somewhat higher levels of satisfaction.

## DISCUSSION

The results verify that patient satisfaction in public healthcare facilities is highly impacted by aspects of service quality. Patients place a great value on timely medical attention and compassionate care, as evidenced by the fact that empathy and responsiveness emerged as the biggest drivers of satisfaction. Additionally, assurance and reliability showed strong beneficial benefits, indicating the importance of confidence and consistent service delivery in public hospitals. According to the demographic research, most healthcare patients at public hospitals were middle-aged respondents. The Chi-Square test verified a strong correlation between patient satisfaction and service quality. Strong positive correlations between patient satisfaction and all aspects of service quality were found by rank correlation analysis. The greatest factors affecting patient satisfaction were found to be empathy and responsiveness. Significant variations in patient satisfaction across age groups were revealed by the ANOVA results. Male and female respondents' satisfaction levels differed significantly, according to the Independent Sample t-Test. With acceptable goodness-of-fit indices, Confirmatory Factor Analysis verified the measurement model. Tangibility, dependability, responsiveness, certainty, and empathy all have a major impact on patient satisfaction, according to structural equation modeling. Empathy had the highest path coefficient, suggesting that patients place a high importance on individualized care and emotional support. The study verified that the SERVQUAL model may be used to assess the quality of public healthcare services. The findings are in line with other research that highlights the significance of healthcare personnel behavior and interpersonal communication in influencing patient experiences. Patients favor human engagement and prompt care over physical infrastructure alone, according to the significantly lesser influence of tangibility.

## Implications

### Theoretical Implications

By validating the SERVQUAL framework in the public healthcare setting of Odisha, the study adds to the body of knowledge on healthcare management. Additionally, it enhances the empirical knowledge of patient-centered healthcare service quality.

### **Implications for Staff**

Healthcare workers should concentrate on enhancing patient participation, empathy, communication, and responsiveness. Interpersonal skills and patient handling abilities can be improved through training programs.

### **Implications for Management**

Prioritizing patient-centered healthcare methods, bolstering staffing systems, enhancing waiting time management, and setting up ongoing service quality monitoring systems are all important tasks for hospital administrators.

## **CONCLUSION**

In this competitive world the services sectors are growing very fast to provide best services to customers. Hospitals are coming more and to serve the people and trying to give best services than the government hospital in that geographical area. Service quality is the most important aspect of health care sector. According to the study's findings, patient satisfaction in public healthcare facilities is greatly impacted by aspects of service quality. The two most important factors influencing patient impressions are responsiveness and empathy. To increase patient happiness and healthcare efficacy, public healthcare administrators should concentrate on enhancing interpersonal service delivery procedures.

### **Limitations and Future Research**

The study solely looks at public healthcare facilities and is restricted to a few areas in Odisha. Future studies could compare the public and private healthcare systems or incorporate other factors like patient loyalty, trust, and healthcare accessibility. Additionally, longitudinal research may offer more profound insights into how patient views evolve over time.

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