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# Evaluating Patients' Perceptions of Service Quality and Its Impact on Satisfaction in Multispecialty Hospitals: An Empirical Analysis

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**Abstract**

**Purpose**

The study reveals patient satisfaction in multispecialty hospitals in North Indian states, i.e. Punjab and Haryana on the level of service quality. The study employs the Brady and Cronin model to identify the service quality dimensions and suggests enhancements to healthcare delivery systems in order to increase patient satisfaction.

**Research Design/Methodology**

The study utilized a quantitative cross-sectional survey to examine 460 hospitalized patients from 10 private multispecialty hospitals in Haryana and Punjab. Researchers collected information through a standardized assessment tool that measured interaction quality along with physical environment aspects and outcome quality dimensions. The research team used PLS-SEM for structural equation modeling to measure construct reliability and validity as well as interrelationships between variables.

**Findings**

The study discovered that service quality demonstrates a substantial influence on patient satisfaction ($\beta$ = 0.781). The strongest contributor among dimensions emerged from the interaction quality aspect of respectful behavior combined with effective communication. The research showed that cleanliness along with tangible amenities and timely service had significant effects on satisfaction but design aesthetics had minimal importance. Patients identified emotional and social support as unexpressed but crucial elements that impacted their satisfaction.

**Research Implications**

The research emphasizes healthcare providers should focus their efforts on delivering empathy with transparent communication and personalized care to boost patient satisfaction levels. Healthcare facilities must train their staff to implement emotional intelligence and integrate culturally responsive approaches for providing successful services.

**Limitations**

The research restricted itself to North Indian private hospitals while disregarding public healthcare facilities and their contexts. The study uses only structured surveys to obtain data which requires further exploration through qualitative methods and long-term research.

**Keywords**: patient satisfaction, service quality, multispecialty hospitals, healthcare delivery, Brady and Cronin model, PLS-SEM, India.

## INTRODUCTION

Since healthcare changes fast these days, there is more emphasis on how to serve patients as they now want to play a bigger role in their treatment. It is clear in countries like India that hospitals are facing great challenges in matching patient expectations while preserving access and effectiveness in care and costs. Because patient-centered care is now encouraged, the quality of services has an important impact on how pleased patients are, how loyal, and how healthy they are (Dagger et al., 2007).

Because health services are not tangible, are always user-centered, and involve a high degree of attention, they differ from most other service sectors. Unlike things you can hold in your hand, health services are perceived, so how patients feel about them is crucial for understanding how well a service is doing (Zeithaml et al., 1996). Since there are many aspects to healthcare quality such as provider ability, facilities, empathy, communication, and responsiveness, all service providers should regularly review and improve their services. As a result of these dimensions, patients' opinions about the quality of care and their happiness with it are created.

With private healthcare providers facing stronger competition, primarily in the field of multispecialty services in India, knowing about the quality of services from patients is very important to achieve lasting growth and better service. Many patients are choosing multispecialty hospitals, as they think these places offer both convenience and a full range of treatments all in one location. Even so, the complicated organization requires strong quality management to ensure everyone provides the same care.

Most previous work has measured the quality of healthcare services using frameworks such as SERVQUAL developed by Parasuraman (Parasuraman et al., 1985). Even though these models are useful, they do not always represent how healthcare services are built in a structured and detailed way. The current study uses the Brady and Cronin (Brady et al., 2001) which sees service quality as being composed of several lower-order traits and forming a second-order construct. Three important dimensions make up the model: interaction quality, physical environment quality, and outcome quality, each divided into more detailed sub-dimensions. When evaluating the service at hospitals that involve many related touchpoints, the model is highly effective. The empirical evidence highlights the patients who recommend the hospitals to their family and friends are usually those who obey the hospital rules and regulations, these are usually the patients who are satisfied with the hospital service quality. (Padma et al., 2009) highlighted that the services which are provided by the hospital build trust in the patient and also form a connection between the patient and the healthcare provider which further affects the patient's visit to the healthcare provider in the future.

India's healthcare system is divided between a crowded public sector and a fast-growing private sector concentrating on multipurpose hospitals. These types of institutions treat many people, whether they require general or specialized treatment. Because private healthcare costs are rising, patients pay closer attention to what they get for their money and prioritize good service which matters a lot to both researchers and healthcare managers.

This research examines how patients view the quality of services they receive in a multispecialty hospital in India, as captured by the Brady and Cronin model. The aim is to uncover important points in the hospital system where patients are most satisfied, so hospital officials and policymakers can work on them.

## REVIEW OF LITERATURE

### Overview of Understanding Patient Satisfaction

Over the time, patient satisfaction has been used to judge healthcare quality because it results from service interactions and points to how likely patients will behave in the future. It means a patient's assessment of care quality which is affected by medical, relationship, environmental, and organizational aspects. It is claimed that things such as provider empathy, plain communication and good response from the institution decide client satisfaction. It was found that satisfaction is formed continually by interactions and experiences the patient has as care continues, unlike a single event (Bernhart et al., 1999; Williams et al., 1998).

Good communication is a key part of what makes employees satisfied. It was agree that good communication encourages both parties to understand one another and receive reassurance, helping form trust in healthcare (Batbaatar et al., 2017; Jackson et al., 2001). The more emotional support a patient receives, the more likely they are to cope well and follow their treatment plan, particularly if they are either sensitive or have a chronic illness (Carr-Hill, 1992; Chandra et al., 2018).

General characteristics in a system affect how satisfied the users are. Patients' judgments of clinic quality are greatly affected by cleanliness, decreased noise, shorter waits, and practical work procedures (Sitzia & Wood, 1997; Valentine et al., 2003). Equally important, prompt access to healthcare—close location, low cost, and

fast service—makes people feel more favorable about their treatment (Heidegger et al., 2006; Vuori, 1991). Besides how effective procedures are, patients also look at the perceived value of care. If the outcome is positive, the costs are acceptable, but when benefits do not meet what customers thought they would get, they often get disappointed (Ng & Luk, 2019) . Furthermore, how sensitive providers are to culture has a big impact on how people feel about their care, mainly in societies made up of various cultures (Williams et al., 1998).

**Geographical Variations in Patient Satisfaction**

Throughout numerous regions, patient satisfaction surveys find patterns as well as issues that are unique to the area. (Al-Abri & Al-Balushi, 2014) emphasized that the way a patient is communicated with and the amount of time they must wait affects their opinions. According to (Batbaatar et al., 2017), studying in Mongolia, satisfaction comes from both internal and contextual factors and it cannot be attached to one key measurement alone.

Among patients in the US, (Kennedy et al., 2014) found that satisfaction with hospital care is closely related to statistics such as the hospital's size, what outcomes are achieved, and how many resources it has. Based on HCAHPS results, Isaac and his team supported the importance of communication and responsiveness and encouraged using national standards to support improvement.

Several UK studies including those by (Carr-Hill, 1992; Valentine et al., 2003) underline that the environment and support for patients' feelings are vitally important in their experience. In their Hong Kong study, (Ng & Luk, 2019) found that medical skills and results were the most important determinants of how patients see their doctors.

Many works in literature globally agree that satisfaction is related to communication, infrastructure development, how people interact, and medical care.

## PATIENT SATISFACTION IN THE INDIAN HEALTHCARE CONTEXT

Looking at the way India's healthcare system divides its providers, we can better observe how patients feel about their care. They found that Odisha residents' satisfaction is highly correlated with better interpersonal care, but even if historically marginalized people feel dissatisfied, socio-cultural norms may lessen their frustration. In the same vein, according to (Persai et al., 2022) , patients in those Indian states indicated greater satisfaction with primary care than with tertiary centers, mainly because of positive staff behavior and clean environments.

(Koul et al., 2024; Saeed et al., 2024) found that how well patients are assessed depends greatly on communication and proper facilities. Nevertheless, people still struggle with learning how much in-hospital care might cost and with how long they might have to wait.

(Bandhu et al., 2023; Yadav et al., 2024) show that gender, literacy, caste, and income are major factors affecting patients' experiences with health care. Hygiene problems and poor organization in administration still prevent customers from being completely pleased in good hotels.

## BRADY AND CRONIN MODEL OF SERVICE QUALITY

The Brady and Cronin model introduces a new conceptual framework that views quality of service as a multi-level system. The Brady and Cronin model differs from SERVQUAL and SERVPERF by simultaneously integrating service quality into three main domains: interaction quality and physical environment quality and outcome quality (Brady et al., 2001).

The ***interaction Quality*** describes the way providers communicate and demonstrate skill and behavior toward customers. In healthcare settings, the quality of communication includes both information transmission and

emotional content and empathy depth. Patients exhibit better responses when healthcare providers combine technical knowledge with warm interactions as demonstrated by (Chandra et al., 2018; Ferreira et al., 2023).

The ***physical environment quality*** involves three essential components which are space configuration, design specifications, and social context factors. The study conducted by (Wang et al., 2016) discovered that spatial arrangement along with environmental appearance has a direct effect on patient trust levels and safety perceptions. (Medina-Mirapeix et al., 2013; Theodorakis et al., 2015) explain that the environment can either strengthen or weaken the emotional connection patients have to their care experience.

The ***outcome quality*** stands as the most precise metric for determining patient satisfaction levels within healthcare systems. According to researchers (Martínez & Martínez, 2010; Raposo et al., 2009) patients use emotional elements as well as visual signals to assess healthcare service quality while focusing less on clinical precision.

The evaluation of healthcare services by patients depends on three main aspects which include clinical performance alongside the perceived benefit of changes and the service delivery duration and emotional response (valence). Patients evaluate service quality mostly through emotional elements and visual signals while showing less attention to clinical precision (Raposo et al., 2009).
Brady and Cronin's model functions best when applied to large hospitals with various medical specialties because these institutions operate through multiple service levels. The model embraces both physical infrastructure elements and empathetic and trust-based components that build patient experiences.

## RESEARCH METHODOLOGY

### Research design

A quantitative study was carried out using a cross-sectional survey, designed to review patients' views on service quality and its effect on their satisfaction in multi-specialty hospitals. The technique worked well for finding connections at a given point across various healthcare organizations. Given the study's objective of measuring both subjective perceptions and measurable satisfaction levels, a structured and standardized survey instrument was deployed to capture relevant patient data in a consistent and statistically analyzable format. Statistical generalization was made possible without losing the consistency necessary for testing hypotheses in the chosen variables.

## POPULATION AND SAMPLE

This study was focused on inpatients from private hospitals of multiple specialties in Haryana and Punjab, India. There were a total of ten facilities chosen, five from each state, according to defined criteria. 460 inpatients were included in the study group at the time when the survey was conducted.

### Inclusion and Exclusion Criteria

Hospitals were considered for the study if they met all of these requirements: they were private, multi-specialty Hospitals with 200 beds or more, in Punjab or Haryana, and had an average bed occupancy rate of over 50%. These patients were part of the study if they had been hospitalized for at least three days, were at least 18 years old, and were able to do the survey with or without a little support.
Anyone who was being treated in critical care needed psychiatric help, or did not give proper consent was excluded from the study. With these exclusions, participants had fewer obstacles to thinking about their healthcare and used the research survey with little bias.

## SAMPLING TECHNIQUE

The method chosen for sampling allowed for an equal number of hospitals to be chosen in both states. Every hospital involved sent in nearly the same amount of data, so the results from each institution were comparable. To include all areas equally but manage the logistics, we chose this approach. This method

enabled the researchers to make sure a unique number of patients from each hospital were studied and that location, type of hospital, and complexity of services were taken into account. Although these results mainly apply to the people chosen, quota sampling is helpful for comparing individuals within each healthcare group and for fitting the results to the communities studied.

**DATA COLLECTION METHODS**

Data were obtained through the use of self-administered questionnaires given directly by individuals to each patient during their hospital stay. The method was picked to lessen problems with incorrect responses, deliver clarification in the moment, and enhance how complete responses would be. The data were gathered from July through December 2024 at the participating hospitals. All participants got a brief introduction and were given the survey in their preferred language: Hindi, Punjabi, or English. An orientation was given before the survey to check if participants understood what would be asked. There were 483 responses at the start, but after removing incomplete or wrong answers, 460 valid responses were used for further analysis.

**INSTRUMENTS AND TOOLS USED**

The authors took existing healthcare service quality frameworks as a basis and developed a questionnaire centered on Brady and Cronin's hierarchical model. There were three parts to the instrument: information about the patient, questions on service quality, and how satisfied they were with their care. Dimensions included in the service quality items (totaling 27) were interpersonal behavior, how fast employees respond, the surroundings, patients' waiting time, the quality of tangible services, and emotional experience. Items on the survey were evaluated using a Likert scale from 1 (Strongly Disagree) to 5 (Strongly Agree) and satisfaction items went from 1 (Not satisfied) to 5 (Extremely satisfied).

Because of in-depth reviews of relevant literature and advice from experts in hospital management, clinical work, and research on health services, the content of the instrument was improved for validity. English and dialects were used to present the questionnaire to the group, who spoke different languages, during the study. The final form was brief, understandable, and built to prevent inpatients from becoming tired during the survey.

**VARIABLES AND OPERATIONAL DEFINITIONS**

The study measured the satisfaction of patients by looking at how much individuals rated the quality of care, how well outcomes turned out, and how likely they were to suggest the hospital to others. The independent variables consisted of nine essential areas of perceived service quality: attitude, behavior, expertise, the environment, how the center looks, social behavior, waiting time, tangible items, and general satisfaction. All the constructs were taken from the literature and adjusted to apply to Indian healthcare situations.

Satisfaction with patients' care is seen as covering multiple aspects, including treatment, procedures, the team helping in offices, and the way costs compare to quality. Equations were checked through inferential analytics to study the relationship between every independent dimension and how satisfied people were.

**PRETESTING OF INSTRUMENTS**

Before starting formal data collection, 30 randomly chosen patients from two hospitals in Punjab and Haryana used the questionnaire in a preliminary study. The main reason was to test if the instrument proves clear, coherent, and reliable among real patients. The survey collected responses about how easy it was to follow the survey, whether the same questions were repeated, and if the responses fit the questions.

With the insights from the pilot, minor edits were applied to both the language used and the question order. Good internal consistency was confirmed by measuring Cronbach's Alpha which resulted in a score of 0.82. The pilot also improved the logistics around how surveys would be handled, making operations easier in the main data-gathering phase.

**DATA ANALYSIS AND RESULT**

The research model and hypotheses were evaluated by running PLS-SEM in SmartPLS 4.1.1.2 on the data analysis results. At first, AMOS-based CB-SEM was chosen, but it was not used since assumptions about multivariate normality and formative constructs were violated. We opted to use PLS-SEM because it can handle non-normal data, works with limited sample sizes, and deals with constructs that have to be measured

by either reflective or formative means. Two main ways were used for analysis: determining whether the measurement model was reliable and valid and assessing the structural model through path coefficients, $R^2$, $f^2$, and $Q^2$. The findings directed how constructs were interpreted about each other.

**Demographic profile**

The demographic profile of the study's respondents reveals a predominance of older adults, with 32.6% aged 51–65 and 22.4% above 65, indicating a mature sample. Individuals in the 18–35 age group were 29.3% and there were fewer than 1% under 18. The study population was slightly more female (54.3%) than male. Many people were educated, as 37.6% were university graduates, and 20.4% learned beyond that. The largest group (27%) had an average monthly income of ₹10,000, 21.5% of those surveyed earned between ₹50,000–₹1,00,000 and the rest earned less than ₹10,000 or more than ₹1,00,000. According to data on marital status, the majority, or 73.3%, were married and 17.4% were unmarried. An elderly, well-educated, moderately wealthy, and mostly married population forms a balanced setting for studying the research outcomes.

**Objective 1- Analysis of Service Quality Dimensions in Multi-Specialty Hospitals**

The primary aim of this objective is to investigate and interpret the key dimensions that shape patients' perceptions of service quality in multi-specialty hospitals. The Hierarchical Model of Service Quality by Brady and Cronin is used and this study divides service quality into three main areas: how interactions take place, how the surroundings are built and the results received. To confirm the presence of these constructs, the research used EFA. With a KMO of 0.699, sampling was adequate for the analysis. The majority of the variables showed a shared variance of over 0.6 which is very strong. Because most of the factor loadings were around 0.8 or higher, this confirmed that the items fit well with their design factors. Behaviour2 returned a loading of 0.963 and Expertise2 returned a loading of 0.927. According to mean scores, patients are highly satisfied with how staff relate to them (Attitude1), yet somewhat less so with the hospital's design and positioning (Design and Valence).

To test whether statistically significant differences exist in patients' perceptions across these dimensions, the **Friedman Test**—a non-parametric alternative to repeated measures ANOVA was employed. This was deemed appropriate due to the ordinal nature of Likert-scale data. Results indicated significant variability in perceptions, as evidenced by differing mean scores and rank positions.

**Table 1 Friedman Test**

| | Mean | Std Dev | Median | Skewness | Kurtosis | Rank |
|---|---|---|---|---|---|---|
| Attitude | 4.312 | 0.66 | 4 | -0.466 | -0.798 | 1 |
| Social Factors | 3.833 | 0.745 | 4 | -0.684 | 0.822 | 2 |
| Tangibles | 3.761 | 0.643 | 4 | -0.642 | 1.318 | 3 |
| Behaviour | 3.63 | 0.83 | 3.667 | -0.345 | -0.396 | 4 |
| Waiting Time | 3.332 | 0.806 | 3.333 | -0.167 | -0.163 | 5 |
| Ambient | 2.978 | 0.852 | 3 | 0.157 | -0.634 | 6 |
| Expertise | 2.847 | 0.955 | 2.667 | -0.062 | -0.641 | 7 |
| Valence | 2.253 | 0.806 | 2 | 0.853 | 1.249 | 8 |
| Design | 2.12 | 0.72 | 2 | 0.474 | 0.004 | 9 |

In total, Attitude was the best-rated dimension (M = 4.312; Rank = 1), coming after Social Factors and Tangibles. According to these findings, courtesy by staff, effective communication proper equipment, and cleanliness matter a lot. At the same time, Design (M = 2.12; Rank = 9), Valence (M = 2.253; Rank = 8), and

Expertise (M = 2.847; Rank = 7) received the lowest scores, suggesting concerns about the attractiveness of the app, user emotions and the technical skills needed.


**Figure 1 Mean Score of Service Quality Dimensions in Multi-Specialty Hospitals**

**Objective 2: Assessing Associations Among Service Quality Dimensions in Multispecialty Hospitals**

Partial Least Squares structural equation modelling (PLS-SEM) has been used to explore the interactions among the several dimensions of service quality in order fulfil the second objective of the study. In order to evaluate the validity, reliability, and interrelationships among the constructions identified in the prior factor analysis, measuring and interrelationships analysis were conducted using structural equation modeling. With all outer loadings higher than 0.70, the examination of the measuring model revealed that, save from one indication for attitude, all constructs had adequate indicator dependability. With strong combination reliability (CR > 0.90) and average variance extracted (AVE > 0.90), the constructs of attitude, behaviour, and valence all displayed sufficient dependability and validity with convergent validity.

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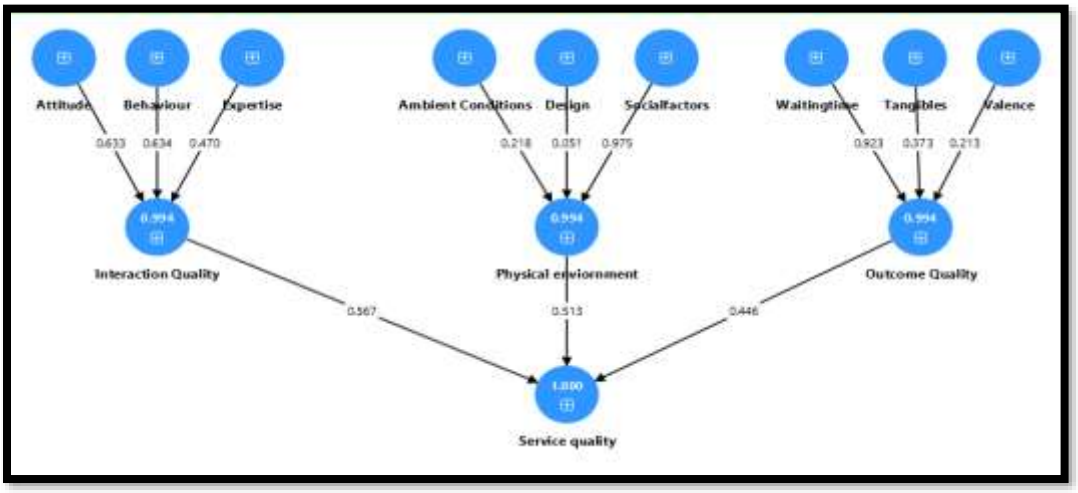


Figure 2 *Measurement Model*

Discriminant validity was established with certainty through the Fornell-Larcker criterion which proves that all constructs show clear empirical distinctions thus strengthening the measurement model.

**Table 2** Fornell-Larcker criterion

| | Ambientconditions | Attitude | Behaviour | Design | Expertise | Socialfactors | Tangibles | Valence | Waitingtime |
|---|---|---|---|---|---|---|---|---|---|
| Ambientconditions | 0.824 | | | | | | | | |
| Attitude | 0.027 | 0.931 | | | | | | | |
| Behaviour | 0.050 | 0.005 | 0.899 | | | | | | |
| Design | -0.002 | 0.021 | 0.014 | 0.864 | | | | | |
| Expertise | 0.008 | -0.018 | -0.035 | -0.010 | 0.883 | | | | |
| Socialfactors | -0.013 | 0.001 | 0.012 | 0.023 | 0.041 | 0.819 | | | |
| Tangibles | 0.051 | 0.008 | 0.014 | -0.016 | 0.029 | 0.067 | 0.854 | | |
| Valence | 0.062 | 0.046 | -0.004 | -0.029 | -0.009 | 0.040 | 0.062 | 0.918 | |
| Waitingtime | -0.062 | 0.047 | 0.060 | 0.023 | -0.031 | 0.353 | -0.081 | -0.004 | 0.844 |

The VIF values for all constructs fell below the strict 3.3 threshold which confirmed the absence of multicollinearity among the variables. Path estimations through the structural model maintained statistical integrity throughout the analysis.

**Table 3 VIF Values**

| | VIF |
|---|---|
| Ambientconditions -> Physical Enviornment | 1.000 |
| Attitude ->Interation Quality | 1.000 |
| Behaviour ->Interation Quality | 1.001 |
| Design -> Physical Enviornment | 1.001 |
| Expertise ->Interation Quality | 1.002 |
| Interation Quality -> Service Quality | 1.008 |
| Outcome Quality -> Service Quality | 1.167 |
| Physical Enviornment -> Service Quality | 1.162 |
| Socialfactors -> Physical Enviornment | 1.001 |
| Tangibles -> Outcome Quality | 1.010 |
| Valence -> Outcome Quality | 1.004 |
| Waitingtime -> Outcome Quality | 1.007 |

The path analysis method examined the relationship between Interaction Quality (IQ), Physical Environment (PE), and Outcome Quality (OQ). The analysis revealed a statistically significant two-way connection between Outcome Quality and Physical Environment ($\beta$ = 0.144, p = 0.002). The direct inter-construct relationship between Interaction Quality and the remaining two dimensions did not reveal statistically significant results (p > 0.3) which confirms the construct's independence from direct connections with others.

**Table 4 Path Coefficients to show association between variables**

| | **Path Coefficient** | **t-statistic** | **p-value** |
|---|---|---|---|
| **IQ→PE** | 0.036 | 0.764 | 0.445 |
| **PE→IQ** | 0.036 | 0.764 | 0.445 |
| **IQ→OQ** | 0.046 | 0.978 | 0.329 |
| **OQ→IQ** | 0.046 | 0.978 | 0.329 |
| **PE→OQ** | 0.144 | 3.120 | 0.002 |
| **OQ→PE** | 0.144 | 3.120 | 0.002 |

The research team defined Interaction Quality alongside Physical Environment and Outcome Quality as the building blocks that form Service Quality (SQ). SQ received substantial impact from all three variables through path coefficients that exceeded 0.4 in each case—IQ → SQ ($\beta$ = 0.567), PE → SQ ($\beta$ = 0.513), OQ → SQ ($\beta$ = 0.446)—demonstrating their fundamental function in evaluating service quality by patients.

The endogenous constructs achieved almost perfect $R^2$ values including SQ (0.998), IQ (0.994), PE (0.994), and OQ (0.996). The model's strong $R^2$ performance demands cautious interpretation because of potential model overfitting problems.

**Table 5 R Square and Adjusted R Square Table**

| | R-square | R-square adjusted |
|---|---|---|
| Interaction Quality | 0.994 | 0.994 |
| Outcome Quality | 0.996 | 0.996 |
| Physical Environment | 0.994 | 0.994 |
| Service Quality | 0.998 | 0.998 |

**Objective 3: Examining the Impact of Service Quality Dimensions on Patient Satisfaction in Multi-Specialty Hospitals**

Multi-specialty hospitals use various service quality factors to affect patient satisfaction, which this study aims to analyze. The research model used Partial Least Squares (PLS-SEM) and structural equation modeling (SEM) to evaluate the measurement and structural aspects of the theoretical framework.

The assessment of the measurement model established the constructs demonstrate acceptable reliability and validity. The majority of indicators displayed outer loadings that exceeded the 0.70 criterion, indicating satisfactory indicator reliability. The three constructs of Behaviour, Valence, and Attitude had composite reliability measures above 0.90 and strong convergent validity according to the average variance extracted (AVE) results of more than 0.80. The Patient Satisfaction construct received an acceptable AVE value of 0.519 yet its internal consistency was below the recommended level at 0.691 Cronbach's α, which indicates the need for measurement enhancement..

All constructs demonstrated satisfactory discriminant validity through the Fornell-Larcker criterion during testing. Construct square root of AVE values surpassed inter-construct correlations which demonstrated both statistical and conceptual independence.

Table 6 **Fornell-Larcker criterion**

| | **Ambientconditions** | **Attitude** | **Behaviour** | **Design** | **Expertise** | **Patient Satisfaction** | **Socialfactors** | **Tangibles** | **Valence** | **Waitingtime** |
|---|---|---|---|---|---|---|---|---|---|---|
| **Ambientconditions** | 0.840 | | | | | | | | | |
| **Attitude** | 0.027 | 0.931 | | | | | | | | |
| **Behaviour** | 0.043 | 0.004 | 0.899 | | | | | | | |
| **Design** | -0.008 | 0.010 | 0.009 | 0.887 | | | | | | |
| **Expertise** | 0.012 | -0.020 | -0.037 | -0.021 | 0.885 | | | | | |
| **Patient Satisfaction** | 0.279 | 0.176 | 0.305 | 0.296 | 0.275 | 0.721 | | | | |
| **Socialfactors** | -0.019 | -0.001 | 0.012 | 0.017 | 0.033 | 0.346 | 0.819 | | | |
| **Tangibles** | 0.049 | 0.011 | 0.018 | -0.008 | 0.027 | 0.238 | 0.056 | 0.857 | | |
| **Valence** | 0.068 | 0.046 | -0.006 | -0.041 | -0.009 | 0.270 | 0.040 | 0.065 | 0.918 | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Waitingtime** | -0.070 | 0.047 | 0.060 | -0.001 | -0.037 | 0.305 | 0.354 | -0.090 | -0.003 | 0.844 |

The evaluation of the structural model demonstrated that Service Quality significantly influences Patient Satisfaction through a strong coefficient of 0.781. Patient satisfaction directly derives from service perceptions according to the strong influence of Service Quality. Physical Environment (β = 0.548) and Interaction Quality (β = 0. 541) and Outcome Quality (β = 0. 446) significantly determine Service Quality levels. Patients' perspectives are shaped by Social Factors and Behaviour and Waiting Time according to the dimensions being analyzed.

The further evaluation of the effect size ($f^2$) enhanced comprehension of the interactions among variables. Outcome Quality ($f^2$ = 389.544) had the greatest significant influence from Waiting Time; Behaviour ($f^2$ = 155.854) came second and Tangibles ($f^2$ = 152.009 third. Given Service Quality yielded statistically significant results with a moderate effect size on Patient Satisfaction ($f^2$ = 1.565), this study demonstrates more elements could be relevant for satisfaction outcomes.

**Table 7 F Square values**

| | f-square |
|---|---|
| Ambientconditions -> Physical Environment | 44.858 |
| Attitude -> Interaction quality | 60.668 |
| Behaviour -> Interaction quality | 155.854 |
| Design -> Physical Environment | 31.373 |
| Expertise -> Interaction quality | 102.455 |
| Interaction quality -> Service Quality | 18.298 |
| Outcome quality -> Service Quality | 11.660 |
| Physical Environment -> Service Quality | 17.580 |
| Service Quality -> Patient Satisfaction | 1.565 |
| Socialfactors -> Physical Environment | 129.348 |
| Tangibles -> Outcome quality | 152.009 |
| Valence -> Outcome quality | 112.927 |
| Waitingtime -> Outcome quality | 389.544 |

The evaluation through the Standardized Root Mean Square Residual (SRMR) established an acceptable model fit at an SRMR value of 0.068 indicating strong alignment between the proposed model and actual data. The construct Service Quality achieves strong explanatory power with its $R^2$ value of 0.984 and Outcome Quality demonstrates maximum explanatory power with its $R^2$ value of 0.998 but Patient Satisfaction scores 0.610 for $R^2$.

## FINDINGS

The research benefited significantly from understanding the survey results by examining the characteristics of participants. The research group mainly included senior citizens above age 50 who demonstrated healthcare experience because they formed 54% of the sample. The sample included more females at 54.3% while educational achievements were high with 60% of participants holding advanced degrees. The sample spanned different income groups from less than ₹10,000 to more than ₹1,00,000, which helped create understanding of diverse socio-economic perspectives. The survey participants were mostly married at 73.3%, showing a high representation of individuals who base their healthcare choices on family circumstances.

The most significant service quality dimension according to respondents was the quality of interactions. Patients considered staff communication together with respectful and empathetic behavior as essential

elements in their healthcare experiences. The key factors in staff interactions that lead to high satisfaction included attentive service combined with professional conduct. Patients recognize their physician's skill yet they primarily evaluate it through communication methods rather than through direct examination therefore doctors should provide transparent medical process details.

The physical setting demonstrated a critical importance to patient experiences. Patients found confidence and comfort in clean spaces with well-maintained facilities and peaceful environments. Patients value hygiene and safety standards above all else because architectural attractiveness did not receive high importance in the survey results. Older and married participants experienced higher satisfaction when healthcare services demonstrated social inclusion and provided respectful treatment to everyone.

The time spent waiting for services emerged as the most important issue among patients. Patients believed that delayed registration diagnostics and consultations led to lower quality outcomes. Patients experienced better satisfaction levels when they received clear information about waiting times along with efficient service management. Patients considered emotional support as essential even though it remained hidden because they sought hospital stays that provided comfort and mental peace especially if they were older and had lower income.

The research results confirmed that Physical Environment, Interaction Quality, and Outcome Quality independently contributed to service quality which led to Patient Satisfaction scores ($\beta = 0.781$). Different demographic characteristics such as income level and age influenced patient satisfaction scores which requires personalized service delivery methods.

## CONCLUSION

Multispeciality hospitals that patients visited shared feedback about medical service quality which indicated that they had broadened their perception of quality to encompass staff relationships and emotional assistance that exceeded clinical outcomes and facility standards. Patients consistently expressed gratitude for respectful interactions as well as clear communication and inclusive care. The healthcare staff's combination of warmth with professionalism and ethical behavior stood out as fundamental factors for establishing trust and satisfaction with patients. Patients based their overall care assessment on emotional comfort and individual treatment which surpassed their evaluation of clinical results.

Patients perceived quality mainly through their interactions with staff as this factor surpassed the cleanliness and comfort of the physical environment. Patients showed more understanding toward basic facilities as long as staff members delivered personalized and emotionally supportive services. Advanced hospital environments showed no positive impact when staff members failed to provide adequate empathy and attentive care. Time management and delay communication together with waiting period efficiency significantly impacted how patients experienced their care results.

According to research findings healthcare service quality should address both emotional and social domains as well as technical capabilities. Hospitals which focus on compassionate care together with cultural awareness and transparent communication tend to build lasting patient trust and satisfaction. The research demonstrates a need for hospital management to adopt an approach which places human needs at the core.

## IMPLICATIONS AND RECOMMENDATIONS

This research generates fundamental conclusions to improve patient satisfaction in multi-specialty hospitals by providing specific operational directives for clinical staff, administrators, top management, and

accreditation bodies. The research shows that medical professionals need to approach patient care through emotional intelligence alongside clinical expertise. The human elements of attentive communication and empathy along with cultural sensitivity play a critical role in developing patient trust and satisfaction. Simplified communication techniques along with emotional resilience training and cultural humility development remain essential for achieving personalized care delivery.

Operational frameworks within healthcare facilities need to integrate emotional intelligence and inclusivity measures under the guidance of hospital administrators. Patients experience better outcomes during their medical treatment when healthcare facilities maintain respectful environments with fair treatment and prompt communication. The implementation of smart queue systems combined with multilingual services and feedback channels leads to better patient care and enhanced comfort along with improved transparency for hospitals. Emotional support services which include patient advocates and wellness staff should form part of standard patient care services.

The strategic implementation of patient experience within organizational culture depends on top-level management leadership. Organizations need to place specific focus on safety along with system-wide accountability and interpersonal quality beyond physical infrastructure development. Digital tools for real-time feedback together with predictive analytics and interdepartmental coordination must be implemented by leadership to maintain consistent and responsive care delivery.

Accreditation bodies need to adjust their assessment criteria by making patient experience factors that focus on emotional safety and empathy and communication clarity their primary evaluation standards. The medical sector should promote AI feedback tools among hospitals to enhance the support for diverse cultural groups and publish their responsive quality enhancements which will protect patient-centered standards. The combined outcomes of these implications require healthcare providers to establish a comprehensive empathy-based delivery approach that connects physical space and professional conduct with the factors patients value most: personalized attention and compassionate care.

## LIMITATION

Results from the study provide important information but the study's findings may not extend to different locations outside the current regional scope in Haryana and Punjab. The study excluded public healthcare institutions together with small healthcare facilities because it concentrated its research solely on private hospitals. The research included a sample predominantly composed of older participants who possessed higher educational qualifications thus generating demographic and literacy-based distortions. Structured surveys prove efficient in data collection yet they fail to reach the same level of insight that qualitative methods provide. The patient experience lacks an important perspective since caregivers were not involved in the study. The above-mentioned study limitations call for researchers to expand their scope through more comprehensive future studies that examine the complete range of healthcare delivery systems.

## SCOPE OF FUTURE STUDY

The significance of examining emotional and social factors, as well as communication strategies, in multispecialty hospital environments to comprehend patient satisfaction levels is underscored by the research. To investigate the development of patients' post-discharge perceptions, longitudinal methodologies should be employed in future research. Cross-cultural studies have significance in the healthcare industry since they help to produce knowledge supporting culturally sensitive treatment. Further investigation is necessary to address the emotional impacts of digital healthcare and the distinctive needs of terminally ill patients, the elderly, and minors. Deeper insights into the subject will be achieved by incorporating healthcare provider perspectives and qualitative interviews in conjunction with narrative research. Including healthcare provider

viewpoints together with doing qualitative interviews and storytelling helps one to get a deeper understanding. Research initiatives will enable the development of a healthcare system that operates inclusively across several healthcare delivery sites and displays more patient empathy.

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