

A Study on Patient Experience with Optimum Resource Utilization in Multi Speciality Hospital

DHAKSHIKA V , PG Student , Department of Management Studies (Hospital Administration) , Jerusalem College of Engineering, Chennai, Tamil Nadu,India.

Dr.AYSHA FATHIMA Y , Associate Professor, Department of Management Studies, Jerusalem College of Engineering, Chennai, Tamil Nadu,India.



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ABSTRACT

This study aims to analyse patient experience and the effectiveness of optimum resource utilization in a multi-specialty hospital, with specific reference to Dr. Rela Institute & Medical Centre. In today's healthcare environment, patient experience has emerged as a key indicator of service quality, significantly influencing patient satisfaction, loyalty, and overall healthcare outcomes. The study focuses on evaluating how efficiently hospital resources—human, technological, and infrastructural—are utilized and how these factors impact patient satisfaction.

A descriptive research design was adopted for the study. Primary data were collected from 120 patients through structured questionnaires using a convenience sampling method, while secondary data were gathered from hospital records and published sources. Various statistical tools such as percentage analysis, Chi-square test, ANOVA, and correlation analysis were employed to interpret the data and derive meaningful conclusions.

The findings reveal that the majority of patients have a positive perception of hospital services, particularly in areas such as doctor-patient communication, staff coordination, infrastructure, and cleanliness. Efficient administrative processes, including registration, billing, and patient flow management, also contributed significantly to patient satisfaction. Correlation analysis indicates that factors such as seating arrangements, billing efficiency, and availability of medical equipment have a strong positive relationship with overall patient experience.

However, the study also identifies certain areas for improvement, including waiting time management, consultation duration, and further enhancement of service efficiency. The study concludes that optimizing resource utilization and adopting a patient-centered approach can significantly improve healthcare service quality and patient satisfaction. The findings provide valuable insights for hospital management to enhance operational performance and deliver better patient care.

Keywords

Patient Experience, Resource Utilization, Patient Satisfaction, Healthcare Services, Service Quality, Hospital Management, Patient-Centered Care, Healthcare Efficiency, Doctor-Patient Communication

INTRODUCTION

Healthcare is a service-oriented sector in which patient experience is a key indicator of quality and effectiveness. Patient experience refers to the range of interactions individuals have with the healthcare system, including physical, psychological, social, and emotional aspects of care. It reflects how well healthcare services meet patient needs, expectations, and values throughout the continuum of care.

Measuring patient experience has become essential for improving healthcare delivery. Standardized tools such as the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) help assess patient perceptions regarding communication, responsiveness, and overall service quality. These measures enable healthcare organizations to identify gaps and implement improvements to ensure safe, timely, efficient, and patient-centered care.

In addition to patient experience, effective resource utilization plays a crucial role in healthcare systems. Proper management of human, technological, material, and financial resources ensures cost efficiency while maintaining high-quality care. Optimizing these resources helps reduce delays, improve access to services, and enhance patient satisfaction.

Therefore, this study focuses on analyzing patient experience and the effectiveness of resource utilization in healthcare, highlighting their impact on service quality and overall healthcare outcomes.

OBJECTIVES

Primary objectives

- To analyze patient experience with optimum resource utilization in a multi-specialty hospital.

Secondary Objectives

- To study patient perception of hospital resources.
- To assess the impact of human resources on patient satisfaction.
- To evaluate infrastructure and equipment utilization.
- To examine the effect of waiting time on satisfaction.
- To suggest improvements for better patient experience.

LITERATURE REVIEW

Research by Zehra et al. (2025) highlights a strong correlation between service quality dimensions—environmental, process, and interaction quality—and patient experience, which in turn increases the likelihood of patients returning for future treatment. Similarly, a study by Sodani & Sharma (2014) found that patients reported high satisfaction levels in interpersonal behaviour (86.3%) and communication (85.4%), while financial aspects received comparatively lower satisfaction (61.6%), indicating cost as a key concern.

Despite positive outcomes, several challenges persist in delivering quality patient experiences. Studies such as Uma (2025) point out that international patients often face communication delays and logistical difficulties, which negatively impact their overall satisfaction. These findings suggest that while hospitals perform well in core service areas, addressing communication barriers, financial concerns, and operational inefficiencies is essential for enhancing patient experience.

Habib, Abo-Hamad, and Arisha (2014) In recent years, healthcare quality assessment has expanded beyond clinical outcomes to include patient experience as a key indicator. Patient experience reflects all interactions and events across the continuum of care, emphasizing individualized treatment, patient involvement, and meeting patient expectations. It goes beyond patient satisfaction by focusing on patient-centered and family-centered care. Establishing a clear and consistent definition of patient experience is essential for improving healthcare quality, research, and overall clinical practice.

Kennedy et al. (2014) examined the differences between healthcare providers' and patients' understanding of health beliefs and values. The study found that patients prefer greater involvement and partnership in their care, while providers often underestimate these expectations. It emphasized that effective communication, trust, education, and cultural understanding are essential to improve patient-centered care and enhance the overall quality of healthcare services.

Doyle, Lennox, and Bell (2013) explored the relationship between patient experience, patient safety, and clinical effectiveness. The study found a strong positive association among these factors. Hospitals that provide better patient experiences tend to achieve improved clinical outcomes. It highlighted that patient experience should be considered a core component of healthcare quality. The research also emphasized integrating patient feedback into healthcare improvements. It concluded that enhancing patient experience contributes significantly to overall healthcare performance.

Andaleeb (2001) analysed service quality in hospitals and identified key factors influencing patient satisfaction. These factors included responsiveness, assurance, empathy, and communication. The study emphasized the importance of doctor-patient interaction in shaping perceptions. It found that better interpersonal relationships lead to higher satisfaction levels. The research suggested improving staff behavior and service delivery. It concluded that service quality plays a major role in determining patient experience.

RESEARCH METHODOLOGY

This study adopts a **descriptive research design** to analyse patient experience and the effectiveness of optimum resource utilization in a multi-specialty hospital, with specific reference to Dr. Rela Institute & Medical Centre. The design helps in systematically describing patient perceptions, satisfaction levels, and the efficiency of hospital services without manipulating any variables.

The study is based on both **primary and secondary data**. Primary data were collected from **120 patients** visiting the Outpatient Department (OPD) through structured questionnaires using a **convenience sampling technique**, where respondents were selected based on their availability and willingness to participate during February 2026. Secondary data were obtained from hospital records, previous studies, journals, and other published sources to support the theoretical background and provide additional insights into hospital operations and resource utilization practices.

The study focuses on **patient experience and satisfaction** as the dependent variable, while independent variables include doctor-patient communication, staff coordination, infrastructure, cleanliness, billing efficiency, seating arrangements, availability of medical equipment, and overall service efficiency.

Data analysis was carried out using various statistical tools such as **percentage analysis, Chi-square test, One Way ANOVA, and correlation analysis**. Percentage analysis was used to present data in a simplified form, the Chi-square test to identify associations between variables, ANOVA to examine differences among groups, and correlation analysis to determine the strength of relationships between factors affecting patient experience.

HYPOTHESIS FRAMED FOR THE STUDY

Visit Type vs Billing and Payment Time Efficiency:

Since the significance value ($p = 0.273$) is greater than 0.05, the null hypothesis (H_0) is accepted and the alternative hypothesis is rejected. There is no significant association between visit type and patients' perception of billing and payment time efficiency. Hence, visit type does not influence this factor.

Billing and Payment Time Efficiency (Response Variation):

Since the significance value ($p = 0.000$) is less than 0.05, the null hypothesis (H_0) is rejected and the alternative hypothesis is accepted. There is a significant difference in responses regarding billing and payment efficiency. This indicates that patients' opinions vary significantly across different response categories.

ANOVA – Group Differences:

Since the significance value ($p = 0.004$) is less than 0.05, the null hypothesis (H_0) is rejected and the alternative hypothesis is accepted. There is a statistically significant difference between the groups, indicating that the factor under study varies significantly across different groups.

Hospital Environment vs Overall Patient Experience:

Since the Pearson correlation value ($r = 0.506$) indicates a moderate positive relationship and the significance value ($p = 0.000$) is less than 0.05, the null hypothesis (H_0) is rejected and the alternative hypothesis is accepted. There is a significant positive relationship between hospital environment and overall patient experience. This implies that a better hospital environment enhances patient experience.

DATA ANALYSIS AND INTERPRETATION

Profile of the respondent

Percentage analysis was used to summarize the demographic distribution of the respondent Age , Gender , Visit type, Duration of Association , Residential Area

PARTICULARS	CLASSIFICATION	N	PERCENTAGE
Age	< 20 years	18	15.0
	21-31 years	31	25.8
	32-42 years	18	15.0
	43-53 years	28	23.3
	> 53 years	25	20.8
Gender	Male	51	42.5
	Female	69	57.5
Visit Type	First Visit	54	45.0
	Follow Up visit	66	55.0
Duration of Association	Less than 1 year	42	35.0
	1-3 years	35	29.2
	3-5 years	16	13.3
	Above 5 years	27	22.5
Residential Area	India (TN)	91	75.8
	India (Other state)	6	5.0
	Other country	23	19.2

The table represents the demographic profile of the respondents. The age distribution shows that the majority of respondents belong to the **21–31 years age group (25.8%)**, followed by **43–53 years (23.3%)**, **above 53 years (20.8%)**, while **less than 20 years and 32–42 years** each account for **15.0%** of the respondents.

In terms of gender, **female respondents (57.5%)** outnumber **male respondents (42.5%)**, indicating higher participation from female patients in the study.

Regarding visit type, the majority of respondents are **follow-up patients (55.0%)**, while **45.0%** are first-time visitors, suggesting good patient retention and continued utilization of hospital services.

With respect to duration of association, most respondents have been associated with the hospital for **less than 1 year (35.0%)**, followed by **1–3 years (29.2%)**, **above 5 years (22.5%)**, and **3–5 years (13.3%)**.

In terms of residential area, the majority of respondents belong to **Tamil Nadu (75.8%)**, followed by **patients from other countries (19.2%)**, and a small proportion from **other states in India (5.0%)**.

CHI SQUARE ANALYSIS OF VISIT TYPE AND BILLING AND PAYMENT WAS TIME EFFICIENT

Test Statistics		
	Visit type	Billing an payment was time efficient
Chi-Square	1.200 ^a	108.256 ^b
Df	1	4
Asymp. Sig.	.273	.000

The Chi-square test shows that the p-value for visit type is 0.273, which is greater than the 0.05 significance level. Therefore, the null hypothesis is accepted, indicating that there is no statistically significant association between visit type and patients’ perception of billing and payment time efficiency. Hence, visit type does not significantly influence this factor in the study.

For the variable “Billing and payment was time efficient,” the p-value is 0.000, which is less than the 0.05 significance level. Therefore, the null hypothesis is rejected, indicating that there is a statistically significant difference in responses. This suggests that patients’ opinions on billing and payment efficiency vary significantly across response categories.

ANOVA ANALYSIS OF DURATION OF ASSOCIATION AND MEDICAL EQUIPMENT’S WERE AVAILABLE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	15.861	3	5.287	4.748	.004
Within Groups	126.927	114	1.113		
Total	142.788	117			

The ANOVA results show that the significance value ($p = 0.004$) is less than the 0.05 level of significance. Therefore, the null hypothesis is rejected, indicating that there is a statistically significant difference between the groups. This suggests that the factor under study varies significantly across the different groups considered in this analysis.

CORRELATION

The Pearson Correlation analysis was used to determine the relationship between “Hospital environment was comfortable” and “Overall experience with the hospital services.

		Hospital environment was comfortable	Overall experience with the hospital services
Hospital environment was comfortable	Pearson Correlation	1	
Overall experience with the hospital services	Pearson Correlation	.506**	1
** . Correlation is significant at the 0.01 level (2-tailed).			

The Pearson Correlation analysis reveals that the correlation coefficient ($r = 0.506$) indicates a moderate positive relationship between the hospital environment and the overall experience with hospital services. The p-value (0.000) is less than the 0.01 significance level, which shows that the relationship is statistically significant.

Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted. This implies that a more comfortable hospital environment significantly enhances the overall patient experience with hospital services.

RESULT AND DISCUSSION

The study assessed patient experience and resource utilization among 120 patients in a multi-specialty hospital, revealing that the majority of respondents belong to the 21–31 years age group, with a higher proportion of female patients and most being follow-up visitors, indicating good patient retention. The findings show that a significant number of patients have been associated with the hospital for less than one year, and most respondents are from Tamil Nadu, along with a notable proportion of international patients.

The Chi-square analysis showed no significant association ($p = 0.273$) between visit type and billing and payment time efficiency, indicating that both first-time and follow-up patients share similar perceptions regarding billing processes. However, a significant difference in responses ($p = 0.000$) was observed regarding billing efficiency, suggesting that patient opinions vary across different categories.

The ANOVA results indicated a significant difference ($p = 0.004$) in perceptions related to the availability of medical equipment across different groups, highlighting variations in patient experiences based on certain factors. Furthermore, correlation analysis demonstrated a moderate positive relationship ($r = 0.506, p = 0.000$) between hospital environment and overall patient experience, suggesting that a comfortable and well-maintained environment significantly enhances patient satisfaction. These findings indicate that while hospital services such as communication, infrastructure, and administrative processes are generally perceived positively, there is still a need to improve areas like billing efficiency consistency and equipment accessibility. Overall, the study emphasizes that effective resource utilization combined with a patient-centered approach and improved service efficiency plays a crucial role in enhancing patient experience and satisfaction in healthcare settings.

CONCLUSION

The study concludes that patient experience is a crucial factor in determining the quality of healthcare services. It is influenced by multiple factors, including doctor–patient communication, service quality, staff behaviour, hospital infrastructure, and operational efficiency. The findings indicate that the hospital performs well in most areas, with high levels of patient satisfaction and trust. However, certain aspects such as communication, waiting time, and service efficiency require continuous improvement. Effective utilization of resources, including human resources, infrastructure, and technology, plays a vital role in enhancing patient experience and ensuring quality healthcare delivery. A patient-centered approach, combined with efficient resource management, can lead to improved healthcare outcomes and higher patient satisfaction. In conclusion, by focusing on continuous improvement, adopting innovative technologies, and prioritizing patient needs, hospitals can enhance service quality, build strong patient relationships, and achieve long-term success in the healthcare sector.

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