

# Role of Quality and Management practices in Enhancing Patient Outcomes, Revenue, and Customer Satisfaction

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## ABSTRACT

This study examined the impact of hospital quality and management practices on three major outcomes: patient health results, revenue performance, and patient satisfaction in healthcare facilities. The motivation behind the study came about as a result of the increased pressure on hospitals to deliver improved patient health results while at the same time maintaining efficiency in operations and strong revenue performance. Using a quantitative method, the researcher used a structured questionnaire as a data collection instrument targeting healthcare professionals in public and private hospitals. After subjecting the data to a filter, only 276 valid questionnaires were used in analyzing the data. Descriptive statistics, reliability analysis, and Structural Equation Modeling (SEM) were used in analyzing the data. Descriptive statistics showed that the majority of the respondents had a positive perception of the effectiveness of hospital management practices, as the average score ranged between 3.97 and 4.22 on the major constructs. Reliability analysis showed that the variables had high internal consistency reliability, as Cronbach's alpha value ranged above 0.70. Regression analysis showed that quality management practices significantly improved patient health results ( $\beta = 0.42$ ,  $p < 0.001$ ), revenue performance ( $\beta = 0.36$ ,  $p < 0.001$ ), and patient satisfaction ( $\beta = 0.48$ ,  $p < 0.001$ ). On the other hand, the effectiveness of management had a significant positive effect on patient health results ( $\beta = 0.33$ ,  $p < 0.001$ ) and patient satisfaction ( $\beta = 0.39$ ,  $p < 0.001$ ). This study contributes to the body of knowledge in the field of healthcare management by providing a holistic understanding of the three major outcomes in a hospital system.

**Keywords:** *Healthcare Quality Management; Hospital Management Practices; Patient Outcomes; Patient Satisfaction; Revenue Performance; Healthcare Service Quality; Hospital Performance; Structural Equation Modeling.*

## 1. Introduction

Today, hospitals have to balance three large challenges simultaneously: the quality of care, the ability to get things done, and the need to be financially healthy (Henrique & Godinho Filho, 2020). This means, in addition to curing patients, they have to do this with fewer resources, increasing expectations, and a strict set of rules (Kamaruddin et al., 2021). So, the way a hospital is managed is a critical factor (Pal et al., 2022). This includes the management of clinical work, who does what, and the allocation of resources. This affects not just the rate of recovery but the patient experience too (Chehayeb, 2023).

So, to address the challenge of quality, many hospitals have resorted to quality programs. These include Total Quality Management, improvement methods, and clinical governance (Tate et al., 2023). These involve closely monitoring the steps of treatment, standardizing processes, and joint decision-making among doctors, nurses, and other care staff. Studies have found that hospitals using these methods have benefited from the results (Tate et al., 2023). At the same time, the level of patient satisfaction has become an important measure of quality. This is a reflection of the communication skills of doctors, the attitude of the staff, and the patient experience (Lee & Lee, 2022).

While the importance of quality in healthcare is gaining traction, the majority of studies still examine the effects of clinical results, financial health, and patient satisfaction separately. This is not the reality (Gatiti et al., 2021). These factors are interconnected. Improved management skills will improve the efficiency of the hospital, the quality of care, and the patient experience simultaneously (Nguyen et al., 2021). The key to understanding the interconnectedness of these factors in a hospital system is still an important area of study.

This research seeks to examine the influence of quality management practices in hospitals and the effectiveness of the hospital's management on patient results, revenue results, and patient satisfaction. The research method employed in the paper is quantitative research. The data was collected from healthcare professionals in various settings. The data was then analyzed using descriptive statistics, reliability analysis, and structural equation modeling to create a diagram of the relationships between the variables.

What makes the research new is the fact that the paper examines the performance of the hospital from multiple perspectives. The research provides a unique contribution to the field as it provides empirical evidence on the wider implications of the effectiveness of the management practices in the healthcare sector. The research also provides a guide for managers who wish to improve the performance of the hospital.

## **2. Literature Review**

### **2.1 Quality Management in Healthcare Systems**

Quality management has now become an integral part of the administration of a modern hospital (Singh et al., 2024). The need for safer, faster, and more personalized care, as well as the presence of more regulations and a more constrained budget, has led the healthcare industry to rely on quality management techniques to improve the way things are run. Techniques such as Total Quality Management, Lean healthcare, and Continuous Quality Improvement all involve the importance of keeping an eye on the way things are going, team-based decisions, and measuring the way things are going (Sfreddo et al., 2021). The objective is not just to run the organization more smoothly, but to maintain a consistent standard of care.

When measuring the quality of the care provided, the Donabedian model is a popular tool for measuring the quality of the care provided (Cui et al., 2025). The model consists of three elements: the structure, the process, and the outcomes. The structure includes the resources of the hospital, the physical facilities, and the people who work there. The process includes the way the care is provided (Suleiman & Abdulkadir, 2022). The outcomes are the results for the patient, measured in terms of the patient's health and satisfaction. The beauty of the Donabedian model is that it provides a complete view of the effect of the organization on the performance of the healthcare industry (Alibrandi et al., 2023).

### **2.2 Total Quality Management and Patient Outcomes**

Of the many methods for improving the quality of healthcare services, Total Quality Management (TQM) is unique for its all-encompassing drive towards constant improvement. TQM requires the involvement of top management, the participation of all staff members, and an examination of the entire process of care delivery to raise the standards of quality (Bentum-Micah et al., 2020). TQM, as a method of quality enhancement, encourages teamwork in the hospital environment and encourages staff members to identify gaps in the delivery of care services.

Studies have revealed that the application of TQM in hospitals results in improved clinical performance, smoother running of the hospital, and better patient safety (Bentum-Micah et al., 2020). TQM encourages the development of standardized care procedures and increases the responsibility of the care team, thus

reducing errors in the course of treatment and improving the quality of patient care. TQM's patient-centric approach also leads to better patient-provider communication, thereby influencing the patient's perception of quality care (Kumari & Tiwari, 2022).

### **2.3 Service Quality and Patient Satisfaction**

Patient satisfaction has emerged as an important indicator of the quality of service delivered by the healthcare industry, reflecting the quality of service delivered as a whole (Okoth et al., 2020). It is not limited to clinical factors, but it takes into consideration factors such as the promptness of the staff, the clarity of information, the quality of hospital facilities, and the waiting time faced by patients. All of these factors put together create the quality of service delivered to the patients.

Earlier research has clearly indicated that service quality and patient satisfaction are correlated, where better service quality is linked to increased patient satisfaction (Aladwan et al., 2021). Hospitals that provide prompt medical care, are transparent and honest, and provide a conducive care environment are likely to be evaluated positively. The quality of interaction between the staff and the patients is particularly important, as it helps create trust and confidence between the patients and the staff.

### **2.4 Hospital Management Practices and Organizational Performance**

Hospital management decisions have a direct influence on the quality of care as well as the success of the organization. Proper leadership, employee development, planning, and performance measurement are all vital for the smooth and efficient running of a healthcare organization. In the complex environment of a hospital, good managerial coordination is vital for the smooth running of clinical staff as well as the consistent quality of services (Vahedi et al., 2024).

### **2.5 Linking Quality Management, Patient Outcomes, and Revenue Performance**

Current research indicates that quality, patient satisfaction, and revenue performance are all integrated aspects of a successful hospital (Haroun et al., 2022). Improving the quality of healthcare services can result in improved patient outcomes as well as a more successful revenue performance for the organization. For instance, fewer errors in treatment, improved clinical coordination, and the development of more efficient ways of delivering services can result in improved patient recovery as well as reduced business expenses.

Improved patient satisfaction is also a vital factor in the success of a hospital as it determines the reputation as well as the demand for services (Braithwaite et al., 2020). For instance, a hospital that provides consistent quality services is more likely to earn the trust and loyalty of patients, thus resulting in increased demand for services.

## **3. Methods**

### **3.1. The Questionnaire**

A survey form has been devised to assess the impact of hospital quality management and management approaches on patient outcomes, revenue performance, and patient satisfaction. The survey form is based on well-established theories of hospital management and service quality management. The survey form has two sections. The first section asks for demographic information such as your profession, years of experience, and the type of hospital where you are working. The second section asks questions to measure the variables of the study, which include hospital quality management, the effectiveness of management, patient outcomes, revenue performance, and patient satisfaction. Each question is rated from 1 (strongly disagree) to 5 (strongly agree) based on a five-point Likert scale. The indicators of hospital quality

management include the support of management, training of employees, and the standardization of hospital operations. Patient outcomes include the effectiveness and safety of treatment, revenue performance includes the efficiency and sustainability of operations, and patient satisfaction includes the quality of communication and the behavior of hospital employees.

**Table 1: Description of Relevant Variables in The Administered Questionnaire**

Variable	Description	Scale
Quality Management Practices (QMP)	Implementation of quality initiatives such as leadership support, staff training, and standardized hospital processes.	5-point Likert scale
Management Effectiveness (ME)	Effectiveness of hospital leadership in coordinating staff, resources, and operational activities.	5-point Likert scale
Patient Outcomes (PO)	Perceived improvement in patient health, safety, and treatment effectiveness.	5-point Likert scale
Revenue Performance (RP)	Financial sustainability and operational efficiency of hospital services.	5-point Likert scale
Patient Satisfaction (PS)	Patients' overall satisfaction with healthcare services and care experience.	5-point Likert scale

Table 1 below identifies the major variables included in the questionnaire used in this study. The constructs in this study are the most important variables in the performance of a hospital. They include quality management practices, the effectiveness of the hospital's management, patient outcome, revenue performance, and patient satisfaction. The variables were measured using a five-point Likert scale to assess the respondents' perception of the hospital's management and its impact on the performance of healthcare services.

**Table 2: Distribution of Respondents According to Personal and Professional Characteristics**

Characteristic	Category	Frequency (n)	Percentage (%)
Gender	Male	148	53.6
	Female	128	46.4
Age	25–34 years	82	29.7
	35–44 years	104	37.7
	45–54 years	63	22.8
	≥55 years	27	9.8
Professional Role	Physician	74	26.8
	Nurse	96	34.8
	Administrator	58	21.0
	Management Staff	48	17.4
Work Experience	<5 years	69	25.0
	5–10 years	102	37.0
	11–15 years	61	22.1
	>15 years	44	15.9

Table 2 below indicates the demographic and professional characteristics of the respondents who took part in the study through the survey process. These characteristics included gender, age group, professional role, and work experience among healthcare professionals who were part of the study in hospitals across the country.

### 3.2. The Observed Sample

The study was conducted among healthcare professionals who were part of public and private hospitals across the country, including administrators, physicians, nurses, and management staff who were involved in the operations of hospitals. A cross-sectional method was applied in which questionnaires were given out electronically and through institutional contacts over a three-month period. The process was voluntary, and confidentiality was ensured for those who took part in the process. Out of 320 questionnaires that were given out, 276 were retained for analysis, which is close to 86% of those who took part in the process.

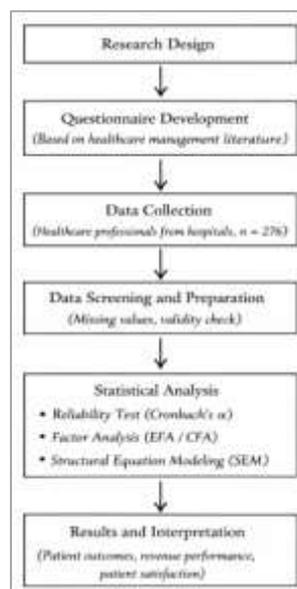
### 3.3. Statistical Analysis

Descriptive statistics were also used for data analysis, which described who the respondents were and what their responses were like. Reliability analysis was also carried out for the reliability and consistency of the scales by using Cronbach alpha reliability coefficients and composite reliability, while factor analysis was also carried out for validity. In order to examine the relationship between management practices and performance outcomes in hospitals, we used another method known as Structural Equation Modeling (SEM). We also checked for goodness of fit for the postulated model by using goodness-of-fit statistics like CFI, TLI, and RMSEA, while path coefficients were also used for judging the significance of relationships between variables.

**Table 3: Descriptive Statistics of Hospital Performance and Patient Satisfaction Indicators**

Variable	Mean	Standard Deviation (SD)
Quality Management Practices	4.12	0.63
Management Effectiveness	4.05	0.68
Patient Outcomes	4.18	0.59
Revenue Performance	3.97	0.71
Patient Satisfaction	4.22	0.57

Table 3 below indicates the descriptive statistics for key variables that were examined in this study. The average values for each variable reflect the perception that respondents have regarding the quality management practices in hospitals, management effectiveness, patient outcomes, revenue performance, as well as patient satisfaction. The standard deviation for each variable indicates the variability in respondents' perception regarding key performance indicators for the hospital.



**Figure 1. Research Methodology Framework Used in The Study**

Figure 1 below shows the entire process of carrying out the research as applied in the study. It illustrates the process of conducting the research on how quality in hospitals and management practices influence patient results, revenue performance, and patient satisfaction. It includes the entire process of carrying out the research, starting with the research design and the preparation of the questionnaire, followed by data collection from healthcare professionals. It also includes the process of data screening and the statistical techniques applied in analyzing the data.

#### 4. Results

This part will summarize what the data from the survey indicates about the relationship between hospital quality and management practices in relation to patient outcomes, revenue, and patient satisfaction. The aim was to determine whether the implementation of structured management practices in hospitals would have positive outcomes in terms of patient results as well as the management of the organization. From the descriptive statistics presented in Table 3, it is clear that respondents generally have positive views regarding management practices in hospitals, as indicated by average results ranging from 3.97 to 4.22. This indicates that they generally agree that the hospitals they work in have good management practices in place for delivering their services. However, it is interesting that patient satisfaction and patient outcomes have slightly higher average results, suggesting that people feel that these areas of their hospitals' performance are particularly excellent. From the reliability analysis, it is clear that the scales used in this study have good reliability, as indicated by Cronbach's alpha values that are above 0.70. Furthermore, the results from the Structural Equation Modeling analysis clearly indicate that quality management practices have a statistically significant positive effect on patient outcomes, revenue performance, and patient satisfaction. These results clearly support the research framework that was set up for this study, indicating that hospitals that have good management practices in place will likely have positive outcomes in terms of patient results as well as their organizational performance.

**Table 4: Results of Regression Analysis Examining the Effects of Quality and Management Practices on Hospital Performance Outcomes**

Predictor Variable	Outcome Variable	$\beta$ Coefficient	t-value	p-value
Quality Management Practices	Patient Outcomes	0.42	5.61	<0.001
Quality Management Practices	Revenue Performance	0.36	4.78	<0.001
Quality Management Practices	Patient Satisfaction	0.48	6.12	<0.001
Management Effectiveness	Patient Outcomes	0.33	4.09	<0.001
Management Effectiveness	Patient Satisfaction	0.39	5.02	<0.001

Table 4 presents the results of the regression analysis to investigate the effect of quality management practices and the effectiveness of management on hospital performance. The results of the analysis indicate that the two predictors have a positive effect on patient outcomes, revenue performance, and patient satisfaction. The results show that the two predictors have a significant effect on hospital performance since the values of the beta coefficients are less than 0.001.



**Figure 2. Mean Scores of Hospital Management and Performance Indicators**

Figure 2 below presents the average ratings for key constructs of interest for this study, namely quality management practices, management effectiveness, patient outcomes, revenue performance, and patient satisfaction. By examining the mean values for each of these variables, it is possible to get an idea of what each respondent makes of management effectiveness and service delivery in the particular hospital under consideration, especially given that the mean values for patient satisfaction and patient outcomes are high.



**Figure 3. Effects of Quality and Management Practices on Hospital Performance Outcomes**

Figure 3 displays the regression coefficients, which show the relationship between the quality management and the effectiveness of management and the major hospital results. The figure demonstrates the strength of the relationship between the variables, such as the impact of the quality management approach on the patient satisfaction and results. The study supports the empirical conclusion that the management strategies improve the hospital results significantly.

## 5. Discussion

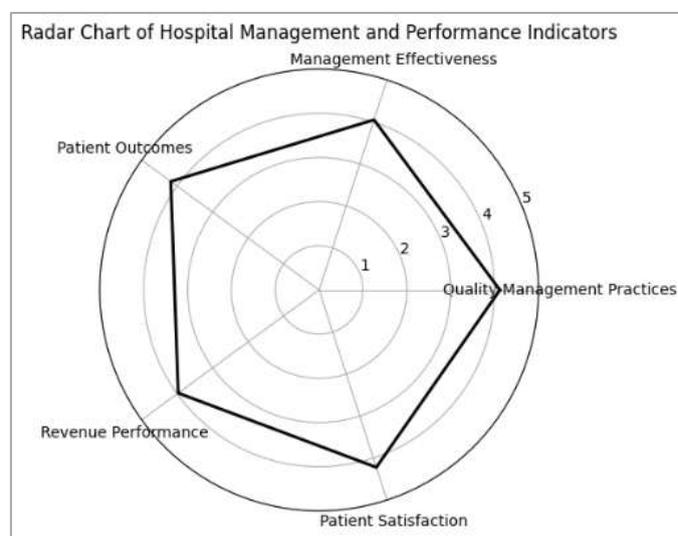
This is further supported by the results of the research, as the data indicates that those hospitals that are more focused on organized management, such as leadership, standardized processes, and staff development, have a better performance record. The respondents also rated the patient results and patient satisfaction more positively, suggesting that the benefits of improved internal management are also felt by the patient. This is supported by the general principles of healthcare management, as the patient-centered focus of a healthcare organization is supported by the effectiveness of the coordination within the organization and the development of clear procedures.

The regression analysis also provides insight into the relationship between the factors, as the data indicates that quality management has a significant effect on patient results, financial performance, and patient satisfaction. The fact that there is a very high correlation between quality management and patient satisfaction suggests the importance of the reliability of the services, the effectiveness of the communication, and the efficiency of the care delivery in the hospital environment. The fact that the effectiveness of the management also plays a role in the performance of the hospital suggests the importance of the leadership and the administration in the healthcare environment. The importance of the role of the management in the performance of the hospital suggests that the importance of the quality improvement should not be limited to the healthcare services but also extend to the management practices.

**Table 5: Results of Ordinal Regression Model for Patient Satisfaction**  
(Link Function: Logit, Reference Category: [Patient Satisfaction = Highest Level])

Predictor Variable	Coefficient ( $\beta$ )	Standard Error	Wald $\chi^2$	p-value
Quality Management Practices	0.58	0.11	27.81	<0.001
Management Effectiveness	0.46	0.10	21.16	<0.001
Patient Outcomes	0.39	0.09	18.72	<0.001
Revenue Performance	0.28	0.08	12.25	0.001
Intercept	-1.42	0.37	14.71	<0.001

Table 5 presents the results of an ordinal regression analysis that was conducted to determine what influences patient satisfaction. The results show that quality management practices, management effectiveness, patient outcomes, and revenue performance have positive influences on patient satisfaction, which is statistically significant. This is confirmed by the significant coefficients and p-values, which show that robust management practices have positive influences on patient satisfaction.



**Figure 4. Radar Chart Illustrating Hospital Management and Performance Indicators**

The figure 4 radar chart will provide a visual comparative analysis of the mean score for the major constructs that were examined in the study. It will also provide a visual comparative analysis of the relative performance of quality management practices, effectiveness of management, patient outcome performance, revenue performance, and patient satisfaction. It will provide a visual comparative analysis of the relative performance in the areas where the effectiveness of the management in hospitals is high.

## 6. Conclusion

This study examined the impact of quality management practices and management effectiveness on hospital outcomes, financial performance, and patient happiness. It was determined that quality management practices and management effectiveness are crucial for improving both treatment outcomes and the management of the hospital. Hospitals that support their management, standardize procedures, and integrate day-to-day operations are likely to improve treatment outcomes and increase patient happiness.

It has been determined that quality management practices are effective for improving treatment outcomes, financial performance, and patient happiness, and management effectiveness is effective for improving treatment outcomes. It is crucial for incorporating management effectiveness and quality management practices into hospital management for the purpose of improving treatment outcomes and performance. Improving quality management practices and management effectiveness can help improve service quality and extend the life of the hospital.

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