

ENHANCING PATIENT LOYALTY THROUGH OPERATIONAL STRATEGIES AND SERVICE QUALITY: THE IMPACT OF PATIENT SATISFACTION ON COMPANY REVENUE

Renaldus Iwan Sumarta^{*)}, Maun Jamaludin^{**1)}, Iman Sudirman^{*)}

^{*)}Management Science Doctoral Study Program, Universitas Pasundan
Jl. Tamansari No.6-8 Kota Bandung, West Java, Indonesia

^{**)}Business Administration Study Program, Universitas Pasundan
Jl. Tamansari No.6-8 Kota Bandung, West Java, Indonesia

Article history:

Received
26 August 2024

Revised
2 October 2024

Accepted
21 October 2024

Available online
22 January 2025

This is an open access article under the CC BY license (<https://creativecommons.org/licenses/by/4.0/>)



Abstract:

Background: Hospitals, as public companies, must prioritize not only healthcare quality but also revenue and sustainability. Patient satisfaction serves as a key indicator of service quality, while effective operational strategies and high service quality are essential for fostering patient loyalty.

Purpose: This study analyzes how operational strategies and service quality influence patient loyalty and, consequently, company revenue.

Design/Methodology/Approach: A quantitative research methodology was employed, utilizing simple random sampling to collect data from 187 patients in private hospitals in Bandung. Data were gathered through questionnaires on a 7-point Likert scale, complemented by interviews. SmartPLS 4.0 software was used for data analysis.

Finding/Result: The findings reveal that operational strategies significantly enhance service quality and patient loyalty. Improved operational strategies lead to better service quality, which in turn boosts consumer loyalty. Additionally, service quality plays a crucial mediating role in the relationship between operational strategies and patient loyalty.

Conclusion: Satisfied patients are more likely to return, contributing to increased revenue and sustainability for hospitals.

Original/Value: This research innovatively links operational strategies to patient loyalty in private hospitals, demonstrating how service quality mediates this relationship and drives revenue growth and business sustainability.

Keywords: operational strategies, service quality, patient loyalty, patient satisfaction, company revenue

How to Cite:

Sumarta R. I., Jamaludin M., & Sudirman I. (2025). Enhancing Patient Loyalty Through Operational Strategies and Service Quality: The Impact of Patient Satisfaction on Company Revenue. *Jurnal Aplikasi Bisnis Dan Manajemen (JABM)*, 11(1), 203. <https://doi.org/10.17358/jabm.11.1.203>

¹ Corresponding author:
Email: maunjamaludin.unpas@gmail.com

INTRODUCTION

Hospitals, as public companies, bear a responsibility that extends beyond merely providing satisfactory healthcare services to patients. They must also consider revenue and business sustainability aspects as entities operating in a competitive market (Inayati, 2018). As public entities, hospitals owe shareholders a duty to generate reasonable profits. Therefore, optimizing revenue sources such as patient receipts, health insurance, additional services, and profitable investments is necessary. Healthy revenue plays a crucial role in maintaining the hospital's operational sustainability. This includes paying employee salaries, acquiring medical equipment and infrastructure maintenance, and allocating funds for research and development (Idarti & Hasanah, 2018). Sufficient revenue enables these investments to be made without compromising service quality (Sitio & Ali, 2019; Aladwan et al. 2021; Abu-Rumman et al. 2021).

Patient satisfaction levels are often regarded as one of the key indicators of healthcare service quality. Patients satisfied with the care and services they receive have a positive experience during their hospital stay (Elizar et al. 2020). This encompasses aspects such as the availability of medical staff, clarity of information, service speed, and patient safety. Patient satisfaction can directly influence hospital revenue (Tan et al. 2019). Patients satisfied with care and services are more likely to choose the hospital for further treatment or recommend it to others. This can increase the number of patients received by the hospital, thereby boosting revenue through service fees, insurance payments, and additional services. According to Nguyen et al. (2021), to achieve high levels of patient satisfaction, hospitals must have competent and well-trained medical personnel. Additionally, an efficient and effective hospital management system is also crucial.

Appropriate operational strategies are essential in enhancing patient loyalty in hospitals. By designing and implementing effective strategies, hospitals can create a positive experience for patients, build long-term relationships, and ensure that patients return for future care (Hong & Lee, 2018; Calero et al. 2018). Good operational strategies ensure that healthcare provided to patients is top-notch. This includes aspects such as minimal wait times, effective communication between medical staff and patients, cleanliness and comfort of facilities, and the use of cutting-edge medical

technology (Themba et al. 2019). Quality services create a positive impression on patients. Through the right operational strategies, hospitals can personalize the patient experience according to individual needs and preferences. This may involve providing tailored care, friendly and courteous communication, and quickly and efficiently meeting patients' additional needs. Personalized services help build deeper relationships between hospitals and patients, thereby increasing patient satisfaction and loyalty (Gogoi, 2020).

Additionally, service quality plays a crucial role in enhancing patient loyalty. Consistent service quality helps build trust between patients and hospitals. Patients feel comfortable and confident in receiving their care at hospitals that provide good service and attend to their needs well (Aljumah et al. 2020; Pratama & Hartini, 2020). This established trust forms the foundation of a strong and loyal relationship between patients and hospitals. Almomani et al. (2020) explain that quality service provides added value to patients beyond medical aspects. This can include education about health conditions, emotional and psychological support, easy access to health information and resources, and attention to individual patient needs. To achieve high levels of patient loyalty for the sustainability of the company, it is necessary to focus on both operational strategies and good service quality. Therefore, the aim of this research is to analyze the extent to which operational strategies and service quality can influence patient loyalty levels, thus impacting company revenue.

METHODS

This research used a quantitative approach with the simple random sampling method to collect data. Simple random sampling is a random sampling technique in which every member of the population has an equal chance of being selected as part of the sample. This sampling technique increases the likelihood that the sample will represent the broader population, making findings more generalizable. In relation to the unknown population size of patients in private hospitals in Bandung, the sample selection formula from Lemeshow is used, as follows:

$$n = (Z^2 p (1 - p)) / E^2$$

Where: n (required sample size); Z (Z -value (from the standard normal distribution for your desired confidence

level, e.g., 1.96 for 95% confidence)); p (estimated proportion of the population (if unknown, often set at 0.5 to maximize the sample size)); E (margin of error (the desired precision, expressed as a decimal)).

Using the formula, the sample size can be determined as follows:

$$\begin{aligned} n &= (Z^2 p (1 - p)) / E^2 \\ &= (1.96^2 * 0.5 * (1 - 0.5)) / (0.05)^2 \\ &= 200 \end{aligned}$$

The respondents selected as samples in this study included patients from private hospitals in Bandung, totaling 200 patients between July to September 2023. However, 13 questionnaires were excluded due to no responses from the patients or incomplete answers; thus, 187 questionnaires were collected for further analysis.

In collecting data, this study used a questionnaire structured using a 7-point Likert scale. The Likert scale was utilized to measure respondents' attitudes or perceptions regarding various statements related to service quality in hospitals. The questionnaire included questions about service reliability, responsiveness of medical staff, patient trust in the service, staff empathy ability, quality of physical and non-physical facilities, and level of patient satisfaction. More specifically, Operational Strategies (OS) refer to important practices that help improve Service Quality (SQ) and Patient Loyalty (PL) in hospitals. The indicators for operational strategies include Patient Flow Efficiency (OS1), Resource Utilization (OS2), Cost Management (OS3), Quality of Care (OS4), and Staff Engagement (OS5). These strategies aim to make hospital operations more effective. For service quality, key indicators like Tangibility (SQ1), Reliability (SQ2), Responsiveness (SQ3), Assurance (SQ4), and Empathy (SQ5) show how patients feel about the services they receive. Finally, patient loyalty is measured through Retention Rate (PL1), Patient Satisfaction (PL2), Referral Rates (PL3), Engagement Levels (PL4), and Customer Feedback (PL5). These factors help determine how likely patients are to continue using the hospital's services and recommend it to others. Together, these indicators provide a clear picture of how operational strategies affect service quality and patient loyalty. In addition to the questionnaire, the study also involved interviews with some respondents to gain a deeper understanding of the patient experience in hospitals. These interviews

can provide richer and more detailed insights into the factors influencing patients' perceptions of service quality and loyalty to the hospital. The variables used in this study were operational strategies, service quality, and patient loyalty. This research utilized SmartPLS 4.0 software for data analysis.

Patient satisfaction is not only an indicator of service quality in hospitals but it also has broad impacts on various operational and financial aspects of hospitals. When patients feel satisfied with the care and services they receive, it not only creates a positive experience but also has significant consequences for the hospital itself (Syafarudin 2021; Naini et al. 2022). Financially, patient satisfaction can increase hospital revenue, net income, and asset return rates (Aladwan et al. 2021). This is because satisfied patients are more likely to return for further treatment and recommend the hospital to others, thereby increasing the number of patients received by the hospital and the income generated. Additionally, hospitals with a positive image resulting from patient satisfaction will be more trusted by insurance companies and other stakeholders (Tan et al. 2019; Sakti et al. 2019).

According to Themba et al. (2019), to improve patient satisfaction, hospitals need to provide satisfactory services, which include aspects such as staff friendliness, availability of clear information, minimal wait times, and care for individual patient needs. Furthermore, hospitals need to continually improve the efficiency and effectiveness of their services by optimizing workflows, minimizing unnecessary bureaucracy, and leveraging technology to enhance service processes (Idarti & Hasanah, 2018; Bungatang & Reynel, 2021). Moreover, maintaining patient safety, security, and comfort is also crucial. This includes implementing strict safety protocols, monitoring infection risks, and creating a clean and comfortable environment for patients (Nyan et al. 2020).

There are five important dimensions used to measure patient satisfaction in hospitals. Firstly, service reliability or reliability refers to how consistent and reliable the services provided to patients are. Next, responsiveness highlights how responsive the hospital is in providing quick and responsive services to patient needs. Assurance relates to the trust and sense of security patients have in the medical and non-medical services provided by the hospital (Raising, 2019; Anjayati, 2021). Furthermore, empathy indicates how well

medical and non-medical staff can empathize with and understand the needs and concerns of patients. Finally, tangibles include the physical and non-physical aspects of hospital facilities, such as cleanliness, comfort, and the quality of medical equipment (Calero et al. 2018; Elizar et al. 2020).

Operational strategies in hospitals play a vital role in improving service quality and patient loyalty. Inayati (2018) highlights the importance of operational strategies in enhancing service quality and patient loyalty through the implementation of technology, effective resource management, workflow optimization, and responsiveness to patient feedback. Resource management serves as the main foundation in this strategy (Sesrianty et al. 2019; Gogoi, 2020). Effective management of human, financial, and physical resources enable hospitals to deliver consistent and quality services. Recruiting and training competent staff, allocating budgets appropriately, and maintaining facilities are key components of effective resource management (Hong & Lee, 2018).

Technology and information systems also play crucial roles in operational strategies (Saraswati et al. 2023). The implementation of advanced technology such as integrated patient data management systems, electronic medical records, and telemedicine services helps improve operational efficiency and information accessibility. This positively impacts care coordination, reduces errors, and makes patients feel more connected to the hospital (Abu-Rumman et al. 2021). Workflow optimization is another important aspect of operational strategy. Improving registration processes, scheduling, and medical procedures can reduce wait times, enhance communication among medical teams, and address bottlenecks in workflows, thus increasing efficiency and patient satisfaction (Aljumah et al. 2020). Additionally, inclusive operational strategies involve collecting feedback from patients and using that data for continuous improvement. By effectively responding to feedback, hospitals can improve their service quality and build patient loyalty (Nyan et al. 2020).

Service quality in a hospital has a significant impact on patient loyalty. Factors such as responsiveness to patient needs, service reliability, patient safety, empathy towards patients, and the quality of physical and non-physical facilities play crucial roles in creating a positive experience for patients. The research findings of Myo et al. (2019) indicate a positive relationship

between service quality and patient loyalty. High patient satisfaction, good communication between patients and medical staff, and a good reputation have been proven to be key factors in building and maintaining patient loyalty in hospitals. High-quality service helps build trust and strong relationships between patients and hospitals (Yaqub et al. 2019; Sakti, 2021). High-quality service directly increases the level of patient satisfaction. Patients who are satisfied with their experience are more likely to return for further treatment and recommend the hospital to others. Furthermore, good service quality also encourages active patient engagement in the patient care process. The reputation and image of a hospital are also influenced by service quality (Pratama & Hartini, 2020). Hospitals known for high-quality service have a good reputation, which can increase public trust and confidence and strengthen patient loyalty. Thus, the hypotheses proposed in this study are as follows:

- Hypothesis 1: Operational strategies have a significant effect on service quality
- Hypothesis 2: Operational strategies have a significant effect on patient loyalty
- Hypothesis 3: Service quality has a significant effect on patient loyalty
- Hypothesis 4: Service quality mediates the effect of operational strategies on patient loyalty

The framework in Figure 1, illustrates the relationships among operational strategies, service quality, and patient loyalty. It posits that effective operational strategies directly enhance service quality, leading to improved patient experiences. In turn, higher service quality fosters greater patient loyalty, as satisfied patients are more likely to return and recommend the hospital. Additionally, service quality serves as a mediator in this relationship, indicating that the influence of operational strategies on patient loyalty occurs through their effect on service quality. Overall, the framework highlights the importance of operational strategies in creating a positive cycle that promotes patient loyalty through enhanced service quality.

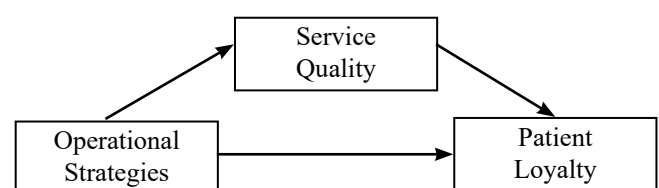


Figure 1. Research framework

RESULTS

Data analysis is the process of processing data to find information that can be used as the basis for decision-making. In data analysis using data analysis software such as SmartPLS, which is used in Structural Equation Modeling (SEM), there are several important steps carried out to test the model and draw valid conclusions (Pering, 2020). The first step in data analysis with SmartPLS is to test the standard loading factor. The standard loading factor test evaluates how well each indicator reflects the represented construct. The higher the loading factor value, the stronger the relationship between the indicator and its construct. After evaluating the loading factor, the next step is to test the reliability and validity of the constructs. Reliability measures how consistent the indicators are in measuring the construct, while validity measures how accurate the indicators are in representing the construct. Next, the R Square (R^2) test is a measure of how well the model can explain the variation in the endogenous variables, while the F Square (f^2) measures the effect

size of the independent variables on the endogenous variables. This helps assess how well the constructed model explains the observed phenomenon. Hypothesis testing is used to determine the significance of the path coefficients between the variables proposed in the model. The results of this test help determine the level of significance of the relationships between variables. Finally, there is a model fit test conducted to assess how well the constructed model fits the observed data (Ghozali & Latan, 2015).

In the loading factor test, the loading factor value is the coefficient that measures how well each indicator represents the construct. A loading factor value of more than 0.7 for an indicator indicates that the indicator has a strong relationship with the construct and is therefore considered adequate in measuring the construct. This means that the higher the loading factor value, the greater the contribution of the indicator to measuring the construct. The analysis test of this research is shown in Figure 2, and the results of the loading factor test are presented in Table 1.

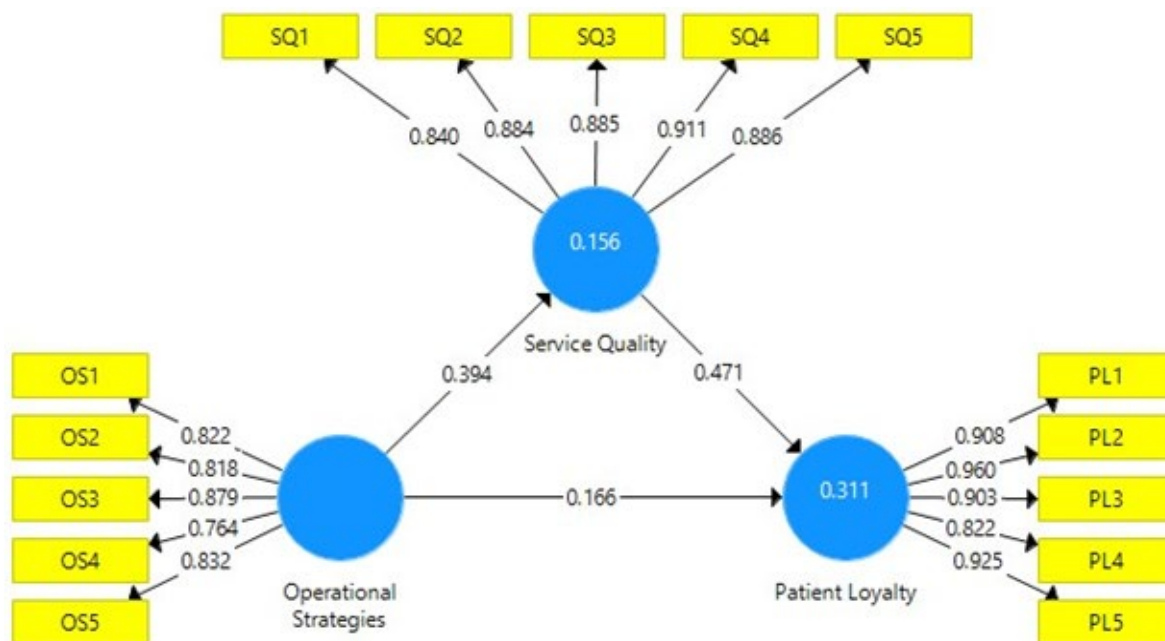


Figure 2. Outer loading

Table 1. Standard Loading Factor

Construct		Operational Strategies	Service Quality	Patient Loyalty
Patient Flow Efficiency	OS1	0.822	0.280	0.262
Resource Utilization	OS2	0.818	0.386	0.289
Cost Management	OS3	0.879	0.388	0.401
Quality of Care	OS4	0.764	0.191	0.241
Staff Engagement	OS5	0.832	0.320	0.206
Tangibility	SQ1	0.250	0.840	0.466
Reliability	SQ2	0.299	0.884	0.513
Responsiveness	SQ3	0.373	0.885	0.474
Assurance	SQ4	0.414	0.911	0.450
Empathy	SQ5	0.389	0.886	0.464
Retention Rate	PL1	0.295	0.441	0.908
Patient Satisfaction	PL2	0.334	0.537	0.960
Referral Rates	PL3	0.286	0.492	0.903
Engagement Levels	PL4	0.327	0.457	0.822
Customer Feedback	PL5	0.346	0.492	0.925

The results of the standard loading factor test indicate that all indicators from each variable have high loading factor values, approaching or exceeding the threshold of 0.7 used as a criterion for measurement quality. In the variable of operational strategies, the loading factor values range from 0.764 to 0.879. This suggests that all indicators, namely OS1 to OS5, have a strong relationship with the operational strategies construct. Similarly, in the service quality variable, all indicators, SQ1 to SQ5, have high loading factor values ranging from 0.840 to 0.911, indicating that all indicators effectively reflect the measured service quality in the model. Furthermore, the test results for the patient loyalty variable show that all indicators, PL1 to PL5, have very high loading factor values ranging from 0.822 to 0.960. This indicates that all indicators effectively measure the patient loyalty construct in the analysis model. Thus, the results of the standard loading factor test indicate that all indicators in the model have strong associations with the measured constructs, indicating good measurement quality and high model validity. This provides confidence that the model used is adequate for measuring the relationships between variables.

Next, reliability and construct validity tests are conducted to measure how consistent and accurate the indicators are in measuring the constructs. Construct reliability is measured using two methods, Cronbach's Alpha and Composite Reliability, while validity is measured using Average Variance Extracted (AVE). Construct reliability measures how consistent the

indicators are in measuring the same construct. Cronbach's Alpha or Composite Reliability values greater than 0.7 are considered indications of good consistency in construct measurement. High values indicate that the indicators consistently measure the construct. Construct validity measures how accurately the indicators represent the measured construct. The method used is Average Variance Extracted (AVE), which assesses how much variance is explained by the indicators in the construct compared to the overall variance. AVE values greater than 0.6 are considered indications of good validity in construct measurement.

The results of reliability and validity tests in Table 2 indicate the level of consistency and accuracy of the indicators in measuring the constructs in the analysis model. For the variable of operational strategies, the obtained Cronbach's Alpha and Composite Reliability values are 0.883 and 0.913, respectively. These values exceed the threshold of 0.7, indicating good consistency in measuring the operational strategies construct. The Average Variance Extracted (AVE) value obtained is 0.679, indicating high consistency and good validity in measuring the operational strategies construct. Testing on the service quality variable shows both Cronbach's Alpha and Composite Reliability values obtained are 0.928 and 0.946 (> 0.7), respectively, indicating high consistency in measuring the service quality construct. Additionally, the AVE value obtained is 0.777, exceeding the threshold of 0.6, indicating good validity in measuring the service quality construct. Meanwhile, for the patient loyalty variable, the obtained Cronbach's

Alpha, Composite Reliability, and AVE values are 0.944, 0.957, and 0.818, respectively. All of these values exceed the established standards and indicate high consistency in measuring the patient loyalty construct and good validity. Thus, the results of reliability and validity tests show that the indicators in the model have a high level of consistency in measuring the constructs they represent, and these constructs validly represent the observed phenomena in the study.

Discriminant validity testing is an important step in ensuring that the constructs measured in an analysis model are truly distinct from each other. In the context of the Fornell-Larcker Criterion, discriminant validity is evaluated by comparing the square root of the average variance extracted (AVE) by a construct with the correlation between that construct and other latent variables. Discriminant validity is considered good if the square root of the AVE of a construct is higher than its correlation with other latent variables.

Table 3 in the Fornell-Larcker Criterion testing shows that the correlation values between constructs (main diagonal) are higher than the correlations between constructs and other constructs (outer diagonal). This indicates good discriminant validity, where each construct significantly differs from one another in the analysis model. This confirms that each construct uniquely represents different dimensions in the observed data. These results indicate that the measured constructs can be trusted as distinct representations

of the observed phenomena, validating accurate and consistent interpretation of the analysis results.

The coefficient of determination or R Square (R^2) in multiple linear regression analysis is an important measure to understand how much variability in the dependent variable can be explained by the independent variables used in the model. The R^2 value ranges from 0 to 1, where a higher R^2 value indicates the model's ability to explain the variation in the dependent variable. Thus, the higher the R^2 value, the greater the contribution of the independent variables to the variation in the dependent variable.

The R Square (R^2) value for the service quality construct is 0.156, indicating that approximately 15.6% of the variability in service quality can be explained by the independent variables (Table 4). The adjusted R Square value, which considers the model's complexity, is 0.151. Meanwhile, the R Square value for the patient loyalty construct is 0.311, meaning that around 31.1% of the variability in patient loyalty can be explained by the independent variables in the model. The adjusted R Square value is 0.303 after considering the model's complexity. These results show the extent of the contribution of the independent variables to the variability in each dependent variable. Although the contributions are quite significant, there is still some variability in the dependent variables that cannot be explained by the independent variables used in the model.

Table 2. Reliability and Validity

Construct	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Operational Strategies	0.883	0.913	0.679
Service Quality	0.928	0.946	0.777
Patient Loyalty	0.944	0.957	0.818

Table 3. Discriminant Validity (Fornell-Larcker Criterion)

Construct	Operational Strategies	Service Quality	Patient Loyalty
Operational Strategies	0.824		
Service Quality	0.394	0.881	
Patient Loyalty	0.352	0.537	0.905

Table 4. R Square (R^2)

Construct	R Square	R Square Adjusted
Service Quality	0.156	0.151
Patient Loyalty	0.311	0.303

The F Square (f^2) test is conducted to evaluate the combined influence of all independent variables on the dependent variable. The F Square value is used as a measure of effect size, indicating how much the combined contribution of the independent variables affects the variation in the dependent variable. In interpreting the F Square value, a value greater than 0.02 indicates a small effect size, a value greater than 0.15 indicates a moderate effect size, and a value greater than 0.35 indicates a large effect size (Livingston et al. 2009).

Table 5 shows the results of the F Square (f^2) test, where for the service quality construct, the F Square value associated with the variable of operational strategies is 0.184, while for the patient loyalty variable, it is 0.034. This indicates that the variable of operational strategies has a greater influence on service quality than on patient loyalty. Meanwhile, the F Square value associated with the patient loyalty construct with the service quality variable is 0.272. This means that the service quality variable has a greater influence on patient loyalty compared to the influence of the variable of operational strategies.

Table 5. F Square (f^2)

Construct	Service Quality	Patient Loyalty
Operational Strategies	0.184	0.034
Service Quality		0.272

Furthermore, hypothesis testing is used to determine the level of significance of the relationships between variables. In this study, there are 4 hypotheses tested: the influence of operational strategies on service quality, the influence of operational strategies on patient loyalty, the influence of service quality on patient loyalty, and the mediating effect of service quality in the relationship between operational strategies and patient loyalty. A hypothesis is accepted if the obtained T Statistics value > 1.96 and P value < 0.05 . With this threshold, it means that the relationship between variables is significant, and the hypothesis is accepted. The results of hypothesis testing can be seen in Figure 3.

Table 6 shows that the first hypothesis (H1), which tests the influence of operational strategies on service quality, yields a T Statistics value of 5.958 and a P value of 0.000. Since the T Statistics value exceeds 1.96 and the P value is less than 0.05, it can be

interpreted that the relationship between operational strategies and service quality is significant, and thus the first hypothesis is accepted. Additionally, the results of the second hypothesis (H2), which tests the influence of operational strategies on patient loyalty, show a T Statistics value of 2.400 (> 1.96) and a P value of 0.017 (< 0.05). Therefore, the relationship between operational strategies and patient loyalty is significant, and thus the second hypothesis is accepted. These findings support the assertions of Hong & Lee (2018), Bungatang & Reynel (2021), and Nguyen et al. (2021) that operational strategies significantly affect service quality. Furthermore, operational strategies can also significantly influence patient loyalty.

The results of the third hypothesis (H3), which tests the influence of service quality on patient loyalty, show a T Statistics value of 6.606 and a P value of 0.000. Since the T Statistics value exceeds 1.96 and the P value is less than 0.05, there is a significant relationship between service quality and patient loyalty. Therefore, the third hypothesis is accepted. These results align with Gogoi (2020) and Almomani et al. (2020), stating that better service quality leads to increased consumer loyalty. The final hypothesis (H4), which tests the mediating effect of service quality in the relationship between operational strategies and patient loyalty, yields a T Statistics value of 4.562 (> 1.96) and a P value of 0.000 (< 0.05). With these results, the fourth hypothesis is accepted, indicating significant evidence that service quality mediates the relationship between operational strategies and patient loyalty. With the increase in patient loyalty through operational strategies and good service quality, patients will feel satisfied and more likely to return, thus impacting the revenue and sustainability of the company.

Managerial Implications

The significant influence of operational strategies on service quality and patient loyalty highlights the need for managers to focus on refining these strategies. Investing in operational improvements, such as enhancing staff training, optimizing workflows, and leveraging technology, can directly boost service quality. This, in turn, fosters greater patient loyalty, as evidenced by the strong correlation found in the study. Managers should ensure that operational strategies are continually evaluated and adjusted to align with evolving patient needs and industry standards.

Table 6. Hypothesis Test

Hypothesis	Std. Deviation	T Statistics	P Values
H1 Operational Strategies → Service Quality	0.066	5.958	0.000
H2 Operational Strategies → Patient Loyalty	0.069	2.400	0.017
H3 Service Quality → Patient Loyalty	0.071	6.606	0.000
H4 Operational Strategies → Service Quality → Patient Loyalty	0.041	4.562	0.000

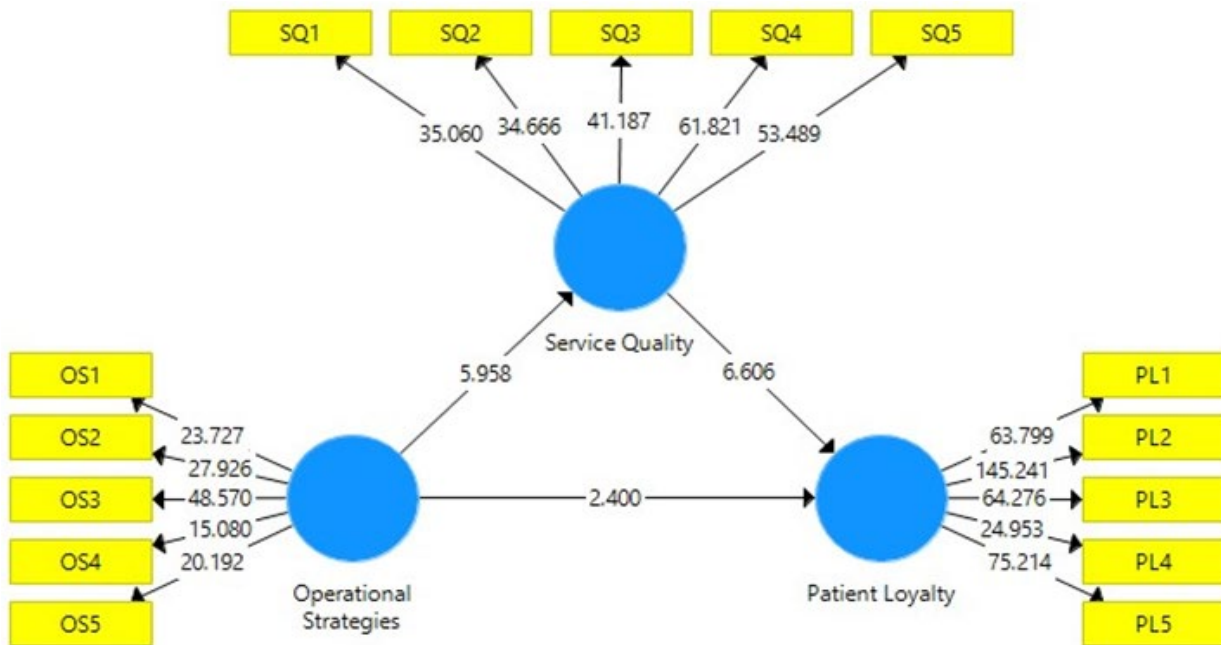


Figure 3. Hypothesis Testing Results

Additionally, since service quality plays a crucial role in mediating the relationship between operational strategies and patient loyalty, it is essential to implement comprehensive quality improvement programs. Integrating these programs with loyalty initiatives will likely enhance patient satisfaction and retention. Managers should also regularly review and adapt their strategies based on performance metrics and patient feedback to ensure sustained success and competitiveness in the market.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The main findings of this study affirm that the relationship between operational strategies and service quality significantly impacts the level of patient loyalty. This indicates that efforts to improve operational efficiency and enhance service quality can

directly influence patient loyalty. Furthermore, the research also confirms that the relationship between operational strategies and patient loyalty is significant. This suggests that effective operational strategies, such as good resource management and service process optimization, can directly affect patient loyalty. The findings indicate that the better the service provided, the higher the level of consumer loyalty.

Practically, the study underscores the importance of improving operational strategies to enhance service quality, which in turn boosts patient loyalty. Hospitals should focus on optimizing resource management and service processes to provide high-quality care, thereby increasing patient satisfaction and retention. The research highlights that effective operational strategies directly influence patient loyalty and that service quality serves as a crucial mediator in this relationship. Theoretically, these findings confirm that operational strategies significantly affect service quality and patient loyalty, supporting existing literature on the

importance of operational efficiency in healthcare. The study contributes to the understanding of how service quality mediates this relationship, providing a refined perspective on how operational improvements translate into increased patient loyalty.

Recommendations

The findings emphasize the importance of focusing on service quality as one way to maintain and enhance patient loyalty. Additionally, the research results show that service quality mediates the relationship between operational strategies and patient loyalty. This means that effective operational strategies can indirectly increase patient loyalty through improved service quality. This highlights the importance of paying attention to service quality as a key factor in achieving high patient loyalty. The implications of these findings for hospitals as public companies are significant. With the increasing level of patient loyalty through effective operational strategies and good service quality, hospitals can expect an increase in patient return visits. This will not only boost hospital revenue but also strengthen the hospital's image and reputation.

FUNDING STATEMENT: This research did not receive any specific grant from public, commercial, or not-for-profit funding agencies.

CONFLICTS OF INTEREST: The author declares no conflict of interest.

REFERENCES

- Abu-Rumman, A., Mhasnah, A., & Al-Zyout, T. (2021). Direct and indirect effects of TQM on the patients' satisfaction and loyalty in the Jordanian health care sector. *Management Science Letters*, 11(2), 493-502.
- Aladwan, M. A., Salleh, H. S., Anuar, M. M., ALhwadi, H., & Almomani, I. (2021). The relationship among service quality, patient satisfaction and patient loyalty: Case study in Jordan Mafraq hospital. *Linguistics and Culture Review*, 5(S3), 27-40.
- Aljumah, A., Nuseir, M. T., & Islam, A. (2020). Impacts of service quality, satisfaction and trust on the loyalty of foreign patients in Malaysian medical tourism. *International Journal of Innovation, Creativity and Change*, 11(1), 451-467.
- Almomani, R., Al-Ghdabi, R., & Banyhamdan, K. (2020). Patients' satisfaction of health service quality in public hospitals: A PubHosQual analysis. *Management Science Letters*, 10(8), 1803-1812.
- Anjayati, S. (2021). Review Artikel: Analisis kualitas pelayanan terhadap kepuasan pasien di Puskesmas menggunakan metode Servqual. *Nursing Care and Health Technology Journal*, 1(1), 31-38.
- Bungatang, B., & Reynel, R. (2021). The effect of service quality elements on customer satisfaction. *Golden Ratio of Marketing and Applied Psychology of Business*, 1(2), 107-118.
- Calero, R., Lorenzo, C., & Gallarza, M. G. (2018). Patient segmentation based on patient loyalty. *Journal of Health Management*, 20(4), 508-534.
- Elizar, C., Indrawati, R., & Syah, T. Y. R. (2020). Service quality, customer satisfaction, customer trust, and customer loyalty in service of pediatric polyclinic over private H hospital of East Jakarta, Indonesia. *Journal of Multidisciplinary Academic*, 4(2), 105-111.
- Ghozali, I., & Latan, H. (2015). Partial least squares concepts, techniques and applications using the SmartPLS 3.0 program for empirical research. Semarang: Badan Penerbit UNDIP.
- Gogoi, D. B. J. (2020). Service quality measures: How it impacts customer satisfaction and loyalty. *International Journal of Management*, 11(3), 354-365.
- Hong, K. S., & Lee, D. (2018). Impact of operational innovations on customer loyalty in the healthcare sector. *Service Business*, 12(1), 575-600.
- Idarti, I., & Hasanah, A. (2018). Analisis pengaruh struktur kepemilikan, kebijakan hutang dan likuiditas terhadap financial distress. *Journal of Applied Managerial Accounting*, 2(2), 160-178.
- Inayati, N. (2018). Implementasi pengukuran kinerja pada organisasi sektor publik. *Jurnal Ekonomi Dan Bisnis Kontemporer*, 4(1), 21-32.
- Livingston, E. H., Elliot, A., Hynan, L., & Cao, J. (2009). Effect size estimation: A necessary component of statistical analysis. *Archives of Surgery*, 144(8), 706-712.
- Myo, Y. N., Khalifa, G. S., & Aye, T. T. (2019). The impact of service quality on customer loyalty of Myanmar hospitality industry: The mediating role of customer satisfaction. *International Journal of Management dan Human Science*, 3(3), 1-11.

- Naini, N. F., Santoso, S., Andriani, T. S., & Claudia, U. G. (2022). The effect of product quality, service quality, customer satisfaction on customer loyalty. *Journal of Consumer Sciences*, 7(1), 34-50.
- Nguyen, N. X., Tran, K., & Nguyen, T. A. (2021). Impact of service quality on in-patients' satisfaction, perceived value, and customer loyalty: A mixed-methods study from a developing country. *Patient Preference and Adherence*, 23(2), 2523-2538.
- Nyan, L. M., Rockson, S. B., & Addo, P. K. (2020). The mediation effect of customer satisfaction on the relationship between service quality and customer loyalty. *Journal of Management and Strategy*, 11(3), 13-20.
- Pering, I. M. (2020). Kajian analisis jalur dengan Structural Equation Modeling (SEM) SmartPLS 3.0. *Jurnal Ilmiah Satyagraha*, 3(2), 28-48.
- Pratama, V., & Hartini, S. (2020). The effect of perception of health care service quality on patient satisfaction and loyalty in mother and child hospital. *Journal of Theory and Applied Management*, 13(3).
- Raising, R. (2019). Analisis tingkat kepuasan pasien terhadap pelayanan kefarmasian di rumah sakit dan apotek. *Jurnal Mandala Pharmacon Indonesia*, 5(1), 31-37.
- Sakti, R. F., Widiyanto, P., & Susanto, P. C. (2021). Service quality and customer satisfaction increasing loyalty of passengers Ro-Ro Ferry Bakauheni. *Journal of Economics, Management, Entrepreneurship, and Business*, 1(1), 79-92.
- Saraswati, E., Kristianto, G. B., & Yuliarti, L. (2023). Sistem informasi akuntansi menjadi elemen penting dalam peningkatan kinerja UMKM. *Jurnal Abdimas Ekonomi dan Bisnis*, 3(1), 1-8.
- Sesrianty, V., Machmud, R., & Yeni, F. (2019). Analisa kepuasan pasien terhadap mutu pelayanan keperawatan. *Jurnal Kesehatan Perintis*, 6(2), 116-126.
- Sitio, T., & Ali, H. (2019). Patient satisfaction model and patient loyalty: Analysis of service quality and facility (Case study at Rawamangun Special Surgery Hospital). *Scholars Bulletin*, 5(10), 551-559.
- Syafarudin, A. (2021). The effect of product quality on customer satisfaction implications on customer loyalty in the era COVID-19. *Ilomata International Journal of Tax and Accounting*, 2(1), 71-83.
- Tan, C. N. L., Ojo, A. O., Cheah, J. H., & Ramayah, T. (2019). Measuring the influence of service quality on patient satisfaction in Malaysia. *Quality Management Journal*, 26(3), 129-143.
- Themba, O. S., Razak, N., & Sjahruddin, H. (2019). Increasing customers' loyalty: The contribution of marketing strategy, service quality and customer satisfaction. *Archives of Business Research*, 7(2), 31-42.
- Yaqub, R. M., Halim, F., & Shehzad, A. (2019). Effect of service quality, price fairness, justice with service recovery and relational bonds on customer loyalty: Mediating role of customer satisfaction. *Pakistan Journal of Commerce and Social Sciences*, 13(1), 62-94.