



THE INFLUENCE OF HEALTHCARE SERVICE QUALITY AND HOSPITAL REPUTATION ON PATIENT LOYALTY: THE MEDIATING ROLE OF PATIENT EXPERIENCE

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ABSTRACT

This study explores how healthcare service quality, hospital reputation and brand, and patient experience influence patient loyalty, emphasizing the mediating role of patient experience. Control variables such as gender, education level, and type of health insurance were also considered. The research was conducted at a hospital in East Java and involved 165 inpatients aged 18 years and over. It was analyzed using Partial Least Squares Structural Equation Modelling (PLS-SEM). The findings reveal that patient experience is the strongest determinant of loyalty, followed by healthcare service quality, hospital reputation, and brand. Among the control variables, education level was found to have a significant impact on patient loyalty, whereas gender and type of health insurance had a limited effect. The analysis shows that hospital reputation and brand play a crucial role in shaping patient experience, which mediates the impact of both on patient loyalty. The model demonstrates strong predictive relevance, explaining variance in both patient experience and loyalty, indicating its robustness in capturing these dynamics. However, the cross-sectional design of the study and its focus on a single hospital limit the generalizability of the results and the ability to capture temporal changes. Future research

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should be conducted in multiple healthcare settings and adopt longitudinal designs to explore additional factors, such as socioeconomic and cultural influences. This research contributes to the field by emphasizing the importance of hospital reputation and brand, healthcare service quality, and educational level in fostering patient loyalty, and by providing actionable insights for improving patient-centered care through strategic enhancements to experience and service delivery.

JEL classification: I18, M31, M38, C12

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1. INTRODUCTION

Hospitals today face increasing competition among medical service providers, influenced by factors such as open market policies, population growth, and increasing health awareness. The growing demand for healthcare services emphasizes the vital role of these services in shaping public satisfaction and trust in hospitals. Providing high-quality services and ensuring patient safety are crucial in reducing negative perceptions and strengthening patient loyalty. Hospitals are therefore advised to adopt a customer-oriented approach, focusing on building a positive reputation and brand within the community, and on improving service quality to ensure patient satisfaction and loyalty.

Patient loyalty depends on a hospital's ability to build strong relationships with patients, by understanding and meeting their needs effectively. Extensive research emphasizes the role of service quality in health care, especially in hospital settings. Several studies (Lubis et al., 2021; Dewi et al., 2021; Sadiartha and Apsari, 2018) highlight the significant influence of service quality on loyalty. In addition, the importance of patient-preferred service attributes, such as room availability, in increasing patient satisfaction and readiness to pay higher costs has also been shown to be significant (Suess and Mody, 2017). Holistic improvement in service quality across all hospital functions is identified as key to achieving excellence in service.

Advocating the use of a customer experience framework that focuses on service quality, the effort aims to encourage positive interactions between staff and patients (Hunter-Jones et al., 2020). The role of services, especially during the pandemic, in improving

health outcomes through quality medical services, financial savings, and convenience, is also emphasized (Alshiha, 2021). In the hospital context, image plays a key role in shaping loyalty dynamics. A positive hospital reputation and brand can increase loyalty, while a negative hospital reputation and brand can inhibit re-engagement with hospital services or products. Therefore, image management is the main focus to increase loyalty (Purnama et al., 2024).

Research shows that a hospital's reputation and brand are influenced by various factors, including the quality of its services, the adequacy of its equipment and the competency of its medical personnel. Improving a hospital's reputation and brand is important because it has a direct and indirect influence on loyalty (Jiang and Zhang, 2016).

Against this backdrop, the present study aims to explore the role of patient experience as a mediator between healthcare service quality and patient loyalty at Sakinah Islamic Hospital. The focus is on issues relating to poor service, particularly with regard to the registration process, waiting times, and waiting room comfort. The study seeks to provide a deeper understanding of how healthcare service quality, hospital reputation, brand and patient experience influence patient loyalty. Despite limitations in the existing literature, this study seeks to address this gap by providing valuable insights for healthcare practitioners and researchers.

2. LITERATURE REVIEW

This study defines healthcare service quality as the extent to which hospital services meet or exceed patient expectations. This encompasses medical expertise, friendliness, accessibility and supporting facilities. Drawing on (Laver et al., 2020) framework of structure, process and outcome, healthcare service quality was measured using (Parasuraman and Grewal, 2000) SERVQUAL model, which includes five dimensions: tangibles, reliability, responsiveness, assurance and empathy. The study examines the relationships between healthcare service quality, hospital reputation and branding, patient experience, and patient loyalty, emphasizing the mediating role of patient experience in the context of Indonesian hospitals.

Healthcare service quality incorporates several critical factors designed to meet customer expectations and needs. Eight key indicators detail these aspects: medical staff competency, facility availability, treatment effectiveness, cleanliness, emergency

response, communication with patients, waiting time, and patient safety. These indicators are based on frameworks from Darzi et al. (2023).

Hospital reputation and brand refer to consumer perceptions influencing decisions to use hospital services, measured through eight main indicators: public trust, media reporting, patient testimonials, recognition and awards, branding and marketing, community involvement, innovation and technology, and information transparency. These dimensions are drawn from Hazimah and Azis (2022).

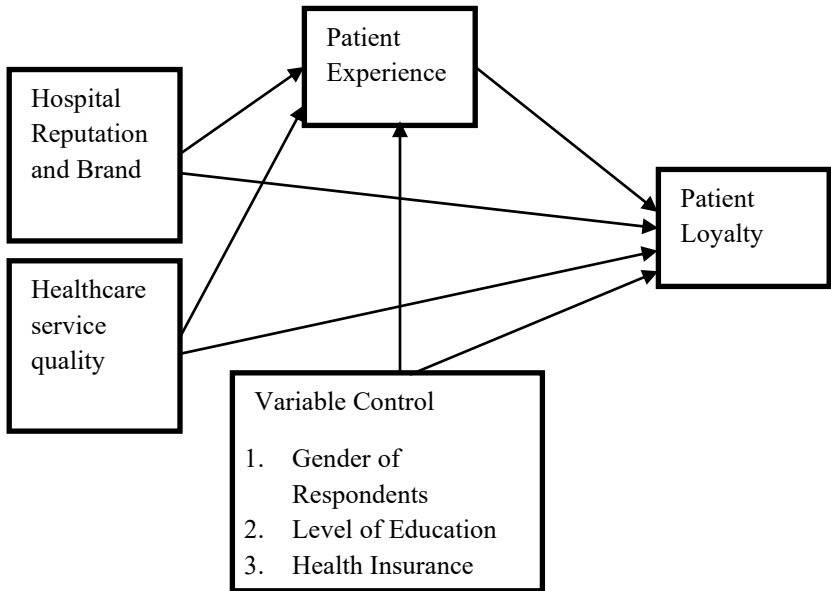
Patient experience, defined as the knowledge gained from interactions with service providers, influences perceptions and motivations. It is measured through eight indicators: ease of registration, waiting room comfort, staff friendliness, care services, medical information, postcare support, respect for privacy, and accessibility (Akthar, Nayak, and Pai, 2023).

Patient loyalty is conceptualized as a consistent commitment to choosing a service despite external influences, measured by indicators such as willingness to return, recommendations to others, overall satisfaction, trust in services, expectancy congruence, visit frequency, feelings of respect, and emotional loyalty (Gül, Helvacıoğlu, and Saraçlı, 2023).

The interactions among these variables reveal that healthcare service quality and hospital reputation and brand influence customer experience, which, in turn, fosters loyalty (Tasci and Semrad, 2016). Positive perceptions of service quality and reputation encourage loyalty (Singh et al., 2023). The study highlights patient experience as a mediating factor in building loyalty, addressing a gap in prior literature that often focuses on direct relationships between service quality and loyalty (Patmawati and Andjarwati, 2023). By exploring how patient experience, including perceptions of healthcare service quality and hospital reputation and brand, shapes these relationships, this research provides practical insights for hospital managers seeking to enhance patient loyalty.

This study affirms the need for further research into the mediating role of patient experience in the relationship between healthcare service quality, hospital reputation and brand, and patient loyalty, as illustrated in the proposed research model (Figure 1). It provides a valuable theoretical and practical contribution to improving healthcare services and fostering patient loyalty in the sector.

FIGURE 1
Proposed Research Model



Based on the literature, the following hypothesis can be formulated:

- H1: Healthcare service quality has a positive effect on patient experience.
- H2: Hospital reputation and brand have a positive influence on patient experience.
- H3: Healthcare service quality has a positive effect on patient loyalty.
- H4: Hospital reputation and brand have a positive effect on patient loyalty.
- H5: Patient experience has a positive effect on patient loyalty.
- Ha1, 2, 3: Variable control (gender, education and health insurance status) has a positive effect on patient experience.

- Hb1, 2, 3: Variable control (gender, education and health insurance status) has a positive effect on patient loyalty.
- Hc1, 2, 3: Patient experience mediates the relationship between Variable control (gender, education and health insurance status) on patient loyalty
- H6: Patient experience mediates the relationship between healthcare service quality on patient loyalty.
- H7: Patient experience mediates the relationship between hospital reputation and brand on patient loyalty.

3. RESEARCH METHOD

3.1 RESEARCH DESIGN

This study adopts an explanatory approach to analyze the relationships among healthcare service quality, hospital reputation and brand, patient experience, and patient loyalty through hypothesis testing. Cross-sectional data was utilized, which is considered appropriate for exploratory objectives and the resource constraints faced. While a longitudinal approach could capture changes in patient experience and patient loyalty over time, cross-sectional data remains relevant for identifying relationships between variables at a specific point in time (Creswell et al., 2014). This approach allows for a quick mapping of current conditions without requiring the extensive time and resources needed for longitudinal studies (Gomm, 2008). Limitations of not capturing long-term dynamics are acknowledged, however longitudinal studies are recommended for future research to better understand changes in patient experience and patient loyalty.

This study incorporates control variables such as gender, education level, and type of health insurance to examine their influence on patient experience and patient loyalty. In the Partial Least Squares (PLS) analysis, these variables are modeled as exogenous factors that may directly or indirectly affect latent variables. This aim reducing bias stemming from demographic differences and insurance status, which can impact perceptions of healthcare service quality and hospital reputation and brand (Ahmed et al., 2025). For example, patients with higher education levels may be more critical in assessing services, while gender may influence

interactions with medical staff and overall patient experience. Additionally, the type of insurance could affect the range of services received, thereby influencing experience and patient loyalty levels.

The potential for control variables to act as mediators or moderators is also recognized in this study, acknowledging their possible confounding effects. This consideration enhances the robustness of the findings and highlights areas for further investigation in understanding the nuanced roles these variables may play in shaping patient experience and patient loyalty.

3.2 SAMPLING STRATEGY

This study was conducted at Sakinah Hospital in East Java, using purposive sampling, involving 165 patients aged 18 years and older who had been hospitalized for at least one night. The sample size was determined based on the number of indicators used in the study, which is 32 indicators. According to (Ferdinand, 2014), the ideal sample size in Partial Least Squares Structural Equation Modeling (PLS-SEM) analysis should be at least 5 to 10 times the number of indicators. Therefore, a sample size of 165 meets the minimum requirement suggested by Ferdinand to produce valid and reliable estimations. The use of PLS-SEM is also appropriate for moderate sample sizes as this method allows for flexible testing, even with a relatively smaller sample (Sarstedt, Ringle, and Hair, 2021). Additionally, focusing on a single hospital allows for an in-depth exploration of the relationships between healthcare service quality, hospital reputation and brand, patient experience, and patient loyalty, without institutional variability. In future, this research is planned to be expanded to multiple hospitals to strengthen the generalizability of the findings.

3.3 DATA COLLECTION

Data collection took place between August and October 2023 using a Likert-scale questionnaire to capture patient perceptions of healthcare service quality, hospital reputation and brand, patient experience, and control variables (gender, education level, health insurance type). The main challenges faced included patient accessibility, where health conditions, time limitations, and personal preferences affected participation. These challenges were addressed through a sensitive approach, adhering to ethical procedures, and obtaining hospital approval.

Another challenge was the variation in patient understanding of the questionnaire items, which was addressed by conducting a pilot test to ensure clarity of the questions and providing additional explanations when necessary. The time constraints patients had while at the hospital were also a limitation, so the questionnaire format was designed to be more concise and efficient. Through flexible steps and careful planning, valid and representative data was successfully collected despite these challenges.

3.4. DATA ANALYSIS TECHNIQUES

Data analysis for this study was performed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The selection of Partial Least Squares (PLS) as the analysis method was based on its suitability for the objectives and characteristics of the data. PLS is effective for analyzing data with a limited sample size, complex models, and non-normal data distributions (Hair et al., 2019). This method can also handle multicollinearity and measure latent variables, such as patient experience, which cannot be directly observed.

PLS allows for exploring causal relationships and mediation within a structural model, such as the impact of healthcare service quality and hospital reputation and brand on patient experience and patient loyalty. This method also supports research focus on prediction and understanding the relationships between variables in the context of complex data and limited resources (Wu, Chen, and Wang, 2023). PLS-SEM was implemented using SmartPLS software, which consists of two main stages. First, in the Measurement Model Evaluation stage, validity and reliability of the instruments were tested using convergent validity, measured by Average Variance Extracted (AVE), where AVE values greater than 0.5 indicate that constructs can capture more than half of the variance of their indicators. Discriminant validity was then tested using the Fornell-Larcker Criterion and Heterotrait-Monotrait Ratio (HTMT), where HTMT values lower than 0.85 indicate good discrimination between constructs. Internal consistency of the instruments was also measured using Composite Reliability and Cronbach's Alpha, with target values above 0.7 to ensure consistency and reliability.

The second stage is Hypothesis Testing, which evaluates the relationships between latent variables in the structural model. Path coefficients are used to determine the strength and direction of relationships between latent variables, while significance testing is

performed using bootstrapping with 5,000 resamples. T-values greater than 1.96 at a 95% confidence level indicate statistical significance. The resulting regression model is then used to test the research hypotheses through the following two main equations:

Patient Loyalty (PL) Equation

$$(1) \quad PL = b_1 \cdot HS + b_2 \cdot HB + b_3 \cdot PE + b_4 \cdot GEN + b_5 \cdot EDUC + b_6 \cdot TYPH$$

Patient Experience (PE) Equation

$$(2) \quad PE = b_1 \cdot HS + b_2 \cdot HB + b_3 \cdot GEN + b_4 \cdot EDUC + b_5 \cdot TYPH$$

Where:

PL: Patient Loyalty

PE: Patient Experience

HS: Healthcare Service Quality

HB: Hospital Reputation and Brand

Control variables: GEN: Gender, EDUC: Education Level, TYPH: Type of Health Insurance

Additionally, the Coefficient of Determination (R^2) is used to measure the predictive power of the model, with values approaching 1 indicating higher prediction accuracy. Predictive Relevance (Q^2) is measured using Stone-Geisser's test to assess the model's predictive ability on data outside the sample, while Effect Size (f^2) measures the contribution of each variable to the dependent variables in the model, providing insight into the relative influence of each variable. The use of these three metrics provides a comprehensive foundation to assess the extent to which the model can explain and predict the relationships among the variables studied, as well as the model's validity in a broader context.

4. FINDINGS

4.1 BACKGROUND SOCIO-DEMOGRAPHIC STATISTICS

Table 1 presents the demographic characteristics of respondents. The sample consisted of around 51.3% men with an average age of respondents above 53 years, and the age group 32 to 52 years formed the highest proportion of respondents. The majority of respondents have an educational level of highest secondary, 37.5%, and doctorate, only 2.5% of the total respondents. The average visit to a health

facility is around two times. The majority of respondents had insurance under the National Health Insurance scheme.

TABLE 1
Respondent Characteristics

Information		N	%
Gender	Man	85	51.3
	Woman	80	48.7
		165	100
Age	17-34	47	28.8
	35-52	56	33.7
	53>	62	37.5
		165	100
Education	Primary	38	23.2
	Secondary	62	37.5
	Bachelor	29	17.5
	Masters	15	8.8
	Doctorate	4	2.5
	Others	17	10.5
		165	100
Times of visits to the facility	Once	29	17.5
	Twice	109	66.3
	Three or more	27	16.2
		165	100
Type of Insurance	Government	159	96.5
	Private	6	3.5
		165	100

Source: Data processed

Based on Table 2, the results of the validity and reliability testing for the measurement model indicate that all variables meet the criteria for convergent validity and demonstrate high reliability. Loading factor values (λ) > 0.70 and AVE > 0.50 confirm convergent validity, while Cronbach's alpha (α) and composite reliability (CR) > 0.70 indicate strong internal reliability. Patient loyalty shows the highest reliability ($\alpha = 0.952$; CR = 0.960; AVE = 0.749), with frequency of visits as the strongest indicator ($\lambda = 0.908$). Patient experience also exhibits high reliability ($\alpha = 0.941$; CR = 0.951; AVE = 0.707), with post-treatment as the key indicator ($\lambda = 0.887$). Healthcare service quality ($\alpha = 0.930$; CR = 0.942; AVE = 0.671) is supported by availability of facilities ($\lambda = 0.872$). Hospital reputation and brand ($\alpha = 0.937$; CR = 0.948; AVE = 0.695)

highlights innovation and technology ($\lambda = 0.879$). Control variables (GEN, EDUC, and TYPH) exhibit perfect measurement. The model is valid and reliable for further analysis, such as SEM.

4.2 MEASUREMENT MODEL ASSESSMENTS

TABLE 2
Measurement Model Testing Convergent Validity, Composite Reliability and Cronbach's Alpha

Variable	λ	Cronbach's α	rho_A	CR	AVE
Patient loyalty		0.952	0.954	0.960	0.749
PL1: Willingness to return	0.856				
PL2: Recommendations to others	0.890				
PL3: Overall satisfaction	0.883				
PL4: Trust in service	0.832				
PL5: Conformity to expectations	0.838				
PL6: Frequency of visits	0.908				
PL7: Feeling valued	0.879				
PL8: Emotional loyalty	0.833				
Patient Experience		0.941	0.942	0.951	0.707
PE1: Ease of registration	0.786				
PE2: Waiting room comfort	0.827				
PE3: Staff friendliness	0.852				
PE4: Maintenance services	0.813				
PE5: Medical information	0.834				
PE6: Post-treatment	0.887				
PE7: Respect for privacy	0.860				
PE8: Accessibility	0.864				

TABLE 2 (continued)

Variable	λ	Cronbach's α	rho_A	CR	AVE
Healthcare service quality		0.930	0.934	0.942	0.671
HS1: Patient safety	0.838				
HS2: Medical staff competency	0.841				
HS3: Availability of facilities	0.872				
HS4: Treatment effectiveness	0.738				
HS5: Cleanliness	0.809				
HS6: Response to emergencies	0.842				
HS7: Communication with patients	0.829				
HS8: Waiting time	0.778				
Hospital Reputation and Brand		0.937	0.939	0.948	0.695
HB1: Public trust	0.840				
HB2: Media reporting	0.783				
HB3: Patient testimonials	0.834				
HB4: Recognition and awards	0.842				
HB5: Branding and marketing	0.839				
HB6: Community involvement	0.839				
HB7: Innovation and technology	0.879				
HB8: Information transparency	0.810				
GEN	1.000	1.000	1.000	1.000	1.000
EDUC	1.000	1.000	1.000	1.000	1.000
TYPH	1.000	1.000	1.000	1.000	1.000

Source: Data processed

4.3 MEASUREMENT MODEL ASSESSMENTS

Based on Table 3, the results of the discriminant validity testing using the Fornell-Larcker Criterion, Heterotrait-Monotrait Ratio (HTMT), and Inner VIF Values analysis are presented. According to the Fornell-Larcker criterion, discriminant validity is achieved because the square root of the Average Variance Extracted (AVE) (diagonal values) for each construct is greater than the correlations with other constructs. For example, PL has an AVE square root of 0.865, which is greater than its correlations with PE (0.643) and HS (0.572). The HTMT results also support discriminant validity, as all values are below the threshold of 0.90, such as the relationship between PL and PE (0.676), as well as between HB and PE (0.596). Additionally, the analysis of Inner VIF Values shows no multicollinearity in the model, as all VIF values are below five, such as the relationship between PE and PL, with a VIF of 2.009. Therefore, the measurement model meets the criteria for discriminant validity and does not exhibit multicollinearity issues, making it suitable for further structural analysis.

TABLE 3
Discriminant Validity

Variable	EDUC	GEN	HB	PE	PL	HS	TYPH
Fornell-Larcker Criterion							
EDUC	1.000						
GEN	0.254	1.000					
HB	0.258	0.082	0.834				
PE	0.416	0.252	0.562	0.841			
PL	0.468	0.178	0.522	0.643	0.865		
HS	0.309	0.111	0.320	0.518	0.572	0.819	
TYPH	0.294	0.209	0.018	0.126	0.244	0.239	1.000
Heterotrait-Monotrait Ratio (HTMT)							
EDUC							
GEN	0.254						
HB	0.266	0.086					
PE	0.429	0.261	0.596				
PL	0.478	0.179	0.550	0.676			
HS	0.317	0.114	0.339	0.547	0.604		
TYPH	0.294	0.209	0.037	0.130	0.250	0.246	
Inner VIF Values							
EDUC				1.264	1.336		
GEN				1.093	1.135		
HB				1.165	1.483		
PE					2.009		

TABLE 3 (continued)

Variable	EDUC	GEN	HB	PE	PL	HS	TYPH
PL							
HS				1.230	1.445		
TYPH				1.163	1.167		

Source: Data processed

4.4 STRUCTURAL MODEL TESTING RESULTS

Testing of the Inner Model. Structural models focus on hypothesized relationships or paths between variables. The results of the inner model testing can be seen in Figure 2.

Based on Figure 2, the results of the path analysis using Partial Least Squares-based Structural Equation Modeling (SEM) show that HB and HS have a significant positive influence on PE. These factors contribute positively with path coefficients of 0.397 and 0.328, respectively. PE plays a strong mediating role between these two variables and PL, with a path coefficient of 0.502. This indicates that improvements in HS and HB can enhance PL through positive experiences gained. Additionally, control variables such as GEN, EDUC, and TYPH show very small effects on the latent variables, suggesting that the direct influence of these factors on PL and PE is insignificant in this model. This study highlights the critical role of PE in strengthening their PL, offering practical insights for hospital management to focus on improving healthcare service quality and hospital reputation and brand to strengthen patient relationships.

4.5 HYPOTHESIS TESTING RESULTS

The results of the hypothesis testing presented in Table 4 indicate that PE and HS are the primary factors significantly influencing PL. HS has a direct impact on PL with a coefficient of $b_1=0.273$ ($p=0.000$), while PE contributes more significantly with a coefficient of $b_3=0.292$ ($p=0.001$). Additionally, HB also positively influences PL ($b_2=0.222$, $p=0.001$). On the other hand, control variables such as GEN ($b_4=-0.009$, $p=0.879$) and TYPH ($b_6=0.086$, $p=0.088$) do not have a significant effect on PL, while EDUC shows a significant positive effect ($b_5=0.182$, $p=0.006$). In shaping PE, HB has the largest impact ($b_2=0.397$, $p=0.000$), followed by HS ($b_1=0.328$, $p=0.000$). Control variables such as GEN ($b_3=0.144$, $p=0.009$) and EDUC ($b_4=0.189$, $p=0.006$) also significantly affect PE, while TYPH has no significant effect ($b_5=-0.045$, $p=0.424$).

The mediation analysis shows that PE mediates the relationship between HS and HB with PL. This mediation is significant for HS → PE → PL ($p=0.006$) and HB → PE → PL ($p=0.007$). Mediation for EDUC → PE → PL ($p=0.057$) and TYPH → PE → PL ($p=0.472$) is however not significant. Therefore, PE plays a crucial role in enhancing PL, particularly through the HS and HB, while control variables have a more limited impact. The equations for PL and PE are as follows:

Patient Loyalty Equation (PL): $PL = 0.273 \cdot HS + 0.222 \cdot HB + 0.292 \cdot PE - 0.009 \cdot GEN + 0.182 \cdot EDUC + 0.086 \cdot TYPH$

Patient Experience Equation (PE): $PE = 0.328 \cdot HS + 0.397 \cdot HB + 0.144 \cdot GEN + 0.189 \cdot EDUC - 0.045 \cdot TYPH$

Based on the results from these equations, PL is influenced by several key variables and controls. The equation for PL shows that PE has the greatest impact with a coefficient of 0.292, followed by HS at 0.273, and HB at 0.222. EDUC has a significant effect of 0.182, while GEN and TYPH are not significant, with coefficients of -0.009 and 0.086, respectively. In the PE equation, HB is the most significant factor with a coefficient of 0.397, followed by HS at 0.328. Additionally, GEN and EDUC have significant influences of 0.144 and 0.189, respectively, while TYPH has a small negative and insignificant effect (-0.045).

Overall, PE plays a pivotal role as a mediator in enhancing PL, especially through HS and HB. This underscores the importance for hospitals to strengthen their HB, HS, and PE in strategies to increase PL. Control variables such as EDUC have a positive effect on PL, while GEN and TYPH play a more limited role in this model.

Table 5 presents the outcomes for the Coefficient of Determination (R^2) and Predictive Relevance (Q^2) for PE and PL. For PE, the R^2 value of 0.502 indicates that the model explains 50.2% of the variance in PE, suggesting a moderate explanatory power. The Q^2 value of 0.462 reflects moderate predictive relevance, showing that the model can predict PE with a fair degree of accuracy. On the other hand, PL has an R^2 of 0.565, meaning that 56.5% of the variance in PL is explained by the model, which indicates a better fit than for PE. The Q^2 value for PL, at 0.482, further supports this by demonstrating a good level of predictive relevance, meaning the model is fairly effective at predicting PL. Overall, while both variables show a good degree of explanatory and predictive power, there is still room for improvement, suggesting the presence of other influencing factors not captured by the model.

FIGURE 2
Structural Model

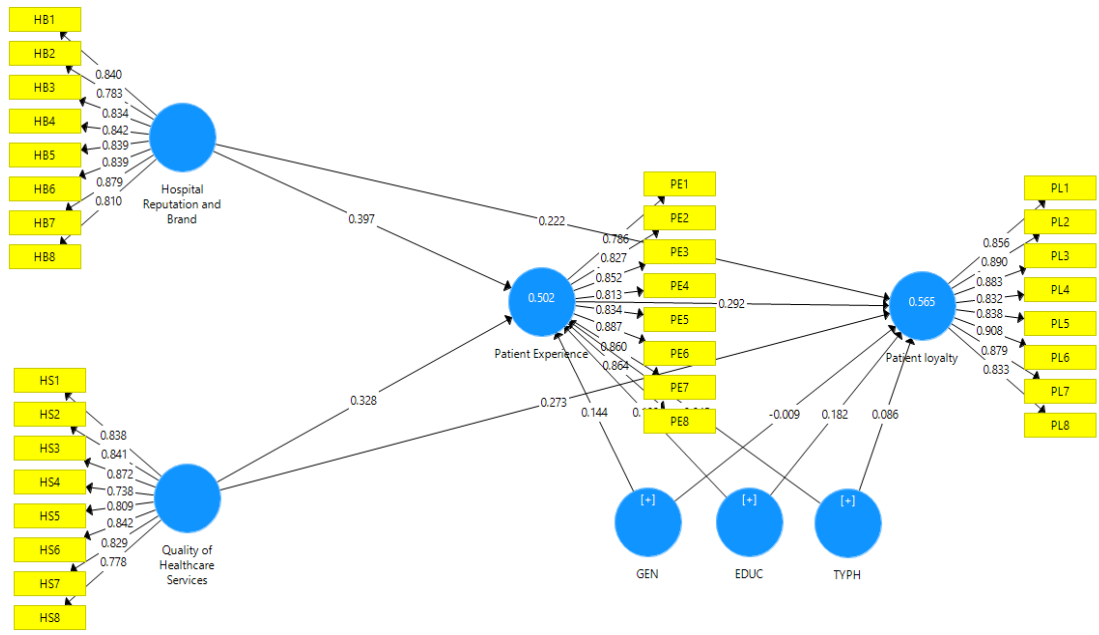


TABLE 4
Hypothesis Testing

Variable	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P Values	Decision
Direct Effects						
H1: HS -> PE	0.328	0.331	0.065	5.028	0.000	Significant
H2: HB -> PE	0.397	0.389	0.066	6.063	0.000	Significant
H3: HS -> PL	0.273	0.268	0.071	3.868	0.000	Significant
H 4: HB -> PL	0.222	0.219	0.065	3.419	0.001	Significant
H5: PE -> PL	0.292	0.294	0.091	3.205	0.001	Significant
Ha1: GEN -> PE	0.144	0.144	0.055	2.628	0.009	Significant
Ha2: EDUC -> PE	0.189	0.195	0.068	2.771	0.006	Significant
Ha3: TYPH -> PE	-0.045	-0.047	0.056	0.800	0.424	Not Significant
Hb1: GEN -> PL	-0.009	-0.007	0.057	0.152	0.879	Not Significant
Hb2: EDUC -> PL	0.182	0.183	0.065	2.776	0.006	Significant
Hb3: TYPH -> PL	0.086	0.088	0.051	1.709	0.088	Not Significant
Indirect Effects (Mediating)						
Hc1: GEN -> PE -> PL	0.042	0.042	0.020	2.095	0.037	Significant
Hc2: EDUC -> PE -> PL	0.055	0.058	0.029	1.908	0.057	Not Significant
Hc3: TYPH -> PE -> PL	-0.013	-0.014	0.018	0.719	0.472	Not Significant
H 6: HS -> PE -> PL	0.096	0.097	0.035	2.739	0.006	Significant
H7: HB -> PE -> PL	0.116	0.115	0.043	2.687	0.007	Significant

Source: Data processed

TABLE 5
Presents the Outcomes for Koefisien Determinasi (R^2) and Relevansi Prediktif (Q^2)

Variabel	R^2	Q^2
PE	0.502	0.462
PL	0.565	0.482

Source: Data processed

The results from the f-square (f^2) analysis in Table 6 show the extent to which each variable in the research model influences the others. Overall, HB has a very large effect on PE, with an f^2 value of 0.272, indicating that HB plays a significant role in shaping the PE. On the other hand, PE has a moderate effect on PL, with an f^2 value of 0.098, signifying that PE contributes significantly to PL. EDUC also shows a moderate effect on both PE and PL, with f^2 values of 0.057 for each. In contrast, GEN and TYPH show very small effects, with an f^2 of 0.000 for the effect of GEN on PL, and only 0.003 and 0.015 for the effects of TYPH on PE and PL, respectively. This suggests that these control variables have a limited impact on this model. Meanwhile, HS has a small to moderate effect on both PE and PL, with f^2 values of 0.175 and 0.119, respectively.

Thus, it can be concluded that HB and HS have a greater influence compared to control variables such as GEN and TYPH.

TABLE 6
Presents the Outcomes for f Square (f^2)

Variables	EDUC	GEN	HB	PE	PL	HS	TYPH
EDUC				0.057	0.057		
GEN				0.038	0.000		
HB				0.272	0.076		
PE					0.098		
PL							
HS				0.175	0.119		
TYPH				0.003	0.015		

Source: Data processed

5. DISCUSSION

The most significant finding in this study relates to the relationship between healthcare service quality and patient experience, which

reveals that healthcare quality has a direct and significant impact on patient experience. This finding suggests that the higher the healthcare service quality provided, the more positive the patient experience. Thus, patient experience can be effectively mediated by healthcare service quality, which plays a crucial role in enhancing patient loyalty through positive experiences. This contribution to the existing literature is important as it reinforces previous research highlighting the role of healthcare quality in shaping patient perceptions and satisfaction (Liu, Chen, and Ko, 2024; Darzi et al., 2023). In line with the Servqual theory and the SERVPERF model, which emphasize healthcare service quality as a key factor in patient satisfaction, this study strengthens the argument that healthcare quality plays a direct role in shaping patient experience (Parasuraman and Grewal, 2000). Additionally, the study contributes to the literature by emphasizing the importance of patient experience as a strong mediator in the relationship between healthcare quality and patient loyalty, supporting the relationship marketing theory that asserts positive customer experiences can enhance loyalty (Lolemo and Pandya, 2025).

This research provides practical insights for hospital administrators to enhance healthcare service quality as a strategy for boosting patient loyalty, especially in the highly competitive healthcare industry today. Improving doctor-patient interactions within the context of healthcare quality is emerging as essential (Darzi et al., 2023). The positive correlation between medical and financial aspects and patient experience underscores the significant role of hospitality in shaping overall patient satisfaction (Altinay et al., 2023). Patient satisfaction is a crucial metric for healthcare services, highlighting the profound impact of service quality in hospitals (Alibrandi et al., 2023). Furthermore, significant disparities exist in how patients perceive service quality (Wu, Ho, and Yang, 2024). Strategies aimed at improving revenue, such as enhancing patient experience and care quality, are essential (Scott et al., 2024). The quality of information provided significantly affects patient satisfaction and future consultation intentions (Chen, Jin, and Yan, 2024). Patients receiving high-quality care tend to report more positive hospital experiences, underscoring the critical role of patient experiences in shaping their perceptions of services received.

Hospitals today face intense competition due to open market policies, population growth, and increased health awareness. To build patient loyalty, hospitals must prioritize key aspects of

patient experience, including staff interactions, facility comfort, administrative efficiency, communication quality, and complaint management. Positive staff-patient interactions significantly enhance satisfaction and loyalty (Choi, Roh, and Lee, 2024), while clean, comfortable, and accessible facilities contribute to a better patient experience (Chen and Lin, 2015). Efficient processes and reduced wait times further strengthen satisfaction and loyalty (Askari et al., 2024). Clear communication about health conditions and treatments builds trust, while effective complaint handling maintains loyalty even after service failures (D'Souza et al., 2025).

A customer-oriented approach places patients at the center of hospital services by focusing on empathy, responsiveness, and personalized care (Cheng et al., 2022). Hospitals can enhance their reputation and brand by improving service quality, fostering community relations through health programs, and creating a comfortable environment (Gatwiri et al., 2022). These strategies not only increase satisfaction but also strengthen hospital loyalty and community trust. Leadership plays a vital role in embedding patient experience and care quality into hospital operations. Leaders must prioritize healthcare service quality, inspire empathy among staff, and facilitate cross-departmental collaboration (Anwar et al., 2025); (Quesada-Puga et al., 2024). Effective leadership ensures that quality care becomes integral to the hospital's strategic vision, enabling holistic improvements in healthcare services.

Improving service quality requires comprehensive efforts across medical and non-medical aspects, from reducing registration wait times to enhancing cleanliness and modernizing facilities (Milošević et al., 2025). Staff training in interpersonal and communication skills is equally critical. A culture of continuous feedback and patient-centered values helps sustain high standards of care and strengthens long-term patient relationships.

This study explores customer experience as a mediator between healthcare service quality and patient loyalty, focusing on issues such as long wait times, registration inefficiencies, and waiting room discomfort. While valuable insights are provided, several limitations exist. The cross-sectional design restricts analysis to a single time point, failing to capture dynamic relationships over time. Longitudinal studies are recommended for deeper exploration. The limited sample size may reduce the generalizability of findings, and future research should involve larger, more diverse populations. Although control variables such as gender, education level, and type of health insurance are

included, factors such as socio-economic status and cultural preferences remain unexplored despite their potential impact on patient experience and loyalty.

The geographic limitation to a single hospital in East Java may affect relevance to other regions with different healthcare characteristics. The use of perception-based measurement tools introduces risks of response bias or misinterpretation of questions. Self-reported data from questionnaires can also be influenced by social desirability bias. Addressing these issues in future research, such as expanding geographic coverage, using mixed-method approaches (e.g., interviews or observations), and employing longitudinal designs, will enhance the robustness and applicability of findings.

This study underscores the importance of customer experience, hospital reputation, and service quality in fostering patient loyalty while highlighting opportunities for future research to refine and expand these insights.

6. CONCLUSION

This study demonstrates that patient experience plays a key role in fostering patient loyalty. This is supported by the finding that healthcare service quality, hospital reputation, and brand are significant factors. A patient's level of education also has a positive impact on loyalty, while other control variables, such as gender and type of health insurance, have a more limited influence. Patient experience is an important mediator that strengthens the relationship between healthcare service quality, hospital reputation and brand, and patient loyalty. These findings emphasise the importance of focusing on patient experience in strategies aimed at improving services and patient satisfaction.

Hospitals are recommended to improve healthcare service quality by strengthening communication, accelerating service delivery and enhancing facility comfort. Hospital reputation management should also be reinforced through positive campaigns, active community engagement and strategic communication programmes. Patient experience could be improved by training staff to refine their interpersonal skills and empathy, and by adopting a feedback system that enables patients to provide input on the quality of healthcare services.

Future researchers are recommended to use a longitudinal design to understand changes in patient loyalty over time and to

expand the research scope to include multiple hospitals to enhance the generalisability of the results. Future research should also explore additional factors, such as socio-economic status and cultural preferences, and utilise more diverse data collection methods, such as interviews or direct observation. Technological innovations, such as telemedicine, could also be a relevant area of research in order to understand their impact on patient experience and loyalty.

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