

Determinants of Patient Satisfaction with Hospital Services: Mediating and Moderating Effect

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Abstract

Patient satisfaction reflects the level of quality of health services and is influenced by the interaction between health service providers and patient-related factors. Meanwhile, evidence regarding the role of trust and patient characteristics in determining the level of patient satisfaction is still limited. The relationships between the existing dimensions of service quality, patient trust, and patient satisfaction were analyzed including the role of patient trust as a mediating variable and patient characteristics as moderating variables. The study was conducted at a hospital in West Java, Indonesia. A quantitative design was applied and conducted cross-sectionally. A total of 510 inpatients participated. Data were collected using a previously validated questionnaire. PLS-SEM was used as the data analysis method, including mediation and moderation analyses. All service quality dimensions significantly influenced patient trust, with technical quality showing the strongest effect. Patient trust significantly influenced patient satisfaction and mediated relationships between service quality dimensions and patient satisfaction. Technical quality demonstrated the strongest indirect effect. Age, gender, insurance type, socioeconomic status, and comorbidity significantly moderated the relationship between patient trust and patient satisfaction. The model explained 32.9% and 23.4% of the variance in patient trust and satisfaction, respectively. Patient trust plays a crucial role in strengthening the relationship between service quality and patient satisfaction. The strength of the relationship between trust and patient satisfaction depends on patient characteristics. Strengthening technical and non-technical aspects of healthcare services may improve trust and patient-centred outcomes. This study extends patient satisfaction research by integrating mediation and moderation mechanisms within a single structural model.

Keywords: *Patient Satisfaction, Patient Trust, Healthcare Quality, Hospital Services, Patient-Centred Care, Structural Equation Modelling, Indonesia.*

INTRODUCTION

The central role in the health care system rests with hospitals by delivering high-value and complex care while also serving as essential

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components of emergency preparedness and public health response (DeParle et al. 2024). Despite this critical role, healthcare systems in developing countries such as Indonesia continue to face persistent challenges, including inequitable distribution of healthcare personnel, limited infrastructure, and systemic constraints, all of which contribute to disparities in service quality and patient perceptions (Agustina et al. 2019). Globally, evidence suggests that expanding access to healthcare alone is insufficient to improve outcomes, because the worsening quality of care makes it difficult to reduce the death rate (Kruk et al. 2018).

The implementation in Indonesia of the National Health Insurance program has increased the utilization of health services, placing greater pressure on hospital services and healthcare systems (Sari et al. 2023). Besides that, structural disparities within the decentralised healthcare system continue to affect the equity and quality of care delivery (Nugraha, Paskarini & Tualeka 2025). As expectations towards healthcare services continue to rise, ensuring high-quality, patient-centred care has become an essential priority for healthcare providers. Healthcare quality and patient satisfaction are commonly conceptualised within established service quality frameworks that emphasise the multidimensional nature of healthcare delivery and patient experience (Ghotbabadi, Feiz & Baharun 2015). These frameworks provide a foundation for understanding how healthcare services influence patient perceptions and outcomes within healthcare settings (Sumaedi, Yarmen & Bakti 2016).

An important indicator of health care quality that is widely recognized is patient satisfaction, which reflects patients' perceptions and experiences of service delivery (Xesfingi & Vozikis 2016). Recent findings also show that patient satisfaction surveys provide valuable insights into improving the quality of healthcare and patient-centered service delivery at both the organizational and system levels (Cui et al. 2025). Standardized instruments such as the PSQ (Patient Satisfaction Questionnaire) have been used in various regions with the aim of assessing various aspects of patient satisfaction in various healthcare settings, including in Indonesia (Marshall & Hays 1994; Imaninda & Azwar 2016). Previous studies have shown that higher patient satisfaction is associated with improved clinical outcomes, including lower, shorter hospital stays, complication rates, reduced readmissions and lower mortality (Kaye et al. 2017; Prabhu et al. 2018). However, research results on the relationship between patient satisfaction and health care outcomes are still inconsistent, as a result of the multidimensional and complex nature of patient satisfaction. (Kennedy, Tevis & Kent 2014). Nevertheless, patient experience and satisfaction remain closely associated with safety, healthcare quality and treatment adherence (Doyle, Lennox & Bell 2013).

Identification has been carried out regarding various factors determining patient satisfaction, including provider-related factors such as communication and interpersonal skills, patient-related characteristics such as age and comorbidity, and environmental or system-related factors such as healthcare processes and the physical

environment (Kalaja 2023; McFarland, Ornstein & Holcombe 2015; Jamshidi, Parker & Hashemi 2020). These findings suggest that patient satisfaction is shaped by complex interactions between healthcare service quality, patient perceptions, and individual patient characteristics rather than by isolated determinants alone (Al-Abri & Al-Balushi 2014). Within this multidimensional context, Patient trust is considered an important mechanism that bridges the relationship between health service quality and patient satisfaction (Du et al. 2020). Effective communication and patient-centred interactions further contribute to the development of trust and positive patient experiences in healthcare settings (Burgener 2017). Trust has also been shown to influence treatment adherence, continuity of care, and patient engagement with healthcare services, making it a fundamental component of effective healthcare delivery (Ozawa & Sripad 2013).

In Indonesia, national health standards emphasize achieving high levels of patient satisfaction as a primary indicator of the quality of hospital services (Ministry of Health of the Republic of Indonesia 2008). However, variations in service delivery and gaps between patient expectations and actual care experiences may still affect patient satisfaction across healthcare settings (Lee et al. 2010). Despite growing interest in patient satisfaction research, existing evidence remains fragmented and inconsistent. Previous studies often examine the determinants of patient satisfaction separately and rarely integrate the various dimensions of service quality with the outcomes desired by healthcare providers such as patient trust and patient satisfaction in an integrated analytical framework. Although patient satisfaction is recognized as a multidimensional variable or construct formed by the interaction between healthcare factors and patient characteristics, limited studies have simultaneously examined direct, indirect, and moderating relationships among these variables using advanced analytical approaches such as Structural Equation Modelling (Batbaatar et al. 2017). In particular, the role of patient characteristics as moderating variables in shaping the relationship between trust and patient satisfaction remains under-explored, particularly in healthcare settings or middle- and low-income countries with resource constraints that may further influence patients' experiences and perceptions of care. Therefore, this study attempts to test and develop a structural model of patient satisfaction by examining the relationship between the dimensions contained in service quality and expected outcomes such as patient trust and patient satisfaction. Furthermore, this study evaluates whether patient characteristics including age, gender, insurance type, socioeconomic status, and comorbidity in moderating (strengthening/weakening) the relationship that occurs between a patient's trust and satisfaction.

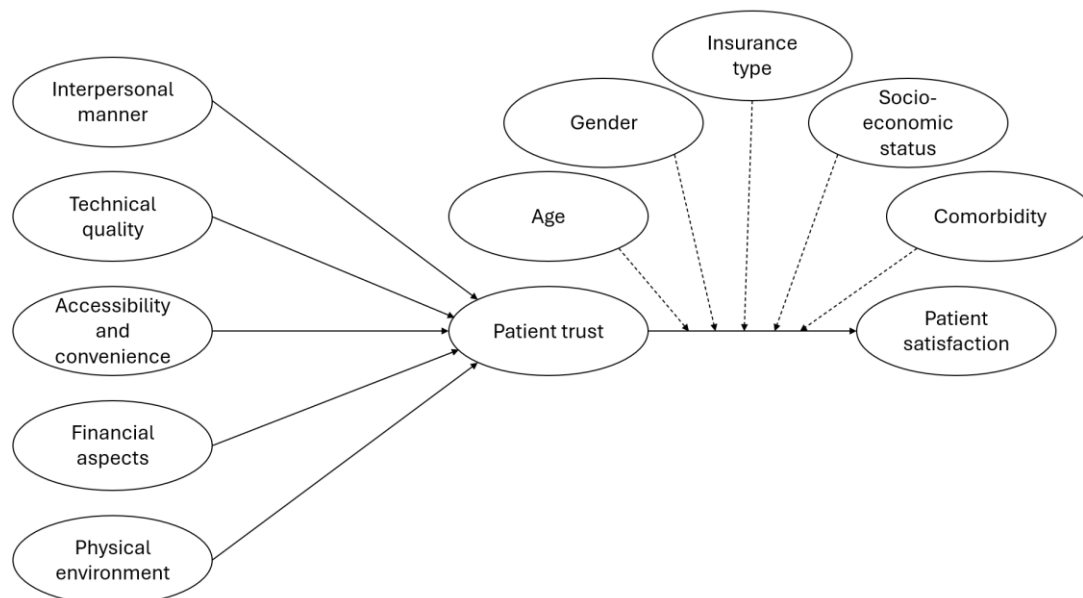


Figure 1. Conceptual Framework

Figure 1 illustrates the proposed structural model in which service quality dimensions are hypothesised to influence patient trust, which subsequently affects patient satisfaction. In the relationship between patient trust and patient satisfaction, patient characteristics act as a moderator.

METHODS

Setting and Study Design

This study aims to analyze the relationship between the dimensions of service quality and the results expected by hospitals such as patient trust and satisfaction through a quantitative research design conducted over a period of time. Data were collected from inpatients at a hospital in West Java, Indonesia, between February and March 2026.

Participants and Sampling

The study population comprised adult inpatients hospitalised at the study site. Respondents who met the criteria were adults aged 18 years or older who had been hospitalized for at least 48 hours, were cognitively intact, able to communicate effectively, and willing to participate. Participants who met these inclusion criteria were recruited sequentially over the study period until the required sample size was reached. Patients with severe cognitive impairment, critical conditions, or inability to complete the questionnaire were excluded.

The 10-fold rule is used to determine the minimum sample size in the analysis method using PLS-SEM, which requires that at least ten observations be obtained per maximum number of structural paths leading to the latent construct. As five structural paths were directed towards the construct of patient trust, A value of 50 is the minimum sample size required. The final sample of 510 participants exceeded this requirement and was considered sufficient for robust estimation of the proposed structural model.

Variables and Measurement

Structured questionnaires adapted from validated instruments were used for data collection. Modified versions of the Patient Satisfaction Questionnaire (PSQ) were used to measure service quality dimensions, the Trust in Doctor Scale (TIPS) to measure patient trust, and the Client Satisfaction Questionnaire (CSQ-8) to measure patient satisfaction. The PSQ-based service quality dimensions consisted of multiple items representing each domain, while the TIPS included 11 items assessing patient trust, and the CSQ-8 included 8 items measuring overall satisfaction. All instruments were adapted to the local context and pre-tested among 110 patients to ensure clarity and contextual relevance.

Most construct/variable measurement processes use a five-point Likert scale ranging from 1 to 5. Patient satisfaction items were measured using a 4-point ordinal response scale adapted from the CSQ-8. Recoding was carried out on items with negative connotations before the analysis process was carried out to ensure consistency in the direction of measurement. All constructs were modelled as reflective indicators in accordance with established measurement practices in PLS-SEM. The constructs and measurement instruments used in this study are summarised in Table 1. Detailed questionnaire items, construct indicators, and Likert scale measurements are presented in Appendix S1 as supplementary material.

Table 1. Measurement of Constructs and Instruments

Construct	Domain	Item Code	Number of Items	Example Item	Source
Interpersonal manner	Communication, empathy	PSQ1-1-PSQ1-5	5	"I feel that nurses treat patients equally without discrimination."	PSQ (modified)
Technical quality	Professional competence	PSQ2-1-PSQ2-5	5	"The doctor always explained the purpose of the medical tests I underwent."	PSQ (modified)
Accessibility and convenience	Access, waiting time	PSQ3-1-PSQ3-5	5	"Once I had registered, I was always informed of how long I would need to wait."	PSQ (modified)
Financial aspects	Cost, administration	PSQ4-1-PSQ4-5	5	"I felt that the cost of treatment at this hospital was proportional to the services I received."	PSQ (modified)
Physical environment	Facility, comfort	PSQ5-1-PSQ5-5	5	"The chairs in the waiting room made me feel comfortable staying there."	PSQ (modified)
Patient trust	Trust in physician	TIPS1-TIPS11	11	"I trust my doctor's judgment about my medical care"	TIPS
Patient satisfaction	Overall satisfaction	CSQ1-CSQ8	8	"How would you rate the quality of service you received?"	CSQ-8

PSQ: Patient Satisfaction Questionnaire; TIPS: Trust in Physician Scale; CSQ-8: Client Satisfaction Questionnaire. Source: Study data

Data Collection

A self-administered online questionnaire was used to collect data and was accessible via mobile devices throughout the hospital stay. This approach ensured standardised data collection and minimised input errors. Participation was voluntary, and each respondent completed the questionnaire once. The dataset was selected for consistency and completeness prior to analysis.

Statistical Analysis

Common method bias is likely not a major problem if the variance explained by a single factor is below the 50% threshold. PLS-SEM was chosen as the data analysis method. SmartPLS version 4.0 (SmartPLS GmbH, Germany) was the software used in this study. The analysis followed a two-step approach, consisting of evaluation of the measurement model and the structural model.

The measurement model, also known as the outer model, is assessed for its convergent validity (the outer loadings value must be greater than 0.70; while the average variance extracted [AVE] value must be above 0.50), internal consistency reliability (composite reliability and Cronbach's alpha must be higher than 0.70), and the heterotrait-monotrait ratio (HTMT < 0.90) is used to check discriminant validity. The structural model, also known as the inner model, was evaluated by examining the R Square value, path coefficients, and hypothesis testing using a bootstrapping procedure with 5,000 resamples. Mediation effects were assessed through indirect effect analysis. Moderation analysis was conducted by creating interaction terms between patient trust and each moderating variable using the PLS-SEM. Categorical moderating variables were dummy coded prior to interaction term construction. Statistical significance or error level is determined at $p < 0.05$.

Ethical Considerations

This research received ethical approval from the Research Ethics Committee of the Faculty of Economics and Business, Pelita Harapan University (Approval Number 010/MARS/EC/II/2026). The ethical principles of the Declaration of Helsinki, as revised in 2013, were applied in this research. All participants received information regarding the study objectives and procedures and provided written informed consent prior to participation. Participation was voluntary, and respondents had the right to withdraw at any time without consequence. Confidentiality is strictly maintained, and all data is analyzed in aggregate form for research purposes only.

RESULTS

Participant Characteristics

Respondent characteristics are shown in Table 2. The total number of patients included in the analysis was 510 people. Most participants were aged over 50 years (44.9%), followed by those aged 30–50 years (33.9%) and under 30 years (21.2%). Most participants were female

(51.6%) and covered by public health insurance (BPJS) (95.1%). Nearly half of the participants had low socioeconomic status (47.5%), and 58.2% reported having at least one comorbid condition.

Table 2. Participant Characteristics (n = 510)

Variable	Category	n	%
Age (in years)	< 30	108	21.2
	30–50	173	33.9
	> 50	229	44.9
Gender	Female	263	51.6
	Male	247	48.4
Insurance type	Public insurance	485	95.1
	Private insurance	25	4.9
Socioeconomic status	Low	242	47.5
	Middle	166	32.5
	High	102	20.0
Comorbidity	Yes	297	58.2
	No	213	41.8

Source: Study Data

Measurement Model

The measurement model evaluation process was based on internal consistency reliability, indicator reliability, convergent validity, and discriminant validity (HTMT). The research found that all constructs/variables were reliable and demonstrated adequate validity.

Indicator Reliability

All indicator loadings exceeded the recommended threshold of 0.70, ranging from 0.713 to 0.989, indicating strong indicator reliability (see Figure 2).

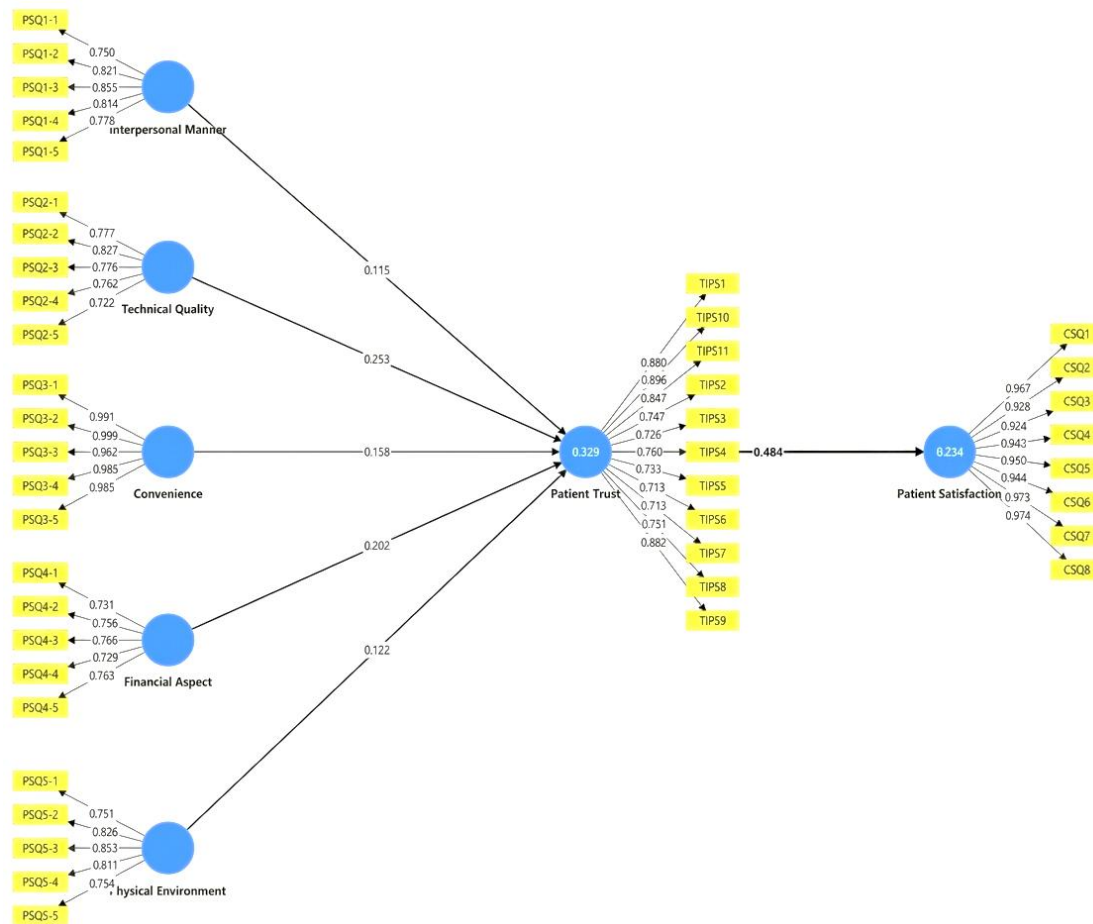


Figure 2. Measurement and structural model with path coefficients, outer loadings, and R² values

Source: Study Data

Internal Consistency Reliability

The Cronbach's alpha value and composite reliability of all constructs have exceeded the threshold or > 0.70 so that internal consistency reliability has been established (see Table 3), which indicates qualified reliability across all constructs.

Convergent Validity and Reliability

The average variance extracted (AVE) and factor loadings were examined to confirm convergent validity. All factor loadings were >0.70, and ranged from 0.713 to 0.989 (see Figure 2), indicating that the indicators were valid. Furthermore, the AVE values of all variables ranged from 0.568 to 0.963, all above 0.50 (see Table 3), indicating that each construct explained a substantial proportion of the variance in its indicator.

Table 3. Reliability Assessment and Convergent Validity

Construct/Variable	AVE	Cronbach's Alpha	Composite Reliability
Interpersonal manner	0.647	0.866	0.901
Technical quality	0.599	0.832	0.882
Accessibility and convenience	0.963	0.990	0.992

Financial aspects	0.568	0.815	0.868
Physical environment	0.640	0.859	0.899
Patient trust	0.650	0.945	0.953
Patient satisfaction	0.904	0.985	0.987

Note: All values exceeded recommended thresholds (AVE > 0.50; reliability > 0.70).
Source: Study data

Discriminant Validity

Heterotrait–monotrait ratio (HTMT) was used in the assessment of discriminant validity. All HTMT values were less than 0.90, with the highest value of 0.501 observed between technical quality and patient trust, meaning that all constructs have their own characteristics and are different from each other.

Overall, the measurement model met the required criteria, thus supporting its use in subsequent structural model analysis. After the measurement model was evaluated and satisfactory results were obtained, the structural model was then evaluated to examine the correlations between constructs.

Structural Model

Collinearity, explanatory power, predictive relevance, and hypothesis testing are useful in evaluating structural models.

Collinearity Assessment

Collinearity diagnostics were performed to assess potential multicollinearity among predictor constructs. The absence of multicollinearity symptoms in the structural model is indicated by the variance inflation factor (VIF) value being below 5.

Coefficient of Determination

The structural model demonstrated moderate explanatory power, consistent with behavioural research standards. The exogenous constructs explained 32.9% of the variance in patient trust ($R^2 = 0.329$), indicating a moderate level of predictive accuracy. In contrast, patient trust explained 23.4% of the variation in changes in patient satisfaction ($R^2 = 0.234$), indicating acceptable explanatory power for behavioral and healthcare research contexts.

The small differences between adjusted R^2 and R^2 values indicate that the model is stable and not affected by overfitting.

Q Square

Stone–Geisser Q^2 relevance is used to assess predictive relevance. All endogenous constructs show Q^2 values above 0, thus they can be said to have adequate predictive relevance. In addition, all VIF values are below the established standard, which results in no multicollinearity problems.

Hypothesis Testing

A positive and statistically significant direct relationship was found after data analysis (see Table 4). Among the service quality dimensions, technical quality showed the strongest influence on patient trust (original sample = 0.253), followed by financial aspects (original sample = 0.202), and accessibility and convenience (original sample = 0.158). The physical environment (original sample = 0.122) and interpersonal behavior (original sample = 0.11) also showed significant, but relatively smaller, influences. Furthermore, patient trust had a strong and significant influence on patient satisfaction (original sample = 0.484), highlighting its central role in shaping patient satisfaction (see Figure 2).

Table 4. Direct Effects (Hypothesis Testing)

Relationship	β	t-value	p-value
Interpersonal manner → patient trust	0.115	2.668	0.008
Technical quality → patient trust	0.253	5.814	<0.001
Accessibility and convenience → patient trust	0.158	3.756	<0.001
Financial aspects → patient trust	0.202	4.651	<0.001
Physical environment → patient trust	0.122	2.560	0.011
Patient trust → patient satisfaction	0.484	14.774	<0.001

Source: Study data

Mediation and Moderation Analysis

The relationship between the dimensions of service quality and patient satisfaction through trust as a mediator was studied using the bootstrapping procedure. All indirect effects were statistically significant ($p < 0.05$), indicating that patient trust significantly mediates the relationship between all service quality dimensions and patient satisfaction (see Table 5). Among the service quality dimensions, technical quality demonstrated the strongest indirect effect (original sample = 0.122, $p < 0.001$), followed by financial aspects (original sample = 0.098, $p < 0.001$) and accessibility and convenience (original sample = 0.077, $p < 0.001$). Interpersonal manner (original sample = 0.056, $p = 0.009$) and physical environment (original sample = 0.059, $p = 0.014$) also showed significant, although comparatively smaller, indirect effects. This finding indicates a complementary mediation pattern, because both the direct effects of the existing dimensions of service quality on patient trust and the indirect or mediation effects on patient satisfaction through the patient trust variable are positive and statistically significant.

Moderation analysis was conducted using the product indicator approach by constructing interaction terms between patient trust and each moderating variable. The results indicated that all moderating variables significantly influenced the correlation between patient trust and patient satisfaction ($p < 0.05$) (see Table 5). Age exhibited the strongest moderating effect (original sample = 0.178, $p < 0.001$), followed by comorbidity (original sample = 0.162, $p = 0.001$), gender (original sample = 0.145, $p = 0.003$), socioeconomic status (original sample = 0.137, $p = 0.004$), and insurance type (original sample = 0.122, $p = 0.013$). These findings suggest that demographic and clinical

characteristics influence the strength of the relationship between patient trust and patient satisfaction.

Table 5. Indirect Effects (Mediation Analysis) and Interaction Effects (Moderation Analysis)

Relationship	β	t-value	p-value
IM \rightarrow PS	0.056	2.602	0.009
TQ \rightarrow PS	0.122	5.449	<0.001
AC \rightarrow PS	0.077	3.512	<0.001
FA \rightarrow PS	0.098	4.409	<0.001
PE \rightarrow PS	0.059	2.468	0.014

Interaction	β	t-value	p-value
PT \times age \rightarrow PS	0.178	3.955	<0.001
PT \times gender \rightarrow PS	0.145	3.021	0.003
PT \times insurance type \rightarrow PS	0.122	2.490	0.013
PT \times socioeconomic status \rightarrow PS	0.137	2.854	0.004
PT \times comorbidity \rightarrow PS	0.162	3.306	0.001

Source: Study data

Information: IM = interpersonal manner, TQ = technical quality, AC = accessibility and convenience, FA = financial aspects, PE = physical environment, PT = patient trust, PS = patient satisfaction

DISCUSSION

This study provides empirical evidence that service quality influences patient satisfaction through the mediating role of patient trust, highlighting trust as a central mechanism in healthcare delivery. Rather than operating as isolated determinants, Service quality dimensions appear to impact patient satisfaction through patient perceptions and healthcare experiences, underscoring the importance of trust in translating healthcare interactions into perceived outcomes. The research findings are consistent with previous evidence showing that patient experience—including satisfaction—is closely linked to improved health outcomes and overall healthcare performance (Manary et al. 2013). Previous research has confirmed that higher patient satisfaction is associated with better postoperative outcomes, including reduced readmission rates and lower complication rates (Kaye et al. 2017). Patient satisfaction has also been linked to better surgical outcomes and healthcare quality indicators in postoperative care settings (Prabhu et al. 2018). In this context, patient trust functions as an important mechanism that influences how patients interpret service quality, adhere to treatment, and engage with healthcare providers. Trust is also associated with a higher willingness to interact continuously with the health care system and seek care, further underscoring its central role in healthcare delivery (Hall et al. 2001).

Among all dimensions of service quality, technical quality emerged as the dominant factor in patient trust ($\beta = 0.253$), indicating that clinical competence plays a major role in shaping patient perceptions. These results are similar to previous findings which emphasize that professional expertise, diagnostic capabilities, and effective clinical

performance are factors that can determine and drive patient trust and perceptions of health service quality. Perceived clinical competence can be a primary basis for building trust because hospitals are a place where patients often experience uncertainty and vulnerability. These results are in line with previous research which stated the importance of medical personnel expertise and technical aspects of care in shaping patient evaluations of the quality of health services (Sumaedi, Yarmen & Bakti 2016). In addition, evidence from high-quality health systems research highlights that strengthening clinical quality is crucial for improving health outcomes and building confidence in health care systems, particularly in middle- and low-income countries (Kruk et al. 2018).

Apart from technical quality, other service dimensions including financial aspects also need to be considered, accessibility and convenience, interpersonal manner, and physical environment—also demonstrated significant positive effects on patient trust. These findings suggest that trust is not only driven by clinical competence but is also determined by broader patient service experience factors. Financial aspects and perceived fairness of healthcare costs may also influence patients' confidence in healthcare services, particularly in systems where access to care is affected by insurance coverage or out-of-pocket payments. These findings are consistent with previous studies highlighting the importance of communication, responsiveness, accessibility, and patient experiences in shaping perceptions of healthcare quality and satisfaction (Kalaja 2023). Accessibility and waiting time may reflect healthcare system efficiency, where delays or barriers to care can reduce patients' confidence in healthcare delivery (Jamshidi, Parker & Hashemi 2020). Long waiting times are consistently associated with poor quality of care, decreased trust in healthcare providers, low patient satisfaction (Bleustein et al. 2014).

Interpersonal communication further contributes to trust by fostering empathy, understanding, and patient engagement, all of which may improve patients' experiences and satisfaction with healthcare services (Burgener 2017). Effective communication has also been shown to strengthen trust between doctors and patients and improve perceptions of satisfaction and quality resulting from the service (Du et al. 2020). Previous studies have demonstrated that effective clinician-patient communication may influence health outcomes through improved understanding, treatment adherence, and patient engagement (Street et al. 2009). Environmental factors, including physical comfort and healthcare environmental design, may also shape patients' perceptions of care quality and overall healthcare experience (Jamshidi, Parker & Hashemi 2020).

Patient trust acts as a connecting factor between service quality and patient satisfaction when mediation analysis is conducted. This finding aligns with healthcare quality frameworks such as the Donabedian model, in which healthcare structures and care processes contribute to patient-centred outcomes through perceptions of care and patients' experiences. In this framework, service quality dimensions

reflect structural and process-related components of care that shape patients' perceptions and experiences of healthcare services (Sumaedi, Yarmen & Bakti 2016). Patient trust may function as an important mechanism through which these care experiences influence patient-centred outcomes, including satisfaction. Previous research has shown similarly that trust mediates the correlation between healthcare experience and patient satisfaction (Du et al. 2020). These findings mean that patient trust plays a key role in linking service quality with patient satisfaction variables, Highlighting that in the provision of health services, trust and the relationship between patient and service provider are things that need attention.

Moderation analysis revealed that patient characteristics including age, gender, insurance type, socioeconomic status, and comorbidities significantly influenced the correlation between trust and satisfaction. Notably, the positive coefficients indicate that these factors strengthen the effect of patient trust on patient satisfaction, suggesting that trust becomes more influential under certain demographic and clinical conditions. For example, older patients and those with comorbidities may place greater emphasis on trust when evaluating healthcare experiences due to increased clinical complexity and dependency on healthcare providers (Xesfingi & Vozikis 2016). Similarly, differences in socioeconomic status and insurance coverage may shape expectations, perceived value, and sensitivity to service quality, thereby influencing how trust translates into satisfaction (McFarland, Ornstein & Holcombe 2015). This variability is supported by previous evidence demonstrating that demographic and socioeconomic factors significantly influence patient perceptions and reported satisfaction levels (Anhang et al. 2014). This indicates that there is heterogeneity in the results of the impact of trust on satisfaction because it depends on the context, emphasising the need for tailored, patient-centred healthcare strategies.

These findings are further supported by evidence from the Indonesian context, where various dimensions in the quality of health services are able to encourage patient satisfaction, especially in general hospital environments (Nawawi, Aryawati & Febriani 2025). Increased utilization of health services and additional pressure on the health care delivery system has occurred as a result of the implementation of the National Health Insurance program, particularly in middle, and low-income settings where healthcare quality remains a major challenge (Kruk et al. 2018). In Indonesia, structural challenges within the decentralised healthcare system may further influence patient expectations, perceptions of care quality, and healthcare experiences (Nugraha, Paskarini & Tualeka 2025). In such contexts, both non-technical and technical aspects of healthcare services become increasingly important in maintaining patient trust and satisfaction. Strengthening healthcare system resilience and service quality is therefore essential to sustain patient-centred outcomes in resource-constrained settings (Sari et al. 2023). These contextual factors may help

explain why both technical and non-technical dimensions of care significantly contributed to patient trust in this study.

Overall, the results of this study can provide new insights into the factors and mechanisms underlying patient satisfaction, specifically in hospital settings. Furthermore, it highlights the importance of a comprehensive, patient-centered approach to improving the quality of healthcare services, integrating clinical excellence with accessibility, financial transparency, and effective communication. In resource-constrained healthcare systems, strengthening patient trust may represent a critical strategy for improving patient satisfaction and overall healthcare performance.

Several limitations were identified in the study. First, it was conducted over a limited period of time, thus limiting causal conclusions between service quality, patient trust, and patient satisfaction. Second, data were obtained from only one hospital located in West Java, Indonesia, thus limiting the generalizability of the results to other healthcare sectors. Third, the existence of response bias due to measurements based on self-reports can include response bias due to social pressure or social desire. Fourth, although PLS-SEM is suitable for complex models, these results should be interpreted not as causal but as predictive in nature. Finally, while several moderating variables were included, other potentially relevant factors—such as clinical severity or prior healthcare experiences—were not examined and may influence patient perceptions. Further research is recommended using longitudinal designs and multi-center data to expand and validate these findings.

CONCLUSION

The research results found that patient trust is able to mediate or bridge the impact of service quality on patient satisfaction. Among the dimensions of service quality, patient trust is highly influenced by technical quality factors, which underscores the importance of clinical competence in hospital care. In addition, the finding of a moderating effect of patient characteristics on the correlation between trust and satisfaction, indicates that patient satisfaction varies across demographic and clinical profiles.

These findings focus on a comprehensive approach that is useful for improving the quality of healthcare services that integrates technical excellence, accessibility, and financial transparency with strategies to strengthen patient trust. The observed moderating effects further suggest that patient-centred care should be tailored to individual characteristics to optimise satisfaction. Overall, the research contribution lies in in-depth understanding of the mechanisms underlying patient satisfaction in hospital settings and providing evidence to inform targeted strategies to improve healthcare performance in resource-constrained systems.

ACKNOWLEDGEMENTS

The authors would like to express their deepest gratitude to all respondents and hospital staff who provided support in the process of conducting this research.

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