



The Influence of Hospital Service Quality, Hospital Service Innovation Strategy, and Therapeutic Communication Competence of Doctors on Patient Loyalty Mediated by Trust in a Military Hospital under the Indonesian Army Health Center

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

Aims: This study aims to explore the influence of hospital service quality, hospital service innovation strategy, and doctors' therapeutic communication competence on patient loyalty, with trust and patient satisfaction as mediating variables.

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Study Design: Quantitative, cross-sectional study.

Place and Duration of Study: The research was conducted at the Level III Army Hospital, a healthcare facility managed by the Indonesian Army under the Army Health Center (Puskesad).

Methodology: A structured survey was administered to 384 family patients receiving care at the hospital. Data were analyzed using Structural Equation Modeling-Partial Least Squares (SEM-PLS) to examine the relationships between hospital service quality, innovation strategies, therapeutic communication competence, trust, and patient loyalty.

Results: The study found that service quality, innovation strategies, and communication efficiency positively influence patient loyalty, with trust mediating the effect of service quality and communication efficiency. However, trust did not mediate the effect of innovation strategy on loyalty.

Conclusion: Hospital service quality, innovation strategies, and therapeutic communication competence are critical factors influencing patient loyalty. Trust enhances the effects of hospital service quality and therapeutic communication competence on loyalty but does not mediate the impact of innovation strategies. These findings highlight the importance of improving service quality and communication competence to build trust and foster patient loyalty in hospital settings.

Keywords: Hospital service quality; service innovation, physician therapist communication competence; patient loyalty; patient trust; SMILE Puskesad, and Level III Army Hospital.

1. INTRODUCTION

Patient loyalty is crucial for hospitals as it impacts operational and financial success. Loyal patients tend to return and recommend the hospital to others, improving its reputation and reducing marketing costs (Asnawi et al., 2019; Susanti, Nyorong, & Sudiro, 2020). This loyalty is closely linked to patient satisfaction, which influences clinical outcomes and adherence to treatment plans (Harsa & Indrawati, 2019). Hospitals that focus on delivering a positive patient experience, including both medical and non-medical services, can create strong emotional bonds, provide a competitive advantage, and strengthen their market position (Lin & Yin, 2022; Huang et al., 2021). Research shows that patient loyalty is influenced by factors such as service quality, satisfaction, and relationship marketing (Yıldırım et al., 2022; Aladwan et al., 2021).

Service innovation in hospitals is essential for enhancing patient satisfaction and loyalty. This innovation includes service design, development of new services, process improvements, and the integration of digital technology in hospital administration, finance, service, and management. The use of Electronic Medical Records (EMR) for administrative efficiency (Katapally & Ibrahim, 2023), digital payment systems (Kouroubali et al., 2021), and telemedicine for remote consultations (Dowding et al., 2015) are examples of innovations that can improve operational efficiency and patient satisfaction. Additionally, the use of self-service kiosks and real-time data dashboards can speed

up service and decision-making in management (Gray, 2021; Weggelaar-Jansen et al., 2018).

The quality of hospital services plays a key role in building patient loyalty. Hospitals must provide comprehensive healthcare services with professional medical staff, adequate facilities, and effective management. High service quality can lead to patient satisfaction, which in turn encourages loyalty (Santoso, 2018; Melyani et al., 2020). Consumer evaluations of hospital service quality also serve as a basis for service improvements, focusing on healing, prevention, and rehabilitation efforts (Hayati, 2018). Patient satisfaction is crucial in shaping perceptions and fostering loyalty, especially in the face of increasing competition in the healthcare sector (Arianto, 2017; Assauri, 2003; Tjiptono & Chandra, 2005).

Trust is also a key factor in building patient loyalty. Trust is essential for retaining patients and preventing them from switching to other hospitals, as well as for fostering patient commitment to remain loyal. Studies show that service quality, including staff competence and doctor communication, significantly impacts patient satisfaction and loyalty. Effective communication between doctors and patients, along with medical staff competence, plays a vital role in building trust and patient satisfaction (Setyanda et al., 2020; Unal et al., 2018).

Various studies suggest that service quality, supported by doctor communication skills and

good hospital management, contributes to increased patient satisfaction and loyalty. Trust, commitment, perceived value, and the quality of doctor communication can all enhance patient loyalty (Sembiring & Nurwahyuni, 2023; Zhang et al., 2018; Karakaya et al., 2021). Furthermore, medical competence and good communication in the doctor-patient relationship also contribute to treatment outcomes, satisfaction, and patient loyalty (Thuy et al., 2021; Mei et al., 2021; Tasri & Tasri, 2020).

This research was conducted at the Army Level III Hospital, a healthcare facility owned by the Indonesian National Army (TNI) under the administration of the Army Health Center (Puskesmas) and part of the national healthcare system. This hospital provides basic healthcare services as well as some specialized services, including inpatient care, outpatient care, minor surgery, and emergency services. As part of the network of hospitals managed by Puskesmas, the Army Hospital must comply with government regulations related to service quality and patient satisfaction. Puskesmas has developed the Electronic Service Management Information System (SMILE Puskesmas) to monitor service quality and patient satisfaction. This research is relevant because the hospital is subject to national quality monitoring indicators (INM), which include government-monitored patient satisfaction surveys. SMILE Puskesmas, which allows patients to provide feedback on service quality, shows that while the hospital's performance is generally good, certain aspects such as room cleanliness, food quality, service timeliness, and staff attitude still need improvement.

Patient loyalty is a critical component in the healthcare industry, as it not only reflects the quality of care but also contributes to the sustainability and reputation of healthcare institutions. Understanding the factors that influence patient loyalty is essential for developing effective strategies to enhance healthcare services. The aim of this research is to explore the influence of hospital service quality, hospital service innovation strategy, and doctor therapeutic communication competence on patient loyalty, mediated by the patient satisfaction index and overall trust. It is hoped that this research will provide a deeper understanding of the factors influencing patient loyalty and generate insights that will be beneficial for improving healthcare services in hospitals.

2. MATERIALS AND METHODS

This study uses a quantitative research approach, focusing on the relationships between hospital service quality, hospital service innovation strategy, and therapeutic communication competence of doctors, with patient loyalty as the dependent variable and trust as the mediating variable. The research setting is a real-world environment, conducted at hospitals affiliated with the Indonesian Army Health Service under the guidance of the Indonesian Army Health Center (Puskesmas). The unit of analysis is the individual, namely patients and their families who have used hospital services. The type of data used in this study is primary data collected directly from respondents through surveys.

The population in this study consists of all family patients who have received care at hospitals affiliated with the Indonesian Army Health Service under the guidance of Puskesmas. Since the population is unknown, the sample in this study is determined using the Rao Purba formula. Based on the calculation, the minimum sample size is 384 respondents. The sampling technique used in this study involves purposive sampling and stratified random sampling. The criteria for inclusion in the study are family patients who have received care at least twice or have used the SMILE Puskesmas application at Indonesian Army hospitals, as well as patients who have received care at Indonesian Army Health Service Level III hospitals.

For data analysis, this study uses Structural Equation Modeling-Partial Least Squares (SEM-PLS), which is well-suited for examining complex relationships among multiple variables. This technique allows for assessing the direct impact of hospital service quality, hospital service innovation strategy, and therapeutic communication competence of doctors on the dependent variable, patient loyalty, with trust as the mediating variable. It provides insights into the strength and significance of these relationships. The data collected through surveys are processed and analyzed to test the hypotheses and interpret the findings comprehensively, leading to actionable recommendations for healthcare providers.

3. RESULTS AND DISCUSSION

3.1 Socio-demographic Characteristics

Based on Table 1, the respondents, who are family patients receiving care at the Indonesian

Army Hospital (RSAD) under the supervision of the Indonesian Army Health Center (Puskesad), are mostly female, totaling 293 (76.3%), with the remaining 91 (23.7%) being male. The majority of respondents are aged over 41 years, with 133 (34.6%), followed by those aged 31-40 years with 128 (33.3%), 18-30 years with 119 (31.0%), and under 17 years with 4 (1.0%). Regarding their last level of education, 177 respondents (46.1%) have a diploma, followed by 122 (31.8%) with a bachelor's degree, 60 (15.6%) with a high school diploma, 10 (2.6%) with elementary school, 8 (2.1%) with a master's/doctoral degree, 6 (1.6%) with junior high school, and 1 (0.3%) with no formal education. The majority of respondents are married, with 301 respondents (78.4%), followed by 76 (19.8%) who are single,

and 7 (1.8%) who are widowed/divorced. Regarding occupation, 123 respondents (32.0%) work as civil servants, followed by 90 respondents (23.4%) in other occupations, 87 (22.7%) in private sector employment, 34 (8.9%) are entrepreneurs, 17 (4.4%) are in the military or unemployed, 8 (2.1%) are freelancers, and 8 (2.1%) are students. No respondents work in the police force. In terms of income, 265 respondents (69.0%) earn less than IDR 5,000,000, followed by 113 respondents (29.4%) earning between IDR 5,000,000 and IDR 10,000,000, 4 respondents (1.0%) earning between IDR 15,000,000 and IDR 20,000,000, and 2 respondents (0.5%) earning more than IDR 20,000,000.

Table 1. Socio-demographic characteristics of the study sample

Characteristics	N (384)	%
Gender		
Male	91	23,7%
Female	293	76,3%
Age		
< 17 Tahun	4	1,0%
18 - 30 Tahun	119	31,0%
31 - 40 Tahun	128	33,3%
> 41 Tahun	133	34,6%
Education Level		
No School	1	0,3%
Elementary School	10	2,6%
Junior High School	6	1,6%
Senior High School	60	15,6%
Diploma	177	46,1%
Bachelor's Degree	122	31,8%
Master's/Doctoral Degree	8	2,1%
Marital Status		
Single	76	19,8%
Married	301	78,4%
Widow/Widower	7	1,8%
Employment		
Military	17	4,4%
Police	0	0,0%
Civil Servant	123	32,0%
Private Sector Employee	87	22,7%
Entrepreneur	34	8,9%
Freelancer	8	2,1%
Student/University Student	8	2,1%
Unemployed	17	4,4%
Other	90	23,4%
Income		
< Rp 5.000.000	265	69,0%
Rp 5.000.000 - Rp 10.000.000	113	29,4%
Rp 15.000.000 - Rp 20.000.000	4	1,0%
> Rp 20.000.000	2	0,5%

Source: Primary Data Processed (2024)

3.1.1 Outer model

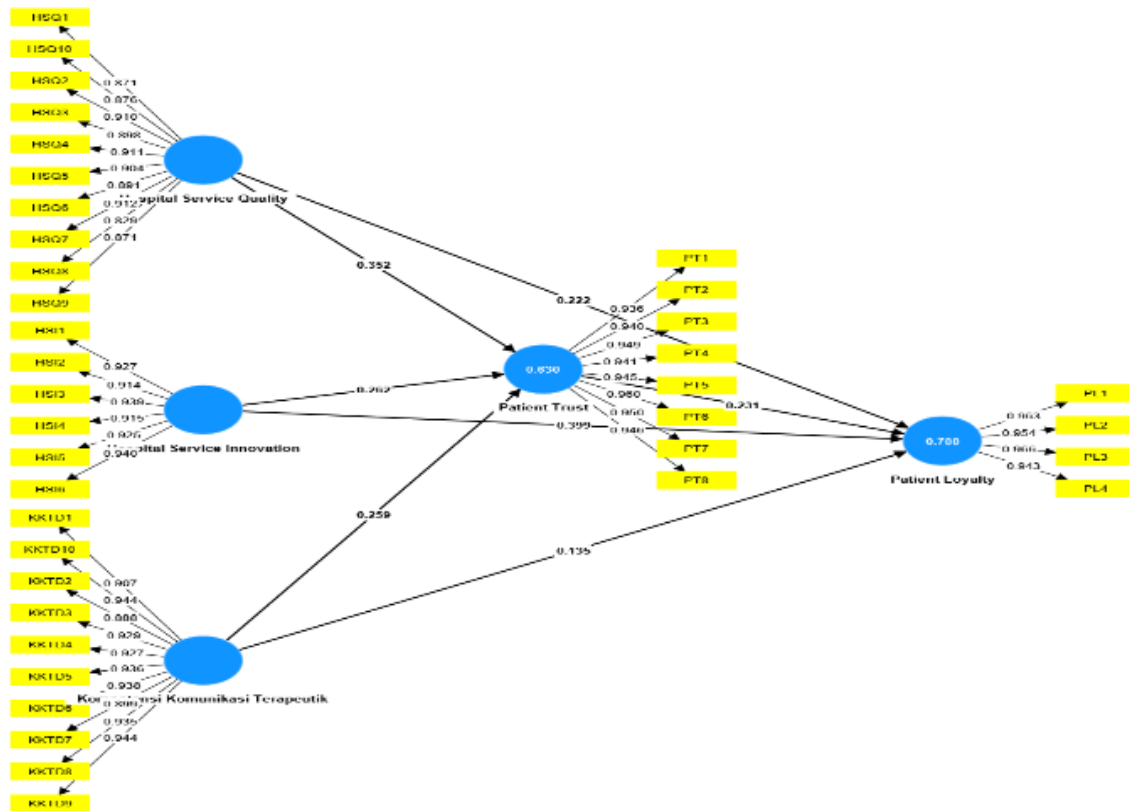


Fig. 1. Outer model
Source: Primary Data Processed (2024)

3.1.2 Validity test

The results of measuring the outer loading of reflective indicators, most of the research indicators have met the characteristics of convergent validity with an outer loading value greater than 0.7 (outer loading > 0.7). This shows that all valid indicators can be utilized in further research analysis. A validity assessment is conducted to evaluate the reliability of a questionnaire. In this study, validity was measured by examining convergent validity and Average Variance Extracted (AVE). A questionnaire is deemed valid if the AVE value exceeds 0.5 and the outer loading value surpasses 0.7.

The table indicates that all research variables have achieved an AVE value that exceeds the standard threshold of 0.5 (AVE > 0.5).

3.1.3 Reliability test

The researchers employed two reliability testing methods: Cronbach's Alpha (CA) and Composite

Reliability. CA evaluates the minimum reliability of a variable, with a value above 0.7 considered acceptable. Composite Reliability assesses the true reliability of a variable, with a value above 0.7 regarded as highly reliable.

The results of the composite reliability and Cronbach's alpha tests indicate that all research variables have values greater than 0.7. Therefore, it can be concluded that these research variables are reliable and suitable for further analysis.

3.1.4 R-square test

The calculated Q-Square value is 0.773. This finding indicates that the research model explains 77.3% of the variation in the data. The remaining 22.7% is explained by factors outside the scope of this study. Therefore, this finding suggests that the applied study model has a high level of fit.

Table 2. Average Variant Extracted (AVE)

Variable	AVE	Description
Hospital Service Innovation Strategy	0,859	Valid
Hospital Service Quality	0,788	Valid
Therapeutic Communication Competence	0,856	Valid
Patient Loyalty	0,915	Valid
Patient Trust	0,895	Valid

Source: Primary Data Processed (2024)

Table 3. Composite reliability and cronbach alpha

Variable	Composite reliability (rho_a)	Composite reliability (rho_c)	Cronbach's Alpha	Information
Hospital Service Innovation Strategy	0,967	0,973	0,967	Reliable
Hospital Service Quality	0,971	0,974	0,970	Reliable
Therapeutic Communication Competence	0,982	0,983	0,981	Reliable
Patient Loyalty	0,969	0,977	0,969	Reliable
Patient Trust	0,983	0,986	0,983	Reliable

Source: Primary Data Processed (2024)

3.1.5 Inner model

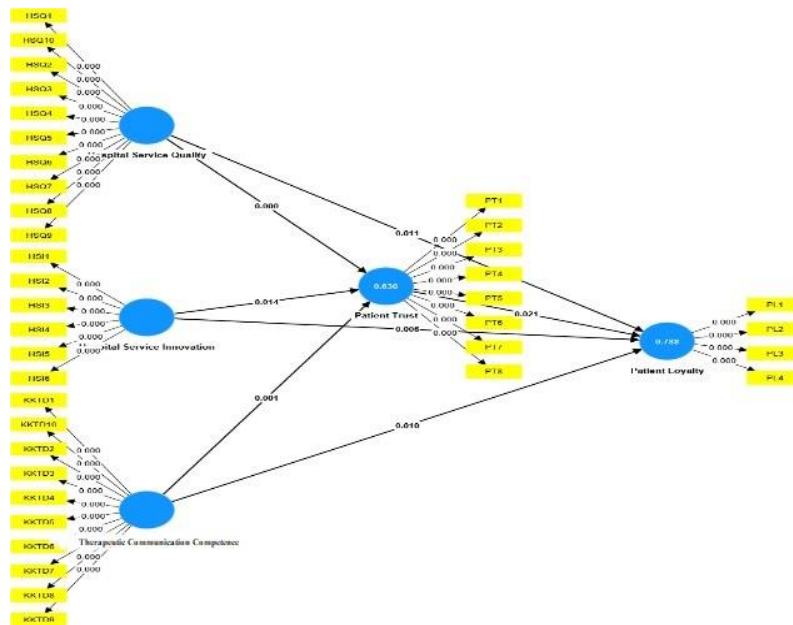


Fig. 2. Inner model

Source: Primary Data Processed (2024)

3.1.6 Hypothesis test

The results of this study indicate that 10 hypotheses were tested, of which 9 hypotheses showed significant results, meaning the research hypotheses were accepted, while the remaining 1 hypothesis showed insignificant

results, meaning the research hypothesis was rejected.

The study found that hospital service quality, service innovation strategies, and therapeutic communication competence significantly and positively influence patient loyalty. Additionally,

Table 4. Hypothesis values

Hypothesis	Impact	T Statistics	P Values	Description
H ₁	Hospital Service Quality (X1) -> Patient Loyalty (Y)	2,548	0,011	Significant
H ₂	Hospital Service Innovation Strategy (X2) -> Patient Loyalty (Y)	2,765	0,006	Significant
H ₂	Therapeutic Communication Competence (X3) -> Patient Loyalty (Y)	2,566	0,010	Significant
H ₄	Patient Trust (Z) -> Patient Loyalty (Y)	2,307	0,021	Significant
H ₅	Hospital Service Quality (X1)-> Patient Trust (Z)	3,814	0,000	Significant
H ₆	Hospital Service Innovation Strategy (X2) -> Patient Trust (Z)	2,465	0,014	Significant
H ₇	Therapeutic Communication Competence (X3) -> Patient Trust (Z)	3,459	0,001	Significant
H ₈	Hospital Service Quality (X1-> Patient Trust (Z)-> Patient Loyalty (Y)	2,005	0,045	Significant
H ₉	Hospital Service Innovation Strategy (X2) -> Patient Trust (Z)-> Patient Loyalty (Y)	1,125	0,261	Not Significant
H ₁₀	Therapeutic Communication Competence (X3) -> Patient Trust (Z) -> Patient Loyalty (Y)	2,784	0,005	Significant

Source: Primary Data Processed (2024)

these three factors were also shown to have a significant impact on patient trust. Trust was identified as a mediating factor in the relationship between hospital service quality and patient loyalty, as well as between therapeutic communication competence and patient loyalty. However, trust did not mediate the relationship between hospital service innovation strategies and patient loyalty. These findings emphasize the crucial role of trust in enhancing patient loyalty, particularly through improving service quality and communication competence.

3.2 Discussion

3.2.1 The effect of hospital service quality on patient loyalty

The results of the study indicate that the T-table value is (2.548 > 1.66140), and the P-value is (0.011 < 0.05), meaning that hospital service quality significantly affects patient loyalty. Hospital service quality significantly impacts patient loyalty, with higher service quality fostering trust, satisfaction, and emotional connection, encouraging patients to return and recommend the hospital (Susanti et al., 2020; Lin & Yin, 2022). Key factors include empathy,

responsiveness, communication, and reliability, which directly influence loyalty (Aladwan et al., 2021). Patient satisfaction often mediates this relationship, highlighting the importance of meeting or exceeding expectations (Asnawi et al., 2019; Fatima et al., 2018). Additionally, trust, perceived value, and hospital image play crucial roles in shaping loyalty (Shie et al., 2022; Yu et al., 2020). Overall, improving service quality and addressing factors like cleanliness and personal attention is essential for sustaining long-term patient loyalty (Yudhawati, 2019; Zhang et al., 2018).

3.2.2 The impact of hospital service innovation strategy on patient loyalty

The research results show that the T-value is (2.765 > 1.66140), and the P-value is (0.006 < 0.05), indicating that hospital service innovation strategies significantly impact patient loyalty. Hospital service innovation strategies play a crucial role in enhancing patient loyalty by creating more efficient, effective, and personalized healthcare experiences. Innovations such as digital technologies, including Electronic Medical Records (EMR),

mobile applications for scheduling and consultations, and telemedicine services, improve service quality and accessibility (Hydari et al., 2020). These strategies foster satisfaction, trust, and emotional connections by addressing patient needs responsively, ultimately strengthening loyalty (Susanti et al., 2020; Zhang et al., 2018). Research highlights that service quality, patient satisfaction, trust, and empathy are critical determinants of loyalty, with innovations driving positive perceptions and long-term relationships (Fatima et al., 2018; Puspaningrum, 2020; Sembiring & Nurwahyuni, 2023). Consequently, hospitals adopting continuous service innovations not only attract new patients but also retain existing ones, boosting overall loyalty and healthcare outcomes (Pratama & Hartini, 2020; Aladwan et al., 2021).

3.2.3 The impact of therapeutic communication competence on patient loyalty

The research results show that the T-value is (2.566 > 1.66140), and the P-value is (0.010 < 0.05), indicating that therapeutic communication competence significantly impacts patient loyalty. Therapeutic communication competence significantly influences patient loyalty by fostering trust, satisfaction, and positive healthcare experiences. Effective doctor-patient communication, characterized by clarity, empathy, and responsiveness to emotional needs, enhances trust and supports long-term relationships (Kugbey et al., 2018; Prasasta et al., 2022). This competence not only affects immediate care experiences but also shapes patients' long-term perceptions of service quality, encouraging them to return and recommend services (Afif & Suwandari, 2019; Karakaya et al., 2021). Research highlights that attributes such as clinical expertise, empathy, and respect improve patient trust and loyalty by strengthening relational outcomes (Robins & Wolf, 1988; Guo et al., 2023). Thus, enhancing therapeutic communication is crucial for healthcare providers to ensure patient satisfaction, strengthen loyalty, and achieve better treatment outcomes (Ridd et al., 2009; Singh, 2015).

3.2.4 The impact of trust on patient loyalty

The research results show that the T-value is (2.307 > 1.66140), and the P-value is (0.021 < 0.05), indicating that trust significantly impacts patient loyalty. Patient trust is a critical factor in fostering loyalty, as it builds confidence in the quality, professionalism, and transparency of healthcare services. Research highlights that

trust enhances emotional bonds and long-term commitment, making patients more likely to return and recommend services despite alternative options (Li et al., 2021; Sofia, 2023). Trust also mediates the relationship between satisfaction and loyalty, reinforcing its central role in sustaining positive patient-provider relationships (Pribadi et al., 2021; Ernilawati & Maulana, 2022). Additionally, trust has been shown to significantly influence positive word-of-mouth recommendations, further solidifying its importance in patient loyalty (Wibowo & Junaedi, 2019).

3.2.5 The impact of hospital service quality on trust

The research results show that the T-value is (3.814 > 1.66140), and the P-value is (0.000 < 0.05), indicating that hospital service quality significantly impacts patient trust. The descriptive results show that overall hospital service quality is highly rated, although improvements are needed in areas such as staff attention during care and cleanliness of medical facilities. Responsiveness from staff was rated most positively by patients. Trust in the hospital is also high, with patients feeling secure in the medical standards and reliability of the care provided, though clarity of medical information and consistency in applying standards could be improved. Enhancing service quality, especially in areas that patients prioritize, is crucial for building and maintaining patient trust. Research emphasizes the strong relationship between service quality and patient trust, with studies indicating that high-quality care strengthens trust and patient loyalty (Shie et al., 2022; Usman, 2017). Positive hospital image also plays a moderating role in this relationship (Usman, 2017).

3.2.6 The impact of hospital service innovation strategy on trust

The research results show that the T-value is (2.465 > 1.66140), and the P-value is (0.014 < 0.05), indicating that hospital service innovation strategy significantly impacts patient trust. The descriptive results indicate that the Hospital Service Innovation Strategy is highly rated, with room for improvement in responsiveness to patient feedback, which is slightly lower than the collaboration between medical staff and patients. Meanwhile, Patient Trust also scored very well, reflecting high patient confidence in the care provided. This suggests that service innovations

not only enhance trust but also contribute to a positive perception of care quality. Strategies like technology adoption, personalized care, and proactive customer care programs help strengthen patient trust by demonstrating the hospital's commitment to efficiency and quality (Julianti et al., 2022; Sembiluh & Sulistiadi, 2022). Research highlights that trust mediates the positive impact of service innovation on patient satisfaction and loyalty (Chen et al., 2017; He et al., 2022). Innovations that address patient needs and adapt to medical advancements significantly boost trust, leading to better patient experiences and stronger relationships (Zheng et al., 2023).

3.2.7 The impact of therapeutic communication competence on trust

The research results show that the T-value is (3.459 > 1.66140), and the P-value is (0.001 < 0.05), indicating that therapeutic communication competence significantly affects patient trust. The descriptive results show that while therapeutic communication competence is very good, with doctors effectively implementing therapeutic communication, there is room for improvement, particularly in providing emotional support during care. Patient trust is also high, suggesting that patients feel secure and confident in their care, though concerns about safety and clear communication from medical staff remain. Effective doctor-patient communication is crucial for building trust, as it influences patients' perceptions of competence, empathy, privacy, and reliability (Kayaniyil et al., 2009). Good communication skills, including active listening and empathy, enhance patient trust and engagement in their care (Setlhare & Madiba, 2023; Chandra et al., 2020). Ultimately, improving therapeutic communication competence can strengthen patient trust, leading to better satisfaction and loyalty (Du et al., 2020; Karakaya et al., 2021).

3.2.8 The impact of hospital service quality on patient loyalty mediated by trust

The research results show that the T-value is (2.005 > 1.66140), and the P-value is (0.045 < 0.05), meaning that patient trust acts as a mediator between hospital service quality and patient loyalty. Hospital service quality, particularly staff responsiveness, significantly impacts patient trust and loyalty, although areas like personalized attention and cleanliness require improvement to enhance overall service

perceptions (Fatima et al., 2018; Nurgahawan et al., 2022). Patient trust mediates the relationship between service quality and loyalty, with high-quality care fostering trust, which in turn strengthens patient loyalty and commitment (Aladwan et al., 2021). Research indicates that service quality, patient satisfaction, and trust are crucial factors in promoting patient loyalty, with satisfaction often mediating the relationship between service quality and loyalty (Sitio & Ali, 2019; Shie et al., 2022). Therefore, healthcare providers should prioritize service quality and trust-building efforts to foster long-term patient loyalty.

3.2.9 The impact of hospital service innovation strategy on patient loyalty mediated by trust

The research results show that the T-value is (1.125 < 1.66140), and the P-value is (0.261 > 0.05), meaning that patient trust does not act as a mediator between hospital service quality and patient loyalty. Hospital service innovation strategies, such as implementing new technologies, efficient management systems, and improved facilities, directly impact patient satisfaction and loyalty by enhancing service quality and operational efficiency (Hsieh et al., 2018; Fatima et al., 2018). While patient trust remains essential, innovations like online registration and telemedicine provide convenience and a better experience, fostering loyalty without necessarily requiring trust as a mediator (Unal et al., 2018; Platonova et al., 2008). Hospitals that prioritize continuous innovation can meet patient expectations more effectively, increasing satisfaction and loyalty through practical improvements rather than solely relying on trust-building efforts.

3.2.10 The impact of therapeutic communication competence on patient loyalty mediated by trust

The research results show that the T-value is (2.784 > 1.66140), and the P-value is (0.005 < 0.05), meaning that patient trust plays a mediating role between therapeutic communication competence and patient loyalty. Therapeutic communication competence is a key factor in building patient trust and loyalty through effective interactions, including empathetic listening, providing clear information, and offering emotional support (Fatima et al., 2018). Research shows that good communication enhances patients' trust in medical professionals

and healthcare facilities, which in turn strengthens patient satisfaction and loyalty (Hsieh et al., 2018; Akbar et al., 2020). Trust acts as a mediator linking communication competence with loyalty, indicating that a solid and trust-based patient-doctor relationship is a crucial predictor of patient loyalty to healthcare providers (Platonova et al., 2008; Mbuthia & Thaddaeus, 2015).

4. CONCLUSION

This study demonstrates that there is a positive and significant influence of hospital service quality on patient loyalty, indicating that improving hospital service quality can enhance patient loyalty. Hospital service innovation strategy also has a positive and significant effect on patient loyalty, suggesting that enhanced service innovation can strengthen patient loyalty. Additionally, therapeutic communication competence shows a significant relationship with patient loyalty, highlighting that better communication by medical staff can improve patient loyalty. The study further reveals the critical role of patient trust, both directly on patient loyalty and as a mediator between hospital service quality, therapeutic communication competence, and patient loyalty. Patient trust increases with improvements in hospital service quality, service innovation strategy, and therapeutic communication competence. However, the results also show that the mediation of patient trust is not significant in the relationship between hospital service innovation strategy and patient loyalty, indicating that service innovation requires additional approaches to be more effective in increasing patient loyalty. Overall, the study underscores the importance of service quality, innovation, communication competence, and patient trust in building patient loyalty.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that generative AI technologies such as Large Language Models, etc have been used during writing or editing of this manuscript. This explanation will include the name, version, model, and source of the generative AI technology and as well as all input prompts provided to the generative AI technology.

Details of the AI usage are given below:

1. **Name of AI Technology:** ChatGPT (OpenAI, Version January 2025).

2. **Purpose:** Assistance in drafting, editing, and revising text in specific sections, particularly the methodology and discussion.

3. **Prompts:**

- "Generate a concise description of methodology aligned with qualitative research approaches."
- "Revise the discussion section to emphasize key findings and ensure coherence with the hypothesis."

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

- Afif, N., & Suwandari, L. (2019). Patient information system and doctor competence in increasing satisfaction and loyalty to primary level health service. *Journal of Medicoeticolegal and Hospital Management*, 8(1). <https://doi.org/10.18196/jmmr.8182>
- Akbar, F., Ulfah, U., & Mareta, Y. (2020). The effect of health services quality on satisfaction and loyalty in West Sulawesi Province, Indonesia. *Open Access Macedonian Journal of Medical Sciences*, 8(D), 150-157. <https://doi.org/10.3889/oamjms.2020.4290>
- Aladwan, M., Salleh, H., Anuar, M., Alhwadi, H., & Almomani, I. (2021). Relationship among service quality, patient satisfaction and patient loyalty: Case study in Jordan Mafrag Hospital. *Linguistics and Culture Review*, 5(S3), 27-40. <https://doi.org/10.21744/lingcure.v5ns3.1368>
- Arianto, N. (2017). The influence of service quality, price, and satisfaction on patient loyalty (case study in outpatients at Premier Bintaro Hospital). *Journal of Organization and Management*, 13(1), 1-9.
- Asnawi, A., Awang, Z., Afthanorhan, A., Mohamad, M., & Karim, F. (2019). The influence of hospital image and service quality on patients' satisfaction and loyalty. *Management Science Letters*, 9, 911-920. <https://doi.org/10.5267/j.msl.2019.2.011>
- Assauri, S. (2008). *Production and Operations Management* (Revised Edition). Jakarta: Publishing Institute of the Faculty of Economics, University of Indonesia. Chandra, S., Ward, P., &

- Mohammadnezhad, M. (2020). Investigating patient trust in physicians: A cross-sectional survey of out-patient departments in Fiji. *International Quarterly of Community Health Education*, 41(4), 369-377.
<https://doi.org/10.1177/0272684x20967602>
- Chen, J., Kerr, D., Chou, C., & Ang, C. (2017). Business co-creation for service innovation in the hospitality and tourism industry. *International Journal of Contemporary Hospitality Management*, 29(6), 1522-1540. <https://doi.org/10.1108/ijchm-06-2015-0308>
- Dowding, D., Randell, R., Gardner, P., Fitzpatrick, G., Dykes, P., Favela, J., ... & Currie, L. (2015). Dashboards for improving patient care: Review of the literature. *International Journal of Medical Informatics*, 84(2), 87-100. <https://doi.org/10.1016/j.ijmedinf.2014.10.001>
- Du, L., Xu, J., Chen, X., Zhu, X., Wu, R., Ji, H., ... & Zhou, L. (2020). Rebuilding doctor-patient trust in medical service delivery in China. *Scientific Reports*, 10(1). <https://doi.org/10.1038/s41598-020-78921-y>
- Ernilawati, M., & Maulana, H. (2022). The influence of customer perceived value and customer trust on customer loyalty in J&T delivery services Bengkalis. *Inovbiz Journal of Business Innovation Investment Management and Entrepreneurship Series*, 2(1), 115. <https://doi.org/10.35314/inovbizmik.v2i1.2489>
- Fatima, T., Malik, S., & Shabbir, A. (2018). Hospital healthcare service quality, patient satisfaction, and loyalty. *International Journal of Quality & Reliability Management*, 35(6), 1195-1214. <https://doi.org/10.1108/ijqrm-02-2017-0031>
- Gray, C. (2021). Integrated care's new protagonist: The expanding role of digital health. *International Journal of Integrated Care*, 21(4). <https://doi.org/10.5334/ijic.6437>
- Guo, S., Hui, P., Xu, D., Xu, P., & Lu, J. (2023). Self-assessment of doctor-patient communication skills of Chinese medical students: A cross-sectional study. <https://doi.org/10.21203/rs.3.rs-2438065/v1>
- Harsa, S., & Indrawati, R. (2019). Patients' satisfaction and loyalty affect the quality of healthcare services (a clinical study on patients in Indonesia). *IARJSET*, 6(2), 27-32. <https://doi.org/10.17148/iarjset.2019.6205>
- Hayati, T. (2018). The influence of superior leadership style and nurse service quality on patient satisfaction in the treatment room Gatot Soebroto Army Hospital Surgery Puskesmas. *Educational Journal of Nursing (JEN)*, 1(1), 48-57.
- He, J., Hu, C., & Chen, L. (2022). Service innovation, inter-organizational trust, and performance in hospital platforms: Social network and agency perspectives. *Frontiers in Public Health*, 10. <https://doi.org/10.3389/fpubh.2022.819371>
- Hsieh, P., Lee, Y., Wu, H., Huang, C., & Li, L. (2018). Establishing patient loyalty by investigating its relationship with relationship quality, alternative attractiveness, and patient gratitude in hospitals. *International Journal of E-Education E-Business E-Management and E-Learning*, 8(1), 58-65. <https://doi.org/10.17706/ijeeee.2018.8.1.58-65>
- Huang, I., Du, P., Lin, L., Liu, T., Lin, T., & Huang, W. (2021). The effect of perceived value, trust, and commitment on patient loyalty in Taiwan. *Inquiry: The Journal of Health Care Organization, Provision, and Financing*, 58, 004695802110072. <https://doi.org/10.1177/00469580211007217>
- Hydari, M., Ali, M., & Dost, M. (2020). Impact of accreditation, service quality, green standards, and product superiority on customer loyalty: A case of healthcare quality in hospitals of Pakistan. *Journal of Accounting and Finance in Emerging Economies*, 6(1), 219-236. <https://doi.org/10.26710/jafee.v6i1.1080>
- Julianti, V., Sjaaf, A., & Sulistiadi, W. (2022). Digital marketing implementation strategy in hospitals during the COVID-19 pandemic: Literature review. *Indonesian Health Promotion Publication Media (Mppki)*, 5(3), 218-223. <https://doi.org/10.56338/mppki.v5i3.2107>
- Karakaya, Ç., Sumer, F., Demir, Z., & Durmaz, E. (2021). Is communication a prescription for doctors? The relationship between communication competence and trust: A study on breast patients. *Turkish Journal of Communication Research*, (37), 92-108. <https://doi.org/10.17829/turcom.861934>
- Katapally, T., & Ibrahim, S. (2023). Digital health dashboards for decision-making to enable

- rapid responses during public health crises: Replicable and scalable methodology. *JMIR Research Protocols*, 12, e46810. <https://doi.org/10.2196/46810>
- Kayaniyil, S., Gravely-Witte, S., Stewart, D., Higginson, L., Suskin, N., Alter, D., ... & Grace, S. (2009). Degree and correlates of patient trust in their cardiologist. *Journal of Evaluation in Clinical Practice*, 15(4), 634-640. <https://doi.org/10.1111/j.1365-2753.2008.01064.x>
- Kouroubali, A., Kondylakis, H., & Katehakis, D. (2021). Integrated care in the era of COVID-19: Turning vision into reality with digital health. *Frontiers in Digital Health*, 3. <https://doi.org/10.3389/fdgth.2021.647938>
- Kugbey, N., Asante, K., & Meyer-Weitz, A. (2018). Doctor-patient relationship mediates the effects of shared decision making on health-related quality of life among women living with breast cancer. *South African Journal of Psychology*, 49(3), 364-375. <https://doi.org/10.1177/0081246318801159>
- Li, S., Li, G., Liu, N., & Wu, H. (2021). The impact of patient satisfaction on patient loyalty with the mediating effect of patient trust. *Inquiry: The Journal of Health Care Organization, Provision, and Financing*, 58, 004695802110072. <https://doi.org/10.1177/00469580211007221>
- Lin, W., & Yin, W. (2022). Impacts of service quality, brand image, and perceived value on outpatient's loyalty to China's private dental clinics with service satisfaction as a mediator. *PLOS ONE*, 17(6), e0269233. <https://doi.org/10.1371/journal.pone.0269233>
- Mbuthia, M., & Thaddaeus, E. (2015). Validating customer loyalty model using structural equation modeling in a Kenyan hospital. *OALib*, 02(04), 1-11. <https://doi.org/10.4236/oalib.1101213>
- Mei, N., Chang, L., Zhu, Z., Dong, M., Zhang, M., & Zeng, L. (2021). Core competency scale for operating room nurses in China: Scale development, reliability, and validity evaluation. *Nursing Open*, 9(6), 2814-2825. <https://doi.org/10.1002/nop2.985>
- Melyani, R., Irfan, D., Ambiyar, F. A., & Khairana, R. (2020). Design of online queue system for web-based visit of patients in Syafira Hospital. *J Inf Technol Comput Sci*, 3(2), 192-198.
- Nurgahawan, C., Nurminingsih, N., & Agustin, D. (2022). Analysis of the effect of service quality on treatment decisions and patient loyalty in the outpatient unit of Mampang Prapatan Hospital, Jakarta. *Marginal Journal of Management Accounting, General Finance and International Economic Issues*, 1(2), 37-42. <https://doi.org/10.55047/marginal.v1i2.131>
- Platonova, E., Kennedy, K., & Shewchuk, R. (2008). Understanding patient satisfaction, trust, and loyalty to primary care physicians. *Medical Care Research and Review*, 65(6), 696-712. <https://doi.org/10.1177/1077558708322863>
- Prasasta, R., Dewanti, L., Husada, D., & Djuari, L. (2022). Therapeutic communications of doctors and hypertensive patients' satisfaction. *Juxta Jurnal Ilmiah Mahasiswa Kedokteran Universitas Airlangga*, 13(2), 73-78. <https://doi.org/10.20473/juxta.v13i22022.73-78>
- Pratama, V., & Hartini, S. (2020). The effect of perception of health care service quality on patient satisfaction and loyalty in mother and child hospital. *Jurnal Manajemen Teori Dan Terapan | Journal of Theory and Applied Management*, 13(3), 234. <https://doi.org/10.20473/jmtt.v13i3.21139>
- Pribadi, P., Kristina, S., & Syahlani, S. (2021). Building patient loyalty in pharmacy service: A comprehensive model. *Indonesian Journal of Pharmacy*, 241-250. <https://doi.org/10.22146/ijp.1326>
- Puspaningrum, A. (2020). Quality of hospital services and loyalty: Role of customer value. <https://doi.org/10.2991/aebmr.k.200410.008>
- Ridd, M., Shaw, A., Lewis, G., & Salisbury, C. (2009). The patient-doctor relationship: A synthesis of the qualitative literature on patients' perspectives. *British Journal of General Practice*, 59(561), e116-e133. <https://doi.org/10.3399/bjgp09x420248>
- Robins, L., & Wolf, F. (1988). Confrontation and politeness strategies in physician-patient interactions. *Social Science & Medicine*, 27(3), 217-221. [https://doi.org/10.1016/0277-9536\(88\)90124-4](https://doi.org/10.1016/0277-9536(88)90124-4)
- Santoso, V. (2018). Development of the Tanjungpura University teaching hospital. *JMARS: Journal of Architectural Mosaics*, 6(2).
- Sembiluh, N., & Sulistiadi, W. (2022). Analysis of digital marketing implementation in hospitals during the COVID-19 pandemic:

- Literature review. *Indonesian Health Promotion Publication Media (Mppki)*, 5(3), 224-232.
<https://doi.org/10.56338/mppki.v5i3.2135>
- Sembiring, D., & Nurwahyuni, A. (2023). Determinants of loyalty of executive class patients at ambulatory services at Siloam Hospitals TB Simatupang during Covid-19 pandemics. *Journal of Indonesian Health Policy and Administration*, 8(1), 38. <https://doi.org/10.7454/ihpa.v8i1.6556>
- Sethlare, V., & Madiba, S. (2023). Doctor attributes that patients desire during consultation: The perspectives of doctors and patients in primary health care in Botswana. *Healthcare*, 11(6), 840. <https://doi.org/10.3390/healthcare11060840>
- Setyanda, Y. O., Machmud, R., & Putra, A. S. (2020). The relationship between the quality of communication between doctors and dentists and patient loyalty. *B-Dent: Journal of Dentistry, Baiturrahmah University*, 7(2), 136-142.
- Shie, A., Huang, Y., Li, G., Lyu, W., Yang, M., Dai, Y., ... & Wu, Y. (2022). Exploring the relationship between hospital service quality, patient trust, and loyalty from a service encounter perspective in elderly with chronic diseases. *Frontiers in Public Health*, 10. <https://doi.org/10.3389/fpubh.2022.876266>
- Singh, M. (2015). Communication as a bridge to build a sound doctor-patient/parent relationship. *The Indian Journal of Pediatrics*, 83(1), 33-37. <https://doi.org/10.1007/s12098-015-1853-9>
- 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*, 05(10), 551-559. <https://doi.org/10.36348/sb.2019.v05i10.002>
- Susanti, I., Nyorong, M., & Sudiro, S. (2020). Analysis of factors affecting patient loyalty in Bandung General Hospital in Medan. *Journal La Medihealthico*, 1(5), 6-15. <https://doi.org/10.37899/journallamedihealthico.v1i5.148>
- Tasri, Y., & Tasri, E. (2020). Improving clinical records: Their role in decision-making and healthcare management – COVID-19 perspectives. *International Journal of Healthcare Management*, 13(4), 325-336. <https://doi.org/10.1080/20479700.2020.1803623>
- Thuy, D., Phuong, T., Khanh, N., & Vien, N. (2021). Evaluation of patient satisfaction and the service quality of the outpatient care at the Heart Institute of Ho Chi Minh City. *Ho Chi Minh City Open University Journal of Science - Economics and Business Administration*, 11(1), 46-59. <https://doi.org/10.46223/hcmcoujs.econ.en.11.1.1307.2021>
- Tjiptono, F., & Anastasia, D. (2005). *Total quality management*. Yogyakarta: Penerbit Andi.
- Unal, O., Akbolat, M., & Amarat, M. (2018). The influence of patient-physician communication on physician loyalty and hospital loyalty of the patient. *Pakistan Journal of Medical Sciences*, 34(4), 999.
- Usman, I. (2017). Hospital image as a moderating variable on the effect of hospital service quality on the customer perceived value, customer trust, and customer loyalty in hospital services. *Eurasian Journal of Business and Management*, 5(4), 22-32. <https://doi.org/10.15604/ejbm.2017.05.04.003>
- Weggelaar-Jansen, A., Broekharst, D., & Buijne, M. (2018). Developing a hospital-wide quality and safety dashboard: A qualitative research study. *BMJ Quality & Safety*, 27(12), 1000-1007. <https://doi.org/10.1136/bmjqs-2018-007784>
- Wibowo, H., & Junaedi, S. (2019). The impact of service quality, patient satisfaction, and trust on positive word of mouth (WOM) of dental clinic's patients. *Journal of International Conference Proceedings*, 2(3), 68-78. <https://doi.org/10.32535/jicp.v2i3.645>
- Yıldırım, Y., Amarat, M., & Akbolat, M. (2022). Effect of relationship marketing on hospital loyalty: The mediating role of patient satisfaction. *International Journal of Pharmaceutical and Healthcare Marketing*, 16(3), 337-353. <https://doi.org/10.1108/ijphm-01-2021-0010>
- Yu, Y., Chen, Z., Zhao, Y., Wang, Y., Zhang, R., & Zhou, X. (2020). Medical service quality, psychological contract, and patient loyalty. *Medicine*, 99(48), e21079. <https://doi.org/10.1097/md.00000000000021079>
- Yudhawati, N. (2019). Effect between quality of nursing service on inpatient's loyalty and satisfaction in Dr. Soepraoen Army Hospital Malang. *Journal for Research in*

- Public Health*, 1(1).
<https://doi.org/10.30994/jrph.v1i1.3>
Zhang, Y., Zhang, L., Zhang, X., Yang, M., Zhang, S., Li, S., ... & Huang, Y. (2018). Hospital service quality and patient loyalty: The mediation effect of empathy. *Journal of Business and Industrial Marketing*, 33(8), 1176-1186.
- <https://doi.org/10.1108/jbim-02-2018-0072>
Zheng, X., Wang, Y., Wei, W., Zhang, L., & Huo, D. (2023). The impact of service robots on consumer response: Examining the roles of consumers' service expertise and technology expertise. *Psychology and Marketing*, 40(11), 2341-2354.
<https://doi.org/10.1002/mar.21878>

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