The Influence of Leadership, Communication, and Staff Attitude on Hospital Operational Efficiency in East Jakarta

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Submitted: November 28, 2025

Revised: December 23, 2025

Accepted: January 27, 2026

Published Online: January 31, 2026

ABSTRACT

Hospital competition in Indonesia is increasing, requiring every institution to maintain sustainability through increased operational efficiency. Operational efficiency plays a crucial role in service quality, resource utilization, and hospital financial stability. This study aims to analyze the influence of leadership and communication on operational efficiency with staff attitudes as a mediating variable at ABC Hospital, East Jakarta. This study used a causal quantitative approach with Partial Least Squares-Structural Equation Modeling (PLS-SEM) analysis. The sample consisted of 204 healthcare workers at ABC Hospital. Data was collected using a 7-point Likert-scale questionnaire that had been tested for validity and reliability. The analysis included evaluation of the outer model, inner model, hypothesis testing, and Importance-Performance Map Analysis (IPMA). Leadership and communication significantly influenced staff attitudes. Staff attitudes significantly influenced operational efficiency and partially mediated the influence of leadership on operational efficiency. In addition, leadership also had a direct and significant influence on hospital operational efficiency. Therefore, improving leadership quality and strengthening staff professional attitudes are key strategies in sustainably improving the operational efficiency of ABC Hospital.

Keywords*: Communication, Hospital Operational Efficiency, Leadership, Staff Attitude.*

INTRODUCTION

Every year, new hospitals are established in Indonesia in order to meet the citizens' constitutional rights to healthcare. In 2025, around 30 hospitals are built, adding to the existence of 3155 hospital units recorded in 2023, according to the Ministry of Health of Indonesia (Ministry of Health of the Republic of Indonesia, 2024). This growth phenomenon intensifies competition among hospitals, which in turn can influence the hospital in the context of its financial sustainability. Based on Alatawi et al. (2022), the growth of hospital units has placed the obligation to develop an effective, equitable, and efficient healthcare system. However, repetition of consultations due to misdiagnosis, repeated laboratory tests, or redundant prescriptions are some examples of the inefficiencies that can escalate the cost and, in the end, threaten the hospital's ability to remain sustainable. Within this context, operational efficiency is one of the most crucial points to be evaluated in the healthcare system, especially in hospitals, due to its impact on the hospital service quality and the hospital's financial situation. Supporting this, Irwandy et al. (2020), through data envelopment analysis, conclude that operational efficiency and productivity are influenced by good leadership, competent human resources, a good management system, and also technological support.

This study analyzes how leadership, communication, and staff attitude influence the hospital operational efficiency in order to identify the major determinants that contribute the most to improving hospital performance. Leadership is generally understood as an individual's ability to influence, direct, and coordinate the behavior of organizational

JIMKES

Jurnal Ilmiah Manajemen Kesatuan
Vol. 14 No. 1, 2026
pp. 215-226
IBI Kesatuan
ISSN 2337 – 7860
E-ISSN 2721 – 169X
DOI: 10.37641/jimkes.v14i1.4783

members to achieve predetermined goals. In the context of modern organizations, leadership focuses not only on providing instructions but also on the ability to build motivation, discipline, and a work climate conducive to improving individual and organizational performance. Hamdi et al. (2024) emphasized that leadership style plays a strategic role in shaping employee work behavior by strengthening motivation and discipline, which ultimately impacts performance. Similarly, Inayah et al. (2025) view leadership as a crucial element in effective human resource planning and management, particularly in healthcare organizations that demand optimal coordination and service delivery. Furthermore, Sismiati et al. (2025) explain that leadership contributes significantly to employee performance through its ability to retain employees (employee retention) and develop competencies and work commitment. From an organizational perspective, Suparman et al. (2024) emphasize that effective leadership shapes organizational values and norms that support performance. Meanwhile, Sukalumba and Ramli (2025) highlight transformational leadership as an approach that encourages employee emotional engagement, reduces work stress, and strengthens organizational commitment. Thus, leadership can be considered a dynamic process that plays a crucial role in effectively and sustainably mobilizing human resources.

Leadership can play a main role in establishing a clear vision, which sets performance expectations, and also fosters a supportive organizational culture among the hospital staff. Effective communication also ensures that procedures, clinical guidelines, and policies are perfectly understood by all levels of staff, in order to minimize errors, reduce delays, and ultimately support hospital efficiency. Staff attitude reflects the level of commitment, motivation, and behaviour that influence the quality of care (Subhi et al., 2020; Handayani et al., 2022). Therefore, understanding these relationships are crucial, as it shape the behaviour and motivation of healthcare staff, which in turn influences the efficiency of delivery service.

This research is important because the result can provide evidence-based insights as a foundation for hospital management and policymakers. Hospital staff can prioritize strategic improvement in management practices based on the evidence-based results, as it becomes the practical impact from this research, in order to improve the hospital's sustainability. For the academic impact, this research can play a role as a literature within the hospital context, specifically in Indonesia. ABC Hospital, located in East Jakarta, was one of the 44 hospitals in this region that were chosen. ABC Hospital is classified as one of the 5 type B hospitals, a secondary-tier healthcare service based on BPJS. The institution has a total of 206 healthcare staff, consisting of 164 nurses and 42 midwives who support patient care. Located in a strategic place in East Jakarta, this setting was chosen to represent diverse socioeconomic and demographic characteristics.

LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

The Effect of Leadership and Communication on Staff Attitude

Leadership plays an essential role in shaping employee attitudes, particularly within hospital organizations where service demands and work complexity are high. Leaders who are visionary, supportive, and able to act as role models can create a positive and healthy work environment that encourages staff motivation, commitment, and professional behavior. Such leadership helps employees develop constructive attitudes, including responsibility, openness, and a strong focus on service quality. Jaaron (2014), and Zhang et al. (2025) argue that leadership that effectively balances organizational objectives with individual staff needs has a significant influence on the attitudes of healthcare workers. As a result, higher leadership quality is more likely to generate stronger positive outcomes in terms of staff attitude (Chia & Johnson, 2014).

Great communication skills contribute significantly to staff attitude, particularly during their duties. Conveying clear, consistent information in a structured manner can help minimize misunderstanding, thereby fostering greater compliance with safety standards. Seddon (2005) and Sembiring et al. (2022) demonstrate that structured communication like Situation, Background, Assessment, and Recommendation (SBAR)

has a positive influence on nurse attitude and consequently supports patient safety. Therefore, effective communication is believed to be a factor that can influence the shaping of more professional and responsible staff attitudes.

H1: Leadership has a positive effect on staff attitude.
H2: Communication has a positive effect on staff attitude.

The Effect of Staff Attitude on Operational Efficiency

Positive staff attitude plays a key role in improving hospital operational efficiency, as healthcare services rely heavily on human resources. Proactive, disciplined, and quality-oriented staff attitudes contribute to a supportive work environment and smoother service processes (Annisa & Ismail, 2025). Staff with positive attitudes are more likely to comply with standard operating procedures, demonstrate a strong sense of responsibility, and collaborate effectively with colleagues, which helps reduce errors and operational inefficiencies (Pham et al., 2023; Akande et al., 2025). In addition, positive staff attitudes encourage higher productivity and more optimal use of organizational resources.

Kumar et al. (2025) emphasize that staff attitude functions as a significant mediating variable between managerial factors and operational efficiency. This finding indicates that managerial policies, leadership practices, and communication systems cannot fully improve operational efficiency without being supported by positive staff attitudes (Quader, 2024; Ogbu et al., 2024). Therefore, staff attitude should not be viewed merely as an individual characteristic, but also as an important organizational determinant that influences overall work performance optimization. By fostering and maintaining positive staff attitudes, hospitals can enhance operational effectiveness, improve service quality, and support the achievement of long-term strategic objectives (Porter & Teisberg, 2006; Kaplan et al., 2014).

H3: Staff attitude has a positive effect on operational efficiency.

The Effect of Leadership and Communication on Operational Efficiency

In addition to influencing staff attitudes, strong leadership also directly contributes to operational efficiency in hospitals. Through effective decision-making, optimal utilization of human resources, and improved coordination among multidisciplinary teams, leaders can enhance overall operational performance. Seddon (1992) and Okwang'a et al. (2015) identify leadership as one of the key drivers of operational efficiency in the business sector. In the healthcare setting, effective leadership supports the achievement of hospital strategic goals by ensuring that human resources are managed efficiently and aligned with organizational priorities (Walley et al., 2019).

Effective communication plays a pivotal role in accelerating decision-making processes, thereby contributing to operational efficiency. Kumar et al. (2025) argue that operational efficiency in healthcare organizations is influenced by staff attitude, which is shaped through effective communication. This is consistent with Rosen (2014) and Okwang'a et al. (2015), who highlight that communication between staff and management has become a key factor of operational efficiency in the business sector. Within the hospital, the implementation of SBAR communication was found to be significantly important to improve nurses' attitude towards patients, which in turn enhances the service efficiency (Sembiring et al., 2022). Moreover, leaders who encourage open communication can strengthen professionalism and teamwork (Okunande, 2025). In conclusion, these underscore the crucial role of communication in improving operational efficiency (Mitakos & Mpogiatzidis, 2024).

H4: Leadership has a positive effect on operational efficiency.
H5: Communication has a positive effect on operational efficiency.

Staff Attitude as a Mediating Effect

The influence of leadership on operational efficiency extends beyond its direct effects and is often mediated by staff attitude. Effective leaders are able to build trust, provide clear instructions, and create a motivating work environment, which helps shape positive staff attitudes. Positive staff attitudes are reflected in higher commitment, discipline, and responsibility, which in turn improve productivity and operational efficiency. Shah et al. (2023) and Kumar et al. (2025) emphasize that staff attitude plays a critical mediating role in linking leadership and operational efficiency. Therefore, strengthening leadership effectiveness should be accompanied by efforts to foster positive staff attitudes in order to maximize its impact on operational efficiency.

Similarly, effective communication has a significant influence on operational efficiency, although much of this influence occurs indirectly through staff attitude. Clear and structured communication among staff encourages positive attitudes such as compliance with procedures, accountability, and openness in sharing information, which ultimately supports smoother organizational workflows. Sembiring et al. (2022) and Soomro et al. (2024) highlight that structured communication can improve staff attitudes toward patient safety, while Park et al. (2022) and Kumar et al. (2025) further demonstrate that staff attitude mediates the relationship between organizational factors and operational efficiency. Thus, staff attitude functions as a key mechanism that facilitates the relationship between communication quality and operational efficiency (Berwick et al., 2008).

H6: Staff attitude mediates the influence of leadership on operational efficiency.
H7: Staff attitude mediates the influence of communication on operational efficiency.

Figure 1 shows a conceptual model explaining the influence of leadership and communication on operational efficiency, both directly and indirectly through staff attitudes as a mediating variable. Leadership and communication influence staff attitudes, which in turn impact operational efficiency. Furthermore, leadership and communication also have a direct influence on operational efficiency. This model emphasizes the important role of staff attitudes in strengthening the relationship between leadership, communication, and operational efficiency.

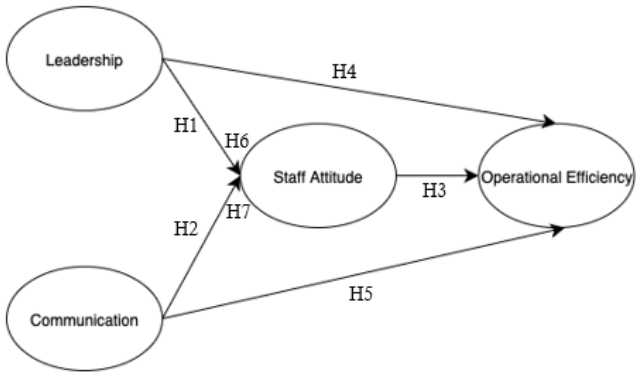

Figure 1. Conceptual Research

RESEARCH METHODS

This study employs a quantitative research design with a causal approach and focuses on hospital employees as the target population. The causal approach is applied to examine cause-and-effect relationships among the variables investigated. The study was conducted at ABC Hospital, located in East Jakarta, which has approximately 206 employees. To determine an appropriate sample size, a G*Power analysis was performed. The analysis used an effect size (f^2) of 0.30 for a one-way test, a 5% error rate ($\alpha = 0.05$), and a statistical

power of 95% (power = 0.95). Based on these parameters, the minimum required sample size was calculated to be 111 respondents, which was considered sufficient to represent the population and explain the relationships among the study variables.

Data were collected using a structured questionnaire adapted from previous studies by Zhang et al. (2025), and Kumar et al. (2025). The questionnaire was distributed online through Google Forms to facilitate accessibility and encourage respondent participation. All variables in this study were measured using a seven-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree), following the recommendation of Weijters et al. (2010).

The inclusion criteria for respondents included hospital staff who have direct contact with patients, have worked at the hospital for at least one year, and voluntarily agreed to participate in the study. The primary data collected were analyzed using Partial Least Squares–Structural Equation Modeling (PLS-SEM). The analysis began with tests of validity and reliability by evaluating the outer measurement model, including convergent validity using the Average Variance Extracted (AVE > 0.5) and reliability assessed through Cronbach's alpha and composite reliability. Subsequently, the inner structural model was evaluated to test the research hypotheses using R^2, Q^2, f^2, and significance testing through a bootstrapping procedure with one-tailed t-values.

Performance Map Analysis (IPMA) is a follow-up analysis conducted after PLS-SEM to evaluate two dimensions of each construct: importance (the importance of the construct to the target variable, calculated from the total path effects) and performance (the actual performance of the construct based on the average score of the latent variables). IPMA helps identify the most important but underperforming variables, thus prioritizing them for improvement or greater managerial attention.

RESULTS

In total, 204 respondents were included in this study, with their characteristics presented in Table 1, including age, gender distribution, and working period. This information is relevant to understanding respondents' demographic profile in this research. Table 1 presents that the majority of respondents are women, with a domination of 53.9%. Based on age group, respondents were dominated by the 28-43 years age group (48.5%), followed by 44-59 years (32.4%), and 18-27 years (18.6%). In this study, there were only 0.5% of respondents included in >59 years old group. Regarding working period, most respondents had worked in the hospital for less than 3 years, at 79.9%.

Table 1. Respondent Profile

Respondent Characteristics		Frequency	Percentage
Gender	Male	94	46.1%
	Female	110	53.9%
Age	18-27 years	38	18.6%
	28-43 years	99	48.5%
	44-59 years	66	32.4%
	>59 years	1	0.5%
Working Period	<3 years	163	79.9%
	3 years and above	42	20.1%

Outer model analysis was done to evaluate the validity and reliability of the indicators that form the latent construct of the PLS-SEM model. Convergent validity by using outer loading value and Average Variance Extracted (AVE) was first done in this evaluation. An indicator is considered valid if the outer loading value ≥ 0.70 and AVE ≥ 0.5, as presented in Table 2.

Table 2. Validity and Reliability Test

Variable	Construct	Outer Loading	CR	AVE
Communication	C1	0.865	0.910	0.690
	C2	0.826		
	C3	0.812		

Variable	Construct	Outer Loading	CR	AVE
	C4	0.789		
	C5	0.885		
	C6	0.802		
Leadership	L1	0.860		
	L2	0.731		
	L3	0.752		
	L4	0.810	0.894	0.657
	L5	0.839		
	L6	0.860		
	L7	0.860		
Staff Attitude	SA1	0.876		
	SA2	0.713		
	SA3	0.813	0.901	0.672
	SA4	0.809		
	SA5	0.857		
	SA6	0.838		
Operational Efficiency	OE1	0.833		
	OE2	0.737		
	OE3	0.797	0.890	0.647
	OE4	0.804		
	OE5	0.824		
	OE6	0.826		

Table 2, all indicators evaluated by cronbach alpha and Composite Reliability (CR) have value > 0.70, indicating that it meets convergent validity criteria. AVE value for each indicator were also >0.50, with details communication (0.690), leadership (0.657), operational efficiency (0.647), and staff attitude (0.672). Thus, the indicators were able to represent the construct measured.

Table 3. Heterotrait-Monotrait ratio (HTMT)

Variable	Communication	Leadership	Operational Efficiency
Leadership	0.879		
Operational Efficiency	0.829	0.886	
Staff Attitude	0.824	0.846	0.881

Based on Table 3, HTMT values for every construct were all below 0.90, showing that every construct has good discrimination validity, which shows that each construct in the model has clear differences from the others.

Coefficient of determination (R^2) analysis was used to measure the models' ability to explain the variance of the dependent variable. R^2 value ranges from 0 to 1, the higher the value, the better the explanation of the variance towards the dependent variable. The evaluation of model quality is not only based on in-sample results, but also uses a causal-predictive approach through the PLS Predict features on Smart-PLS. This evaluation aims to assess the extent to which the model has predictive relevance for the model studied. The evaluation was done by using an out-of-sample prediction technique, in which the model stimulates changes in the data, compared with the initial estimates. The primary metric is Q^2 predict (cross-validated redundancy), which indicates whether the model has predictive power on new data. The result of the coefficient of determination (R^2) and Q^2 is presented in Table 4.

Table 4. R^2 Square and Q^2

Construct	R-square	Q^2predict	Interpretation
Operational Efficiency	0.718	0.628	Large predictive relevance
Staff Attitude	0.635	0.594	Large predictive relevance

As presented in Table 4, the research model explains 71.8% of the variance in operational efficiency (R^2 = 0.718). In addition, staff attitude explained by the model as

much as 63.5% ($R^2 = 0.635$). This result indicates the model has strong explanatory power for the dependent variable. Based on the results presented in Table 4, the model demonstrates a strong predictive capability. The Q^2 predicted values for all constructs are above 0, indicating that the model has predictive relevance. Furthermore, each construct has a value greater than 0.50, placing all constructs in the high predictive relevance category. These results suggest that the model can generate consistent, reliable predictions on new data.

An effect size (f^2) analysis was then conducted to assess the contribution of each independent variable to the dependent variable. The effect size (f^2) value is divided into three categories: small (≥0.02), medium (≥0.15), and large (≥0.35) as presented in Table 5.

Table 5. Effect Size

Construct	F-square	Category
Communication → Operational Efficiency	0.334	Medium
Communication → Staff Attitude	0.149	Small
Leadership → Operational Efficiency	0.139	Small
Leadership → Staff Attitude	0.208	Medium
Staff Attitude → Operational Efficiency	0.193	Medium

Based on Table 5, the effect size (f^2) results indicate that communication has a medium effect on operational efficiency, but a small effect on staff attitude. Leadership shows a small direct effect on operational efficiency, while having a medium effect on staff attitude. In addition, staff attitude has a medium effect on operational efficiency. Therefore, these findings highlight the important role of staff attitude in strengthening the influence of communication and leadership on operational efficiency.

Table 6. Variance Inflation Factor (VIF) Inner Model

Construct	Operational Efficiency	Staff Attitude
Staff Attitude	2.736	
Communication	3.127	2.721
Leadership	3.288	2.721

Presented in Table 6, it can be summarized that the VIF values for each construct are still within the multicollinearity tolerance range, below the threshold of 5. The highest VIF value, 3.228, was found on the construct leadership on operational efficiency, which showed moderate correlation, but was still considered acceptable.

PLS-SEM approach recommends the use of the Cross-Validated Predictive Ability Test (CVPAT), comparing the prediction error of the model with the Indicator Average (IA) and the Linear Model (LM). If the average loss difference is negative, the model is considered to have better predictive capability than the benchmark. Therefore, CVPAT was also done as a comprehensive evaluation of the model's predictive ability in this study.

Table 7. Cross-Validated Predictive Ability (CVPAT) Value

Variable	PLS-SEM vs IA (Ave Loss Difference)	PLS-SEM vs IA (P-Value)	PLS-SEM vs LM (Ave Loss Difference)	PLS-SEM vs LM (P-Value)
Operational Efficiency	-0.510	0.032	-0.071	0.000
Staff Attitude	-0.612	0.023	-0.069	0.001
Overall	-0.561	0.025	-0.070	0.000

Based on Table 7, the CVPAT results strengthen these findings, as all average loss difference values are negative, indicating that the model produces lower prediction errors compared to both indicator benchmarks. The p-values for each construct are also below 0.05, suggesting that the model is not only statistically valid but also demonstrates strong

predictive validity. These results align with the requirements of the causal–predictive approach in modern PLS-SEM.

Table 8. Hypothesis Testing

Hypothesis	Standardized Path Coefficient	T-statistics	p-value	Decision
H1	0.455	2.438	0.007	Supported
H2	0.385	2.106	0.018	Supported
H3	0.386	2.455	0.007	Supported
H4	0.359	2.320	0.010	Supported
H5	0.173	1.285	0.099	Not Supported
H6	0.176	1.909	0.028	Supported
H7	0.149	1.438	0.075	Not Supported

Based on the results presented in Table 8, it can be concluded that not all relationships among variables in the proposed model are statistically significant. Of the seven hypotheses tested, five were supported according to the criteria of p-value < 0.05 and t-statistic > 1.645, indicating the use of a one-tailed testing approach. The findings show that leadership has a positive and significant effect on staff attitude (t = 2.438; p = 0.007). Communication also has a positive and significant influence on staff attitude (t = 2.106; p = 0.018). In addition, staff attitude significantly affects operational efficiency (t = 2.455; p = 0.007). Leadership was also found to have a positive and significant direct effect on operational efficiency (t = 2.320; p = 0.010). However, communication does not have a significant direct effect on operational efficiency (t = 1.285; p = 0.099). Mediation analysis indicates that staff attitude significantly mediates the relationship between leadership and operational efficiency (t = 1.909; p = 0.028), suggesting a specific indirect effect. In contrast, staff attitude does not mediate the relationship between communication and operational efficiency (t = 1.438; p = 0.075).

Importance–Performance Map Analysis (IPMA) is an analytical tool used to evaluate and map the importance of variables in a research model and their actual performance based on empirical data. IPMA is applied to identify variables that have high importance but low performance, indicating areas that require improvement and greater managerial attention. Graphically, IPMA is divided into four quadrants: Quadrant I (high importance and low performance), Quadrant II (high importance and high performance), Quadrant III (low importance and low performance), and Quadrant IV (low importance and high performance), as illustrated in Figure 2.

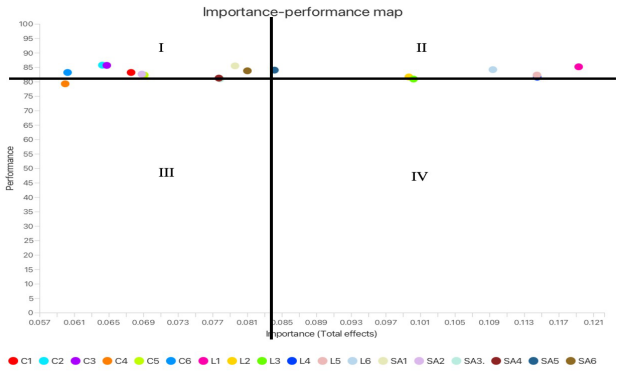

Figure 2. Importance-Performance Map Analysis (IPMA)

As shown in Figure 2, leadership is identified as the most strategic variable influencing operational efficiency, as reflected by its indicators with high importance values. Among these indicators, L1 - Balanced Processing (0.120) shows the highest importance, indicating that leaders' ability to listen to and consider staff input plays a major role in improving operational efficiency. In addition, indicators such as L4 - Self-Awareness, L5 - Charisma, and L6- Inspirational Motivation also demonstrate high importance, further

reinforcing the finding that inspirational, ethical, and reflective leadership dimensions have the strongest influence on operational efficiency. These values exceed the average importance level, positioning leadership as the primary focus for improvement strategies.

In contrast, communication indicators show importance values slightly below the average, suggesting that communication remains relevant in supporting operational efficiency but has a less substantial impact compared to leadership. Similarly, staff attitude indicators show importance in SA3 - Functioning to Meet Patients' Requirements and SA4 – Autonomy of Clinical Judgment, although their contribution is not as strong as that of leadership. Therefore, the IPMA results confirm that the performance of all variables is already at a satisfactory level. However, strengthening leadership emerges as the most effective strategy to enhance operational efficiency.

DISCUSSION

Based on the hypothesis evaluation and the Importance Performance Map Analysis (IPMA), the discussion focuses on the influence of leadership, staff attitude, and communication on operational efficiency at ABC Hospital, East Jakarta. The results indicate that leadership provides the greatest contribution to operational efficiency. This finding is consistent with the study by Tasi et al. (2019), which found that managerial and physician leadership directly improve operational efficiency, service quality, and hospital financial performance. Similarly, Lee et al. (2023) reported that strong leadership, including diversity within the medical workforce, contributes to higher operational efficiency in hospitals in the United States. These findings confirm that leadership remains a key foundation for improving operational efficiency.

Staff attitude was also found to significantly influence operational efficiency. This result is supported by Kumar et al. (2025), who stated that staff attitude plays a mediating role in the effectiveness of AI-based operational management systems. In addition, Alanazi et al. (2022) found that nurses' safety attitudes and work attitudes are positively associated with service quality and patient safety, which are important elements of operational efficiency. These findings suggest that staff with positive attitudes are better able to support higher hospital efficiency. Furthermore, leadership was shown to have a strong influence on staff attitude, indicating that supportive leadership can shape more positive staff behavior. This aligns with the study by Lee et al. (2024), which demonstrated that leaders who reduce workload and workplace incivility can improve staff attitudes and motivation. Park et al. (2022) also confirmed that nurses' attitudes are strongly influenced by leadership within the organizational system.

Communication was found to have a significant effect on staff attitude. This is supported by Giménez-Espert et al. (2023), who reported that communication skills significantly influence professional attitudes. Soomro et al. (2024) also showed that effective communication improves teamwork and nurses' work efficiency, highlighting its relevance in hospital settings. However, communication did not show a significant direct effect on operational efficiency. This finding differs from Shah et al. (2023), who suggested that internal communication strategies improve operational efficiency. This difference may be explained by variations in organizational context, as their study was conducted in a hospital research center with a different team structure from clinical services. Although communication did not have a direct effect, its indirect influence through staff attitude suggests an alternative pathway to operational efficiency.

Mediation analysis showed that staff attitude does not significantly mediate the relationship between communication and operational efficiency. In contrast, staff attitude partially mediates the relationship between leadership and operational efficiency. This finding is consistent with Lee et al. (2024), who found that staff attitudes and well-being, including workload management and reduced workplace incivility, significantly affect hospital productivity and operational efficiency.

The IPMA results indicate that leadership indicators are most important, followed by staff attitude and communication. While internal communication remains important for supporting collaboration, placing greater emphasis on leadership and staff attitudes is

likely to have a stronger impact on operational efficiency (Okwang'a et al., 2015; Okunande, 2025). Therefore, the findings confirm that improving operational efficiency at ABC Hospital depends not only on systems and procedures, but also on leadership quality and staff attitude. Strengthening proactive leadership and a positive work culture is more effective than relying on communication alone (Lee et al., 2023).

CONCLUSION

This study concludes that leadership and staff attitude are the main factors influencing operational efficiency at ABC Hospital. Leadership provides the strongest contribution to operational performance, both directly and indirectly through staff attitude. Staff attitude is shown to be a key mediating factor that strengthens the relationship between leadership and operational efficiency, emphasizing that human aspects within the organization are as important as systems and procedures. Meanwhile, communication demonstrates good performance, but its influence on operational efficiency is lower compared to leadership and staff attitude.

The findings imply that improving hospital operational efficiency should not rely solely on procedural or system improvements, but also on strengthening leadership quality and fostering positive staff attitudes. Therefore, hospital management is encouraged to prioritize the development of participative, inspirational, and reflective leadership, while also cultivating a supportive work culture that enhances staff motivation and commitment. Internal communication should continue to be maintained as a supporting factor, although it is not the primary driver of efficiency improvement. For future research, it is recommended to conduct studies in different hospital settings or apply a longitudinal research design to examine the consistency of these findings over time. Further studies may also incorporate additional organizational variables to provide a more comprehensive understanding of the factors that influence hospital operational efficiency.

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

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

DECLARATION OF GENERATIVE AI STATEMENT: During the preparation of this work the author(s) used ChatGPT, Grammarly, and Turnitin in order to assist in improving writing quality, correcting language errors, and verifying originality of the manuscript. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.

REFERENCES

[1] Akande, A., Bobek, V., Kellner, D., Goodman, M., & Coker, D. C. (2025). Leadership, organizational behavior, and adaptive HR strategies: Ensuring seamless quality integration in the AI era. In *Organizational behavior: Current science, models, and applications* (pp. 415–457). Cham, Switzerland: Springer Nature.

[2] Alanazi, F. K., Sim, J., & Lapkin, S. (2022). Nurses' safety attitudes and their impact on patient outcomes in acute-care hospitals: A systematic review. *Nursing Open, 9*(1), 30–43.

[3] Alatawi, A. D., Niessen, L. W., Bhardwaj, M., Alhassan, Y., & Khan, J. A. (2022). Factors influencing the efficiency of public hospitals in Saudi Arabia: A qualitative study exploring stakeholders' perspectives and suggestions for improvement. *Frontiers in Public Health, 10*(1), 597-607.

[4] Annisa, D., & Ismail, R. S. (2025). Improving the performance of Yogyakarta MSME employees through strengthening work skills. *IJBAMS: International Journal of Business Accounting Management Social Science, 1*(3), 49–57.

[5] Berwick, D. M., Nolan, T. W., & Whittington, J. (2008). The triple aim: Care, health, and cost. *Health Affairs, 27*(3), 759–769.

[6] Chia, L. Y., & Johnson, A. L. (2014). Operational efficiency. In *Operational research in healthcare* (pp. 17–18). Boca Raton, FL: CRC Press.

[7] Giménez-Espert, M. D. C., Maldonado, S., & Prado-Gascó, V. (2023). Influence of emotional skills on attitudes towards communication: Nursing students versus nurses. *International Journal of Environmental Research and Public Health, 20*(6), 4798-4808.

[8] Hamdi, H., Aqmarina, N., Kadir, A., & Naimah, N. (2024). The effect of leadership style, motivation, and work discipline on employee performance. *Jurnal Ilmiah Manajemen Kesatuan, 12*(6), 2201-2212.

[9] Handayani, D., Marnisah, L., Kurniawan, A. W., & Abdurrahman, R. (2022). The effect of transformational leadership on organizational performance: Evidence from private hospitals in Indonesia. *Frontiers in Psychology, 13*(1), 640-650.

[10] Inayah, I., Indradewa, R., Syah, T. Y. R., & Pamungkas, R. A. (2025). Human resource planning at special growth and development hospital: Realizing optimal service. *Jurnal Ilmiah Manajemen Kesatuan*, *13*(7), 399–408.

[11] Irwandy, Sjaaf, A. C., Achadi, A., Nadjib, M., Ayuningtyas, D., Junadi, P., Besral, Kadir, A., Supriyantoro, & Hendrawan, H. (2020). The efficiency and productivity of public service hospitals in Indonesia. *Enfermería Clínica, 30*(12), 236–239.

[12] Jaaron, A., & Backhouse, C. J. (2014). Service organisations resilience through the application of the Vanguard method of systems thinking: A case study approach. *International Journal of Production Research, 52*(7), 2026–2041.

[13] Kaplan, R. S., Witkowski, M., Abbott, M., Guzman, A. B., Higgins, L. D., Meara, J. G., Salem, O., & Weidemeier, M. (2014). Using time-driven activity-based costing to identify value improvement opportunities in healthcare. *Journal of Healthcare Management, 59*(6), 399–412.

[14] Kumar, R., Singh, A., Ahmed Kassar, A. S., Humaida, M. I., Joshi, S., & Sharma, M. (2025). Impact of an artificial intelligence-driven operational management system on operational efficiency in health care organization in Saudi Arabia: a mediating role of staff attitude. *Frontiers in Public Health*, *13*(1), 644-654.

[15] Lee, C. C., Cho, Y. S., Breen, D., Monroy, J., Seo, D., & Min, Y. T. (2023). Relationship between racial diversity in medical staff and hospital operational efficiency: An empirical study of 3,870 US hospitals. *Behavioral Sciences, 13*(7), 564-575.

[16] Lee, S. E., Seo, J. K., & Macphee, M. (2024). Effects of workplace incivility and workload on nurses' work attitude: The mediating effect of burnout. *International Nursing Review, 71*(4), 1080–1087.

[17] Ministry of Health of the Republic of Indonesia. (2024). *Profil kesehatan Indonesia 2023*. Jakarta: Ministry of Health of the Republic of Indonesia.

[18] Mitakos, A., & Mpogiatzidis, P. (2024). Operational efficiency of public hospitals in Greece during the COVID-19 pandemic: A comparative analysis using DEA and AHP models. *Journal of Market Access & Health Policy, 12*(4), 388–402.

[19] Ogbu, A. D., Ozowe, W., & Ikevuje, A. H. (2024). Remote work in the oil and gas sector: An organizational culture perspective. *GSC Advanced Research and Reviews, 20*(1), 188–207.

[20] Okunade, J. K. (2025). Exploring the Impact of Effective Internal Communication Strategies on Employee Morale, Productivity, and Organizational Culture. *Lakhomi Journal Scientific Journal of Culture*, *6*(1), 1-11.

[21] Okwang'a, B., Mungania, A., & Karanja, J. (2015). Analysis of factors affecting the operational efficiency of Jua Kali sector: A case of apparel industry in Nairobi, Kenya. *European Journal of Business and Management, 7*(30), 2123-1133.

[22] Park, J., Han, S. J., Kim, J., & Kim, W. (2022). Structural relationships among transformational leadership, affective organizational commitment, and job performance: The mediating role of employee engagement. *European Journal of Training and Development, 46*(9), 920–936.

[23] Pham, N. T., Jabbour, C. J. C., Pereira, V., Usman, M., Ali, M., & Vo-Thanh, T. (2023). Common good human resource management, ethical employee behaviors, and organizational citizenship behaviors toward the individual. *Human Resource Management Journal, 33*(4), 977–1000.

[24] Porter, M. E., & Teisberg, E. O. (2006). *Redefining health care: Creating value-based competition on results*. Boston, MA: Harvard Business School Press.

[25] Quader, M. (2024). Exploring human resource management practices and employee satisfaction in Bangladesh's private banking sector. *Journal of Policy Options, 7*(1), 36–45.

[26] Rosen, R. (2014). *Meeting need or fuelling demand: Improved access to primary care and supply-induced demand*. London, UK: Nuffield Trust.

[27] Seddon, J. (1992). *I want you to cheat*. Oxford, UK: Blackwell.

[28] Seddon, J. (2005). *Freedom from command and control*. London, UK: Vanguard Press.

[29] Sembiring, M. C., Nasution, S. L. R., & Girsang, E. (2022). The effect of SBAR communication on nurse attitude in increasing patient safety in KRMT Wongsonegoro Hospital, Semarang. *International Journal of Health and Pharmaceutical, 2*(4), 680–683.

[30] Shah, T. A., Parray, Z. A., & Islam, S. U. (2023). The empirical relationship between transformational leadership and job attitudes: Mediating role of psychological capital—A study of healthcare in India. *International Journal of Public Leadership, 19*(1), 45–63.

[31] Sismiati, S., Sulaiman, S., Rudhan, A. M., Nurlela, N., Dema, Y., Darmawansyah, I., Rahmawan, R., & Che-Ni, H. (2025). Determination of employee performance: analysis of leadership,

competence, and discipline through employee retention. *Jurnal Ilmiah Manajemen Kesatuan*, *13*(4), 2037–2046.

[32] Soomro, B. A., Zehri, A. W., Anwar, S., Abdelwahed, N. A. A., & Shah, N. (2024). Developing the relationship between corporate cultural factors and employees' organizational commitment via self-efficacy. *South Asian Journal of Business Studies, 13*(3), 325–347.

[33] Subhi, A., Hidayat, R., & Supriyanto, A. S. (2020). The effect of organizational communication and leadership style on organizational commitment in hospitals. *Humanities and Social Sciences Reviews, 8*(2), 388–398.

[34] Sukalumba, S. A. P., & Ramli, A. H. (2025). The effect of transformational leadership on turnover intention: The mediating role of work stress and organizational commitment in the retail industry. *Jurnal Ilmiah Manajemen Kesatuan*, *13*(7), 1985–1994.

[35] Suparman, D., Rahayu, S. W., & Firmansyah, D. (2024). Leadership style and performance in higher education institutions (phei): The mediating role of organizational culture. *Jurnal Ilmiah Manajemen Kesatuan*, *12*(4), 981–994.

[36] Tasi, M. C., Keswani, A., & Bozic, K. J. (2019). Does physician leadership affect hospital quality, operational efficiency, and financial performance? *Health Care Management Review, 44*(3), 256–262.

[37] Walley, P., Found, P., & Williams, S. (2019). Failure demand: A concept evaluation in UK primary care. *International Journal of Health Care Quality Assurance, 32*(1), 21–33.

[38] Weijters, B., Cabooter, E., & Schillewaert, N. (2010). The effect of rating scale format on response styles: The number of response categories and response category labels. *International Journal of Research in Marketing, 27*(3), 236–247.

[39] Zehir, S., & Zehir, C. (2023). Effects of total quality management practices on financial and operational performance of hospitals. *Sustainability, 15*(21), 1530-1539.

[40] Zhang, S., Liu, C., Lai, C., Zhao, B., Zhang, C., Zhang, Y., & Fa, T. (2025). The power of leadership transforming nurses' professional attitudes through balance theory: A cross-sectional study. *BMC Nursing, 24*(5), 1–14.