

The Effect of Strategic Leadership, Physician Competence, and Digital Health Services Mediated by Service Innovation on the Performance of Indonesian Army Hospitals

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ABSTRACT: Research Objectives This study aims to analyze the influence of strategic leadership, physician competence, and digital health services on the performance of the Indonesian National Army (TNI AD) Hospitals, with service innovation as the mediating variable. As a support for combat readiness and a provider of public health services, the Indonesian Army Hospital faces significant challenges in quality standardization, human resource effectiveness amidst the dynamics of military assignments, and the acceleration of digital technology. This study seeks to answer how the integration of leadership, professional capabilities, and technology can create a competitive advantage through service innovation.

Research Methodology This study employs a quantitative approach using an explanatory survey method. Primary data were collected via a structured questionnaire distributed to top and middle management leaders at various RS TNI AD across Indonesia using purposive sampling. Data analysis was conducted using covariance-based Structural Equation Modeling (SEM) with AMOS software. This technique was used to test complex causal relationships, perform confirmatory factor analysis, and test mediation effects simultaneously and accurately.

Research Findings The findings indicate that strategic leadership has a positive and significant impact on hospital performance; leaders' long-term vision was found to enhance organizational effectiveness. Physician competence also exerts a significant positive influence on performance by improving service quality and operational efficiency. Additionally, digital health services were shown to boost performance by expanding accessibility and enhancing the accuracy of medical data. Mediation analysis results indicate that these three independent variables have a positive effect on service innovation. Crucially, service innovation was found to act as a mediating variable (partial mediation) that strengthens the influence of leadership, competence, and technology on hospital performance. This suggests that the impact of organizational resources will be far more optimal if they can be converted into concrete service innovations for patients.

Implications and Originality Practically, these results recommend that the Army Health Center (Puskesad) focus on integrated digital transformation and the development of adaptive leadership. Enhancing physician competencies must include digital literacy and innovation capabilities. The study's limitation lies in its broad geographical scope; therefore, future research is advised to include organizational culture as a moderating variable. The originality of this study lies in the integration of the three main variables into a single comprehensive empirical model within the context of military hospitals, a sector that has been under-researched compared to the private sector.

KEYWORDS: Strategic Leadership, Physician Competence, Digital Health Services, Service Innovation, Hospital Performance.

BACKGROUND

The healthcare sector faces increasingly complex competitive dynamics due to technological advancements, rising patient expectations, and regulatory changes that require hospitals to continuously adapt and innovate to improve service quality (Flessa & Huebner, 2021; Tonjang & Thawesaengskulthai, 2022). In Indonesia, the number of hospitals continues to rise; however, the phenomenon of a high number of people choosing to seek treatment abroad indicates that the quality of domestic hospital services still faces various challenges. Data from the Indonesian Health Survey (2023) and ARSSI (2023) indicate that patients still highlight poor communication among healthcare staff, lengthy consultation times, and limitations in medical technology at Indonesian hospitals. These conditions contribute to the high preference among the public for foreign hospitals, which are perceived to offer better service quality, medical technology, and healthcare services.

This phenomenon indicates that hospital performance in Indonesia remains a strategic issue related to operational efficiency, service quality, human resource readiness, and the ability to adapt to digital technology. In a competitive environment, hospitals are not

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only required to provide quality medical care but must also create a more effective and responsive patient experience (Pérez et al., 2021). Therefore, a hospital organization's ability to undergo transformation and innovation is a critical factor in maintaining the competitiveness of healthcare services.

In this context, the Indonesian Army Hospital (RS TNI AD) plays a strategic role as a healthcare provider for both military personnel and the general public. As part of the national defense health system, RS TNI AD faces challenges not dissimilar to those of general hospitals, such as limitations in human resources, medical infrastructure, operational effectiveness, and the need to adapt to advancements in healthcare technology (Aggarwal et al., 2019). The strategic position of RS TNI AD in supporting national health resilience makes improving the performance of military hospitals a critical issue warranting further examination.

One factor considered capable of improving hospital performance is strategic leadership. Strategic leadership enables organizations to adaptively respond to environmental changes, accelerate decision-making, and drive organizational effectiveness in addressing the dynamics of healthcare services (Fahlevi et al., 2022; Sallam & Alhakimi, 2023). Previous research indicates that hospitals with strong strategic leadership tend to be better equipped to maintain service quality and improve organizational performance. However, studies on the application of strategic leadership in military hospitals remain relatively limited compared to the private or general hospital sectors.

In addition to strategic leadership, physicians' competencies are also a fundamental factor in determining the quality of care and hospital performance. Physician competence encompasses not only clinical ability but also communication skills, professional experience, and the ability to adapt to modern medical advancements (Kanitkar, 2022). Competent physicians are considered capable of improving diagnostic accuracy, patient satisfaction, and the efficiency of healthcare services (Du et al., 2020). Nevertheless, previous research findings still show inconsistencies. Fe et al. (2017), for example, found that physician competence did not have a significant correlation with healthcare service utilization in a specific context. This finding highlights the need for further testing regarding the relationship between physician competence and hospital performance, particularly in the context of military hospitals. On the other hand, the development of digital healthcare services is driving transformation within hospital care systems. The implementation of digital technologies such as telemedicine, hospital information systems, the Internet of Things (IoT), and real-time data analysis can enhance operational efficiency, service accessibility, and the quality of the patient experience (Kraus et al., 2021; Williams et al., 2019). Digital transformation also enables hospitals to be more responsive to patient needs and changes in the external environment. However, research on the implementation of digital health services in military hospitals remains limited, particularly regarding their impact on organizational performance improvement.

In the face of an increasingly dynamic healthcare environment, hospitals are also required to develop service innovation. Service innovation is viewed as an organization's ability to create new service methods that are more effective, efficient, and patient-centered (Tidd & Pavitt, 2018). Previous research indicates that service innovation can improve service quality, organizational agility, and hospital performance (Khan et al., 2022; Ouddasser et al., 2021). Thus, service innovation has the potential to serve as a strategic mechanism that strengthens the relationship between organizational factors and improved hospital performance.

Although various studies have examined the influence of strategic leadership, physician competence, and digital health services on hospital performance, most research remains fragmented and focuses on general or private hospitals. Research on the integration of these three variables within the context of military hospitals, particularly the Indonesian Army Hospital (RS TNI AD), remains very limited. Additionally, studies examining the role of service innovation as a mediating variable in the relationship between strategic leadership, physician competence, digital health services, and hospital performance have also been minimally explored in the prior literature.

Given these conditions, this study aims to analyze the influence of strategic leadership, physician competence, and digital health services on the performance of the Indonesian Army Hospital (RS TNI AD) with service innovation as a mediating variable. This study offers novelty through the development of an integrative model that links leadership factors, human resources, and digital transformation within a comprehensive framework in the context of military hospitals. The research findings are expected to provide theoretical contributions to the development of hospital management literature as well as practical contributions for the Indonesian Army Hospital (RS TNI AD) in improving service quality and organizational performance sustainably.

THEORETICAL FOUNDATION

Resource-Based View (RBV)

The Resource-Based View (RBV) emphasizes that an organization's competitive advantage stems from its ability to manage internal resources that are valuable, rare, difficult to imitate, and hard to replace (Barney, 1991). In the hospital context, these resources are not limited to physical assets but also include medical staff competencies, strategic leadership, organizational culture, and digital technology capabilities. RBV posits that organizations capable of effectively managing internal resources are better positioned to sustainably improve organizational performance (Fahy, 2000). In the healthcare sector, the RBV approach is relevant in explaining how strategic leadership, physician competencies, and digital healthcare services can serve as sources of a hospital's competitive

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advantage. Thus, RBV serves as the conceptual foundation of this study in understanding the relationship between strategic resources and the improvement of performance at the Indonesian Army Hospital (RS TNI AD) through service innovation.

Service Theory

Service Theory, particularly through the Service-Dominant Logic (S-D Logic) approach, positions services as the primary foundation for value creation within organizations (Vargo et al., 2023). This perspective emphasizes that value is not merely produced by the organization but is co-created between service providers and customers through ongoing interactions. In the hospital context, patients are not merely service recipients but an integral part of the healthcare value creation process. This approach also highlights the importance of integrating resources, technology, competencies, and collaboration to enhance the quality of healthcare services. Therefore, Service Theory serves as a crucial foundation for explaining how digital healthcare services and service innovation can strengthen the patient experience and improve hospital performance, particularly at the Indonesian Army Hospital (RS TNI AD), which faces the demands of modern healthcare services.

Strategic Leadership

Strategic leadership is a leader's ability to guide an organization in navigating a dynamic changing environment through strategic vision, decision-making, and effective resource management (Samimi et al., 2020). In the healthcare sector, strategic leadership is crucial because hospitals are required to maintain service quality, operational efficiency, and adapt to advancements in healthcare technology. Strategic leaders play a role in shaping the organization's vision, fostering innovation, and enhancing collaboration among healthcare staff to achieve organizational goals (Cherop et al., 2022). Additionally, strategic leadership contributes to enhancing the organization's readiness to address regulatory changes and the digital transformation of healthcare services. In the context of Army Hospitals, strategic leadership is a key factor in strengthening the organization's capacity to improve service quality and create service innovations that support enhanced hospital performance.

Physician Competencies

Physician competencies are a combination of knowledge, clinical skills, communication, professionalism, and collaboration skills required to provide quality healthcare services (Indonesian Medical Council, 2024). In the Competency-Based Medical Education (CBME) approach, physician competencies are measured not only by medical ability but also by interpersonal skills and adaptability to advancements in healthcare technology. Competent physicians are able to provide more accurate diagnoses, improve patient safety, and support hospital operational efficiency (Vasquez et al., 2021). Additionally, physician competencies also influence patient satisfaction and the hospital's long-term reputation. In the context of the Indonesian Army Hospitals, physician competence serves as a strategic resource that supports the improvement of healthcare quality and the strengthening of service innovation in addressing the complexities of military healthcare services.

Digital Healthcare Services

Digital health services involve the use of information and communication technology to support more effective, efficient, and patient-centered healthcare (Senbekov et al., 2020). The implementation of digital health services includes telemedicine, electronic health records, mobile health (mHealth), and hospital information systems that enable improved accessibility and quality of healthcare. Digital transformation in the healthcare sector also supports data-driven decision-making and improves hospital operational efficiency (Kraus et al., 2021). However, the success of digital health service implementation is significantly influenced by organizational readiness, healthcare workforce competencies, and strategic leadership support. In the context of the Indonesian Army Hospitals (RS TNI AD), digital health services serve as a crucial tool for accelerating care delivery, strengthening healthcare coordination, and improving the quality of both military and public healthcare services.

Service Innovation

Service innovation is defined as the development of new services or the improvement of existing ones to create added value for organizations and customers (Bhat & Sharma, 2021). In the healthcare sector, service innovation encompasses innovations in service processes, the use of digital technology, enhanced patient interaction, and the development of more effective and responsive healthcare models. Service innovation is crucial because hospitals are required to continuously adapt to changing patient needs and advancements in healthcare technology. Previous research indicates that service innovation can improve service quality, organizational efficiency, and patient satisfaction (Gustafsson et al., 2020). In this study, service innovation is positioned as a mediating variable () that strengthens the influence of strategic leadership, physician competence, and digital healthcare services on hospital performance.

Hospital Performance

Hospital performance refers to an organization's ability to achieve healthcare objectives effectively and efficiently through resource management, service quality, patient safety, and operational sustainability (Dessler, 2019). Hospital performance evaluation typically employs the Balanced Scorecard approach, which encompasses financial, customer, internal process, and learning and

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growth perspectives (Kaplan & Norton, 1996). In the healthcare sector, hospital performance is measured not only by financial aspects but also by service quality, patient satisfaction, operational efficiency, and the organization's capacity for innovation. Hospitals with effective management systems, competent human resources, and digital technology support tend to achieve more optimal performance. In the context of the Indonesian Army's hospitals, improving hospital performance is crucial to supporting the effectiveness of military healthcare services while enhancing the quality of care provided to the general public.

CONCEPTUAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

The conceptual framework serves as the foundation that explains the relationships among theories, concepts, and research variables to address the research objectives. The following conceptual framework is used in this study:

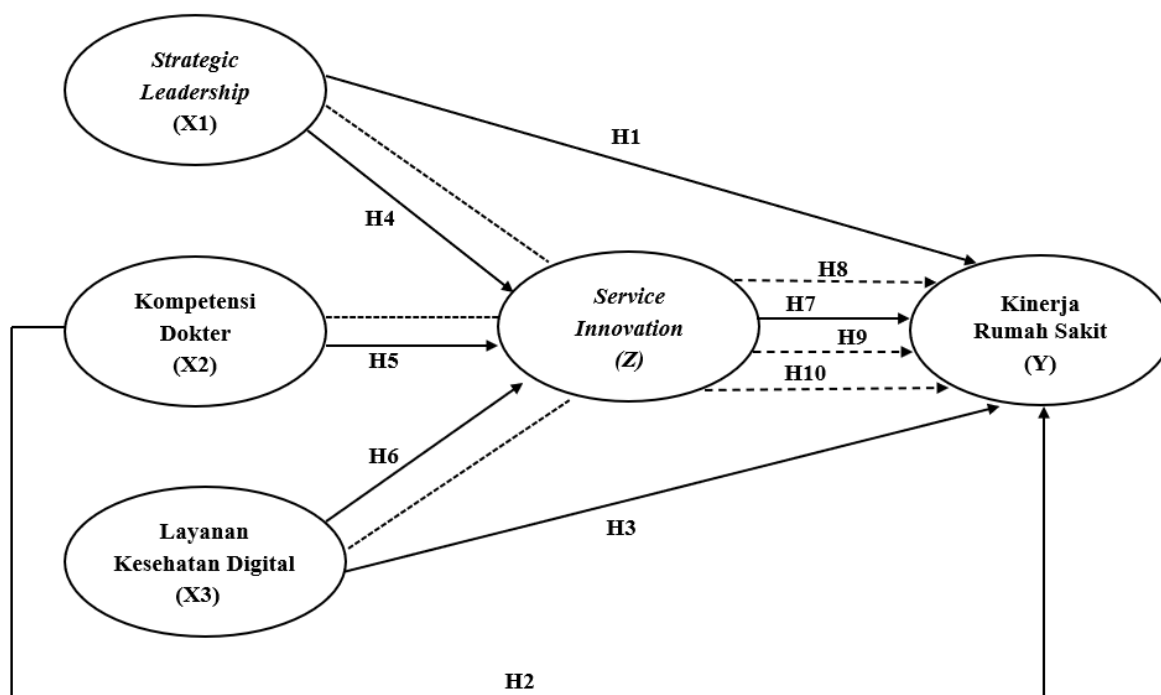


Figure 1. Conceptual Framework

Caption:

—————→	:	Direct Effect
- - - - -→	:	Indirect Effect

The Impact of Strategic Leadership on Hospital Performance

Strategic leadership plays a crucial role in enhancing hospital performance through leaders' ability to establish a strategic vision, manage resources, and adaptively respond to changes in the organizational environment (Wang et al., 2023). In the hospital context, strategic leadership enables the organization to improve service quality, operational efficiency, and collaboration among healthcare staff. Previous research indicates that strategic leadership has a positive impact on hospital performance, particularly in improving patient satisfaction, service quality, and organizational resilience in the face of healthcare environment dynamics (Fahlevi, 2022; Baredda, 2023). Additionally, strategic leaders are capable of fostering a culture of innovation and staff competency development that supports organizational performance improvement (Cherop et al., 2022). From an RBV perspective, strategic leadership serves as a strategic resource capable of creating a competitive advantage for the hospital organization. Therefore, strategic leadership is expected to have a positive impact on the performance of the Indonesian Army Hospital (RS TNI AD). Based on the above discussion, the following hypothesis can be formulated:

H1: There is a positive influence of strategic leadership on hospital performance

The Influence of Physician Competencies on Hospital Performance

Physician competence is a critical factor in determining the quality of care and operational effectiveness of a hospital. Physicians with strong clinical, communication, and professional competencies are more likely to improve diagnostic quality, patient safety,

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and patient satisfaction (Rusvitawati et al., 2019). Previous research indicates that physician competence positively influences hospital performance through improved healthcare quality and service efficiency (Wang et al., 2023; Marliane, 2023). Additionally, competent physicians are more adaptable to advancements in healthcare technology and medical service innovations. From an RBV perspective, physician competence is a valuable and difficult-to-replicate internal resource, making it a potential source of a hospital's competitive advantage. In the context of the Indonesian Army Hospital (RS TNI AD), physician competence is particularly important because military hospitals face the complexities of healthcare delivery that require high levels of medical expertise and collaboration. Based on the above discussion, the following hypotheses can be formulated:

H2: There is a positive influence of physician competence on hospital performance

The Impact of Digital Healthcare Services on Hospital Performance

Digital healthcare services enable hospitals to improve operational efficiency, service accessibility, and the quality of the patient experience through the utilization of health information technology. The implementation of telemedicine, hospital information systems, and other digital healthcare services has been proven to enhance patient satisfaction and the effectiveness of healthcare services (Snowdon, 2024). Previous research indicates that the digitization of healthcare services positively impacts hospital performance through increased efficiency, reduced medical errors, and optimized service processes (Engstrom, 2023; Jin & Wang, 2022). Additionally, digital health services strengthen hospitals' ability to manage patient data and support technology-driven decision-making. In the context of the Indonesian Army Hospital, digital healthcare services are crucial for supporting fast, adaptive, and integrated healthcare delivery. Therefore, digital healthcare services are expected to have a positive impact on hospital performance. Based on the above discussion, the following hypothesis can be formulated:

H3: There is a positive influence of digital health services on hospital performance.

The Influence of Strategic Leadership on Hospital Service Innovation

Strategic leadership plays a role in fostering service innovation through the development of an organizational vision, a culture of innovation, and the ability to adapt to changes in the healthcare environment. Strategic leaders are able to guide organizations to develop new services and improve service quality to be more responsive to patient needs (Anderson & Sun, 2018). Previous research indicates that strategic leadership has a positive influence on organizational innovation and service innovation through enhanced strategic orientation and a collaborative culture (Astria et al., 2019; Kurzhal et al., 2020). In the hospital context, strategic leaders play a role in facilitating technology adoption, healthcare service development, and the involvement of healthcare staff in the innovation process. From the perspective of Service Theory, strategic leadership supports value creation through patient-oriented service innovation. Therefore, strategic leadership is expected to have a positive effect on hospital service innovation. Based on the above discussion, the following hypotheses can be formulated:

H4: There is a positive influence of strategic leadership's on hospital service innovation.

The Influence of Physician Competence on Hospital Service Innovation

Physician competence contributes to the development of service innovation through professional skills, openness to new technologies, and collaborative abilities in healthcare delivery. Physicians with high competence are more likely to adopt medical innovations and digital health services in clinical practice (Hu et al., 2022). Previous research indicates that healthcare professionals' competencies can drive service innovation by enhancing collaboration, communication quality, and the development of new service delivery methods (Rejikumar & Ks, 2018). Additionally, physicians' ability to understand patient needs supports the creation of more effective and patient-centered service innovations. In the context of the Indonesian Army Hospital (RS TNI AD), physician competence is a critical factor in supporting the development of innovative and adaptive healthcare services to address military health challenges. Therefore, physician competence is expected to have a positive influence on hospital service innovation. Based on the above discussion, the following hypothesis can be formulated:

H5: There is a positive influence of physician competence on hospital service innovation.

The Impact of Digital Healthcare Services on Service Innovation

Digital health services serve as a primary driver of service innovation within hospital organizations through the utilization of technology to enhance the effectiveness and efficiency of healthcare services. The implementation of digital technology enables hospitals to develop new service methods, accelerate service processes, and improve the quality of interactions with patients (Yu et al., 2021). Previous research indicates that digital technology has a positive impact on service innovation and healthcare organizational transformation (Kumar et al., 2023; Ebrahiem et al., 2022). Additionally, digital health services also support more effective collaboration among healthcare professionals and the management of health information. From a Service Theory perspective, digital technology serves as a resource that strengthens the creation of healthcare service value. Therefore, digital healthcare services are expected to have a positive impact on hospital service innovation. Based on the above discussion, the following hypothesis can be formulated:

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H6: There is a positive influence of digital health services on hospital service innovation.

The Impact of Service Innovation on Hospital Performance

Service innovation plays a crucial role in enhancing hospital performance through the development of more effective, efficient, and patient-centered service methods. Service innovation enables hospitals to improve service quality, accelerate service processes, and enhance patient satisfaction (Dobrzykowski et al., 2015). Previous research indicates that service innovation has a positive impact on the performance of healthcare organizations, both in terms of operational aspects and service quality (Phan et al., 2021). Additionally, service innovation enhances an organization's ability to adapt to changing patient needs and advancements in healthcare technology. In the context of the Indonesian Army Hospital (RS TNI AD), service innovation serves as a critical strategy for enhancing the effectiveness of military healthcare services and the hospital's competitiveness. Therefore, service innovation is expected to have a positive impact on hospital performance. Based on the preceding discussion, the following hypothesis can be formulated:

H7: There is a positive effect of service innovation on hospital performance

The Influence of Strategic Leadership through Service Innovation on Hospital Performance

Strategic leadership can indirectly improve hospital performance through service innovation. Strategic leaders are capable of creating an organizational environment that supports service innovation, the development of healthcare technology, and improvements in the quality of patient care (Purwanto et al., 2021). Previous research indicates that effective strategic leadership drives organizational innovation, which ultimately enhances hospital performance (Rusli, 2023). In this context, service innovation serves as a crucial mechanism that strengthens the influence of strategic leadership on the organizational effectiveness of a hospital. At the Indonesian Army Hospital (RS TNI AD), adaptive strategic leadership can accelerate the development of healthcare service innovations that support operational efficiency and service quality. Thus, service innovation is expected to mediate the influence of strategic leadership on hospital performance. Based on the above discussion, the following hypothesis can be formulated:

H8: There is a positive influence of strategic leadership through service innovation on hospital performance

The Impact of Physician Competence through Service Innovation on Hospital Performance

Physician competence can improve hospital performance through the ability to create and support service innovation. Competent physicians are better able to adopt new technologies, develop innovative service methods, and improve the quality of interactions with patients (Thambusamy & Palvia, 2018). Previous research indicates that healthcare service innovation can strengthen the influence of medical staff competence on improving service quality and patient satisfaction (Ali et al., 2022). Furthermore, physician competence supported by service innovation can improve hospital operational efficiency and accelerate medical decision-making. In the context of the Indonesian Army Hospital (RS TNI AD), doctors' ability to support service innovation is crucial for addressing the complexities of military healthcare. Therefore, service innovation is expected to mediate the influence of doctors' competence on hospital performance. Based on the above discussion, the following hypothesis can be formulated:

H9: There is a positive influence of physician competence through service innovation on hospital performance

The Influence of Digital Healthcare Services through Service Innovation on Hospital Performance

Digital healthcare services can enhance hospital performance by strengthening service innovation in healthcare delivery. The implementation of digital technology enables hospitals to develop services that are faster, more efficient, and patient-centered (Bhaskar et al., 2020). Previous research indicates that the digitalization of healthcare services integrated with service innovation can improve patient satisfaction, operational efficiency, and the quality of hospital care (Setyawan et al., 2020). Furthermore, service innovation enables the optimal utilization of digital technology to support modern healthcare services. In the context of the Indonesian Army Hospital (RS TNI AD), the integration of digital healthcare services and service innovation is a key strategy for enhancing the effectiveness of military healthcare services. Therefore, service innovation is expected to mediate the influence of digital healthcare services on hospital performance. Based on the above discussion, the following hypothesis can be formulated:

H10: There is a positive influence of digital healthcare services through service innovation on hospital performance

RESEARCH METHODOLOGY

This study employs a quantitative method with a cross-sectional design to analyze the influence of strategic leadership, physician competence, and digital health services on the performance of Indonesian Army Hospitals (RS TNI AD), with service innovation as the mediating variable. The unit of analysis in this study consists of individuals at the Top and Middle Management levels of RS TNI AD hospitals (Levels II and III) across Indonesia, including Hospital Directors, Deputy Hospital Directors, Chairs of the Medical Committee, Department Heads, and other structural officials. The study population consists of RS TNI AD leaders spread across various regions of Indonesia. The sampling technique used purposive sampling based on the respondents' relevance to the research topic. The sample size was determined according to Hair et al. (2021), with a minimum sample size of 280 respondents

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based on the number of research indicators. Research data were collected through the distribution of a closed-ended questionnaire using Google Forms with a 5-point Likert scale. Subsequently, data analysis was conducted using covariance-based Structural Equation Modeling (SEM) with the assistance of AMOS software to test the direct and indirect relationships among the research variables.

VARIABLES AND MEASUREMENT

This study involves five main variables: strategic leadership, physician competence, digital health services, service innovation, and hospital performance, measured using a questionnaire instrument based on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The strategic leadership variable was measured using the dimensions of vision, articulation of the business model, conveying information effectively, exercising power wisely, and emotional intelligence, adopted from Hill, Schilling, and Jones (2020), comprising a total of 10 indicators. Physician competence was measured based on the dimensions of personal and professional conduct, intellectual and analytical skills, and technical competence, referencing the standards of the Indonesian Medical Council (2024), comprising a total of 11 indicators. Meanwhile, digital health services are measured using the dimensions of interoperability, consumer-enabled health, predictive analytics, and governance and workforce, adapted from Snowdon (2020), with 12 measurement indicators.

Furthermore, the service innovation variable was measured using the dimensions of service delivery systems, technology, customer interaction, and new service development, adopted from Delafrooz et al. (2013), comprising a total of 11 indicators. The hospital performance variable was measured using the Balanced Scorecard approach by Kaplan and Norton (1996), which encompasses the financial, customer, internal process, and growth perspectives, comprising a total of 12 indicators. All research indicators were designed to represent the managerial and operational conditions of the Indonesian Army Hospital, particularly in the context of service quality improvement, healthcare innovation, and hospital organizational effectiveness. t instrument testing was conducted using Confirmatory Factor Analysis (CFA) via AMOS, with results showing that all indicators had factor loadings above 0.60 and Composite Reliability values above 0.70, thus being deemed valid and reliable for use in testing the study's structural model.

RESULTS AND DISCUSSION

These test results are based on the processing of research data using Partial Least Squares (PLS) analysis with SmartPLS 3.0 software. Based on the hypothesis test results, the following findings were obtained:

Results of the Direct Effect Hypothesis Test

Research Hypothesis	Standardized Est. (β)	P-Value	Results
H1: There is an effect of strategic leadership on hospital performance	0.196	0.000	Supported
H2: There is an effect of physician competence on hospital performance	0.148	0.001	Supported
H3: Digital health services have an effect on hospital performance.	0.104	0.026	Supported
H4: Strategic leadership has an effect on hospital service innovation	0.354	0.000	Supported
H5: There is an effect of physician competence on hospital service innovation	0.279	0.000	Supported
H6: Digital health services have an effect on hospital service innovation	0.261	0.000	Supported
H7: Service innovation has an effect on hospital performance	0.556	0.000	Supported

Source: AMOS Data Analysis Results, 2025

Based on the results of the direct effect hypothesis test, all hypotheses in this study were accepted, indicating that strategic leadership, physician competence, digital health services, and service innovation have a significant impact on hospital performance. Furthermore, service innovation is the most dominant variable influencing hospital performance with a coefficient of 0.556, while strategic leadership is the strongest factor influencing service innovation with a coefficient of 0.354. Additionally, a hypothesis test was conducted on the indirect (mediation) effect, presented as follows:

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Hypothesis Testing of Indirect Effects (Mediation)

Research Hypotheses	Total Effect	Sobel Test Statistic	Prob.	Result	Type of Mediation
H8: There is an effect of strategic leadership through service innovation on hospital performance	0.373	5.044	0.000	Supported	Partial Mediation
H9: There is an effect of physician competence through service innovation on hospital performance	0.331	4.976	0.000	Supported	Partial Mediation
H10: There is an effect of digital health services through service innovation on hospital performance	0.238	4.655	0.000	Supported	Partial Mediation

Source: Sobel Test Calculator (Attached), 2025

Based on the results of the indirect effect test, all mediation hypotheses (H8–H10) were found to be significant under partial mediation, indicating that service innovation strengthens the relationship between strategic leadership, physician competence, and digital health services on hospital performance. The total effect results show that the influence of independent variables on hospital performance becomes greater after being mediated by service innovation. Furthermore, the strongest mediation path is found in the influence of strategic leadership on hospital performance through service innovation with a Sobel Test value of 5.044, thus confirming that strategic leadership is the most effective factor in driving service innovation and improving hospital performance.

The Effect of Strategic Leadership on Hospital Performance

The research results show that strategic leadership has a positive and significant effect on hospital performance with a coefficient value of 0.196 and a p-value of 0.000, thus H1 is supported. These findings indicate that strategic leadership plays a role in improving organizational effectiveness through vision setting, decision-making, and more adaptive resource management. In the context of the Indonesian Army Hospital (RS TNI AD), hospital leadership plays a crucial role in maintaining organizational stability, coordinating services, and ensuring operational effectiveness amidst the complexities of military healthcare. These findings align with those of Fahlevi (2022), Baredda (2023), and Woo (2025), who emphasize that strategic leadership is a key factor in improving organizational performance. However, the relatively moderate influence value indicates that strategic leadership is not yet fully optimized if not supported by other organizational mechanisms. Thus, strengthening strategy implementation and translating the vision into operational practices is essential for improving the performance of the Indonesian Army Hospital.

The Influence of Physician Competence on Hospital Performance

The research results indicate that physician competence has a positive and significant effect on hospital performance, with a coefficient value of 0.148 and a p-value of 0.001, thus supporting H2. This finding indicates that physician competence can improve service quality, the effectiveness of medical decision-making, and hospital operational efficiency. In the context of the Indonesian Army Hospital, physician competence is a critical factor because military hospitals face complex and dynamic healthcare service needs. These results align with Wang et al. (2023) and Marliane (2023), who state that the competence of medical personnel contributes to improved healthcare organization performance. Conceptually, these findings support the Resource-Based View (RBV) perspective, which views human resource competence as a strategic organizational resource. Therefore, enhancing doctors' professional competence, clinical abilities, and communication skills must be a priority in supporting improved hospital performance.

The Impact of Digital Health Services on Hospital Performance

The research results indicate that digital health services have a positive and significant impact on hospital performance, with a coefficient value of 0.104 and a p-value of 0.026, thus supporting H3. These findings indicate that the implementation of digital technology can improve service efficiency, medical data integration, and the accessibility of healthcare services at the Indonesian Army Hospital. The use of digital systems helps the hospital accelerate service processes and supports more accurate decision-making. These research results align with Engstrom (2023) and Jin & Wang (2022), who affirm that the digitalization of healthcare services contributes to improved performance in healthcare organizations. However, the relatively small magnitude of the effect indicates that digitalization is not yet fully optimized without the support of service innovation and human resource readiness. Therefore, digital transformation needs to be integrated with service strategies oriented toward patient needs and organizational effectiveness.

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The Influence of Strategic Leadership on Hospital Service Innovation

The results of the study indicate that strategic leadership has a positive and significant effect on hospital service innovation, with a coefficient of 0.354 and a p-value of 0.000; thus, H4 is supported. This coefficient value is the highest compared to other variables influencing service innovation, indicating that strategic leadership is the primary factor in driving service innovation at the Indonesian Army Hospital. Strategic leaders are capable of fostering an organizational culture that is innovative, adaptive, and responsive to evolving healthcare needs. This finding aligns with the research by Anderson and Sun (2018), which states that strategic leadership plays a role in accelerating organizational innovation. From a Service Theory perspective, strategic leadership serves as the primary driver of service value creation through patient-oriented innovation. Consequently, strengthening strategic leadership capacity is crucial for fostering sustainable service innovation in military hospitals.

The Influence of Physician Competence on Hospital Service Innovation

The research results indicate that physician competence has a positive and significant effect on hospital service innovation, with a coefficient value of 0.279 and a p-value of 0.000, thus supporting H5. This finding suggests that physicians possessing strong professional competence, analytical skills, and technical expertise are more likely to support the development of healthcare service innovations. In the context of the Indonesian Army Hospital (RS TNI AD), doctors' competencies enable the hospital to be more adaptive to technological advancements and the dynamic needs of patients. These research findings align with those of Hu et al. (2022) and Rejikumar and Ks (2018), who state that healthcare workers' competencies contribute to the development of service innovations. Practically, physicians' competencies contribute not only to medical care but also to the creation of more effective and innovative healthcare systems. Therefore, efforts to enhance physicians' competencies should focus not only on clinical aspects but also on their ability to adapt and innovate in healthcare services.

The Influence of Digital Health Services on Service Innovation

Research results indicate that digital health services have a positive and significant impact on service innovation, with a coefficient value of 0.261 and a p-value of 0.000, thus supporting H6. This finding indicates that the utilization of digital technology can drive the development of healthcare services that are faster, more efficient, and more responsive to patient needs. In practice, digital technology enables the Indonesian Army Hospital to develop a more integrated and data-driven service system. These research results support the findings of Kumar et al. (2023), who state that digital transformation contributes to innovation in healthcare organizations. From a Service Theory perspective, digital technology serves as a crucial tool in creating more effective and modern service value. Therefore, the optimization of digital healthcare services must continue to be developed to strengthen service innovation within military hospitals.

The Effect of Service Innovation on Hospital Performance

The research results indicate that service innovation has a positive and significant impact on hospital performance, with a coefficient value of 0.556 and a p-value of 0.000, thus supporting H7. This coefficient value is the highest compared to other variables influencing hospital performance, indicating that service innovation is the most dominant factor in improving the performance of the Indonesian Army's Military Hospitals. Service innovation enables hospitals to enhance operational efficiency, service quality, and patient satisfaction more effectively. This finding aligns with Phan et al. (2021), who state that service innovation makes a significant contribution to improving the performance of healthcare organizations. In the context of the Indonesian Army Hospital, service innovation serves as a crucial mechanism for enhancing the organization's adaptability in addressing evolving healthcare needs. Therefore, the hospital should prioritize service innovation as a key strategy to boost organizational competitiveness and effectiveness.

The Influence of Strategic Leadership through Service Innovation on Hospital Performance

The research results indicate that strategic leadership through service innovation has a positive and significant effect on hospital performance, with a Sobel Test value of 5.044 and a total effect of 0.373, thus supporting H8. The type of mediation observed is partial mediation, indicating that the direct effect of strategic leadership on hospital performance remains significant but is amplified through service innovation. These findings indicate that innovative strategic leadership can enhance organizational effectiveness through the development of more adaptive and patient-oriented services. These results support Purwanto et al. (2021) and Rusli (2023), who emphasize that service innovation serves as a crucial mechanism in strengthening the influence of leadership on organizational performance. In the context of the Indonesian Army Hospital, strategic leaders play a central role in fostering a culture of innovation and developing more effective healthcare services. Thus, strengthening service innovation is a critical strategy for optimizing the impact of strategic leadership on hospital performance.

The Influence of Physician Competence through Service Innovation on Hospital Performance

The research results indicate that doctors' competencies, mediated by service innovation, have a positive and significant effect on hospital performance, with a Sobel Test value of 4.976 and a total effect of 0.331, thus supporting H9. The type of mediation

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observed is partial mediation, indicating that the influence of physician competence on hospital performance is optimized through service innovation. This finding suggests that physician competence not only directly improves service quality but also strengthens healthcare service innovation, which in turn enhances hospital performance. These findings support Ali et al. (2022), who state that service innovation can strengthen healthcare professionals' contributions to the quality of healthcare organizations. In the context of the Indonesian Army Hospital (RS TNI AD), doctors' ability to adapt to service innovations is crucial for addressing the complexities of military healthcare services. Therefore, the development of doctors' competencies must be integrated with a culture of service innovation to sustainably enhance hospital service effectiveness.

The Impact of Digital Healthcare Services through Service Innovation on Hospital Performance

The results of the study indicate that digital health services through service innovation have a positive and significant effect on hospital performance, with a Sobel Test value of 4.655 and a total effect of 0.238; thus, H10 is supported. The type of mediation observed is partial mediation, indicating that the effect of digital health services on hospital performance is amplified through service innovation. These findings suggest that the digitization of healthcare services will yield more optimal results when supported by service innovations that align with patient needs and the hospital's operational “ ” strategy. These findings are consistent with those of Bhaskar et al. (2020) and Setyawan et al. (2020), who state that the integration of digital technology and service innovation can enhance the quality of healthcare services. In the context of the Indonesian Army Hospital, synergy between digitalization and service innovation is crucial for improving operational efficiency and organizational competitiveness. Therefore, the development of digital healthcare services should be directed toward creating service innovations that are more responsive, integrated, and patient-centered.

DISCUSSION AND CONCLUSION

This study aims to analyze the influence of strategic leadership, physician competence, and digital healthcare services on the performance of the Indonesian Army Hospital (RS TNI AD), with service innovation as the mediating variable. The results indicate that all proposed hypotheses are supported, meaning all independent variables have a positive and significant influence on both hospital performance and service innovation. These findings indicate that improvements in hospital performance are influenced not only by the quality of leadership, medical staff competence, and digital transformation individually, but also by the organization's ability to integrate all these resources through sustainable service innovation. Furthermore, the results demonstrate that service innovation is the most dominant variable in enhancing hospital performance, thereby proving that service innovation serves as a critical mechanism for improving the effectiveness of military hospital organizations.

This study also found that strategic leadership is the strongest factor in driving service innovation at Army hospitals. These findings indicate that strategic leadership plays a vital role in fostering an organizational culture that is innovative, adaptive, and responsive to changes in the healthcare environment. On the other hand, physician competence and digital healthcare services were found to not only have a direct impact on hospital performance but also yield more optimal effects when mediated by service innovation through a partial mediation mechanism. Theoretically, the results of this study reinforce the Resource-Based View (RBV) and Service Theory, which emphasize the importance of managing internal resources and service innovation in creating organizational competitive advantage. The novelty of this research lies in the integration of strategic leadership, physician competence, digital healthcare services, and service innovation into a single empirical model within the context of military hospitals, a setting that remains relatively under-researched.

IMPLICATIONS

The findings of this study provide theoretical and practical implications for hospital management development, particularly within the context of the Indonesian Army's Military Hospitals (RS TNI AD). Theoretically, this study reinforces the Resource-Based View (RBV) by demonstrating that strategic leadership, physician competence, and digital health services are strategic resources capable of enhancing organizational performance through service innovation. Practically, the management of the Indonesian Army's military hospitals needs to strengthen adaptive strategic leadership, enhance doctors' “ ” competencies through continuous training, and optimize the use of digital health services such as electronic medical records and telemedicine. Additionally, hospitals should make service innovation a core organizational strategy, as it has proven to be the most dominant factor in improving hospital performance. The implementation of service innovation can be achieved through the simplification of service procedures, the strengthening of inter-unit coordination, and the development of technology-based services that are more responsive to patient needs. These findings also provide policy implications for Indonesian Army leadership to support digital transformation and the sustainable development of healthcare service innovation within the military hospital environment.

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LIMITATIONS AND RESEARCH RECOMMENDATIONS

This study has several limitations that need to be considered in the development of future research. First, the study was conducted exclusively at Indonesian Army hospitals; therefore, the results cannot yet be broadly generalized to civilian or private hospitals with different organizational characteristics. Second, the research variables were limited to strategic leadership, physician competence, digital healthcare services, and service innovation, even though hospital performance can also be influenced by other factors such as organizational culture, patient satisfaction, and external organizational support. Third, the study used a cross-sectional design, so it was unable to describe the dynamics of the relationships between variables over the long term. Therefore, future research is advised to use a longitudinal approach, expand the research scope to non-military hospitals, and include additional variables to develop a more comprehensive research model for explaining the factors influencing hospital performance.

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