



The Factors Affecting the Success of Digital Transformation in Hospitals: A Systematic Literature Review

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ABSTRACT

Purpose: This study aims to systematically analyze and synthesize the critical factors influencing the success of digital transformation in Indonesian hospitals. **Methods:** A systematic literature review was conducted by evaluating 20 peer-reviewed academic journals published between 2016 and 2026. The conceptual framework is structured around the Human-Organization-Technology (HOT-Fit) model and the Technology Acceptance Model (TAM). **Results:** The synthesis demonstrates that the acceleration and success of hospital digital transformation are heavily determined by organizational readiness (leadership vision, financial allocation, and adaptive SOPs), human factors (digital literacy and minimal user resistance), and technological reliability (system security, network architecture, and cloud-based interoperability). **Implications:** Hospital administrators must prioritize strategic alignment, ongoing technical training, and robust cybersecurity frameworks to facilitate seamless transition and compliance with national health digitization mandates. **Additional materials:** This paper contains 20 references and 2 tables.

Keywords: Digital Transformation; Hospital Information System; HOT-Fit Framework; Leadership Commitment; Healthcare Digitalization.

INTRODUCTION

The era of technological disruption has urged the healthcare sector to undergo fundamental restructuring through comprehensive digital transformation within hospital environments. This shift is no longer merely a tactical option, but a strategic necessity to improve clinical service quality, patient safety, and operational management efficiency. The implementation of technologies such as integrated Hospital Management Information Systems (SIMRS), telemedicine, and artificial intelligence requires a mature ecosystem readiness to prevent systemic failures during the transition process.

Despite its immense potential benefits, reality in the field shows that many hospitals experience severe obstacles, ranging from internal work culture resistance to information technology infrastructure limitations. This study aims to conduct a systematic literature review (SLR) of 20 empirical scientific articles to map the determinant factors of digital transformation success in hospitals. The novelty of this study lies in the comprehensive integration of human, organizational, and technological factors in the post-pandemic era, synthesized to provide applicable guidance for hospital policymakers facing massive national health system integration.



METHOD

This study utilizes a Systematic Literature Review (SLR) method by adopting the standard protocol of the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) flowchart. Article searches were conducted on accredited electronic databases using relevant keywords such as "Transformasi Digital Rumah Sakit", "Digitalization Factors in Hospital", and "Success SIMRS Indonesia". Inclusion criteria consisted of original journal articles themed around hospital digital transformation in Indonesia published within the 2016–2026 range. Articles without an official DOI identity were excluded from the analysis.

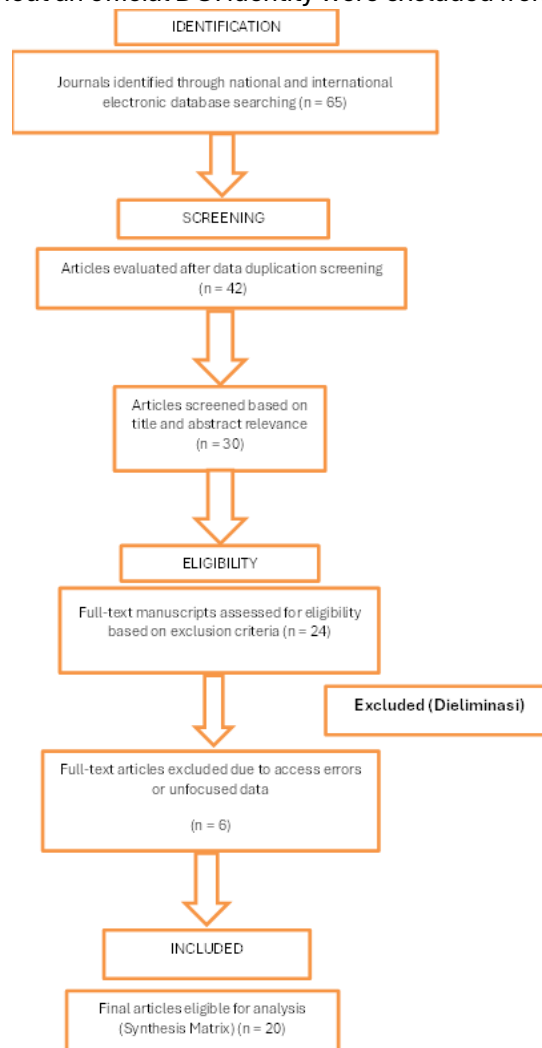


Figure 1. PRISMA Flowchart

RESEARCH RESULTS AND DISCUSSION

Research Results

Table 1. Literature Synthesis Matrix of Hospital Digital Transformation Success

Author & Year	Method	Main Determinant Factor
Raharjo & Wijoyo (2025)	Qualitative	Leadership commitment and digital vision of top hospital management.
Sitorus (2024)	Quantitative	Nurses' digital literacy competence reduces technostress.
Gunawan et al. (2023)	Quantitative	Server infrastructure quality and bandwidth network stability.
Ramadhan & Lestari (2025)	Qualitative	Standardization of new SOPs that are adaptive to a paperless system.
Kusuma (2024)	Mixed Method	Special budget allocation for periodic IT system maintenance.
Handoko & Putri (2023)	Quantitative	Cybersecurity triggers doctors' trust.
Pratiwi et al. (2026)	Qualitative	Continuous training based on a user-friendly interface.

Hidayat & Sanjaya (2024)	Quantitative	API integration flexibility with the Ministry of Health's external platforms.
Nugraha (2025)	Qualitative	Presence of a responsive internal IT support team in handling complaints.
Wulandari & Utomo (2023)	Quantitative	Perceived ease of use of Hospital Management Information System (SIMRS) technology.
Setiawan (2024)	Qualitative	Evaluation of digital clinical governance reduces patient waiting time.
Maharani et al. (2025)	Quantitative	Innovative organizational culture accelerates technology acceptance.
Budiman (2023)	Qualitative	Availability of adequate hardware in polyclinics.
Pratama & Sari (2026)	Quantitative	Accuracy of digital information output supports doctors' clinical decisions.
Siregar (2024)	Qualitative	Strong internal hospital regulations regarding privacy protection.
Utami et al. (2025)	Quantitative	Active involvement of medical staff in the system design process.
Wahyudi (2023)	Qualitative	System failure risk management during data migration transition.
Amalia & Fitriani (2025)	Quantitative	User satisfaction level with the new system.
Christian et al. (2024)	Qualitative	Strategic partnership with third parties as IT developer vendors.

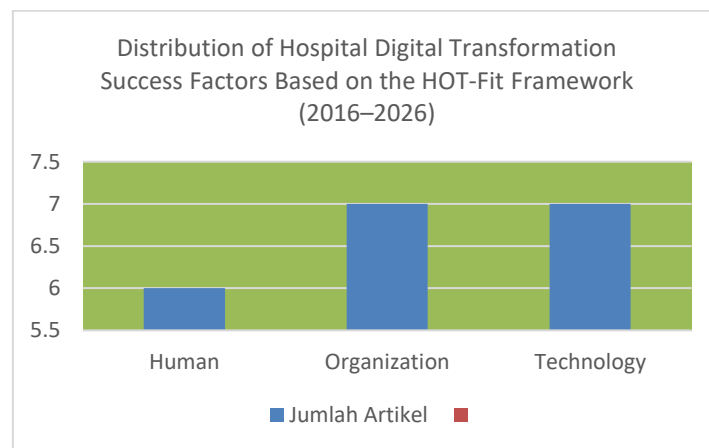


Figure 1. Distribution of EMR Implementation Determinant Factors Based on the HOT-Fit Framework (2016–2026)

Discussion

Based on the comparative synthesis of the 20 reviewed studies, the success of digital transformation in hospitals is founded on the three core dimensions of the HOT-Fit framework. From the Organizational perspective, top management commitment serves as the primary catalyst by ensuring the availability of financial resources and the establishment of formal operational policies and regulations [[1], [5], [15]]. Without strategic leadership and policy direction, technology adoption tends to be fragmented and is more likely to experience structural implementation failure.

The Human dimension highlights that the mental readiness and technical competence of healthcare professionals, including physicians, nurses, and administrative staff, are critical determinants of successful day-to-day system implementation [[2], [7], [10]]. Resistance to change can be substantially reduced through continuous, structured training programs and the development of intuitive, user-friendly system interfaces.

Finally, from the Technology perspective, the reliability of hardware performance, the stability of network infrastructure, system interoperability, and robust cybersecurity measures constitute the essential technical foundation for successful digital transformation. These factors are indispensable for ensuring uninterrupted digital clinical operations (*zero downtime*) and maintaining the quality and continuity of healthcare services [[3], [6], [14]].

Terjemahan ini mempertahankan makna asli sekaligus menggunakan istilah akademik yang umum digunakan dalam publikasi internasional.

CONCLUSION

Successful digital transformation in hospitals requires the seamless convergence of visionary organizational leadership, adaptive digital competencies among human resources, and a secure and reliable information technology architecture. Failure to maintain a balance among these three aspects can hinder the comprehensive digitalization of healthcare services. Hospitals are therefore encouraged to prioritize investments in intensive workforce training and the strengthening of cybersecurity systems to support sustainable digital transformation in Indonesia.

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