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ANALYSIS OF THE IMPLEMENTATION OF THE HOSPITAL MANAGEMENT INFORMATION SYSTEM (SIMRS) ON OPERATIONAL EFFICIENCY AT XYZ HOSPITAL PAMEKASAN

ANALISIS PENERAPAN SISTEM INFORMASI MANAJEMEN RUMAH SAKIT (SIMRS) TERHADAP EFISIENSI OPERASIONAL DI RUMAH SAKIT XYZ PAMEKASAN

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Abstract

This study aims to analyze the implementation of the Hospital Management Information System (HMIS) and its impact on operational efficiency at XYZ Hospital in Pamekasan. In the digital era, hospitals are required to enhance service quality and operational efficiency through the utilization of information technology. HMIS is an innovation designed to integrate managerial and administrative processes within hospitals, including patient data recording, resource management, and other healthcare service procedures. This research adopts a descriptive qualitative approach with purposive sampling techniques, involving informants such as medical personnel, administrative staff, and hospital management who are directly involved in the use of HMIS.The results indicate that the implementation of HMIS has a positive impact on the hospital's operational efficiency, including the acceleration of administrative processes, improved data accuracy, and easier coordination between work units. However, the implementation also faces several challenges, such as limited technological infrastructure, user resistance to change, and insufficient training for staff. These findings are supported by the HOT-Fit framework and Technology Acceptance Model (TAM), all of which emphasize the importance of technological readiness, human resource competence, and organizational commitment in ensuring the successful adoption of HMIS.

Keywords : HMIS, operational efficiency, hospital, information technology, change management

Abstrak

Penelitian ini bertujuan untuk menganalisis penerapan Sistem Informasi Manajemen Rumah Sakit (SIMRS) dan dampaknya terhadap efisiensi operasional di RS XYZ Pamekasan. Di era digital, rumah sakit dituntut untuk meningkatkan kualitas layanan dan efisiensi operasional

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melalui pemanfaatan teknologi informasi. SIMRS merupakan inovasi yang dirancang untuk mengintegrasikan proses manajerial dan administratif di dalam rumah sakit, termasuk pencatatan data pasien, pengelolaan sumber daya, dan prosedur layanan kesehatan lainnya. Penelitian ini menggunakan pendekatan kualitatif deskriptif dengan teknik purposive sampling, dengan melibatkan informan seperti tenaga medis, staf administrasi, dan manajemen rumah sakit yang terlibat langsung dalam penggunaan SIMRS. Hasil penelitian menunjukkan bahwa penerapan SIMRS berdampak positif terhadap efisiensi operasional rumah sakit, termasuk percepatan proses administrasi, peningkatan akurasi data, dan kemudahan koordinasi antar unit kerja. Namun, penerapan tersebut juga menghadapi beberapa tantangan, seperti keterbatasan infrastruktur teknologi, resistensi pengguna terhadap perubahan, dan kurangnya pelatihan bagi staf. Temuan ini didukung oleh kerangka kerja HOT-Fit dan Technology Acceptance Model (TAM), yang semuanya menekankan pentingnya kesiapan teknologi, kompetensi sumber daya manusia, dan komitmen organisasi dalam memastikan keberhasilan adopsi SIMRS.

Kata Kunci : HMIS, Efisiensi Operasional, Rumah Sakit, Teknologi Informasi, Manajemen Perubahan.

1. INTRODUCTION

Hospitals, as healthcare service institutions, face operational complexities that demand efficient management in order to provide quality services. In response to the challenges of the digital era, the implementation of the Hospital Management Information System (SIMRS) has become a strategic step. SIMRS is an information technology-based system that integrates managerial and administrative processes, such as patient recordkeeping, human resource management, and financial administration (Fitriani et al., 2024). Proper implementation of SIMRS can significantly enhance operational efficiency and the quality of patient care.

Several studies have shown that SIMRS can accelerate administrative processes, reduce recording errors, and lighten the workload of medical personnel, allowing them to focus more on direct patient care (Ramadhani, 2024). The system also helps expedite insurance claims, improve inter-unit coordination, and support better clinical decision-making through accurate and transparent patient data (Ammarzuq, 2023). With the automation it offers, SIMRS supports improved responsiveness and service effectiveness in hospitals.

Despite its significant benefits, SIMRS implementation still faces several obstacles. These include the lack of training for medical personnel, resistance to new technologies, and suboptimal infrastructure, particularly in areas with limited access to technology (Siddik, 2024). Moreover, management commitment is essential for conducting regular system evaluations and updates, providing continuous staff training, and ensuring the protection of sensitive patient data (Fadhilla, 2021; Anjani et al., 2024). Therefore, this study aims to analyze the extent to which SIMRS can improve hospital operational efficiency and identify the challenges encountered in its implementation, in order to enhance the overall quality of healthcare services in Indonesia.

2. RESEARCH METHOD

This study employs a descriptive qualitative approach to understand the implementation of the Hospital Management Information System (SIMRS) in relation to hospital operational efficiency. This method aims to deeply explore the experiences and perspectives of the research

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subjects, namely medical personnel, administrative staff, and management involved directly in the use of SIMRS. Data were collected through observation, unstructured interviews, and documentation. Eight informants were purposively selected from strategic hospital units such as nursing, administration, IT, human resources, finance, and top management. The primary instrument for data collection was the researcher, supported by interview guidelines developed based on indicators from the SIMRS and operational efficiency variables.

The data analysis technique used was the interactive model by Miles and Huberman, which includes data collection, data condensation, data display, and conclusion drawing and verification. To ensure data validity, several strategies were employed, including prolonged observation, increased diligence, data triangulation, negative case analysis, and member checking with the informants. Data sources were divided into primary data from interviews and direct observations, and secondary data from literature and other supporting documents. This approach is expected to provide a comprehensive overview of the contribution of SIMRS to improving operational performance efficiency in hospitals.

3. RESULTS AND DISCUSSION

Implementation of the Hospital Management Information System (SIMRS) in the Hospital

The research findings indicate that the implementation of the Hospital Management Information System (SIMRS) has had a positive impact on various aspects of hospital operations and services. SIMRS plays a crucial role in accelerating access to patient data, improving service accuracy, and enhancing patient safety, as reported by doctors and nurses who participated as research informants. This system not only supports administrative functions but also aids in faster and more accurate clinical decision-making. This aligns with various studies showing that health information systems can improve the efficiency and quality of medical and nursing services.

At the managerial and human resource levels, SIMRS has proven effective in streamlining information flow between departments and enhancing work efficiency, particularly through the integration of the Human Resources Information System (HRIS) module. This module enables real-time and digital management of personnel data, including attendance, performance, and training, ultimately improving staff professionalism and accountability. This approach supports data- and competency-based human resource management strategies and fosters transparency within the organizational system. The success of this system's implementation is highly influenced by organizational readiness, including staff training and support in adapting to new technologies.

However, the study also identified several challenges, such as network disruptions, inconsistent data formats across units, and uneven staff adaptation to the digital system. This suggests that the success of SIMRS is not solely determined by technological sophistication but also by human resource readiness and effective change management. To ensure long-term effectiveness, it is essential to strengthen technological infrastructure, provide continuous training, and implement robust information security systems. If these aspects are consistently addressed, SIMRS has the potential to become a central pillar in supporting the digital transformation of hospitals towards more integrated, efficient, and patient safety-focused healthcare services.

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The Role of SIMRS in Enhancing Operational Efficiency in Hospitals

The research findings show that the implementation of the Hospital Management Information System (SIMRS) makes a significant contribution to improving hospital operational efficiency across clinical, administrative, and managerial services. The system accelerates service processes such as registration, examination, and billing, while also reducing the administrative burden on medical personnel through document digitalization. SIMRS integration supports coordination among departments such as laboratories, pharmacies, and finance, making workflows faster, more accurate, and more transparent. Previous studies have reinforced these findings, indicating that SIMRS can reduce operational costs and improve data accuracy.

In the fields of nursing and human resource management, SIMRS allows healthcare workers to focus more on direct patient care by minimizing non-clinical activities. Features such as real-time data access and integrated scheduling systems improve clinical response times and ensure more balanced staff distribution. The hospital's finance and IT managers also acknowledge SIMRS's role in efficiently managing costs and facility capacity through dashboards and data analytics. However, challenges remain, including system stability limitations, non-user-friendly interfaces, and interoperability issues between systems, which need to be addressed for optimal implementation.

Overall, SIMRS is not merely a digital tool but a strategic foundation for transforming hospital service systems. To ensure the sustainability of its benefits, hospitals must strengthen infrastructure, enhance staff training, and align the system with user needs. With these measures, SIMRS is expected to enable more efficient, faster, and integrated healthcare services.

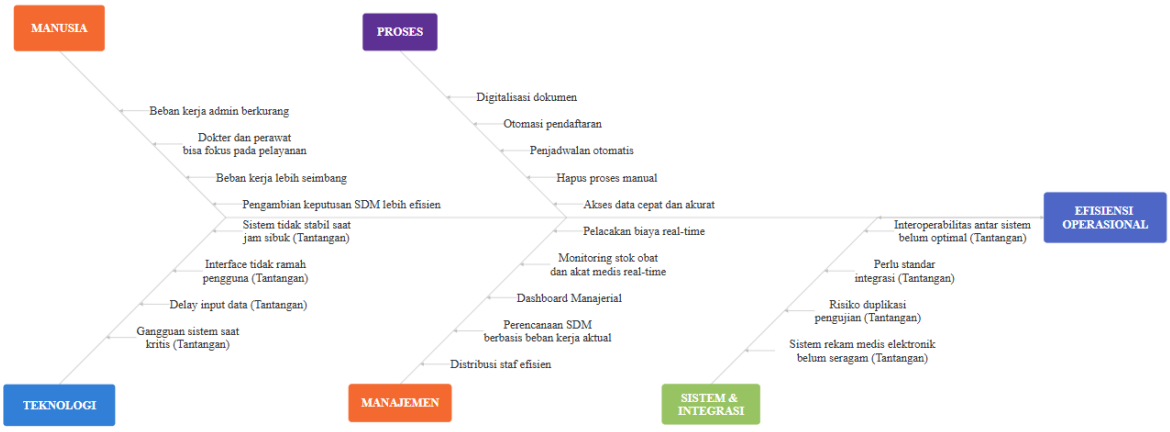

Figure 1. Fishbone Diagram of Operational Efficiency

Supporting and Inhibiting Factors in the Implementation of SIMRS to Enhance Operational Efficiency

The implementation of the Hospital Management Information System (SIMRS) does not rely solely on technological sophistication but is the result of synergy between several critical factors, such as top management support, infrastructure readiness, human resource competence, and organizational preparedness for change. Management support serves as the foundation that ensures system sustainability, while reliable infrastructure—such as hardware, network, and software—plays a key role in smooth operations. Staff competence in using the

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system, along with change management strategies, also plays an essential role in reducing resistance and promoting widespread adoption of the technology.

Beyond technical aspects, the success of SIMRS is also strongly influenced by socio-organizational factors, including communication patterns between units, a data-driven work culture, and incentive policies to encourage system use. The HOT-Fit framework (Human, Organization, Technology Fit) is highly relevant in understanding the interrelation between human readiness, organizational dynamics, and technological compatibility in system implementation. Common obstacles include resistance to change, lack of training, technical issues such as server downtime, and system instability during peak hours. Therefore, continuous training, responsive technical support, and emotional support are essential to fostering user engagement with the system.

To ensure long-term success, hospitals must adopt a holistic approach that integrates routine evaluations, reinforcement of a digital culture, and updates to IT policies. Management support, regular training, and infrastructure quality improvement are the key drivers to ensure that SIMRS serves not just as an administrative tool, but as the engine of digital transformation in healthcare services. The alignment between technology, people, and organizational systems will be a crucial foundation for hospitals in building efficient, responsive, and competitive healthcare services in the digital era.

4. CONCLUSION

The implementation of the Hospital Management Information System (SIMRS) in hospitals has made a significant contribution to improving operational efficiency and the quality of healthcare services. This system enables real-time access to patient data, facilitates better coordination between units, and reduces the administrative burden on medical personnel and staff. SIMRS supports faster and more accurate clinical decision-making and streamlines patient registration and data management in a more structured manner.

The success of SIMRS is highly influenced by the synergy between technological readiness, human resource competence, managerial support, and the organization's preparedness to embrace change. However, technical challenges such as hardware limitations, network disruptions, and suboptimal integration with legacy systems continue to pose barriers. Organizational culture adaptation and resistance from users, particularly senior staff, are also critical concerns in the digitization process of healthcare services.

Theoretical frameworks such as HOT-Fit and the Technology Acceptance Model (TAM) help explain the supporting and inhibiting factors behind SIMRS success, emphasizing the importance of holistic readiness—human, organizational, and technological—as well as systematic change management.

Based on the research findings, it is recommended that hospitals continuously improve their technological infrastructure, including adequate hardware procurement, stable internet connectivity, and the implementation of system interoperability standards to support optimal data integration. Furthermore, it is essential to strengthen training and mentoring programs for all staff—both new users and senior personnel—through adaptive, experience-based approaches to improve system usability and acceptance. Inclusive and systematic cultural change strategies must also be implemented to ensure SIMRS becomes an integral part of the hospital's daily operations. Managerial support should be reinforced through policies, budget allocations, and incentives that encourage consistent SIMRS use across all units. Optimizing

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integration and standardization across departments is crucial to bridge the gap between system design and operational reality. Finally, ongoing evaluation and monitoring mechanisms must be in place to identify and resolve issues promptly and to assess the system's impact on service quality and hospital efficiency.

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