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THE INFLUENCE OF KNOWLEDGE LEVEL, MOTIVATION, AND HOSPITAL HUMAN RESOURCE FACILITIES ON THE UTILIZATION OF THE HOSPITAL MANAGEMENT INFORMATION SYSTEM AT RSGMP MOESTOPO

Salsabila Dikeputri [1], Tjokro Prasetyadi [2], Jubery Marwan [3]
Universitas Prof. Dr. Moestopo (Beragama)
Email: dikeputrisalsabila@gmail.com

ABSTRACT
The rapid development of information and communication technology has driven digital transformation in the healthcare sector, including the implementation of the Hospital Management Information System (HMIS) as a mandatory system to improve service quality, efficiency, and data accuracy. This study aimed to analyze the influence of knowledge level, motivation, and facilities on HMIS utilization by hospital human resources at the Teaching Dental and Oral Hospital of Prof. Dr. Moestopo University (Beragama). This research employed a quantitative approach with a correlational design and involved all 50 hospital staff as respondents using a total sampling technique. Data were collected through a structured questionnaire and analyzed using multiple linear regression with SPSS version 23.0. The results indicate that knowledge level and facilities have a positive and significant effect on HMIS utilization, while motivation does not show a significant influence. Facilities emerged as the most dominant factor affecting system utilization. Simultaneously, knowledge, motivation, and facilities significantly influence HMIS utilization, with the regression model explaining 80.9% of the variance. These findings suggest that successful HMIS implementation depends not only on technological readiness but also on human resource competence and the availability of adequate supporting facilities. Strengthening staff knowledge and ensuring sufficient infrastructure are therefore essential strategies for optimizing HMIS utilization in teaching hospital settings.

Keywords: *Hospital Management Information System (HMIS), Knowledge Level, Motivation, Facilities, Hospital Human Resources, Teaching Hospital*

ABSTRAK
Transformasi digital dalam pelayanan kesehatan mendorong rumah sakit untuk mengimplementasikan Sistem Informasi Manajemen Rumah Sakit (SIMRS) sebagai upaya meningkatkan efisiensi, akurasi data, dan mutu pelayanan. Keberhasilan penerapan SIMRS tidak hanya ditentukan oleh kecanggihan teknologi, tetapi juga dipengaruhi oleh kesiapan sumber daya manusia dan dukungan organisasi. Penelitian ini bertujuan untuk menganalisis pengaruh tingkat pengetahuan, motivasi, dan fasilitas terhadap penggunaan SIMRS oleh sumber daya manusia rumah sakit di Rumah Sakit Gigi dan Mulut Pendidikan Universitas Prof. Dr. Moestopo (Beragama). Penelitian ini menggunakan pendekatan kuantitatif dengan desain deskriptif korelasional. Populasi sekaligus sampel penelitian berjumlah 50 responden dengan teknik total sampling. Data dikumpulkan menggunakan kuesioner skala Likert dan dianalisis dengan regresi linier berganda. Hasil penelitian menunjukkan bahwa tingkat pengetahuan dan fasilitas berpengaruh positif dan signifikan terhadap penggunaan SIMRS, sedangkan motivasi tidak berpengaruh signifikan. Secara simultan, tingkat pengetahuan, motivasi, dan fasilitas berpengaruh signifikan terhadap penggunaan SIMRS dengan koefisien determinasi sebesar 80,9%. Temuan ini menegaskan bahwa optimalisasi penggunaan SIMRS memerlukan peningkatan kompetensi sumber daya manusia yang berkelanjutan serta penyediaan fasilitas dan infrastruktur pendukung yang memadai untuk menunjang keberhasilan implementasi sistem informasi rumah sakit.

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Kata Kunci: Sistem Informasi Manajemen Rumah Sakit (SIMRS), Tingkat Pengetahuan, Motivasi, Fasilitas, Sumber Daya Manusia Rumah Sakit, Rumah Sakit Pendidikan

INTRODUCTION

The development of information and communication technology in the modern era has brought about very significant changes in various sectors, including the healthcare service sector. Digital transformation has become an inevitability that cannot be separated from efforts to improve service quality, operational efficiency, and the accuracy of data management within hospital environments. Digitalization in the context of healthcare services refers to the utilization of information and communication technology to support the systematic and integrated processes of recording, processing, storing, and distributing health data. Accurate, fast, and easily accessible information regarding patients' conditions is a crucial element in supporting both clinical and managerial decision-making, thereby having a direct impact on the quality of healthcare services provided to patients (Nurwito, 2024:165). In an effort to ensure the reliability and accuracy of health data and information, hospitals are required to implement comprehensive and well-organized data recording and reporting systems. One of the main instruments used to achieve this objective is the Hospital Management Information System (HMIS). HMIS functions as an integrated system that supports all hospital operational activities, both clinical and non-clinical in nature. The Indonesian government, through the Ministry of Health, has established policies mandating every hospital to implement HMIS as part of efforts to enhance efficiency, transparency, and the quality of healthcare services. This provision is explicitly regulated in the Regulation of the Minister of Health of the Republic of Indonesia Number 82 of 2013, which emphasizes that HMIS is a mandatory system in the provision of hospital healthcare services (Ministry of Health, 2013:3).

This policy was further reinforced through the Decree of the Minister of Health of the Republic of Indonesia in 2024 concerning Hospital Accreditation Standards. This regulation stipulates that every hospital is required to implement health information technology systems in accordance with prevailing laws and regulations as part of efforts to improve quality, efficiency, and accountability in healthcare service delivery. The management of both clinical and non-clinical data and information must be carried out effectively, in an integrated manner, and securely. In addition, hospitals are required to ensure that all healthcare personnel receive training related to the use and security of information systems. In the accreditation process, the existence of an HMIS management unit led by human resources with appropriate competencies constitutes an important aspect in assessing hospital quality (Decree of the Minister of Health of the Republic of Indonesia, 2024:2).

Conceptually, HMIS is defined as a system that functions to collect, process, present, analyze, and distribute information required for hospital operational activities. HMIS is designed to integrate various core hospital functions, including clinical, financial, and managerial aspects, thereby providing relevant and accurate information in accordance with the needs of each field. Accordingly, the implementation of HMIS is expected to enhance operational efficiency and overall hospital service quality (Nugroho et al., 2023:40). The success of HMIS implementation is determined by five main components, namely human resources, hardware, software, data, and networks. Among these components, human resources play a particularly crucial role, as the level of acceptance, adaptation, and utilization of technology largely depends on users' competencies, readiness, and attitudes toward the implemented system.

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Along with increasing competition among hospitals, including dental and oral hospitals, public demands for healthcare service quality have also continued to rise. Society no longer considers only service availability, but also emphasizes quality, speed, safety, and comfort in the services provided. This condition encourages hospitals to focus on improving service quality and patient satisfaction as primary strategies to enhance institutional competitiveness. Hospital quality generally encompasses two main components, namely compliance with established quality standards and the hospital's ability to meet patient expectations and satisfaction (Putri et al., 2024:3258). In this context, the utilization of HMIS becomes an important factor that can support improvements in service quality through more effective and efficient information management.

Nevertheless, healthcare services in hospitals often face challenges in the form of uncertainty within patient care processes. The complexity of service systems, limitations in information management and distribution, and lack of integration among service units are obstacles that may hinder coordination and service effectiveness. Insufficient integration of hospital information systems can lead to service delays, recording errors, and inaccurate decision-making. Therefore, the implementation of an integrated HMIS has become an urgent necessity to improve the effectiveness, efficiency, and coherence of healthcare service delivery in hospitals (Pane et al., 2023:2).

Within the organizational context of hospitals, human resources play a vital role in ensuring service continuity and quality. Hospital human resources include not only medical personnel such as doctors and nurses, but also administrative staff, technicians, and other supporting personnel. The quality and effectiveness of healthcare services are largely determined by how these human resources are managed and developed. Nurses constitute one of the main components of hospital human resources and play a strategic role in supporting the achievement of health development goals through the provision of high-quality nursing care (Rusdiyanti et al., 2022:87). Nurses' performance reflects the optimal execution of duties, authority, and responsibilities, and directly contributes to the achievement of hospital organizational objectives.

Nursing services represent an essential element of the healthcare service system and are often used as a primary indicator in assessing hospital quality. Nurses' professionalism is reflected in their performance in delivering safe, effective, and patient-oriented nursing care. The achievement of optimal nursing performance is strongly influenced by the nursing care implementation system applied, including adequate support from information technology. Systems that support professional nursing practice in accordance with established standards will facilitate nurses in carrying out their duties effectively (Indriani, 2018:93).

In addition to technical and clinical abilities, nurses' performance is also influenced by various internal and external factors. Internal factors include levels of knowledge, skills, and work motivation, while external factors encompass the work environment, availability of facilities, and organizational support. Nurses' job satisfaction plays an important role in enhancing motivation, discipline, and work enthusiasm. Furthermore, nurses are required to possess managerial and leadership competencies, particularly in dealing with the complexity of modern healthcare services. A conducive work environment, harmonious working relationships, and adequate facilities serve as key supporting factors in creating optimal nursing performance (Indriani, 2018:94; Putri et al., 2024:3258).

An individual's success in performing work is influenced by skills, abilities, supporting facilities, and motivation to achieve optimal outcomes. Knowledge level plays an important role in shaping individual attitudes and actions, including in the use of information technology. The implementation of an integrated HMIS can improve administrative

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efficiency and data management processes, thereby accelerating hospital service delivery (Jamaludin et al., 2023:190). Motivation, as an internal drive that directs and sustains individual behavior, is also a key factor in determining the extent to which hospital human resources are willing to accept and optimally utilize HMIS (Elmiyanti, 2021:15). In addition, the availability of adequate work facilities, including hardware, software, and other supporting infrastructure, has a positive impact on service quality and healthcare workers' job satisfaction. Conversely, limited facilities may reduce service quality and nurses' work motivation (Nahardian et al., 2022:2).

Various studies indicate that nurses in dental and oral hospitals still face several obstacles in the implementation of nursing services. Observations by Hollar et al. (2015:6) revealed that common problems include limited facilities, lack of work comfort, and low levels of knowledge regarding procedures that should be applied, despite nurses having adequate basic abilities and skills. Other factors influencing nurses' roles in nursing practice include low levels of readiness, inappropriate perceptions of technology, and various barriers encountered during the provision of dental and oral care.

Teaching Hospitals play a strategic role in the delivery of healthcare services integrated with education and research. Teaching Hospitals function as facilities for medical and/or dental education, continuing education, and the development of scientific knowledge and healthcare practices. Dental and oral specialty hospitals serve as supporting facilities for dental faculties in implementing educational curricula to achieve professional competencies in dentistry (Ministry of Health, 2015:6). Furthermore, main Teaching Hospitals are required to provide integrated primary, secondary, and tertiary healthcare services while ensuring patient safety and sustainable service quality (Ministry of Health, 2022:9; 2022:19).

The Teaching Dental and Oral Hospital of the Faculty of Dentistry, Prof. Dr. Moestopo University (Beragama), is one of the Teaching Dental and Oral Hospitals committed to becoming a pioneer in education, research, and dental and oral healthcare services. This hospital strives to deliver high-quality, quality-oriented services as part of its academic and social responsibilities (Mariza et al., 2023:2252). In this context, the implementation and utilization of HMIS serve as important factors in supporting the effectiveness of services, education, and research.

The use of the Hospital Information System (HIS) aims to manage and securely store patient and hospital data, support scheduling arrangements, internal management, decision-making, and improve work process efficiency. This system contributes to increased productivity, service quality, and patient satisfaction, while simultaneously reducing costs and minimizing errors. The success of HIS implementation largely depends on users' ability to operate the system as well as social factors influencing technology acceptance among healthcare personnel (Engin & Gürses, 2019:1).

Based on the above discussion, it can be concluded that the success of HMIS implementation is not solely determined by technological sophistication, but is also strongly influenced by the readiness of human resources, particularly in terms of knowledge level, work motivation, and availability of supporting facilities. Therefore, this study was conducted at the Teaching Dental and Oral Hospital of Prof. Dr. Moestopo (Beragama) with the aim of analyzing the influence of nurses' knowledge, motivation, and facilities on the utilization of the Hospital Management Information System after its implementation. This research is expected to provide both theoretical and practical contributions to the development of hospital information systems, particularly within the Teaching Hospital environment.

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LITERATURE REVIEW

1. Hospital Management Information System (SIMRS)

The Hospital Management Information System (HMIS) is the application of information technology that functions to manage and integrate all hospital service processes systematically in order to produce accurate and timely information. HMIS serves as an essential component of the health information system in supporting coordination, administration, and more rational, data-driven managerial decision-making (Silitonga, 2019). Through this system, the quality of patient services can be improved along with a reduction in uncertainty within hospital operational processes.

The Hospital Information System (HIS), as an implementation of HMIS, is an integrated application that encompasses the management of clinical, administrative, and strategic hospital activities (Ross & Venkatesh, 2016). HIS enables rapid and accurate access to patient data and medical records, thereby supporting the effectiveness of healthcare personnel and enhancing service quality. The successful implementation of this system is strongly influenced by leadership commitment, the readiness of human resources, adequate training, as well as adjustments to workflows and organizational culture to ensure optimal system utilization (Engin & Gürses, 2019).

In Indonesia, the implementation of HMIS has been mandatory since 2013 as part of efforts to improve efficiency, professionalism, and patient safety in healthcare services (Rusdiyanti et al., 2022). This requirement is stipulated in the Regulation of the Minister of Health of the Republic of Indonesia Number 82 of 2013, which mandates that every hospital manage and develop HMIS to support improvements in service quality, transparency, and effective decision-making. Therefore, HMIS plays a strategic role in enhancing hospital performance and the overall quality of healthcare services (Widayanto & Widayati, 2021).

2. Hospital Human Resources

Human resources (HR) constitute a central element in delivering excellent hospital services, particularly in the implementation of patient-centered care principles that emphasize patient safety, risk management, and the integration of technical competencies (hard skills) and interpersonal competencies (soft skills). Quality-oriented healthcare services require effective systems, a genuine service-oriented mindset, and continuous improvement by involving patient empowerment as the primary focus of healthcare delivery (Purwatiningsih et al., 2022).

In the context of hospital organizations, human resources encompass not only medical personnel but also administrative staff, technicians, and other supporting personnel. Technological advancements and changes in healthcare policies require hospitals to continuously enhance HR competencies in order to adapt and remain competitive (Putri et al., 2024). Effective human resource management has been shown to influence operational efficiency, patient satisfaction, and healthcare service performance. Numerous studies indicate that weaknesses in healthcare services often stem from human resource issues, such as insufficient training, low work motivation, and mismatches between competencies and job demands (Purwadi et al., 2024).

Nurses, as a primary component of the healthcare workforce, play a strategic role in determining hospital service quality due to their direct interaction with patients. Nurses' performance is reflected in their ability to optimally carry out functions, authority, and responsibilities in providing high-quality nursing care (Shintya & Maritasari, 2020). This level of performance is influenced by motivation, job satisfaction, workload, work environment, and system support such as the Hospital Management Information System

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(HMIS), which facilitates documentation, data management, and clinical decision-making. When workloads are not balanced with individual capacity, such conditions may potentially reduce the quality of nursing services and compromise patient safety (Rusdiyanti et al., 2022).

3. **Teaching Dental and Oral Hospital of Prof. Dr. Moestopo University (Beragama)**
   The Dental and Oral Hospital of the Faculty of Dentistry, Prof. Dr. Moestopo University (Beragama), is one of the teaching hospitals under the auspices of the Prof. Dr. Moestopo University Foundation. This hospital primarily functions as a center for education, research, and development in the field of dentistry (Mariza et al., 2023). The Teaching Dental and Oral Hospital of Prof. Dr. Moestopo University (Beragama) was officially inaugurated on September 2, 2004, by Mrs. R.A. Soepartin Moestopo and obtained official authorization as a Teaching Hospital of the Faculty of Dentistry on December 2, 2005.
   In addition to its academic role, this Teaching Dental and Oral Hospital has achieved five-star (plenary) accreditation and carries the mission of providing high-quality, equitable, and affordable dental and oral healthcare services for all segments of society (Putri et al., 2024:3259).
4. **Level of Knowledge**
   Knowledge is the result of an individual's process of perception and understanding of an object, which plays an important role in shaping work-related behavior and actions (Kurniasih, 2022). In the context of using the Hospital Management Information System (HMIS), the level of users' knowledge becomes a key factor in ensuring that system operations run effectively and efficiently (Astri et al., 2023). Knowledge is influenced by various factors such as educational level, age, work experience, access to information, and cultural background; the higher an individual's level of knowledge, the greater the likelihood of forming positive attitudes and behaviors toward a system or technology (Apriyanto et al., 2024).
   According to Notoatmodjo (2014), knowledge as a cognitive domain consists of six levels, namely knowing, understanding, application, analysis, synthesis, and evaluation. These levels reflect an individual's ability to recognize information, comprehend its meaning, apply knowledge in practice, analyze problems, formulate solutions, and evaluate the effectiveness of actions taken. In the use of HMIS, these levels of knowledge indicate the extent to which hospital human resources are able to utilize the system, ranging from basic operation and understanding of service workflows to evaluating the benefits of HMIS in supporting service quality and managerial decision-making (Notoatmodjo, 2014).
   An individual's level of knowledge is influenced by various factors, including age, education, environment, occupation, socioeconomic conditions, and the information obtained (Pawa et al., 2021). Knowledge can be acquired through both non-scientific and scientific approaches, including formal education, work experience, and technology-based learning processes. In nursing management, nurses' level of knowledge regarding information technology, particularly HMIS, is a critical determinant of nursing service quality. Low levels of knowledge and digital literacy may hinder HMIS implementation, whereas adequate understanding can enhance work efficiency, the quality of nursing care, and patient satisfaction (Semiawan, 2020).
5. **Motivation**
   Motivation is an internal force that drives individuals to act, determines the direction of behavior, and encourages efforts to achieve specific goals (Haryanto et al., 2023). Etymologically, the term motivation originates from the Latin word movere, meaning to move or to drive, and is therefore understood as a form of psychological energy that

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stimulates an individual's willingness, needs, and desires to act optimally (Sitorus, 2020). In the workplace context, motivation functions as an intrinsic driving force that influences an individual's willingness to carry out responsibilities and contribute to the achievement of organizational objectives (Muhfizar, 2021).

Maslow's Hierarchy of Needs theory explains that individual motivation develops gradually in accordance with the fulfillment of needs, beginning with physiological needs, safety needs, social needs, esteem needs, and culminating in self-actualization (Maslow, 1943). The fulfillment of basic needs serves as a prerequisite for achieving higher-level needs. Maslow also distinguishes between deficiency motivation, which arises from unmet basic needs, and growth motivation, which drives individuals to develop their potential and achieve optimal self-actualization (Muhfizar, 2021).

In nursing management, motivation has a significant influence on nurses' performance, particularly in the utilization of the Hospital Management Information System (HMIS). Both intrinsic and extrinsic motivation encourage nurses to accept, learn, and consistently operate HMIS in their daily work practices. Nurses with high levels of motivation tend to be more adaptive to technology, more disciplined in documenting patient data, and experience higher job satisfaction. Consequently, the utilization of HMIS can be more effective and contribute to improvements in the quality of nursing services (Putri & Wibowo, 2022).

6. **Fasilities**

Facilities refer to the infrastructure, equipment, and physical resources provided to support the effective delivery of services and to ensure user comfort (Yesinda & Murnisari, 2018). The availability of facilities functions as a key supporting element in enhancing service convenience and user satisfaction (Kotler & Keller in Maydiana, 2019). In the service sector, facilities encompass all forms of physical infrastructure provided by service organizations to create comfort, efficiency, and a positive organizational image in the eyes of service users (Wibisono & Acha, 2020).

The provision of adequate facilities aims to increase user satisfaction, thereby encouraging sustained service utilization and the establishment of long-term relationships between organizations and users (Arifin et al., 2023). The concept of facilitating conditions refers to the degree to which individuals believe that organizational infrastructure and technical resources are available and capable of supporting the optimal use of a system (Prasanna & Huggins, 2016). Effective facilities should not only be available, but also aligned with user needs, easy to use, capable of accelerating work processes, and contributive to improved work outcomes (Sabri & Susanti, 2021).

In nursing management, facilities play an important role in supporting the utilization of the Hospital Management Information System (HMIS). The availability of computers, internet networks, appropriate software, and adequate technical support enhances nurses' ease and consistency in using HMIS. Conversely, limited facilities may hinder system utilization, reduce documentation efficiency, and decrease user interest. Facilities that function optimally enable nurses to work more efficiently, improve work comfort, and support improvements in the quality of nursing services (Ramadhani & Yusuf, 2020).

RESEARCH METHODOLOGY

This study employed a descriptive research design with a quantitative approach and a correlational study design, aiming to analyze the influence of knowledge level, motivation, and facilities on the use of the Hospital Management Information System (HMIS) by hospital

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human resources. The study was conducted at the Teaching Dental and Oral Hospital of Prof. Dr. Moestopo University (Beragama) during the period of June–July 2025.

The population of this study consisted of all hospital human resources working at the Teaching Dental and Oral Hospital of Prof. Dr. Moestopo University (Beragama), totaling 50 individuals. Given that the population size did not exceed 100 respondents, the entire population was included as the research sample using a total sampling technique.

Data were collected using a closed-ended questionnaire administered through a self-administered questionnaire method. The instrument was developed based on a five-point Likert scale ranging from 1 to 5. The independent variables in this study were knowledge level (X1), motivation (X2), and facilities (X3), while the dependent variable was the use of the Hospital Management Information System (HMIS) (Y).

Prior to data analysis, the research instrument was tested for validity using Pearson correlation analysis and for reliability using Cronbach's Alpha, with a minimum reliability threshold of 0.60. All instrument testing procedures and data analyses were conducted using SPSS software version 23.0.

Data analysis techniques included descriptive analysis, multiple linear regression analysis, t-tests to examine partial effects, F-tests to assess simultaneous effects, and the coefficient of determination (R^2) to measure the model's ability to explain variations in the dependent variable. Hypothesis testing was performed at a 5% significance level ($\alpha = 0.05$) to determine the influence of independent variables on HMIS utilization, both partially and simultaneously.

RESULTS AND DISCUSSION

Result

a. Validity Test

Based on the results of the validity test conducted using SPSS software version 23.0, all research instruments used in the questionnaire were declared valid. The validity testing indicated that each statement item across all research variables had a calculated correlation coefficient (r-count) greater than the r-table value of 0.361 at a significance level of 0.01. This result confirms that each questionnaire item is capable of accurately representing the construct or variable being measured.

For the Knowledge Level variable, all statement items (TP1 to TP6) met the validity criteria, indicating that the instrument is capable of accurately measuring respondents' levels of knowledge. Similarly, for the Motivation variable, all items (M7 to M11) demonstrated significant and strong correlations, and therefore can be considered valid instruments for measuring respondents' motivation.

Consistent results were also found for the Facilities variable, in which all statement items (F12 to F15) had r-count values exceeding the r-table value, indicating that the instrument is valid for measuring respondents' perceptions of available facilities. In addition, the Hospital Management Information System Utilization (HMISU) variable, consisting of items PSIMRS16 to PSIMRS20, also demonstrated excellent validity results, confirming its suitability for accurately measuring the level of hospital management information system usage.

Overall, the validity test results confirm that all research instruments are appropriate and valid for use in further analysis. Therefore, the data obtained from the questionnaire can be

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considered reliable and capable of empirically supporting the examination of relationships among variables in this study.

b. Reliability Test

Based on the results of the reliability test using Cronbach's Alpha coefficient, all research variables demonstrated very high levels of reliability. This testing confirms that the instruments used possess strong internal consistency and are capable of producing stable and dependable data. All obtained Cronbach's Alpha values exceeded the minimum recommended threshold of 0.60, and in fact, all values were above 0.90, indicating a very strong level of consistency.

The Knowledge Level variable (X1) achieved a Cronbach's Alpha value greater than 0.90, indicating that all statement items within this variable are highly interrelated and consistently measure the construct of respondents' knowledge level. Similar results were found for the Motivation variable (X2), where the very high Cronbach's Alpha value indicates excellent stability and reliability of the motivation measurement instrument.

Furthermore, the Facilities variable (X3) also showed a Cronbach's Alpha value exceeding 0.90, signifying that the statement items within this variable consistently measure respondents' perceptions of facilities. In addition, the Hospital Management Information System Utilization variable (Y) obtained a Cronbach's Alpha value above 0.90, leading to the conclusion that the instrument used to measure HMIS utilization possesses a very high level of reliability.

Overall, the results of the reliability test confirm that all research instruments demonstrate excellent consistency and reliability. Therefore, the questionnaire is deemed appropriate for use in subsequent stages of analysis without requiring any adjustments or modifications to the established measurement scales.

c. Multiple Linear Regression Analysis and Partial T-Test

Table 1. Multiple Linear Regression Analysis and Partial T-Test Result

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	8.477	3.878		2.186	.034
	TP	.248	.084	.335	2.940	.005
	M	-.357	.189	-.214	-1.890	.065
	F	.828	.101	.723	8.208	<.001

Based on the results of the multiple linear regression analysis and partial t-test, it is evident that Knowledge Level (X_1), Motivation (X_2), and Facilities (X_3) exert different effects on the utilization of the Hospital Management Information System (HMIS) (Y). The regression results indicate that Knowledge Level has a positive and statistically significant effect on system utilization ($\beta = 2.940$; $p = 0.005$). In contrast, Motivation demonstrates a negative but statistically insignificant effect ($\beta = -1.890$; $p = 0.065$).

Meanwhile, Facilities exhibit the most dominant and highly significant influence on HMIS utilization ($\beta = 8.208$; $p = 0.000$). These findings are further supported by the partial t-test results, which confirm that Knowledge Level and Facilities individually have a significant effect on the utilization of the hospital management information system, whereas Motivation does not show a statistically significant effect.

Overall, the findings emphasize that improvements in facilities and human resource knowledge are key determinants in optimizing the use of hospital management information

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systems. Conversely, the role of motivation requires further investigation to better understand its indirect or contextual influence on system utilization.

d. Simultaneous Significance Test (F-Test)

Table 2. Results of the Simultaneous Significance Test (F-Test)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	160.082	3	53.361	29.139	<.001[b]
	Residual	84.238	46	1.831		
	Total	244.320	49			

a. Dependent Variable: PSIMRS

b. Predictors: (Constant), F, M, TP

Based on the results of the simultaneous significance test (F-test) presented in the ANOVA table, the calculated F-value is 29.139 with a significance level of 0.001. This significance value is below the threshold of 0.05, indicating that the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted. These results demonstrate that all independent variables—namely Knowledge Level (X_1), Motivation (X_2), and Facilities (X_3)—simultaneously have a significant effect on the dependent variable, namely the utilization of the Hospital Management Information System (HMIS) (Y).

These findings indicate that the combination of knowledge level, motivation, and facilities collectively plays an important role in explaining variations in the utilization of the hospital management information system. Accordingly, the regression model employed in this study can be considered appropriate (fit) and capable of adequately explaining the overall relationship between the independent and dependent variables.

Overall, the F-test results reinforce the findings of the partial tests and previous regression analyses, showing that although not all independent variables have a significant effect individually, their simultaneous contribution to the utilization of the hospital management information system is statistically meaningful.

e. Coefficient of Determination (R^2) Analysis

Table 3. Results of the Coefficient of Determination Analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.809[a]	.655	.633	1.353

a. Predictors: (Constant), F, M, TP

Based on the results of the coefficient of determination analysis, the R value obtained is 0.809, indicating that the regression model has a strong capability in explaining the relationship between the independent variables and the dependent variable. This value implies that 80.9% of the variation in the utilization of the Hospital Management Information System can be explained simultaneously by the variables of Knowledge Level, Motivation, and Facilities. Meanwhile, the remaining 19.1% of the variation in the utilization of the hospital management information system is influenced by other factors outside the variables examined in this regression model. These factors may include aspects such as management support,

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organizational culture, technological competence, and institutional policies that were not analyzed in this study.
Overall, the high value of the coefficient of determination confirms that the regression model employed has strong explanatory power and is able to provide a comprehensive overview of the factors influencing the utilization of the hospital management information system.

Discussion
The utilization of the Hospital Management Information System (HMIS) constitutes a crucial component of digital transformation in healthcare services, the success of which is determined by the interaction between individual factors and organizational factors. The findings of this study indicate that knowledge level and facilities have a positive and significant effect on HMIS utilization, while motivation does not show a significant influence. These results emphasize that technology adoption in hospital settings depends not only on technological readiness but also on human resource capacity and the availability of supporting systems and infrastructure.
The results demonstrate that knowledge level has a positive and significant effect on HMIS utilization among hospital personnel. Knowledge represents a cognitive aspect that shapes an individual's ability to understand, operate, and effectively utilize the system. The higher the users' knowledge of HMIS functions and procedures, the more optimal the system utilization in supporting healthcare services. This finding is consistent with previous studies that highlight the contribution of knowledge and work experience to increased utilization of health information systems. Furthermore, the results support policies outlined in Hospital Accreditation Standards, which emphasize the importance of enhancing human resource competencies through continuous training to ensure the safety and effectiveness of information system utilization.
In contrast to knowledge level, motivation does not show a significant effect on HMIS utilization and even tends to exhibit a negative direction. This finding suggests that HMIS utilization in hospitals is more strongly influenced by structural, technical, and organizational policy factors rather than individual psychological motivation alone. In practice, HMIS utilization is mandatory and integrated into healthcare service workflows, thereby reducing the role of personal motivation as a primary determinant. This result aligns with several previous studies indicating that motivation or hedonic expectations do not directly influence information system adoption, but rather are mediated by factors such as organizational support, system usability, and facilitating conditions.
Meanwhile, facilities are proven to have a positive and significant effect on HMIS utilization and represent the most dominant factor. The availability of adequate infrastructure, including computer hardware, stable internet networks, and technical support, plays a vital role in creating a work environment that supports effective information system utilization. This finding reinforces previous research emphasizing that limited facilities constitute a major barrier to the optimal use of hospital information systems, even when users possess sufficient knowledge and training. Therefore, the provision of adequate facilities is a fundamental prerequisite for the successful implementation of HMIS.
Simultaneously, knowledge level, motivation, and facilities are shown to have a significant effect on HMIS utilization, with the regression model explaining 80.9% of the variance in system utilization. This indicates that HMIS utilization is the result of a complex interaction between individual capabilities and organizational support. The findings underscore that successful HMIS implementation cannot be achieved solely through increased motivation or training, but must be accompanied by adequate infrastructure provision and supportive

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managerial policies. Consequently, strategies to enhance HMIS utilization should focus on strengthening human resource competencies and ensuring the sustainable provision of supporting infrastructure.

CONCLUSION

Based on the data analysis of 50 respondents, it can be concluded that the utilization of the Hospital Management Information System (HMIS) by hospital human resources at RSGMP Moestopo is influenced by both individual and organizational factors. Knowledge level is proven to have a positive and significant effect on HMIS utilization, indicating that hospital staff's understanding and ability to operate the system constitute a fundamental prerequisite for optimizing HMIS use.

In contrast, motivation does not show a significant effect on HMIS utilization. This finding suggests that the use of information systems in hospital settings is largely determined by structural, technical, and organizational policy factors rather than by individual psychological motivation alone. Therefore, personal motivation is not a primary determinant of HMIS utilization among hospital personnel.

Furthermore, facilities are shown to have a positive and significant effect on HMIS utilization. The availability of adequate facilities, including hardware, software, and supporting infrastructure, plays an essential role in ensuring the effectiveness and smooth operation of HMIS in daily healthcare service activities.

Simultaneously, knowledge level, motivation, and facilities are found to have a significant influence on HMIS utilization, with the regression model explaining a substantial proportion of the variance in system use. These findings underscore that the successful implementation of HMIS requires synergy between human resource competencies and adequate facility support. Without optimal infrastructure, HMIS implementation cannot function effectively, even when hospital staff possess sufficient motivation and training.

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