

LITERATURE STUDY: FACTORS AFFECTING THE IMPLEMENTATION OF HOSPITAL MANAGEMENT INFORMATION SYSTEMS IN HOSPITAL

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ABSTRACT

Evaluation of information systems aims to explore and find out, about the extent of an information system implementation activity, both from the point of view of user perception, organization, and information system technology. The purpose of this study is to describe a review of the application of the registration information system in hospitals using the Hot-Fit Method. Human component; shortage of experts, officers who do not understand and understand, the process of inputting patient data is not appropriate or incomplete, negligent officers and officers have not attended training on Hospital Management Information Systems. organizational components; there are still some organizations that are not appropriate such as support, supervision, development from the management is lacking or non-existent, there is no reward, there is no evaluation and Standard Operating Procedure in the implementation of Hospital Management Information System. Technology components; some have not run smoothly, the quality of the system is still found obstacles such as the availability of infrastructure that is not yet appropriate, errors still occur in the system, problematic networks, the quality of information that does not meet expectations and the quality of service that has not been maximized.

Keywords: hospital management information system; human; organization; technology

INTRODUCTION

The hospital is a complex health care institution. This complexity arises because hospital services involve various service functions, education, and research, and include various actions and types of discipline, so that hospitals are able to carry out professional functions both in the medical technical field and in health administration (Rustiyanto, 2010). In maintaining and improving quality, many hospitals adopt information systems. The development of information systems is currently growing rapidly. Management of Health Information Systems must be supported by information technology. Health information systems are now also widely implemented in hospitals as Hospital Management Information Systems. Hospital Management Information System is a computer system that processes and integrates all health care business process flows in the form of a network of coordination, reporting and administrative procedures to obtain information quickly, precisely and accurately. Currently, the hospital computer-based management information system is a very important supporting facility, it can even be said to be absolute to support the operational management of the hospital (Listyorini, 2021). Information systems can be used as a strategic means to provide patient satisfaction-oriented services.

Objectives and benefits Hospital Management Information System in general, namely being able to provide accurate, timely information for decision making at all levels of administration in planning, implementing, monitoring, controlling and evaluating in hospitals (Rustiyanto, 2010). In addition,

information systems in hospitals are needed to facilitate access to services, so that they can run more optimally. Hospital commitments to provide quality health services, hospitals are required to develop themselves into an institution that is able to compete in hospital services and has a comparative advantage. A hospital information system ideally includes the integration of clinical (medical), finance, and management functions which will later become a sub-system of a hospital information system. This sub-system is an element of a hospital information system whose task is to prepare information based on existing functions to simplify services at a hospital (Handoyo, 2008).

According to research (Istiqomah, et al., 2021) explained that there are several factors that influence the success of its implementation, including the human component; shortage of experts, officers do not understand and understand, the process of inputting patient data is not appropriate or incomplete, negligent officers and officers have not attended training on Hospital Management Information System. organizational components; there are still some organizations that are not appropriate such as support, supervision, development from the management is lacking or non-existent, there is no reward, there is no evaluation and Standard Operating Procedures in the implementation Hospital Management Information System. Technology components; some have not run smoothly, the quality of the system is still found obstacles such as the availability of infrastructure that is not yet appropriate, errors still occur in the system, network problems, information quality that does not meet expectations and service quality that has not been maximized.

In addition, the research results (Rohaeni, 2016) shows that the application of the medical record information system at the Mental Hospital of West Java Province in 2014 has not run optimally because the information produced is incomplete and less relevant to user needs, the influencing input factors are knowledge, experience, expectations and attitudes of information users, software that not perfect as well as leadership policies in the development of Hospital Information Systems. Factors influencing the process are changes in planning and lack of monitoring and evaluation. The conclusion is that the application of the medical record information system is influenced by human resources, optimal software, careful planning, monitoring and evaluation on a regular and continuous basis as well as environmental support as a supra system. In general, the Hospital Management Information System has been implemented, but based on the document review, many studies reveal problems in the implementation Hospital Management Information System, so it is necessary to prepare a review description to find out what factors affect the implementation of hospital management information systems in hospitals.

METHOD

This type of research is a literature review research. The data collection used in this research is using secondary data which is supporting data sourced from various literatures and existing references. Data analysis was also carried out using literature review techniques including looking for similarities (compare), looking for dissimilarities (contrast), giving views (critize), compare (synthesize), and summarize (summarize). In more detail, the study selection process and quality assessment are presented in Figure 1.

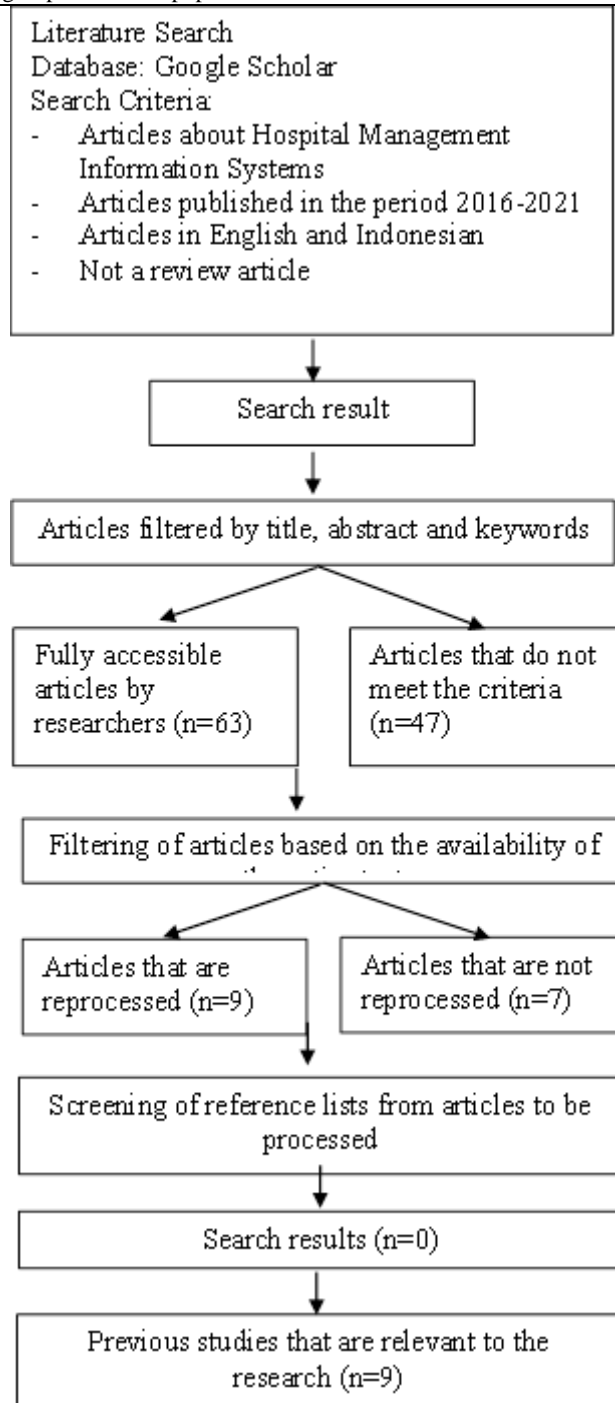


Figure 1. Literature Search Process

RESULTS AND DISCUSSION

A total of seventy-eight journals were selected based on a search through Google Scholar with predetermined keywords, after being selected based on inclusion and exclusion criteria, there were sixteen selected journals and only ten journals were reviewed based on research objectives consisting of eight national journals and two international journals.

Table 1.
 Data Extraction

No	Researcher	Year and Journal	Research Title	Research methods	Research result
1.	Hafis Nur Wicaksono, Siri Utami, Eri Witcahyo	2016 Scientific Articles of Jember University Student Research Results	Management Information System Success Analysis Using Updated D&M Is Success Model Approach at Kaliwates General Hospital	analytical research observational with cross sectional approach	The results of this study indicate that there is an influence of the quality of information on the intention to use. There is an effect of information quality on user satisfaction with. There is an effect of system quality on the intention to wear. there is an effect of system quality on satisfaction. There is an effect of service quality on the intention to use. There is an effect of service quality on satisfaction. There is an effect of intention to use on usage. There is an effect of usage on user satisfaction. There is an effect of user satisfaction on the intention to use. There is an effect of usage on net benefits. There is an effect of net benefits on intention to use. There is an effect of net benefits on user satisfaction. There is an effect of user satisfaction on net benefits.
2.	Deni Maisa Putra, Dila Vadriasm	2020 Administration & Health Information of Journal	Analysis of the Application of Hospital Management Information Systems at the Outpatient Patient Registration Area with the UTAUT Method at Dr. Reksodiwiryo Padang Hospital	Qualitative descriptive	The results of this study found that the implementation of the Hospital Management Information System at the Outpatient Registration Center had been running smoothly, with the Hospital Management Information System at the Outpatient Registration Center it really helped them in their work and was more time efficient from manual to system. However, in its application there are some officers who have not been responsible and disciplined. This is because there is no support and motivation from management specifically for officers yet. The conclusion of the study is the lack of responsibility and discipline of officers in inputting patient data. Management support is provided to improve the

No	Researcher	Year and Journal	Research Title	Research methods	Research result
					performance of officers at work. The application of the Hospital Management Information System at the Outpatient Registration Center in terms of technology is already quite good, although there are still obstacles but can still be overcome. Officers have been trying to make the Hospital Management Information System at the Outpatient Registration Center run smoothly
3.	Anis Khotimah	2021 Permas Scientific Journal: Kendal STIKES Scientific Journal	Evaluation of Management Information System Using Hot-Fit Model for Health Facility X in Yogyakarta	Quantitative descriptive with cross sectional research design	The implementation of the Hospital Management Information System at Rajawali Citra Hospital Yogyakarta still has some minor weaknesses that are not difficult to overcome. Some of the evaluations found were systems that still had errors during busy service hours, causing service activities to be hampered, lack of personnel to handle system problems and users who still did not understand how to use the system.
4.	Muntari, Djawoto, Suwitho, Hening Widi Oetomo	2020 Journal of Management Science	The Influence of the Quality of Hospital Management Information Systems and Non-Physical Work Environments on Employee Performance and Person-Organization Fit (Case Study at Jemursari Islamic Hospital Surabaya)	Qualitative descriptive	The quality of the Hospital Management Information System has an insignificant effect on employee performance at the Jemursari Islamic Hospital in Surabaya. These results reflect that the condition of the quality of the Hospital Management Information System at Jemursari Islamic Hospital in terms of systems, information, and services does not yet have a maximum function, so it has no significant effect on employee performance. Non-Physical Work Environment has an insignificant effect on employee performance at Jemursari Islamic Hospital Surabaya
5.	Fitri Dewi Lestari, Aditya	2020	Evaluation of Hospital Management	Qualitative descriptive	- The technology aspect shows that the system is

No	Researcher	Year and Journal	Research Title	Research methods	Research result
	Rachmadi, Niken Hendrakusma Wardani	Journal of Information Technology and Computer Science Development	Information System Using Framework Human, Organization, And Technology-Fit (HOT-Fit) Model (Study at Islamic Hospital UNISMA Malang)		easy to use, easy to learn, and the system has good access security. <ul style="list-style-type: none"> - In the human aspect, the use of the system is in accordance with the wishes of the user, according to the needs of each installation and in accordance with the goals set by the organization. Usage training for new employees provides convenience in using the system so that it is easier to complete work - On the organizational aspect, stated that top management provides full support for the implementation of the system. Support in the form of training, infrastructure, and communication with users.
6.	Andi Dermawan Putra, Muhammad Siri Danngga, Makhradjani Majid	2020 Journal of Humans and Health	Evaluation of the Hospital Management Information System using the Hot Fit method at the Andi Makkasau Regional General Hospital, Parepare City	Qualitative research with a descriptive approach with	The results showed that this study concluded that the Andi Makkasau Hospital Management Information System in Parepare City was categorized as good because it was able to meet the indicators from the human aspect, from the organizational aspect it was also good enough to meet the indicators from the organizational aspect, from the technological aspect it was also quite good. already able to meet the indicators of technology, from the aspect of benefits it is also quite useful
7.	Beny Budi Khabib Mustofa	Binarto Susilo, 2019 Journal of Information Systems for Public Health	Evaluation of the Implementation of Home Management Information Systems Sick at the Praya Regional General Hospital, Central Lombok Regency, West Nusa Tenggara	Quantitative research with a case study approach is carried out	Utilization of the application of the Hospital Management Information System at the Praya Regional General Hospital, Central Lombok Regency, West Nusa Tenggara, the results of the evaluation have not run optimally. Human factors, organization, technology, user knowledge, and regulations have a significant effect partially or simultaneously on

No	Researcher	Year and Journal	Research Title	Research methods	Research result
					the Net Benefit of Hospital Management Information Systems (p-value = 0.000 < Level of Significant = 0.05).
8.	Imron Rosyidi, Suharnomo, Bambang Edi Warsito	2017 Academia	Analysis of Factors Influencing the Behavior of Nurses in the Use of Hospital Management Information Systems at the Ambarawa Regional General Hospital	Explanatory research	The most influential factor on the behavior of nurses in using the Hospital Management Information System is the knowledge factor, the respondents' understanding of the Hospital Management Information System is not related to the training they receive but is related to how often they use the Hospital Management Information System in documenting all related activities. with the patient. In addition to training, supervision and direction from the direct supervisor or head of the room are needed so that the use of the Hospital Management Information System can be optimally in accordance with the instructions contained in Law no. 44 of 2009 concerning Hospitals that every hospital should carry out the process of documenting all activities and activities using the Hospital Management Information System
9.	Famela Niken Arista Furi, Christiyana Sandra, Eri Witcahyo	2021 Health Library Journal	Factors Affecting Perceptions of the Ease and Benefit of Using Management Information Systems at Kaliwates Jember General Hospital in 2019	Research analytic with observational approach	The results showed that institutional factors, social factors, and individual factors, and ease of use had a significant effect on the usefulness of using the Management Information System of Kaliwates Jember General Hospital.

Source:(Wicaksono et al., 2016);(DM Putra & Vadriasm, 2020);(Khotimah, 2021);(Muntari et al., 2020);(Sustainable, 2020);(AD Putra et al., 2020);(Binarto Budi Susilo & Mustofa, 2019);(Imron Rosyidi, Suharnomo, 2016); and(Furi et al., 2021)

Table 2. Synthesis Results

Factor	Statement	W1	W2	W3	W4
Human	User Satisfaction	-	The system is still often of data input too much /	Simplification of data input by a shortage of personnel,	Constrained by a shortage of personnel, There is no special training for all

Factor	Statement	W1	W2	W3	W4
		- Data collection is often hampered	input sister too many steps	especially those who are experts in the use of Hospital Management Information Systems	users of the Hospital Management Information System
	System User	Officers lack discipline in data entry	Too much workload	User's educational background and age	Lack of human resources because the burden is increasing
Organization	Monitoring and Evaluation	Not all officers have attended training Use of Hospital Management Information Systems	There is no reward for officers to increase morale at work	Not yet there are rules regarding the obligation of officers to use the Hospital Management Information System	There is no Standard Operating Procedure related to maintenance and management (information and technology)
		The exclusion of users from users in the planning and development process	Slow connection and poor network setup	The absence of human resources who are experts in the field of information and technology	Lack of control over technology
Technology	System quality	- Internet network constraints making it difficult to access it. - Hospital Management Information	There is no user manual and instructions for use Hospital Management Information System	Constraints in the ease of software and hardware when accessing it	No system maintenance

Factor	Statement	W1	W2	W3	W4
		System produces inconsistent information			
		-			
	Service Quality	The lack of fast response from vendors causes fewer respondents to use the system	Password security that can be used not only by one owner but by everyone who knows	- There are errors on visits in every poly - Difficult to find patient data - Some modules are unfinished	

The human factor is the first factor that needs to be considered when evaluating the system because it is still constrained by user satisfaction related to the lack of human resources who understand the use of Hospital Management Information Systems, systems that still often experience errors, officers who are less disciplined in inputting data, too much workload, no training for all officers and so on.

The organizational factor is the second factor that needs to be considered because there are problems related to the absence of Standard Operating Procedures related to the management of Information and Technology in a health institution. In addition, there is also no training for each user of the Hospital Management Information System, there is no reward for officers who use the Hospital Management Information System to increase morale, lack of supervision of existing technology and so on.

The technology factor is the third factor that needs to be considered, such as frequent network errors, inconsistent data, lack of access security for each user, difficulty finding patient data, lack of system maintenance and so on.

CONCLUSION

The human component lacks skilled personnel in their fields, officers do not understand and understand, the process of inputting patient data is still not appropriate or incomplete, officers who still neglect their responsibilities and officers have not attended training on Hospital Management Information Systems. There are still some organizational components that are not appropriate, such as support, supervision, lack of development from the management, no rewards, no evaluation and Standard Operating Procedures in implementing the Hospital Management Information System. There are still some technological components that have not run smoothly, the quality of the system

is still experiencing problems such as the availability of infrastructure that is not suitable, there are still errors in the system, the network is often problematic,

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