

Analysis Of Sim-Rs Use In Outpage With Hot-Fit Method In Hospital

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ABSTRACT

Hospital Management Information System (SIMRS) is a system that provides information to support decision making. The organizational need for an integrated SIMRS implementation is very important as a tool or tool for measuring organizational performance, so there is a need for reports for hospital management according to the needs that underlie responsive, innovative, transparent, effective, and efficient organizations as a monitoring tool in measurable implementation. SIMRS is useful in improving the performance of hospitals in terms of speed of decision making in formulating strategies. The use of SIMRS operationally is useful for improving performance and services, facilitating coordination between units, increasing HR capabilities. The HOT Fit model places important components in the information system, namely humans (humans), organizations (organizations), and technology (Technology). The three factors in the HOT-Fit method are related in eight dimensions of the relationship for successful implementation, namely System Quality, Information Quality, Service Quality, System Use, User Satisfaction, Organizational Structure, Organizational Environment and net benefits. The purpose of this study is to analyze how the use of SIM-RS in outpatient units using the HOT-FIT method. The research method used is quantitative research. The instrument used in this study used a questionnaire. The results of this study indicate that the SIM-RS is useful in supporting services to patients. The SIM-RS used is quite good, judging from the indicators of human, organization, technology, user knowledge, regulations and benefits.

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1. INTRODUCTION

Hospital Management Information System (SIMRS) is a system that provides information to support decision making. The organizational need for an integrated SIMRS implementation is very important as a tool or tool for measuring organizational performance, so there is a need for reports for hospital management according to the needs that underlie responsive, innovative, transparent, effective, and efficient organizations as a monitoring tool in measurable implementation (Yulianti & Muhandi, 2020). SIMRS is useful in improving the performance of hospitals in terms of speed of decision making in formulating strategies. The operational use of SIMRS is useful for improving performance and services, facilitating coordination between units, increasing human resource capabilities. Very strict hospital services can be seen from the increase and decrease in the number of inpatient, emergency, outpatient visiting patients. This competitive condition encourages hospital managers to develop strategically, so that hospitals are able to compete by optimizing the Management Information System. Management Information System as part of organizational resources in decision making for the needs of the leadership (Board of Directors) (Wulandari & Putra, 2020).

The Management Information System must be designed to take into account the data
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architecture including automatic codification in an integrated manner such as statistics, mapping for further management that plays a role in all hospital service functions starting from queue management, registration, discharge patient services and other hospital service processes (Wahyuni & Parasetorini, 2019).

The implementation of SIM-SR has also been mandated by Law Number 36 of 2009 concerning Health which mandates that to carry out effective and efficient health efforts, it is necessary to have health information organized through information systems and across sectors (D. M. Putra & Vadriasmi, 2020). Every provider of health facilities, including those who organize health service facilities, must provide health information system infrastructure, including institutional equipment, technology, and human resources of PP Article 45 No. 46 of 2014. The health information system is one of the six "building blocks" or main components in the health system in a country. The six components (building blocks) of the health system, namely service delivery (implementation of health services), medical products, vaccines, and technologies (medical products, vaccines and health technology), health workforce (medical personnel), health system financing (health financing system), health information system (health information system), leadership and governance or leadership and government (A. D. Putra et al., 2020).

The information system is a systematic management of information at all levels of government in the context of providing services to the community. An effective health information system provides information support for the decision-making process at all levels of health administration, especially at Hidayah Boyolali Hospital, which is a basic health service unit. The health information system was developed in order to support the achievement of the vision and mission of Indonesia's health development, namely Healthy Indonesia 2025 (Febrita et al., 2021).

The HOT-Fit method is one of the theoretical frameworks used to evaluate information systems in the field of health services. The HOT-Fit method is also aimed at the core components in the information system, namely Human (Human) - Organization (Organization) - Technology (Technology) and the suitability of the relationship between the three components. Fit can be measured and analyzed using the number of definitions given from these three factors. The three factors in HOT-Fit are related to eight dimensions of the relationship for successful implementation, namely System Quality, Information Quality, Service Quality, System Use, User Satisfaction, Organizational structure, Organizational Environment and net benefits.

Based on the results of an initial survey conducted at Hidayah Hospital that Hidayah Hospital has implemented the use of SIMRS, especially in 13 Outpatient Polyclinics. In each outpatient polyclinic, there are 1 to 2 personnel in charge of managing data at SIMRS. Hidayah Hospital is also a health service provider that is capital-intensive, labor-intensive and plays a strategic role in improving the health status of the community as a service facility that has become a necessity for all levels of society. Where, the implementation of SIMRS in RSHidayah has never been evaluated so that in this study it is necessary to evaluate the application of SIMRS at RSHidayah. The HOT-Fit method is one of the theoretical frameworks used to evaluate information systems in the field of health services. The HOT-Fit method is also aimed at the core components in the information system, namely Human (Human) - Organization (Organization) - Technology (Technology) and the suitability of the relationship between the three components. Evaluation of SIMRS at Hidayah Hospital must be carried out because the evaluation will assess, measure, improve or perfect the hospital management information system to find potential problems that are being faced by users and organizations. The results of the evaluation can be used as a reference to improve or perfect the SIMRS and develop the potential that still exists, so that it can be useful for RSHidayah in improving performance in hospital outpatient services to be better, and can support the goals, vision and mission of the organization.

2. METHOD

This research is a quantitative research with a survey research design. This research was conducted in May-June 2022. The instrument used in this study used a questionnaire consisting of 56 questions divided into 6 groups of questions, namely: Human, Organization, Technology, User Knowledge, Regulation, and Benefits. The study population was nurses or SIMRS operators in outpatient polyclinics.

3. RESULTS AND DISCUSSION

In this study, researchers used the method of evaluating information systems with the HOT-Fit method. This evaluation method according to (A. D. Putra et al., 2020) is a method to look at the whole system by placing 6 important components in an information system, namely human (Human), organization (Organization), technology (Technology), user knowledge, regulation and benefits. According to (A. D. Putra et al., 2020) The human component (Human) assesses information systems in terms of system use (system use) on the frequency and breadth of information system functions and investigations. In addition, the use system is also related to who uses it, the level of use, training, knowledge, expectations and attitudes of accepting or rejecting. This research is also in line with research conducted by (Meliala & Kusumadewi, 2017) which states that SIMRS serves as a means of supporting the operation of medical services which consists of installations as a front office that directly serves customers. In its use, SIMRS makes it very easy for users to input health services.

This study used 30 respondents who served in the outpatient installation of Hidayah Boyolali Hospital. with the following characteristics:

Table 1. Characteristics of Respondents

Characteristics	N=30	%
Gender		
Man	8	26.7
Woman	22	73.3
Age		
20-30 Years	4	13.3
31-40 Years	22	73.3
41-50 Years	4	13.3
Education		
D3 Nursing	18	60.0
S1 Nursing	8	26.7
D3 Midwifery	4	13.3
Years of service		
1-3 Years	8	26.7
3-5 Years	13	43.3
5-10 Years	9	30.0
Long Using SIM-RS		
1 year	3	10.0
2 years	7	23.3
3 years	20	66.7

Source: Primary Data, 2022

From the table of the number of respondents above, it can be seen that health workers who were respondents in this study were dominated by women (73.3%) compared to men (26.7%). Most of the

respondents are aged 31-40 years (73.3%) and have D3 Nursing education (60%). The average length of service of respondents is 3-5 years (43.3%) and has used SIMRS for an average of 3 years (66.7%).

1. Results of Univariate Analysis

a. DescriptionHuman Factor

The system use factor is known as 86.7% of respondents said they agreed that the SIM-RS was easy to use. Respondents said they agreed 93.3% SIM-RS can make employees interact flexibly. A total of 93.3% of respondents agree that the SIM-RS makes their daily work easier. In addition, SIM-RS is also considered to support tasks in building individual performance as much as 86.7%. Respondents also agree that the SIM-RS helps in the decision-making process as much as 93.3%. A total of 86.7% of respondents agree that the SIM-RS information system provided is of high quality.

b. DescriptionOrganization Factor

Respondents agreed by 60% that the support from the hospital management in using the SIM-RS was good. The factor of support for good work units in the use of SIM-RS respondents stated that they agreed as much as 73.3%. A total of 73.3% of respondents agree that the work unit supports the use of SIM-RS. Respondents agreed that 93.3% agreed that technical support for the use of SIM-RS was good. The factor of hospital management conducting training related to MIS-RS. Respondents agreed 66.7% that SIM-RS has computer support (hardware and software).

c. DescriptionFactorTechnology

The results showed that respondents agreed 66.7% that SIM-RS improves communication between data. SIM-RS factor saves time in presenting information as much as 73.3% of respondents agree. A total of 73.3% of respondents agreed with the SIM-RS statement regarding the presentation of information about hospitals. SIM-RS factor has a good response time as many as 86.7% of respondents agreed. In addition, respondents also agreed 80% that SIM-RS provides a reliable security system. A total of 66.7% of respondents agreed that SIM-RS provides updated data. The SIM-RS factor has the completeness of the data required by the respondents, agreeing 86.7%. In addition, the respondents also agree that the SIM-RS has various complete facilities functions as much as 66.7%. The SIM-RS factor has high access speed, as many as 33.3% of respondents agree and 33.3% of respondents disagree. SIM-RS provides relevant information as many as 73.3% of respondents agree. The SIM-RS factor provides useful information for cross-sectoral as much as 40% of respondents agree, but 40% of respondents also disagree with this statement. SIM-RS technology provides 93.3% accurate information. In addition, 60% of respondents agreed that the information presented by the SIM-RS was complete. The results of the study showed that 46.7% of respondents agreed that SIM-RS had helpdesk support but 46.7% of respondents also disagreed with this statement. The SIM-RS factor has good user documentation as many as 73.3% of respondents agree with this statement. In addition, as many as 86.7% of respondents agreed that SIM-RS technology supports information needs.

d. DescriptionUserKnowledgeFactor

Respondents in this study stated that they understand computer technology as much as 53.3%. Respondents understand internet technology as much as 53.3%. Respondents understand the hospital organization system as much as 66.7%. Ewsponden understands about the SIM-RS as much as 60%. Respondents know the benefits of SIM-RS as much as 66.7%. Respondents know the benefits for SIM-RS users are 73.3%. Respondents know the benefits of SIM-RS for hospitals as much as 73.3%.

e. DescriptionRegulatory Factor

Respondents agreed as much as 66.7% that SIM-RS has its own unit/installation. Respondents agreed as much as 80% that the SIM-RS installation had a system staff. A total of 86.7% of respondents said the SIM-RS installation has a programmer staff. A total of 73.3% of respondents agree that the SIMM-RS installation has hardware staff. Respondents agreed as much as 73.3% that the SIM-RS installation has network maintenance staff. Respondents said 80% agreed that the management of SIM-RS refers to the Minister of Health Regulation No. 82 of 2013. Respondents said 80% disagree that SIM-RS is integrated with BPJS. As many as 60% of respondents agree that there is a Director's Decree on SIM-RS. 100% of respondents stated that there was an MoU of Cooperation with the SIM-RS developer. A total of 73.3% of respondents agreed that there was involvement of the hospital in the development of the SIM-RS. As many as 60% of respondents received training in using the SIM-RS after the hospital made the MoU. 60% of respondents agree that the SIM-RS developer is the SIMM-RS maker.

f. Description Benefit Factor

86.7% of respondents stated that the SIM-RS is useful for services. Respondents agreed as much as 73.3% that SIM-RS provides complete information. As many as 86.7% of respondents said that with SIM-RS it was easy to interact with other units. 86.7% of respondents said SIM-RS increases productivity. A total of 86.7% of respondents stated that the SIM-RS is easy to operate. 93.3% of respondents stated that SIM-RS improves hospital performance. 100% of respondents stated that the SIM-RS improves hospital services. 93.3% of respondents stated that SIM-RS improves customer satisfaction.

2. Multivariate Analysis Results

Table 1. Multivariate Analysis

<i>Net Benefit</i>	<i>P> I t I</i>	<i>Prob > F</i>	<i>R > Squared</i>
<i>Human</i>	0.416		
<i>Organization</i>	0.029		
<i>Technology</i>	0.111	0.0000	0.9582
PenggetahuanPengguna	0.001		
<i>Regulasi</i>	0.021		
Manfaat	0.021		
Constanta	0.001		

Independent simultaneously has a significant influence on the dependent variable, namely human, organization, technology, leadership and regulatory factors that affect the net benefit. The value of R -Square is 0.9582, which means that all independent variables can explain the dependent variable of 95.82%.

discussion

Information system success can be measured by four types of measures, namely user satisfaction, system use, decision performance and organizational performance. The results of the multiple regression test obtained an F value of 0.000 which means that all independent variables simultaneously have a significant influence on the dependent variable, namely human factors, organization, technology, user knowledge, regulations and benefits. Influence on net benefits. The R-Square value is 0.9582, which means that all independent variables can explain the dependent variable of 95.82%.

Net benefit, is a balance between the positive and negative impacts of users of information systems. Net benefits can be accessed using direct benefits, work effects, efficiency and effectiveness, reducing error rates, controlling expenses and costs. The higher the positive impact generated, the more successful the implementation of the information system.

Judging from the value of the partial t test, the organization, technology and regulation factors have a $P > I t I < 0.05$ which means that organizational, leadership and regulatory factors partially affect the net benefit, in contrast to the human and technology factors, the t value in the partial t test is above 0.05 which means that the human and technology factors have no effect on net benefits.

This shows that the human factor and technology will affect the net benefit if measured together, but if measured separately both the human factor and the technology factor have no effect on the net benefit, this shows that the human and technology factors cannot be separated from each other. Human factors will affect technology and vice versa technology will affect humans. No matter how good the technology, if the human factor is not good, it will affect the net benefit. The human factor seen from the respondent's perception of the SIM-RS in the hospital shows the respondents agree, this shows that the SIM-RS facilitates the performance of employees in entering patient data. SIM-RS can be used easily by employees and can support daily tasks in improving the performance of hospital services. However, SIM-RS is only used by some parts because it has not been integrated with several

units in the hospital. In addition, the staff in charge of performing maintenance on SIM-RS are still few.

The results of the research show that at Hidayah Hospital an optimal hospital management information system (SIM-RS) is needed in an effort to improve service quality, coordination, efficiency, responsibility, supervision and provision of information quickly, precisely and accurately and SIM-RS also improves hospital services. This is in line with research (A. D. Putra et al., 2020) conducted at the Andi Makkasau Hospital, Parepare City which stated that the SIM-RS was very helpful for employees in doing their jobs. In addition, research conducted by (Wahyuni & Parasetorini, 2019) stated that the SIM-RS had a positive impact on employee performance and increased the efficiency of health services. In addition to human factors, technology factors also affect SIM-RS performance. Good technology support can provide benefits to the organization and hospital staff. The use of technology in work is beneficial for the users themselves and for the Hospital.

From this study, it was found that some respondents had different responses to technology factors. 33.7% of respondents disagreed that SIM-RS has high access speed. In addition, 46.7% of respondents disagreed that SIM-RS had helpdesk support and 40% of respondents disagreed that SIM-RS provided useful information for cross-sectoral purposes. So it can be concluded that technology is very influential in the use of SIM-RS in hospitals. Hospitals need to improve effectiveness and improve technology to be able to maximize the use of SIM-RS to support services to patients.

Based on the research results, it can be obtained information that an optimal SIM-RS is needed in an effort to improve service quality, coordination, efficiency, responsibility, supervision and provision of information quickly, precisely, and accurately so that SIM-RS can be useful to support the improvement of services in hospitals.

4. CONCLUSION

Based on the results of the discussion regarding the analysis of the use of SIM-RS in outpatient units using the HOT-FIT method in hospitals, conclusions and assessments can be drawn from an aspect that on human variables, in general, the use of the SIM-RS application has been going well, judging by the system and user satisfaction who think that the officers can feel the ease of using the SIM-RS, especially in data input and data management. In the organization variable, in terms of these variables, it is quite good, but there are several points that must be improved, namely the SIM-RS aspect has helpdesk support, SIM-RS can provide useful information for cross-sectoral and SIM-RS has high access speed. In terms of benefits, respondents stated that the SIM-RS was useful to support the service process for patients. The advice given by the researcher is an increase in organizational variables, especially some aspects that are still not maximized and the SIM-RS should always be evaluated in its use so that the management can find out the shortcomings of the SIM-RS in meeting the needs of users.

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