

## Analysis of Utilization of Hospital Management Information System (SIMRS) In Ibnu Sina Hospital YW-UMI Makassar

Muhammad Ridwan Rumasukun<sup>1</sup>, Mohammad Aldrin Akbar<sup>2</sup>, Rismawati<sup>3</sup>, Sabri Hasan<sup>4</sup>

<sup>1,2</sup>Faculty of Economics and Business Yapis University Papua

<sup>3</sup>Indonesia School of Economics Indonesia Surabaya

<sup>4</sup>Universitas Moeslem Indonesia Makassar

[aldrinakbar160@gmail.com](mailto:aldrinakbar160@gmail.com)

### Abstract

*The development of technological advances today is growing very rapidly. Currently, in various fields, an application system is needed which makes it a must for every agency, both government and private, in data management that utilizes information as the basis for technology-based administration. The most important role in providing clinical services administratively with the use of information systems must be owned by the hospital. At this time the management of information in hospitals has been implemented with the use of an electronic-based information system (SIMRS), every hospital requires a management information system (SIM) in improving the quality of medical services carried out. In an integrated hospital environment information system (SIMRS) whose design can be used for all hospital activities into one integrated system so that it can be stored in a central database. The application of the use of applications that are stored in an existing case, data, and problems so that they can be turned into something new without losing the basic values of the data, problems, and work itself.*

### Keywords

management information system; SIMRS implementation



## I. Introduction

Management Information System (MIS) is needed by management at any level, whether it is to make decisions, whether structured or unstructured, whether programmed or non-programmed decisions. Management will not be able to work optimally if it is not supported by information that shows quickly and accurately the situation and activities for which it is responsible. The use of SIM in the company is very wide. One of the uses of MIS in the company is in the field of Human Resources (HR), where the main activities carried out by the Human Resources Department are Recruitment and Selection, Education and Training, Data Management, Transfers, Administration of benefits and Termination of employees. All of these activities will run well, if the management uses the Information System properly. Human Resources (HR) is the most important component in a company or organization to run the business it does. Organization must have a goal to be achieved by the organizational members (Niati et al., 2021). Development is a change towards improvement. Changes towards improvement require the mobilization of all human resources and reason to realize what is aspired (Shah et al, 2020). The development of human resources is a process of changing the human resources who belong to an organization, from one situation to another, which is better to prepare a future responsibility in achieving organizational goals (Werdhiastutie et al, 2020).

Poverty alleviation is not an easy job. The work plan of each work unit in the district government must be able to synergize in a multi-sectoral manner, so that the direction of the work plan policies supports each other. Lack of coordination and slow information is certainly one of the factors that causes inappropriate decision-making steps for policy makers.

Information and communication technology today has opened a very wide opportunity to disseminate information. The existence of internet technology and websites can be used to disseminate information quickly and widely. It is also possible to present data in the form of infographics, so that it will be easier for someone to read the data and in the end make a decision. This is what makes the author interested in carrying out research in the field of designing geographic information systems to tackle poverty in an integrated manner.

The benefits of an information system in an organization require a careful evaluation. This is because the successful implementation of information systems is influenced by many factors, not just the use of the latest hardware, software and tools technology. Organizational issues and social issues are the main components of information systems that must be considered (Sittig et. al, 2002). Yusof et.al (2008) revealed that the potential benefits of implementing an information system can be maximized if technology, humans and organizations can support each other (*human, organization and technology-fit*). Therefore, the success of the Hospital Management Information System (SIMRS) is also very dependent on management policies, organizational culture and moreover the existing human resources at the hospital.

Organizational need for an integrated SIMRS implementation is very important as a tool or tool for measuring organizational performance, it is necessary to have a report for Hospital Management and Service 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 hospital performance on the 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 inpatients, emergency departments, and outpatients who visit. This competitive condition encourages hospital managers to develop strategies so that hospitals can compete by optimizing Management Information Systems.

The hospital is one of the health care facilities by empowering various units of trained and educated personnel in dealing with and dealing with medical problems for the recovery and maintenance of good health. Information technology has an important role in today's health services. Where the quality of information processing is an important factor for the success of health care institutions. A good information system can support clinical workflows in various ways that will contribute to better patient care.

Today the development and progress of information technology is growing rapidly. Application systems in various fields are a must for an agency/company to utilize information as a basis for administration and data processing. As a fulfillment of these needs, agencies/companies need to carry out activities related to computer-based application systems so that they are expected to be able to solve problems more quickly, accurately, effectively and efficiently in carrying out all operational activities.

Hospital institutions are always under pressure to improve medical services, reduce medical errors, provide timely access to information, and at the same time monitor service activities and control operational costs. To be able to meet these demands, hospitals must have an integrated management information system (MIS) that can share real-time, precise

and accurate information. This management information system cannot run automatically if it is not supported by a *software system* or enterprise system *that* is embedded in the hospital server.

Management Information System as part of organizational resources in decision making for the purposes of the leadership (Directors). Management Information Systems must be designed to pay attention to data architecture including automatic codification in integration such as statistics, mapping for further management that plays a role in all hospital service functions starting from queuing management, registration, discharge patient services and other hospital service processes. Ibnu Sina Hospital YW-UMI has applied SIMRS in helping the registration, pharmacy, cashier. However, this SIMRS is still not comprehensive to all units. Seeing the condition of the many hospitals in the Sukoharjo Regency area, almost all hospitals in Makassar City need to improve the quality of service, especially in the field of SIMRS, because the application of a computer-based management information system really supports the smooth process of health services at the Ibnu Sina Hospital YW-UMI.

The application of SIMRS can be used by information users with the term *End User*, namely computer operator officers who are responsible for all hospital units, and officers who use the output of this system, either the management or the Board of Directors, as well as hospital patients. The resulting data is a mutually sustainable system that is very beneficial for management in decision making. Decision making from SIMRS is used to find out the wishes and opinions of users from aspects that affect the information system, it is necessary to evaluate from users regarding aspects of performance, information, economy, security, efficiency and service.

According to the world body WHO, an information system is a system that provides information for decision-making processes at every level in an organization; and the hospital information system (SIRS) is a system that integrates data collection, processing, reporting, and use of information needed to improve the efficiency and effectiveness of health services through better management at various levels of health services; while the hospital management information system (SIMRS) is an information system specifically designed to assist the management and planning of health programs.

Hospital information systems have an important role in clinical and administrative services. Information management in hospitals has started using an electronic-based system (SIMRS), especially in supporting decision-making. Hospital information system (SIMRS) can be characterized by its function through the information and types of services offered. To support patient care and administration, SIMRS supports the provision of information, especially about patients, in a correct, relevant and up-to-date manner, easily accessible to the right people at different places/locations and in a usable format. Service transaction data are collected, stored, processed, and documented to produce information about the quality of patient care and about hospital performance and costs. This implies that hospital information systems must be able to communicate high quality data between various units in the hospital. In addition to internal communication, another important goal of SIMRS is the exchange of electronic data between health service providers (practicing doctors, primary facilities and hospitals) so as to ensure the availability of comprehensive patient information and service efficiency.

The system is a unified whole and consists of various factors that are related or thought to be related and influence each other, all of which are consciously prepared to achieve the goals that have been set (Sabarguna, 2007). According to WHO (*World Health Organization*), Information is the result of analysis, manipulation and presentation of data to support the decision-making process. Useful or not an information depends on the

purpose of the recipient of the information, accuracy and information is the result of analysis, manipulation and presentation of data for the delivery and processing of data, time, space or place, at the right time and in the right form.

Quoting Hurtubise's opinion, an information system is defined as a system that provides specific information to support the decision-making process at every level of the organization (Hatta, 2008). Hospitals in Indonesia are required to record and report on all hospital operations as stipulated in Article 52 paragraph (1) of Law Number 44 of 2009 concerning Hospitals. The hospital management information system (SIMRS) used in a hospital must provide convenience in operations and must be able to overcome the constraints of patient care in the hospital.

An information system consists of data, people, and processes as well as a combination of hardware, software, and communication technology or what is known as information technology. Information systems are often associated with disease data collection activities and outputs in health services. In general, the health information system will be composed of two main entities, namely information processing and the management structure of the health information system. The need for health data and information is increasing day by day. People who are increasingly concerned with the health situation and the results of health development that have been carried out by the government, especially in health problems that are directly related to their health, because health concerns people's lives, this health information provides a very positive value for health development.

Hospital information system (SIMRS) can be characterized by its function through the information and types of services offered. To support patient care and administration. According to the world body WHO, an information system is a system that provides information for decision-making processes at every level in an organization; and the hospital information system (SIRS) is a system that integrates data collection, processing, reporting, and use of information needed to improve the efficiency and effectiveness of health services through better management at various levels of health services; while the hospital management information system (SIMRS) is an information system specifically designed to assist the management and planning of health programs.

From the description above, the effort to utilize information systems is a step forward that needs to be implemented in the face of very fast changes and the era of globalization has begun to feel its impact. If the development is late, it will be left behind by the needs of the community, so it will be more outdated. Basically, a small part of the Hospital Information System already exists, and needs to be further utilized so that it can be integrated with other information (Sabarguna, 2005).

More precise information will lead to better decisions. Therefore, information systems and technology are vital components for the success of an organization's business, so information systems and technology are a must for every business. This company information system (*enterprise system*) functions to integrate all departments and business processes within a company so that information can be shared, seen (visibility) in every company department. Information system is collecting data, processing, storing, analyzing and disseminating it for specific purposes. While information technology refers to computer-based tools to work on data/information and information processes needed by the company.

## II. Review of Literature

In the era of globalization, management information systems are an inseparable part of an organization where information systems produce outputs using inputs and various processes needed to fulfill certain objectives in a management activity. According to (Stoa, 2008) "The notion of the system is a combination of the whole heaven and earth working together to form a whole and if one of these elements is missing or does not function, then the combined whole can no longer be called a system". (Kerz, 2008) "The system is a combination of a group of components, both human and/or non-human (non-human) that support each other and are arranged into a unified whole to achieve a common goal, goal or end result" O'Brien (in Rusdiana, Irfan Moch 2014), formulating a management information system is: "An integrated system that provides information to support operational activities, management, and decision-making functions of an organization."

Management Information System is a series of comprehensive and coordinated and rationally integrated information sub-systems capable of transforming data to increase organizational productivity (Scott, 2001). MIS uses hardware, computer software, procedures/guidelines, management models, and databases. Meanwhile, according to Rusdiana and Irfan (2014) management information system is a system designed to provide information to support decision making on management activities in an organization. Information systems perform data processing, then turn it into information.

Management information system is a collection and depends on the size of the organization consisting of information systems: a. Accounting information system b. Marketing information system c. Inventory information system d. Personnel information system e. Distribution information system f. Purchase information system g. Wealth information system h. Credit analysis information system i. Research and development information system j. Technical information systems All of these information systems are intended to provide information to all levels of management, namely lower level management ( *Lower level management* such as foreman, supervisor, supervisor as technical level, *middle level management* ) such as manager, division head, branch head. as tactical level, and top management (*Top level Management*) such as directors, president directors, CEOs, vice presidents, General Managers as strategic level.

SIMRS is an integrated information system prepared to handle the entire hospital management process, from diagnosis and treatment services for patients, medical records, pharmacies, pharmacy warehouses, billing, personnel databases, employee payroll, accounting processes to management control. hospital. Currently SIMRS is an important part of hospital services to *stakeholders*. The obligation to organize SIMRS has even been recommended by the government as stated in Law No. 44 concerning Hospitals and Regulation of the Minister of Health of the Republic of Indonesia No. 82 of 2013.

The implementation of SIMRS is expected to make the work of medical workers more efficient and effective. The patient's medical record data is stored and can be accessed by doctors and nurses, helping them in diagnosing the patient's condition and providing appropriate follow-up. The use of information technology can speed up the administrative process that occurs, from the time the patient registers until he leaves the hospital. With technology, data can be presented quickly to the parties or units in need. The use of technology also reduces the need for paper usage so that it is more friendly to the environment.

According to Sabarguna (2008), the function of information management in hospitals consists of planning (planning), organizing (organizing), implementing (actuating), controlling (controlling), evaluating (evaluating) and innovation (innovation). This process

continues iteratively, based on the evaluation results found problems and system development innovations that must be planned for further system development, and so on. The role of SIMRS becomes very important in every stage of information management. Therefore, competent human resources are needed to be able to keep up with the development needs and technological advances that continue to develop rapidly. The innovations can be in the form of a new way of doing things (*new way of doing things*), improving a product (*improved product*) or applying knowledge in business processes (Baltzan & Philips, 2008).

Maturity of information technology management in a health institution itself can be measured using various instruments to find out how organizational management implements information system functions within the institution (Carvalho, Rocha, & Abreu, 2016). One instrument that is widely used is the NIMM (NHS Infrastructure Maturity Model). This model has five maturity levels.

*ad-hoc* management and support processes based on emerging needs. Usually, the characteristics of the organization at this level focus on how the system can run and function. Organizations at level 2 focus on control, monitoring of existing services and infrastructure, including safe use of information technology practices. At this level, *sharing know-how* becomes a concern. There is no employee who really controls a certain part, so that if the employee leaves the other employee can still continue the work he left behind. In addition to the habit of *sharing know-how*, documenting and making manuals is very important. At Level 3, management focuses on standardizing infrastructure and adopting best practices. There is an awareness of the importance of the organization's ability to develop and utilize intellectual assets. Level 4 is the level where infrastructure optimization is the focus of management. And Level 5, is the highest level of maturity, where management focus is on the use of information technology to carry out various innovations.

### III. Research Method

This research is descriptive evaluative with a *cross sectional approach*. The object of this research is the information system currently implemented at Ibnu Sina Hospital YW-UMI. The subjects observed are all officers involved in the implementation of information systems from management to operator implementation. Primary data and secondary data are obtained through observations about management information systems, both individually and related to the network. Methods of collecting data are questionnaires and interviews. Data processing includes *collecting*, *editing*, data presentation, descriptive data analysis. In this study, the authors collected data by interviewing and distributing questionnaires to employees and patients of the hospital as stakeholders who experienced a direct impact from the implementation of SIMRS at the hospital.

The location of the research was carried out at Ibnu Sina Hospital YW-UMI which is located at Jalan Urip Sumoharjo KM. 5 No. 264 which was conducted on 27 May 2022 - 27 June 2022. In this study, the sampling technique used by the researcher was *purposive* sampling and the research subjects were sampled 99 of the 977 respondents from several service units and objects to be studied/evaluated by the researcher. In qualitative research, the data used in this study are primary data. Primary data is data obtained from interview guides, observations and documentation.



## IV. Result and Discussion

### 4.1 Subject Data Based on Formal Education Level

**Table 1.** Characteristics of Subjects Based on Level of Formal Education

Education	Employee Type			Amount	Percentage
	Civil Servant	Contract	Apprentice Plus		
S2	29	4	0	33	3%
S1	82	29	41	152	16%
D3	195	112	230	537	55%
Senior High School	135	46	49	230	24%
Junior High School	18	0	1	19	2%
SD	4	1	1	6	1%

Based on Table 1, it can be seen that the highest percentage of education is "D3" with a total of 537 with the highest percentage acquisition of 55%. While 230 with high school education or 24%. 152 employees or 16% with undergraduate education, 33 employees with master's education, 19 employees with junior high school education or 2% while those with elementary education are 1% or 6.

### 4.2 Subject Data Based on Group Level

**Table 2.** Characteristics of Subjects Based on Group Level

group	Amount	Percentage
Goal 4	39	4%
Goal 3	252	26%
Goal 2	167	17%
Goal 1	5	1%
Contract	192	20%
Apprentice Plus	322	33%

Based on Table 2, it is known that the highest percentage of the "Apprentice Plus" group is 322 with the highest percentage acquisition of 33%. Furthermore, Group 3 with a total of 252 or 26%, Group of contracts there are 192 or 20%, Group 2 or 167 with a total percentage of 17%, Group 4 with a total of 39 or 4%.

### 4.3 Subject Data by Gender

**Table 3.** Characteristics of Subjects by Gender

Type  Min class	Employee Class						Amou nt	Percenta ge
	G oa l 1	ol 3	ol 2	ol 1	Contr act	Appre ntice Plus		

	4							
Man	19	105	64	3	86	118	395	40.4%
woman	20	147	103	2	106	204	582	56.4%

Based on Table 3, it is known that the female sex number of subjects was 582 with the highest percentage acquisition of 59.6 %. Furthermore, there are 395 genders, 395 or 40.4 %.

#### 4.4 Subject Data by Task

**Table 4.** Characteristics of Subjects Based on Tasks

Position	Amount	Percentage
Medical	67	6.9%
Nursing	474	48.5%
Pharmacy	69	7.1%
Public health	17	1.7%
Akfis (Physiotherapist)	8	0.8%
Medical records	50	5.1
Nutrition	8	0.8%
Non Medical	283	29.0%
Psychology	1	0.1%

Based on Table 4, it is known that the nursing position has 474 subjects with the highest percentage acquisition of 48.5 %. Non-medical positions with the number of subjects as much as 29.0% or 283, then pharmacy positions by 69 or 7.1%, then there are 67 medical employees or 6.9%. The position of the medical record is 50 employees or 5,1. The public health position has 17 employees or 1.7%, there are 8 active employees (physiotherapists) 0.8% and there are 8 nutrition employees or 0.8% and psychology subjects have 1 employee or 0.1%.

In a sample of 98 data input officers on a hospital SIM in each service unit of the Ibnu Sina Hospital YW-UMI, the highest frequency of data input on a hospital SIM is that a hospital SIM officer sometimes inputs data on a hospital SIM with a percentage of as much as 64.73%, while 25.15% do not input at all and only 12.12% who always input data in their hospital driver's license is also based on the influence of the level of proficiency, education of the officers in each room. Hospital Management Information System (SIMRS) in Public health efforts aim to collect, process and analyze information and provide hospital quality improvement. Ibnu Sina Hospital YW-UMI is a hospital that has implemented a Management Information System (SIMRS) in 1998 with the aim of using a hospital management information system, namely to improve hospital quality and speed up hospital processes and improve data processing management into useful information. fast and effective for the benefit of users, management and government.

Based on the theory of human resources inputting data on a hospital SIM, to improve the quality of hospital services, a hospital leader must pay attention to hospital information systems, one of which is by placing medical record personnel and health information in



each part of the medical record unit, in the outpatient polyclinic. , inpatient unit or ward. Indeed, even though there are only one or two people, even then they are only placed in the registration section. It would be nice to use medical record personnel and health information to be used in several or in each part of each service unit in the hospital. This is where the role of medical record and health information personnel or MIK (health information management) is guided to be able to carry out all activities in the hospital service unit, not only as personnel at the registration counter.

Improving access and hospital services to various resources. Computerized systems that are connected, such as the internet, are very easy to access with other companies such as insurance. Currently at Ibnu Sina Hospital YW-UMI has collaborated with several insurance companies such as ASKES, JAMKESMAS,

JAMKESDA and so on, where each section has its own counter that can improve and speed up patient care. This is in accordance with the theory put forward by Hatta (2008) that the health insurance system is the simplest system that can help suppress the control of health services in health facilities. However, the system sometimes still has *trouble* which becomes a bit of a problem in accessing cooperation between companies, accessing data between units with one another. However, this does not become an obstacle in patient care.

Improving the professionalism and performance of hospital management, the quality of hospital management performance at the Ibnu Sina Hospital YW-UMI based on the results obtained regarding using the Hospital Management Information System (SIMRS) with the subjects stating that the management information system improves the quality of management performance because all the unit or part uses a computer and has used *billing a system* that helps management in the decision-making process and services, especially in the emergency department. This is in accordance with the theory put forward by Dadan (2001) that the key to the success of the performance improvement process in today's health care organizations is the existence of a continuous process starting from monitoring, measuring, analyzing and improving existing information systems.

Utilization of a computer-based Management Information System in terms of decision making at Ibnu Sina Hospital YW-UMI. The decision-making process at the Ibnu Sina Hospital YW-UMI with the Hospital Management Information System (SIMRS) viewed from a timely and accurate perspective with the subjects stating that the management information system is very helpful in the decision-making process if problems occur such as in terms of service and management. This is in accordance with the theory put forward by Dadan (2001) that one of the tasks of management is to maintain the *existence* and improve the *performance* of the organization it manages. For this reason, management must make decisions regarding the steps that must be taken, both at the strategic, tactical and operational levels.

So, it is necessary to have HR inputting RS SIM data, especially D3 medical recorders who are placed in each service unit that is directly related to the operational implementation of RS SIM at Ibnu Sina Hospital YW-UMI.

Of all the activities carried out at the Ibnu Sina Hospital YW-UMI using the Management Information System (SIM) it has been well utilized, starting from inputting registration data, patient diagnosis, patient actions, and patient mutations in accordance with applicable SOPs. but the SIM has not been used to its full potential. Although the Management Information System (SIMRS) at Ibnu Sina Hospital YW-UMI has not been utilized optimally, it does not become an obstacle in providing services to patients and in making decisions.

In accordance with the theory put forward by Sabarguna (2007) that the administrative or administrative information system aims to ease the administrative burden

that plays a role in the efficiency of implementation processes related to recording, calculation and reporting.

So, the Management Information System (MIS) can meet the needs of hospitals in accelerating services, presenting data and recording correct data so as to facilitate patient care. However, here data entry is sometimes carried out alternately, either by doctors or nurses, where the data entry is incomplete, considering that there is only 1 special officer.

*Auditable and Accountable Documentation*, Documenting data at the Ibnu Sina Hospital YW-UMI based on the results obtained with the subjects stating that the data documentation using the management information system at the Ibnu Sina Hospital YW-UMI is documented according to the patient service flow or according to standard operating procedures that manage the hospital management information system regarding activities at the Ibnu Sina Hospital YW-UMI and the data is easy to check and can be accounted for if an error occurs because the system is computerized. This is in accordance with the theory put forward by Hatta (2008) that information systems are carried out with processes. The process in question is the policies and procedures that must be followed and implemented by system users.

According to Ery Rustiyanto (2010), that a Hospital Management Information System (SIMRS) can be used as a strategic means to provide services that are oriented both to outpatients and inpatients to patient satisfaction.

This is in accordance with the theory put forward by Hatta (2008) that information systems are carried out with processes. The process in question is the policies and procedures that must be followed and implemented by system users.

Identification of problems in the Hospital Management Information System (SIMRS) based on the results of interviews with the subjects stated that. The Hospital Management Information System (SIMRS) is very helpful in the process of identifying problems that occur because considering using computers and manuals it is easy to identify problems or errors that occur, for example in reports. This makes it easier to make decisions. In accordance with the theory put forward by Sabarguna (2007) that the decision-making process related to identification to problem solving is in accordance with the types and stages proposed by the experts, namely problem clarity, follow the link, replace, if necessary, correct, if necessary, re-involve.

## V. Conclusion

In accordance with the research objectives, which can be concluded in this study include:

1. HR users who input SIM data at the Ibnu Sina Hospital WK-UMI are mostly from D3 Nursing staff.
2. The role of HR users as RS SIM data input users in each service unit at Ibnu Sina Hospital WK-UMI not all HR input data on RS SIM, and understand about RS SIM.
3. Seen from efficiency, which helps work faster, such as doing data *entry*.
4. data and documents are *auditable* and *accountable*, that is, they can be checked and accounted for if there are errors and are documented according to Standard Operating Procedures (SOP).

## References

- Baltzan, P. & Philips, A. (2008). *Business Driven Information System*. New York: McGraw-Hill/Irwin
- Be patient, boys. (2005). *Hospital Information System*. Yogyakarta. Central Java Islamic Hospital Consortium
- Boon, Kurtz (2008). *Contemporary Marketing.*, New York: Sound-West Cengage Learning
- Carvalho, JV, Rocha, A., & Abreu, A. (2016). Maturity Models of Healthcare Information Systems and Technologies: a Literature Review. *Journal of medical systems*, 10(1),1-10
- Daihani, Dadan Umar. (2001). *Management Information Systems*. Jakarta. Salemba Four.
- Even so, Gemala. (2008). *Guidelines for Health Information Management in Health Service Facilities*. Jakarta. University of Indonesia.
- Kadir Abdul. (2003). *Introduction to Information Systems*. Andi Publisher. Yogyakarta.
- Law Number 44 of 2009 concerning Hospitals
- Ministry of Health of the Republic of Indonesia Decree of the Minister of Health of the Republic of Indonesia number 983 of 1992.
- Moekijat. (1991). *Introduction to Management Information Systems*. Bandung. Offset Rosdakarya Youth.
- Niati, D. R., Siregar, Z. M. E., & Prayoga, Y. (2021). The Effect of Training on Work Performance and Career Development: The Role of Motivation as Intervening Variable. *Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences*, 4(2), 2385–2393. <https://doi.org/10.33258/birci.v4i2.1940>
- RI Law No.23. About health. 1992.
- Rusdiana and Irfan (2014)
- Rustiyanto, Ery. (2010). *Integrated Hospital Management Information System*. Yogyakarta. Goshen Publishing.
- Sabarguna, B. (2008). *Atlas of Managing Information in Hospitals*. Corn Seto Regulation of the Minister of Health of the Republic of Indonesia No. 82 of 2013
- Scott, George M. (2003). *Principles of Management Information Systems*. Jakarta: PT. Rajagrafindo Persada
- Shah, M. M., et al. (2020). The Development Impact of PT. Medco E & P Malaka on Economic Aspects in East Aceh Regency. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)* Volume 3, No 1, Page: 276-286.
- Werdhiastutie, A. et al. (2020). Achievement Motivation as Antecedents of Quality Improvement of Organizational Human Resources. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)* Volume 3, No 2, Page: 747-752.