



## Analysis of the Implementation of Electronic Medical Records Using the HOT-Fit Method with Data Integration as an Intervening Variable at Assyifa Women and Children Hospital, Tangerang City

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**Abstract.** *Human Organization Technology Net-Benefit (HOT-Fit) model is used to analyze information systems through 4 (four) dimensions: people, organization, technology, and net benefits. This study aims to analyze the implementation of RME with the HOT-Fit approach through data integration at RSIA Assyifa, Tangerang City. The research method is quantitative with data collection using a questionnaire distributed via Google Form. The sample consisted of 95 respondents of health workers and non-health workers who used RME. Data analysis was carried out using Structural Equation Modeling-Partial Least Square (SEM-PLS) version 3.0. In this study, there are 22 hypotheses, consisting of 17 direct influences and 5 (five) indirect influences. The results of the study show that system quality, information quality, and service quality have a significant positive effect on system use. Furthermore, system quality and information quality have a significant positive effect on user satisfaction, but service satisfaction does not affect user satisfaction. Next, system quality has a significant positive effect on organizational structure, as well as service quality which has a significant positive effect on the organizational environment. In addition, the organizational environment has a significant positive effect on net benefits, but in contrast to the variables of system usage, user satisfaction, and organizational structure which do not have a significant effect on net benefits. Related to the organizational aspect, the net benefit aspect, and data integration have a significant positive effect on RME implementation, while the technology aspect and human aspect do not have a significant effect on RME implementation. Data integration mediates the indirect effect of the technology aspect, the organization aspect, and the net benefit aspect on RME implementation, while data integration does not mediate the effect of the human aspect on RME implementation.*

**Keywords:** *Assyifa Women and Children Hospital; Data Integration; Electronic Medical Records; HOT-Fit Method; Intervening Variable.*

### 1. INTRODUCTION

Electronic Medical Records (EMDR) are comprehensive health data that can be accessed by various health care providers, allowing for better coordination of care, and improving the quality of health services (Gartee, 2011). EMR replaces manual paper-based medical records with a digital format that allows for more efficient and integrated access and management of patient data (Rumana, 2024).

When a system is operating, evaluation and analysis are needed to improve the system (Delfia, Adi, & Purnami, 2022). *Human Organization Technology Net-benefit (HOT-Fit)* is one of the approach models that can be used to analyze information systems. The HOT-Fit model consists of 4 (four) dimensions, including humans covering system use and user satisfaction,

organizations covering structure and environment, technology covering system quality, information quality, and service quality, and net benefits (Tawar, Santoso, & Salma, 2022).

Based on research by Fitriani, Ikawati, & Rusdi (2022); Soraya, Adawiyah, & Sutrisna (2019); Larinse (2015); Yusof et al., (2006), system quality has a significant effect on user satisfaction. These results prove that an information system that is easy to use will get a positive response from users. In line with what DeLone & McLean (2003) stated in Tawar et al., (2022), that good system quality and information quality affect the level of system usage and user satisfaction. The results of research conducted by Nurlani & Permana (2017) found that information quality has a significant effect on system usage variables. This is in line with research by Fitriani et al., (2022); Soraya et al., (2019); Abda'u (2018); and Larinse (2015). Furthermore, in research conducted by Musrifah (2017), it was stated that the higher the quality of service provided by the system, the higher the level of system usage.

Evaluation of the RME information system using the HOT-Fit method has been carried out by Juliantari, Adiningsih, Putri, Putra, & Pradnyani (2023); Franki & Sari (2022); and Widyastuti, Putra, & Ardianto (2020), who concluded that from the human dimension with system usage factors and user satisfaction have a significant influence on RME implementation. When a system is easy to use, has a fast response, is easy to understand and apply, user satisfaction increases in line with the intensity of system use.

Furthermore, from the organizational dimension, both structure and environment have a significant influence on the implementation of RME. Organizational and management support is carried out through the provision of adequate information system facilities and infrastructure, providing training and socialization to users, periodic evaluation by management can increase user satisfaction in providing excellent and optimal health services. Next, from the technological dimension with factors of system quality, information quality, and service quality also have a significant influence on the implementation of RME (Tawar et al., 2022). The last dimension, namely net benefits, has a significant influence on the implementation of RME (Tawar et al., 2022).

RME has been implemented at RSIA Assyifa since early 2023. In its implementation, the implementation of RME experienced several obstacles and constraints, including incomplete filling of patient RME by health workers, data input errors by health workers, errors *in* the RME system, and unstable internet networks. This has hampered the health service process at the hospital.

The accuracy and speed of access to medical information are very important to provide efficient and timely care. If this problem is not resolved immediately, the quality of health services at RSIA Assyifa may be disrupted.

## **2. THEORETICAL STUDY**

### **Medical Records**

According to Hayt & Hayt (1964), medical records are the collection, maintenance, and retrieval of individual medical information, which is primarily documented as a means of communication between health professionals, ensuring continuity of care, and providing a legal record of the care provided. Medical records are documents containing patient identity data, examinations, treatments, actions, and other services that have been provided to patients (Permenkes 24, 2022). According to Huffman (1994), medical records are records of patients during the treatment period that contain knowledge about and the services they receive and contain sufficient information to identify patients, justify diagnoses and treatments, and record the results.

### **Electronic Medical Record**

According to Potter & Perry (2009) Electronic Medical Records (EMDR) is a digital system for storing patient health information that supports health care by providing complete, secure, and easily accessible data. EMR is a computerized health information system that contains demographic data, medical data, and can be equipped with a decision support system. Health care facilities implement EMR as an effort to improve the quality of service, improve patient satisfaction, improve documentation accuracy (Andriani, Kusnanto, & Istiono, 2017). EMR must meet the principles of data and information security, which include confidentiality, integrity, and availability.

### **Data Integration**

According to Nelson & Staggers (2013), health data is defined as information related to the health status of individuals or populations that is used to provide health services and support medical decisions. This data includes various types of information, including clinical data, demographic data, epidemiological data, and health technology data. According to Watson (2009), data integration is defined as the process of combining data from different sources to create a consistent and integrated view of information that can be used by the organization. Data integration includes several steps, such as combining data from different sources,

processing and transforming data, creating consistent data, and presenting data in an organized format.

### **HOT-Fit Method**

Yusof et al., (2008) introduced the HOT-Fit model as an evaluation framework designed to assess the success of health information systems. This model combines the theory of information system success from DeLone & McLean (2003) with a specific approach to health systems, making it relevant to the context of evaluating health information systems in hospitals and other health institutions. The HOT-Fit model is an important tool for understanding the complex dynamics in implementing health information systems, by involving organizational elements that are important components in implementing information systems (Nur, Andrian, Widodo, & Hariyono, 2020).

### **3. METODE PENELITIAN**

This study uses quantitative data analysis methods, with a causal or cause-and-effect research type. The type of causal research is research that aims to determine the cause-and-effect relationship between independent variables and dependent variables (Sugiyono, 2019).

#### **Population and Sample**

The population in this study were health workers who used RME including doctors, midwives, nurses, and other departments that used RME such as polyclinics, radiology, registration desks, and others. The sample used in this study was 95 people who used RME, who had a minimum work period of 1 (one) year. The sampling technique used in this study used the *purposive sampling technique*, which is a sampling determination technique with certain considerations (Sugiyono, 2019).

#### **Data and Data Sources**

This study uses primary and secondary data sources. Primary data in this study were obtained through questionnaires distributed to respondents who were the objects of the study. Respondents have an important role because they are a means of obtaining information or data that is carried out through the distribution of questionnaires. Meanwhile, the secondary data used is of a supporting nature for the needs of primary data such as books, literature, journals, websites, and readings related to this study.

### Data Collection Technique

Data were obtained through a questionnaire distributed in the form of a *google form*, accompanied by a letter of request to fill out the questionnaire and an explanation of matters relating to the research. In this study, the answers to the questions will be measured using a *Likert scale*.

### Data Analysis Procedure

The data analysis procedure was carried out using *Structural Equation Modeling-Partial Least Square* (SEM-PLS) 3.0 which is a component-based or variant SEM equation model. The results of the SEM-PLS analysis can find suitable items that can be used to measure the implementation of RME with the HOT-Fit Model at the Assyifa Mother and Child Hospital in Tangerang City.

## 4. RESULTS AND DISCUSSION

### Respondent Characteristics

Based on the distribution of data, the characteristics of the respondents from 95 respondents are obtained, which are presented in the following table:

**Table 1** Respondent Demographic Data

<b>Group Age</b>	<b>Amount Respondents</b>	<b>Percentage (%)</b>
20-25	14	14.7
26-30	45	47.4
31-35	23	24.2
36-40	13	13.7
<b>Total</b>	<b>95</b>	<b>100%</b>
<b>Gender</b>	<b>Amount Respondents</b>	<b>Percentage (%)</b>
Man	32	33.7
Woman	63	66.3
<b>Total</b>	<b>95</b>	<b>100%</b>
<b>Education</b>	<b>Amount Respondents</b>	<b>Percentage (%)</b>
D3/D4	40	42.1
S1	40	42.1
S2/ Specialist	15	15.8
<b>Total</b>	<b>95</b>	<b>100%</b>
<b>Work</b>	<b>Amount Respondents</b>	<b>Percentage (%)</b>
Midwife	21	22.1
Doctor	20	21.1

Nutrition	8	8.4
Registration	7	7.4
Counter		
Nurse	18	18.9
Radiology	4	4.2
Medical	17	17.9
Records Staff		
<b>Total</b>	<b>95</b>	<b>100%</b>
<b>Years of service</b>	<b>Amount Respondents</b>	<b>Percentage (%)</b>
1 year	4	4.2
1-5 Years	12	12.6
5-10 Years	54	56.8
> 10 Years	25	26.4
<b>Total</b>	<b>95</b>	<b>100%</b>

Source: SmartPLS (Data processed, 2024)

## Data Quality Test Results

**Table 2** Convergent Validity Test Results

Variables	Code Item	Loading Factor	Information
Quality System (KS)	KS1	0.830	Valid
	KS2	0.809	Valid
	KS3	0.832	Valid
	KS4	0.687	Invalid
	KS5	0.258	Invalid
	KS6	0.773	Valid
	KS7	0.673	Invalid
Quality Information (KI)	KI1	0.771	Valid
	KI2	0.889	Valid
	KI3	0.877	Valid
	KI4	0.883	Valid
	KI5	0.842	Valid
Quality Services (KL)	KL1	0.885	Valid
	KL2	0.802	Valid
	KL3	0.866	Valid
Use System (PS)	PS1	0.807	Valid
	PS2	0.654	Invalid
	PS3	0.731	Valid
	PS4	0.883	Valid
	PS5	0.877	Valid

Satisfaction User (KP)	KP1	0.758	Valid
	KP2	0.762	Valid
	KP3	0.777	Valid
	KP4	0.866	Valid
Structure Organization (SO)	SO1	0.881	Valid
	SO2	0.918	Valid
	SO3	0.848	Valid
Environment Organization (LO)	LO1	0.842	Valid
	LO2	0.927	Valid
Net Benefit (MB)	MB1	0.843	Valid
	MB2	0.784	Valid
	MB3	0.934	Valid
	MB4	0.901	Valid
	MB5	0.812	Valid
Data Integration (ID)	ID1	0.765	Valid
	ID2	0.893	Valid
	ID3	0.846	Valid
	ID4	0.820	Valid
Implementation of Electronic Medical Records (EMR)	RME1	0.876	Valid
	RME2	0.918	Valid
	RME3	0.863	Valid
	RME4	0.615	Invalid

Source : Data processed 2024 with Smart PLS

**Table 3** Results of Convergent Validity Test After Elimination

<b>Variables</b>	<b>Code Item</b>	<b>Loading Factor</b>	<b>Information</b>
Quality System (KS)	KS1	0.870	Valid
	KS2	0.829	Valid
	KS3	0.858	Valid
	KS6	0.773	Valid
Quality Information (KI)	KI1	0.770	Valid
	KI2	0.889	Valid
	KI3	0.877	Valid
	KI4	0.884	Valid
	KI5	0.842	Valid
Quality Services (KL)	KL1	0.882	Valid
	KL2	0.799	Valid
	KL3	0.870	Valid
Use System (PS)	PS1	0.794	Valid

	PS3	0.771	Valid
	PS4	0.905	Valid
	PS5	0.898	Valid
Satisfaction User (KP)	KP1	0.759	Valid
	KP2	0.760	Valid
	KP3	0.777	Valid
	KP4	0.866	Valid
Structure Organization (SO)	SO1	0.884	Valid
	SO2	0.916	Valid
	SO3	0.846	Valid
Environment Organization (LO)	LO1	0.843	Valid
	LO2	0.784	Valid
Net Benefit (MB)	MB1	0.843	Valid
	MB2	0.784	Valid
	MB3	0.934	Valid
	MB4	0.901	Valid
	MB5	0.812	Valid
Data Integration (ID)	ID1	0.763	Valid
	ID2	0.894	Valid
	ID3	0.847	Valid
	ID4	0.822	Valid
Implementation of Electronic Medical Records (EMR)	RME1	0.876	Valid
	RME2	0.918	Valid
	RME3	0.863	Valid

Source : Data processed 2024 with Smart PLS

Based on table 3, it shows that the *loading factor values* generated from the indicators of all variables are declared valid.

**Table 4** Results of Discriminant Validity Test

Variables	AVE	$\sqrt{AVE}$	Information
Quality System	0.518	0.834	Valid
Quality Information	0.729	0.854	Valid
Quality Service	0.725	0.851	Valid
Users System	0.633	0.844	Valid
Satisfaction Users	0.625	0.792	Valid
Structure Organization	0.779	0.882	Valid
Environment Organization	0.784	0.886	Valid
Net Benefits	0.734	0.857	Valid
Data Integration	0.693	0.833	Valid

RME Implementation	0.683	0.905	Valid
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Source: Data processed 2024 with SmartPLS

Based on table 4 , it is known that all variables are greater than 0.5. Thus, it can be stated that each variable has good *discriminant validity* in compiling its respective variables.

**Table 5** Reliability Test Results

Variables	Composite Reliability	Cronbach Alpha	Information
KS	0.875	0.833	Reliable
KI	0.930	0.907	Reliable
KL	0.887	0.810	Reliable
PS	0.895	0.851	Reliable
KP	0.870	0.802	Reliable
SO	0.914	0.859	Reliable
LO	0.879	0.733	Reliable
MB	0.932	0.908	Reliable
ID	0.900	0.851	Reliable
RME	0.894	0.838	Reliable

Source : Data processed 2024 with Smart PLS

Based on table 6, it is known that mark all *composite reliability*  $> 0.7$  and *cronbach alpha*  $> 0.6$ . This shows that all variables have a high level of reliability.

### Hypothesis Test Results

Hypothesis testing is determined by looking at the *T-value* and *P-Values* . The research hypothesis can be declared accepted if the *T-value*  $> 1.96$  and the *P-Values*  $< 0.05$  using the *bootstrapping procedure*. There are The results of the hypothesis test can be shown in the *bootstrapping output image* and presented in the following table:

**Table 6** Hypothesis Test Results

Direct Influence	T- Values	P- Values	Information
KS $\rightarrow$ PS	2,917	0.004	H <sub>1</sub> accepted
KS $\rightarrow$ KP	5,713	0,000	H <sub>2</sub> accepted
KI $\rightarrow$ PS	5,238	0,000	H <sub>3</sub> accepted
KI $\rightarrow$ KP	3,545	0,000	H <sub>4</sub> accepted
KL $\rightarrow$ PS	2,913	0.004	H <sub>5</sub> accepted
KL $\rightarrow$ KP	1,552	0.122	H <sub>6</sub> rejected
KS $\rightarrow$ SO	5,677	0,000	H <sub>7</sub> accepted

KL →LO	6,116	0,000	H <sub>8</sub> accepted
PS →MB	0.087	0.931	H <sub>9</sub> rejected
KP →MB	0.880	0.379	H <sub>10</sub> rejected
SO →MB	0.638	0.524	H <sub>11</sub> rejected
LO →MB	6,645	0,000	H <sub>12</sub> received
RME Technology→	1,007	0.315	H <sub>13</sub> rejected
Man →RME	0.712	0.477	H <sub>14</sub> rejected
Organization →RME	2,692	0.007	H <sub>15</sub> accepted
Net Benefits →RME	3,309	0.001	H <sub>16</sub> received
RME ID→	16,599	0,000	H <sub>21</sub> accepted
<b>Indirect Influence</b>	<b>T- Values</b>	<b>P- Values</b>	<b>Information</b>
Technology→ RME ID→	2,021	0.044	H <sub>17</sub> accepted
Man→ RME ID→	0.329	0.742	H <sub>18</sub> rejected
Organization→ RME ID→	2,519	0.012	H <sub>19</sub> accepted
Net Benefits→ RME ID→	10,515	0,000	H <sub>20</sub> accepted
KS→ RME ID→	2,392	0.017	H <sub>22</sub> accepted
KI→ RME ID→	2,250	0.012	
KL→ RME ID→	3,101	0.002	
PS→ RME ID→	2,763	0.049	
KP→ RME ID→	2,640	0.002	
SO→ RME ID→	2,626	0.009	
LO→ RME ID→	2,189	0.029	

Source: Data processed 2024 with SmartPLS

## Discussion Relationship Between Variables

### 1) The Influence of System Quality on System Usage

The results of data processing state that H<sub>1</sub> is accepted . These results are in line with the theory put forward by DeLone & McLean (2003) that system quality is a system of desired quality characteristics of the information system itself. Research conducted by Franki & Sari (2022) revealed that the quality of an electronic medical record information system must have the ability to be easily accessed, easily understood, easily implemented, easily learned, and easily implemented. This research is supported by research by Soraya et al., (2019); Krisbiantoro et al., (2015) which states that system quality has a positive effect on system usage.

### 2) The Influence of System Quality on User Satisfaction

The results of data processing state that H<sub>2</sub> is accepted . These results are in line with the theory put forward by DeLone & McLean (2003) that system quality is a measurement of

characteristics in information systems, especially in *system capability* and visual display forms. Research by Poluan et al., (2014) states that improvements and repairs to information systems and their stability by service providers will increase system usage and lead to user satisfaction. This research is supported by research by Soraya et al., (2019); Sari et al., (2016) which states that system quality has a positive effect on user satisfaction.

### **3) The Influence of Information Quality on System Usage**

The results of data processing state that H<sub>3</sub> is accepted . This result is in line with the theory put forward by DeLone & McLean (2003) that information quality is related to information and system processing that produces information, to measure the quality of *the output* produced. The quality of information that has good quality will attract users to use the system (Yusof et al., 2008). Research by Soraya et al., (2019); Nurlani & Permana (2017) found that information quality has a positive effect on system usage.

### **4) The Influence of Information Quality on User Satisfaction**

The results of the processing state that H<sub>4</sub> is accepted . This result is in line with the theory put forward by DeLone & McLean (2003) that the components of quality include completeness, accuracy, readability, timeliness , availability, relevance, consistency, reliability, data entry, and method quality. Research by Soraya et al., (2019); Putra & Alfian (2016) found that information quality has a positive effect on user satisfaction.

### **5) The Influence of Service Quality on System Usage**

The results of data processing state that H<sub>5</sub> is accepted . This result is in line with the theory put forward by DeLone & McLean (2003) that service quality is a responsive reaction obtained from information system developers in the form of personnel support for fulfilling expectations and providing solutions to user constraints. Research by Soraya et al., (2019); Krisbiantoro et al., (2015); Kodarisman & Nugroho (2013) found that service quality has a positive influence on the use of the system.

### **6) Influence Quality Service To Satisfaction Users**

The results of data processing state that H<sub>6</sub> is rejected . This result is contrary to the theory put forward by Rasid et al., (2022) that service quality is total support from system service providers or technology managers. However, this study is supported by Agung's research (2018) which states that service quality does not affect user satisfaction. In the case of RSIA Assyifa, service quality does not affect user satisfaction, which can be caused by several factors, namely the mismatch between expectations and reality, because users may have high expectations for the quality of service provided,

but the system has not been able to meet these expectations, especially if there are still technical obstacles such as data input errors, system *errors* , or unstable internet networks.

### **7) The Influence of System Quality on Organizational Structure**

The results of data processing state that  $H_7$  is accepted . This result is in line with the theory put forward by Kazemi et al., (2016) that a good organizational structure can separate functional responsibilities explicitly to support the success of the information system implemented. The results of this study are in accordance with the research of Perwira (2016) which states that the element of technology affects the element of the organization, namely the organizational structure.

### **8) The Influence of Service Quality on the Organizational Environment**

The results of data processing state that  $H_8$  is accepted. This result is in line with the theory put forward by Franki & Sari (2022) that service quality is reviewed from the supporting facilities and infrastructure of the electronic medical record information system, starting from patient registration supported by computerization to facilitate patient services. The internal environment of the organization, both staff and health workers must have the capacity to adapt to changes in the application of technology, to reduce the challenges of digital transformation (Nur et al., 2020).

### **9) The Impact of System Use on Net Benefits**

The results of data processing state that  $H_9$  is rejected. This result is not in line with the research of Fitriani et al., (2022); Soraya et al., (2019); Nurlani & Permana (2017) which states that the high behavioral intention of users to use the system is empirically proven to have a significant effect on the net benefits obtained. However, this study is supported by the research of Krisdiantoro, Subekti, & Prihatiningtias (2018) which states that the use of the system does not affect net benefits. In the case of RSIA Assyifa, the use of a system that does not affect net benefits can occur due to various factors related to the implementation and utilization of the electronic medical record system. Some potential causes include constraints on the electronic medical record system such as incomplete data entry, data input errors, and unstable networks. These constraints affect the quality of reports which will reduce the accuracy and validity of the information, so that the information produced is not optimal and affects the expected net benefits.

### **10) Influence Satisfaction Users To Net Benefits**

The results of data processing state that  $H_{10}$  is rejected. The results of this study are not in line with the research of Fitriani et al., (2022); Soraya et al., (2019); Abda'u, (2018) which found that user satisfaction has a positive effect on net benefits. However, this study is

supported by Larinse's research (2015) which states that user satisfaction has no effect on net benefits. In the case of RSIA Assyifa, user satisfaction that does not affect net benefits can be caused by several factors that reflect the gap between user experience and the real impact on the hospital's work results or operational efficiency. This can be caused by several potential causes, namely the system has not met user expectations, because it has not fully answered their needs. There are limitations to the system's features, because the system adopted from RS An-Nisa focuses more on BPJS patients, so it does not fully support the process for general patients or other insurance. This can limit net benefits even though users feel the system is quite helpful.

### **11) The Influence of Organizational Structure on Net Benefits**

The results of data processing state that  $H_{11}$  is rejected. The results of this study are not in line with the research of Fitriani et al., (2022) and Krisbiantoro et al., (2015) which found that organizational structure has a positive effect on net benefits. However, this study is supported by research by Soraya et al., (2019) and Larinse (2015) which found that organizational structure has no effect on net benefits. In addition, research by Hendra et al., (2015) states that organizations cannot directly improve system users' perceptions of net benefits. In the case of RSIA Assyifa, the organizational structure that does not affect net benefits can be caused by several factors that describe limitations in the management and implementation of electronic medical record systems in the organizational environment. This is due to several potential causes, including an organizational structure that may not have been adjusted to support the adoption and implementation of electronic medical record systems optimally. For example, if there is no specific unit or team responsible for the system, coordination becomes less effective.

### **12) The Influence of Organizational Environment on Net Benefits**

The results of data processing state that  $H_{12}$  is accepted. The results of this study are supported by Fitriani et al., (2022) and Krisbiantoro et al., (2015) who found that the organizational environment has a positive influence on net benefits. Research by Soraya et al., (2019) explains that the use of systems in an organizational environment needs to be supported by encouragement from management and colleagues, this is to support the success of the implementation of information systems, by providing motivational encouragement and providing adequate facilities.

### **13) The Influence of Technological Aspects on RME Implementation**

The results of data processing state that  $H_{13}$  is rejected . The results of the study contradict the research of Handayani et al., (2023); Herfiyanti (2023); Erintan et al., (2022) which found that the technological aspect influences the implementation of RME. However, the results of this study are supported by Jayanthi & Lazuardi (2023) and Handayani et al., (2023) which state that the technological aspect does not influence the implementation of RME. In the case of RSIA Assyifa, the technological aspects that do not affect the implementation of RME are caused by several factors, namely the limitations of technological infrastructure with unstable internet networks and systems that are not yet optimal, the presence of errors and errors in the system that reduce the efficiency and effectiveness of its use. The unreliability of this technology can hinder the adoption process by users. In addition, other factors are due to users who are not ready with technology, so they only focus on operations rather than technological transformation.

### **14) The Influence of Human Aspects on RME Implementation**

The results of data processing state that  $H_{14}$  is rejected . This result is contrary to the theory put forward by Agustina, Susilani, & Supatman (2018) which states that system usage is influenced by who uses the system, the level of system usage, training that has been attended, knowledge about the system, and the attitude of accepting or rejecting the system. However, the results of this study are supported by Jayanthi & Lazuardi (2023); Franki & Sari (2022) who stated that the human aspect does not affect the implementation of RME. In the case of RSIA Assyifa, the human aspect that does not affect the implementation of RME can be caused by several factors including the lack of user skills and competence, resulting in the inability of users to input data correctly or understand RME features that cause errors. Changes cause some users to feel more comfortable with manual processes or old systems and are reluctant to adapt to new technologies.

### **15) The Influence of Organizational Aspects on RME Implementation**

The results of data processing state that  $H_{15}$  is accepted . This result is in line with the theory put forward by Franki & Sari (2022) which states that organizational components assess the system from the aspects of organizational structure and organizational environment. The results of this study are supported by Handayani et al., (2023); Erintan et al., (2022); and Franki & Sari (2022) who found that organizational aspects influence the implementation of electronic medical records.

#### **16) The Influence of Net Benefit Aspects on RME Implementation**

The results of data processing state that  $H_{16}$  is accepted. This result is in line with the theory put forward by Franki & Sari (2022) that a system can benefit from 1 (one) user, a group of users, and an organization. The results of this study are supported by Handayani et al., (2023); Herfiyanti (2023); Erintan et al., (2022); and Franki & Sari (2022) who found that the net benefit aspect influenced the implementation of electronic medical records.

#### **17) The Influence of Technology Aspects on RME Implementation through Data Integration**

The results of data processing state that  $H_{17}$  is accepted . This result is in line with the theory put forward by Xu et al., (2014) which states that *online integration systems* are developed to meet user needs with various features tailored to needs. Technology factors can be seen from the quality of the system, the quality of information, and the quality of services provided, can run according to wishes, for example, can provide clear information, can store data that is already running and can help the service process (Erintan et al., 2022; Soraya et al., 2019; and Larinse, 2015).

#### **18) Influence Aspect Man To Implementation of RME through Data Integration**

The results of data processing stated that  $H_{18}$  is rejected. The results of the study contradict the research of Purwanto et al., (2020); Pourrajab, Eftekhari, & Hashemi (2019); Jimenez et al., (2018); Ionescu et al., (2018); Pop & Titu (2018) stated that in data integration, various management systems can be combined, including organizations, humans, and technology that provide benefits for operational performance. Based on the case at RSIA Assyifa, the failure of data integration to mediate the influence of human aspects on the implementation of electronic medical records can be caused by several factors, namely the RME system at RSIA Assyifa is not fully integrated with other information systems such as SIMRS. This causes the data flow to be hampered and inefficient. Furthermore, the system used tends to be more directed at BPJS patients, while general patient data or insurance is not well integrated. This imbalance can reduce the effectiveness of data integration.

#### **19) The Influence of Organizational Aspects on RME Implementation through Data Integration**

The results of data processing state that  $H_{19}$  is accepted. The results of this study are supported by Purwanto et al., (2020); Pourrajab, Eftekhari, & Hashemi (2019); Jimenez et al., (2018); Ionescu et al., (2018); Pop & Titu (2018) stated that in data integration combines various management systems including organizations, humans, and technology that provide benefits for operational performance. Organizational factors can affect the running of the

system and support between human resources that work together, for example cooperation between nursing units and pharmacies.

## **20) The Influence of Net Benefit Aspects on RME Implementation through Data Integration**

The results of data processing state that  $H_{20}$  is accepted . The results of this study are supported by research by Purwanto et al., (2020); Pourrajab, Eftekhari, & Hashemi (2019); Jimenez et al., (2018); Ionescu et al., (2018); Pop & Titu (2018) which states that data integration combines various management systems including organizations, humans, and technology that provide benefits for operational performance. From the net benefit factor, the system is in accordance with the needs of each unit, for example in the registration section if the system can help register patients, the service process will be integrated with other units, meaning the system can lighten the workload.

## **21) The Impact of Data Integration on RME Implementation**

The results of data processing state that  $H_{21}$  is accepted . This study is supported by Radyawanto & Soediantono (2022) who stated that data integration affects system implementation. With system implementation, hospitals can create effectiveness, consistency, be more focused on solving problems, align responsibilities and authorities, align targets, reduce risks, increase profits, and reduce duplication of work.

## **22) The Influence of System Quality, Information Quality, Service Quality, System Usage, User Satisfaction, Organizational Structure, and Organizational Environment on the Implementation of Medical Records through Data Integration**

The results of data processing state that  $H_{22}$  is accepted , meaning that there is a significant positive influence of system quality, information quality, service quality, system usage, user satisfaction, organizational structure, and organizational environment on the implementation of RME through data integration. Data integration acts as a significant mediator in the influence of system quality, information quality, service quality, system usage, user satisfaction, organizational structure, and organizational environment on the implementation of RME. These results are in accordance with Darsono's research (2024) which states that good data integration allows patient information to be available in *real-time* , supports better clinical decision-making, and improves the overall quality of health services.

## 5. CONCLUSION

Based on the results of the study consisting of 22 hypotheses, there are 17 hypotheses that have a direct influence. However, there are 5 (five) hypotheses that are rejected, including there is no influence of service quality on user satisfaction, there is no influence of system use, user satisfaction, and organizational structure on net benefits, and there is no influence of human aspects on the implementation of electronic medical records. In addition, there are 5 (five) indirect influences, but there is 1 (one) hypothesis that is rejected, namely there is no influence of human aspects on the implementation of RME through data integration

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