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Research Article

Content and Ease of Use Influencing Electronic Medical Record Net Benefits: The Role of Actual Use

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Abstract: The implementation of Electronic Medical Records (EMR) has become an important element in improving healthcare service quality, efficiency, and patient safety in hospitals. However, the benefits of EMR depend not only on system availability but also on the quality of the information provided and how actively the system is used by healthcare professionals. This study aims to analyze the influence of electronic medical record content and perceived ease of use on the net benefits of EMR, with actual system use acting as an intervening variable. The research applied a quantitative approach with a cross-sectional design conducted at RSM Hospital. The population consisted of all general practitioners and specialist doctors working at the hospital, totaling 51 respondents, and the study used a total sampling technique. Data were collected through structured questionnaires measured using a Likert scale and analyzed using the Structural Equation Modeling–Partial Least Squares (SEM-PLS) method. The results show that EMR content and perceived ease of use significantly influence the net benefits of EMR. Both variables also significantly affect the actual use of the system, while actual use significantly influences the benefits obtained. Furthermore, actual use mediates the relationship between EMR content, ease of use, and net benefits, indicating that better information quality and usability can encourage greater system utilization and maximize the advantages of EMR implementation.

Keywords: Actual Use; Content; Ease of Use; Electronic Medical Records; Net Benefits.

1. Introduction

The rapid development of information technology has significantly transformed many sectors, including healthcare services. Hospitals and healthcare institutions increasingly adopt digital technologies to improve service quality, operational efficiency, and patient safety. One of the most important digital innovations in healthcare information systems is the implementation of Electronic Medical Records (EMR). EMR systems allow healthcare providers to store, manage, and retrieve patient medical information electronically, replacing traditional paper-based medical records. The use of EMR systems has been widely promoted because digital medical records can improve the accuracy of documentation, facilitate information sharing among healthcare professionals, and support more effective clinical decision-making (WHO, 2018).

Electronic Medical Records have become an essential component of modern healthcare systems because they enable healthcare providers to access patient information more quickly and efficiently. EMR systems help physicians and medical staff obtain comprehensive patient data, including medical history, diagnoses, laboratory results, and treatment plans. The availability of accurate and integrated medical information can significantly improve clinical decision-making and reduce the risk of medical errors. Furthermore, EMR systems also enhance coordination among healthcare professionals and improve the continuity of patient care (Bowman, 2013). For healthcare organizations, the adoption of EMR systems can also

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contribute to improved operational efficiency, better documentation management, and enhanced quality of healthcare services.

Despite the numerous advantages of EMR systems, the successful implementation of these systems remains a challenge for many healthcare institutions. The effectiveness of EMR implementation is not determined solely by the availability of technology but also by how well the system is accepted and utilized by its users. Healthcare professionals, particularly physicians, play a critical role in the success of EMR implementation because they are the primary users of the system in clinical practices. If the system does not meet the needs of users or is perceived as difficult to use, healthcare professionals may be reluctant to adopt it in their daily work activities.

Previous studies on information systems have highlighted several factors that influence the success of information system implementation. One of the most widely recognized frameworks for evaluating information system success is the Information Systems Success Model developed by DeLone and McLean. According to this model, the success of an information system can be assessed through several dimensions, including system quality, information quality, system use, user satisfaction, and net benefits (DeLone & McLean, 2003; DeLone & McLean, 2016). In the context of electronic medical record systems, these factors play a critical role in determining whether the implementation of the system can generate meaningful benefits for healthcare organizations.

One important factor that influences the effectiveness of EMR systems is the quality of the information contained within the system. In electronic medical records, information quality is reflected in the completeness, accuracy, relevance, and timeliness of the medical data stored in the system. High-quality information allows healthcare professionals to make better clinical decisions and provide more effective patient care. Conversely, incomplete or inaccurate information may reduce the usefulness of the system and potentially lead to errors in medical treatment. Therefore, ensuring the quality and reliability of electronic medical record content is crucial for maximizing the benefits of EMR implementation (Holmgren et al., 2012).

Another important factor influencing the adoption and utilization of EMR systems is perceived ease of use. Ease of use refers to the degree to which users believe that using a particular system will require minimal effort. In healthcare environments, physicians often work under high workloads and time constraints. As a result, healthcare information systems must be designed to be intuitive, efficient, and easy to use. If a system is perceived as complicated or time-consuming, users may resist adopting the system even if it offers potential benefits. Previous studies have shown that ease of use plays a significant role in influencing user acceptance and the actual utilization of information systems (Davis, 1989).

The actual use of an information system represents another important determinant of its success. Actual use refers to the extent to which users actively interact with and utilize the system in their daily work activities. Even when an information system has high-quality features and reliable information, the system will not produce meaningful benefits unless it is actively used by its intended users. In healthcare organizations, the consistent use of EMR systems by physicians and medical staff can significantly improve data management, enhance communication among healthcare professionals, and support more efficient clinical workflows (DeLone & McLean, 2003).

Ultimately, the implementation of information systems is expected to generate net benefits for organizations and users. Net benefits refer to the overall advantages gained from the use of information systems, including improved decision-making, enhanced productivity, increased efficiency, and better organizational performance. In the healthcare context, the net benefits of EMR implementation may include improved patient safety, enhanced quality of care, reduced medical errors, and improved coordination among healthcare providers (Tiorentap, 2020).

Although many studies have examined the adoption of healthcare information systems, empirical research examining the relationships between EMR content quality, ease of use, actual system use, and the resulting net benefits in hospital settings remains limited. In particular, studies that explore the mediating role of actual system use in linking system characteristics and organizational benefits are still relatively scarce, especially in developing healthcare systems.

RSM Hospital has implemented an electronic medical record system as part of its efforts to improve healthcare service quality and operational efficiency. However, the effectiveness of this system depends on how well it supports the needs of healthcare professionals and how actively it is used in clinical practices. Evaluating the factors that influence the utilization and

effectiveness of EMR systems in this hospital is therefore important in order to identify opportunities for improving system performance and maximizing the benefits of digital healthcare technologies.

Based on these considerations, this study aims to analyze the influence of electronic medical record content and perceived ease of use on the net benefits of EMR implementation, with actual use serving as an intervening variable at RSM Hospital. The findings of this study are expected to contribute to the development of knowledge in healthcare information systems and provide practical insights for hospital management and system developers in improving the design, implementation, and utilization of electronic medical record systems to enhance healthcare service quality and organizational performance.

2. Literature Review

2.1. Electronic Medical Records (EMR)

Electronic Medical Records (EMR) are digital systems used to store, manage, and access patient health information electronically. EMR systems contain comprehensive patient data such as demographic information, medical history, diagnoses, medications, laboratory results, and treatment plans. The implementation of EMR is intended to replace traditional paper-based medical records and improve the efficiency and quality of healthcare services.

The adoption of EMR systems has increased significantly in healthcare institutions due to their ability to improve clinical documentation, facilitate information sharing among healthcare professionals, and support clinical decision-making. According to Englebardt and Nelson (2002), health information systems play a strategic role in supporting healthcare management and improving healthcare service delivery. EMR systems allow healthcare providers to access patient information quickly and accurately, which can reduce medical errors and improve patient safety.

However, the successful implementation of EMR systems depends not only on the availability of technology but also on how effectively the system is utilized by healthcare professionals. Several factors influence the success of EMR implementation, including information quality, system usability, and user acceptance. Therefore, understanding these factors is important to ensure that EMR systems provide meaningful benefits for healthcare organizations.

2.2. Net Benefits of EMR

Net benefits refer to the overall positive impacts obtained from the use of an information system. In the context of healthcare information systems, net benefits may include improved decision-making, increased efficiency, better service quality, and enhanced organizational performance. The concept of net benefits is widely discussed in the Information System Success Model developed by DeLone and McLean.

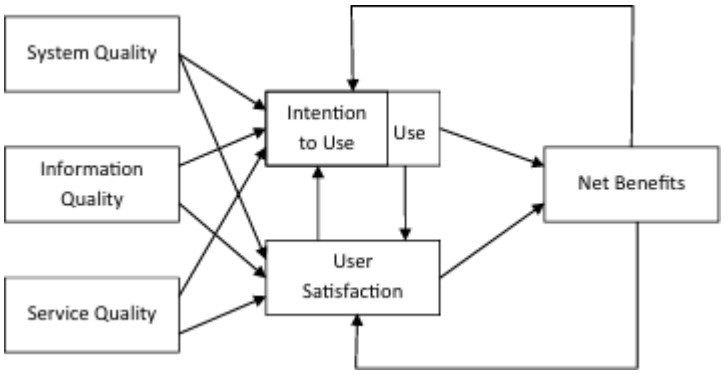

Figure 1. DeLone and McLean's Information System Success Model (2003).

According to DeLone and McLean (2003), net benefits represent the ultimate outcome of information system implementation. These benefits can occur at both the individual level and the organizational level. Individual benefits include improved productivity and better decision-making among users, while organizational benefits include improved operational efficiency, better coordination of services, and enhanced healthcare outcomes.

In the healthcare sector, the implementation of EMR systems is expected to generate various benefits, such as improved quality of patient care, better documentation of medical services, and enhanced coordination among healthcare providers. Tiorentap (2020) explains that the use of electronic medical record systems can significantly improve healthcare service efficiency and support better clinical decision-making processes.

2.3. Content of EMR

Content in electronic medical records refers to the quality and completeness of information contained in the system. The content of EMR includes patient demographic data, clinical examination results, diagnoses, treatments, medications, and other relevant medical information. High-quality EMR content is essential for ensuring that healthcare professionals have access to accurate and reliable information when providing healthcare services.

Information quality is an important factor that influences the effectiveness of information systems. According to DeLone and McLean (2003), information quality is measured through several dimensions, including completeness, accuracy, relevance, and timeliness of information. In the context of electronic medical records, these dimensions determine how useful the information is for healthcare professionals in performing their clinical tasks.

Previous research has shown that the quality of EMR content significantly influences the utilization of electronic medical record systems. Sohn et al. (2020) found that high-quality content in electronic health records contributes to improved healthcare service quality and encourages healthcare professionals to utilize the system more frequently. When the information contained in the system is complete and reliable, healthcare professionals are more likely to rely on the system in their daily clinical activities.

2.4. Perceived Ease of Use

Perceived ease of use refers to the degree to which users believe that a particular system can be used with minimal effort. This concept originates from the Technology Acceptance Model (TAM) proposed by Davis (1989). According to TAM, perceived ease of use is one of the key determinants of technology acceptance and influences users' willingness to adopt and utilize new technologies.

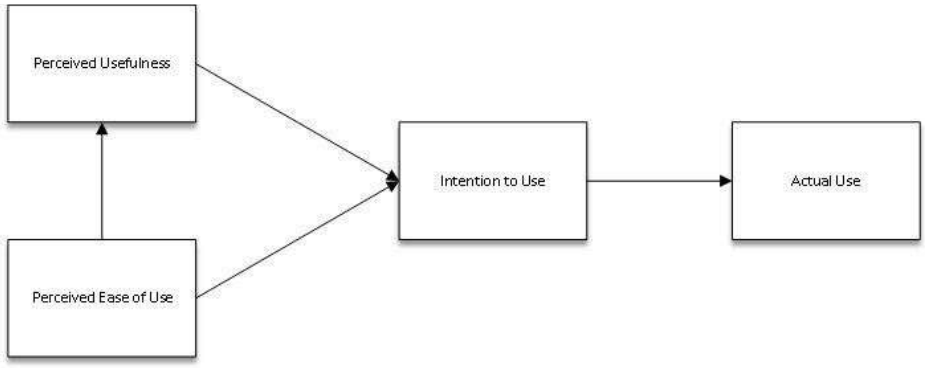

Figure 2. Technology Acceptance Model-TAM (Davis, 1989).

In healthcare environments, ease of use is particularly important because healthcare professionals often operate under high workloads and time constraints. If an EMR system is difficult to use or requires complex procedures, healthcare professionals may be reluctant to adopt the system. Conversely, systems that are easy to learn and operate are more likely to be accepted and utilized by users.

Previous studies have demonstrated that ease of use plays a significant role in influencing the adoption of healthcare information systems. The Unified Theory of Acceptance and Use of Technology (UTAUT) also emphasizes the importance of effort expectancy, which refers to the degree of ease associated with system use. Systems that are perceived as easy to use can increase user satisfaction and encourage greater utilization of the technology.

Nezamdoust et al. (2022) found that perceived ease of use has a significant influence on the adoption of digital health systems. When users perceive a system as easy to operate, they are more likely to use the system consistently in their daily activities.

2.5. Actual Use of EMR

Actual use refers to the real and observable behavior of users when interacting with an information system. In the context of electronic medical records, actual use refers to the extent to which healthcare professionals utilize the EMR system in their daily clinical activities. Actual use can be measured through several indicators, including frequency of system use, duration of use, and the variety of activities performed using the system.

According to the Information System Success Model developed by DeLone and McLean (2003), system use is an important indicator of information system success. The benefits of an information system can only be realized when the system is actively used by its intended users. Without actual use, even well-designed systems cannot produce meaningful organizational outcomes.

Yusof et al. (2008) also emphasize that healthcare information systems can only generate benefits if they are consistently used by healthcare professionals. In the context of EMR implementation in hospitals, actual use represents the level of adoption of the system by physicians and other healthcare staff.

Previous research has also highlighted the relationship between system use and organizational benefits. Xie et al. (2025) found that the active use of digital health technologies by healthcare professionals significantly contributes to improved service efficiency and healthcare outcomes. Therefore, actual use plays a crucial role in determining the net benefits obtained from the implementation of electronic medical record systems.

2.6. Conceptual Framework

This study adopts the Information Systems Success Model developed by William H. DeLone and Ephraim R. McLean as the main theoretical foundation. The model explains that the success of an information system can be evaluated through several dimensions, including information quality, system use, and net benefits. In the context of electronic medical record (EMR) systems, the quality of information contained in the system and the ease with which users can operate the system are important factors that influence the level of system utilization and the benefits obtained from its implementation.

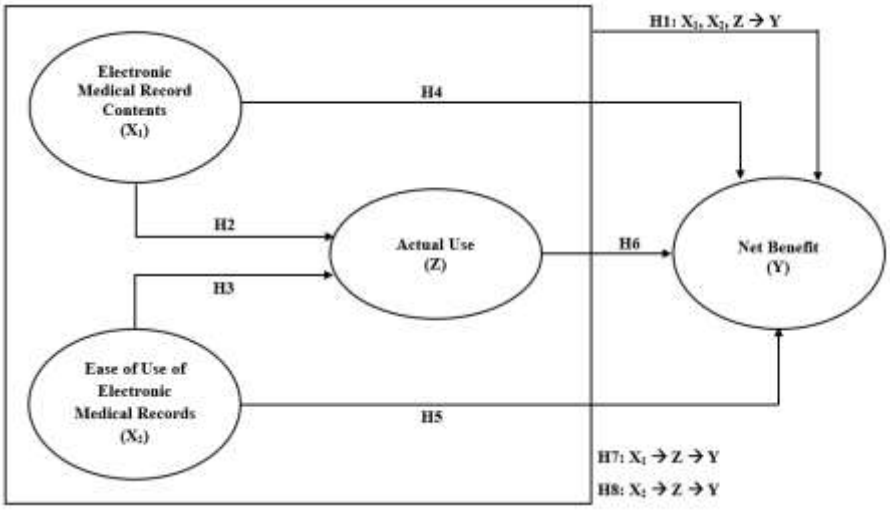

Figure 3. Conceptual Research.

Based on this theoretical perspective, this study proposes a conceptual framework in which electronic medical record content and perceived ease of use influence the net benefits of EMR implementation, both directly and indirectly through actual use as an intervening variable. The framework illustrates that high-quality information and user-friendly systems can encourage healthcare professionals to utilize EMR systems more actively, which ultimately contributes to improved effectiveness and benefits of EMR implementation in hospital services.

2.7. Hypotheses Development

Based on the research problems described previously, the research hypotheses are formulated as follows:

- **H1:** Content and ease of use of electronic medical records simultaneously influence the net benefits of EMR with actual use as an intervening variable.
- **H2:** Electronic medical record content has a significant influence on the actual use of electronic medical records.
- **H3:** Perceived ease of use of electronic medical records has a significant influence on the actual use of electronic medical records.
- **H4:** Electronic medical record content has a significant influence on the net benefits of electronic medical record use.
- **H5:** Perceived ease of use has a significant influence on the net benefits of electronic medical record use.
- **H6:** Actual use has a significant influence on the net benefits of electronic medical record use.
- **H7:** Electronic medical record content influences net benefits through actual use as an intervening variable.
- **H8:** Perceived ease of use influences net benefits through actual use as an intervening variable.

3. Materials and Method

This study employed a quantitative research approach to analyze the influence of electronic medical record content and perceived ease of use on the net benefits of electronic medical record (EMR) implementation, with actual use serving as an intervening variable. The quantitative approach was selected because it allows the researcher to measure relationships between variables and test hypotheses using statistical analysis.

3.1. Research Design

This research used a cross-sectional study design in which data were collected at a single point in time. The study was conducted at RSM Hospital, a healthcare institution that has implemented an electronic medical record system to support its healthcare service operations.

The research focused on evaluating the factors that influence the effectiveness and benefits of EMR implementation among physicians who actively use the system in their clinical activities.

3.2. Population and Sample

The population of this study consisted of all physicians working at RSM Hospital, including both general practitioners and specialist doctors. The total number of physicians involved in the study was 51 respondents. Because the population size was relatively small, this research applied a total sampling technique in which all members of the population were included as research respondents. This approach ensures that the study captures the perceptions and experiences of all physicians who use the EMR system within the hospital.

3.3. Data Collection

Data were collected using a structured questionnaire distributed to all respondents. The questionnaire was designed to measure four main variables in the study: electronic medical record content, perceived ease of use, actual use, and net benefits. Each variable was measured using several indicators adapted from previous studies related to information systems and electronic medical records.

The questionnaire used a Likert scale ranging from 1 to 4, where 1 represents strongly disagree and 4 represents strongly agree. This measurement scale allows respondents to express their level of agreement with statements related to their experiences using the EMR system.

3.4. Research Variables

This study involves four main variables:

a. Electronic Medical Record Content (X1)
   This variable reflects the quality of information contained in the electronic medical record system, including completeness, accuracy, relevance, and timeliness of patient information.
b. Ease of Use (X2)
   This variable measures the degree to which users perceive the EMR system as easy to learn, easy to operate, and not requiring significant effort during use.
c. Actual Use (Z)
   Actual use represents the extent to which physicians actively utilize the EMR system in their daily clinical activities.
d. Net Benefits (Y)
   Net benefits refer to the overall advantages obtained from using the EMR system, including improved work efficiency, better clinical decision-making, and enhanced healthcare service quality.

3.5. Data Analysis

The collected data were analyzed using the Structural Equation Modeling–Partial Least Squares (SEM-PLS) method. This method was chosen because it is suitable for analyzing complex relationships between multiple variables and can be applied to relatively small sample sizes.

The analysis process consists of two main stages: evaluation of the measurement model and evaluation of the structural model. The measurement model evaluation was conducted to assess the validity and reliability of the research indicators, including convergent validity, discriminant validity, and composite reliability. Meanwhile, the structural model evaluation was performed to test the relationships between variables and examine the significance of the proposed hypotheses.

Hypothesis testing was conducted using the bootstrapping method to determine the significance level of the relationships between variables. A hypothesis is considered statistically significant if the p-value is less than 0.05.

4. Results

This study analyzed the relationships between electronic medical record content, perceived ease of use, actual use, and net benefits using the Structural Equation Modeling–Partial Least Squares (SEM-PLS) approach. The analysis consisted of measurement model evaluation and structural model evaluation to test the proposed hypotheses.

4.1. Simultaneous Effect of Content and Ease of Use on Net Benefits

The simultaneous test results show that electronic medical record content and perceived ease of use have a significant simultaneous effect on net benefits, with an F-value of 305.812 and a significance level of 0.000 ($p < 0.05$). Therefore, H1 is accepted, suggesting that the combination of high-quality information and user-friendly system design plays a crucial role in generating the benefits of electronic medical record implementation.

4.2. Measurement Model Evaluation

The measurement model was evaluated using Loading Factor, Average Variance Extracted (AVE), composite reliability, and Cronbach's alpha to assess the validity and reliability of the research constructs.

Table 1. AVE, Composite Reliability, dan Cronbach's Alpha.

	AVE	Composite Reliability	Cronbach's Alpha
Net Benefits of ERM	0,816	0,978	0,975
Electronic Medical Record Content	0,737	0,978	0,976
Ease Of Use of ERM	0,772	0,964	0,958
Actual Use	0,796	0,965	0,957

The results indicated that all indicators had factor loading values above the acceptable threshold of 0.70, indicating good convergent validity. Furthermore, the AVE values for all

variables were greater than 0.50, demonstrating that the constructs explained more than half of the variance of their indicators.

Table 2. Loading Factor.

Variable	Indicator	Loading Factor	Threshold	Description
Net Benefits of ERM (MRM)	MRM1	0,937	> 0,7	**Valid**
	MRM2	0,898	> 0,7	**Valid**
	MRM3	0,887	> 0,7	**Valid**
	MRM4	0,922	> 0,7	**Valid**
	MRM5	0,852	> 0,7	**Valid**
	MRM6	0,856	> 0,7	**Valid**
	MRM7	0,913	> 0,7	**Valid**
	MRM8	0,918	> 0,7	**Valid**
	MRM9	0,94	> 0,7	**Valid**
	MRM10	0,905	> 0,7	**Valid**
Electronic Medical Record Content (IRM)	IRM1	0,856	> 0,7	**Valid**
	IRM2	0,913	> 0,7	**Valid**
	IRM3	0,895	> 0,7	**Valid**
	IRM4	0,895	> 0,7	**Valid**
	IRM5	0,869	> 0,7	**Valid**
	IRM6	0,823	> 0,7	**Valid**
	IRM7	0,903	> 0,7	**Valid**
	IRM8	0,747	> 0,7	**Valid**
	IRM9	0,742	> 0,7	**Valid**
	IRM10	0,82	> 0,7	**Valid**
	IRM11	0,909	> 0,7	**Valid**
	IRM12	0,877	> 0,7	**Valid**
	IRM13	0,876	> 0,7	**Valid**
	IRM14	0,866	> 0,7	**Valid**
	IRM15	0,906	> 0,7	**Valid**
	IRM16	0,814	> 0,7	**Valid**
Ease Of Use of ERM (KPR)	KPR1	0,835	> 0,7	**Valid**
	KPR2	0,856	> 0,7	**Valid**
	KPR3	0,917	> 0,7	**Valid**
	KPR4	0,91	> 0,7	**Valid**
	KPR5	0,83	> 0,7	**Valid**
	KPR6	0,895	> 0,7	**Valid**
	KPR7	0,888	> 0,7	**Valid**
	KPR8	0,893	> 0,7	**Valid**
Actual Use (AS)	AS1	0,876	> 0,7	**Valid**
	AS2	0,855	> 0,7	**Valid**
	AS3	0,893	> 0,7	**Valid**
	AS4	0,885	> 0,7	**Valid**
	AS5	0,935	> 0,7	**Valid**
	AS6	0,917	> 0,7	**Valid**
	AS7	0,882	> 0,7	**Valid**

Reliability testing showed that all constructs met the reliability requirements. The composite reliability and Cronbach's alpha values for all variables exceeded the recommended threshold of 0.70, indicating that the measurement items consistently measured their respective constructs. These results confirm that the measurement model is valid and reliable for further structural analysis.

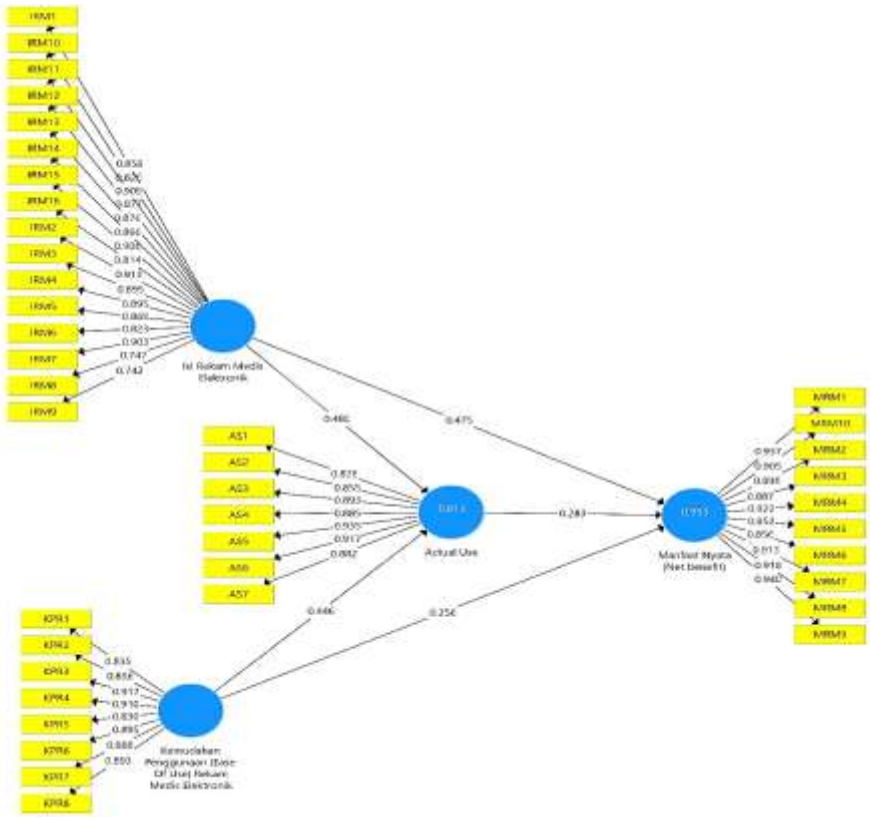

Figure 4. Outer Model SEM-PLS.

4.2. Structural Model Evaluation

The structural model was evaluated by examining the path coefficients, t-statistics, and p-values obtained from the bootstrapping procedure. The results indicate that several hypothesized relationships between variables are statistically significant.

Table 3. Path Coefficient, t-Statistics, dan P-Values (Diirect Effect).

	Original Sample (O)	T Statistics (|O/STDEV|)	P Values	Conclusion
Electronic Medical Record Content → Actual Use (H2)	0,480	3,026	0,003	**Significant**
Ease Of Use → Actual Use (H3)	0,446	2,955	0,003	**Significant**
Electronic Medical Record Content → Net Benefits (H4)	0,475	4,353	0,000	**Significant**
Ease Of Use → Net Benefits (H5)	0,256	2,836	0,005	**Significant**
Actual Use → Net Benefits (H6)	0,283	3,149	0,002	**Significant**

The effect of electronic medical record content on actual use showed a positive and significant relationship with a path coefficient of 0.480, a t-statistic of 3.026, and a p-value of 0.003. This result indicates that higher quality and completeness of EMR content encourage physicians to use the system more actively in their clinical activities.

The relationship between perceived ease of use and actual use was also found to be positive and significant, with a path coefficient of 0.446, a t-statistic of 2.955, and a p-value of 0.003. This finding suggests that when physicians perceive the EMR system as easy to use, they are more likely to utilize the system consistently in their daily work.

Furthermore, the analysis showed that electronic medical record content significantly influences net benefits, with a path coefficient of 0.475, a t-statistic of 4.353, and a p-value of

0.000. This result indicates that the availability of complete and reliable medical information contributes significantly to the perceived benefits of EMR implementation.

Similarly, perceived ease of use was found to have a significant influence on net benefits, with a path coefficient of 0.256, a t-statistic of 2.836, and a p-value of 0.005. This suggests that systems that are easier to operate can enhance efficiency and improve the perceived benefits of EMR usage.

The results also revealed that actual use significantly affects net benefits, with a path coefficient of 0.283, a t-statistic of 3.149, and a p-value of 0.002. This finding confirms that the benefits of EMR systems can be realized when the system is actively used by healthcare professionals.

Table 4. Coefficient of Determination (R^2)

Variable	R Square Adjusted
Actual Use	**0,806**
Net Benefits	**0,950**

The coefficient of determination (R^2) was used to evaluate the explanatory power of the structural model. The results show that the Adjusted R-Square value for the Actual Use variable is 0.806, indicating that 80.6% of the variance in actual use of electronic medical records can be explained by electronic medical record content and perceived ease of use. The remaining 19.4% is explained by other variables outside the model.

Meanwhile, the Adjusted R-Square value for the Net Benefits variable is 0.950, which indicates that 95% of the variance in the net benefits of electronic medical record use can be explained by electronic medical record content, perceived ease of use, and actual use. These results indicate that the proposed research model has a strong explanatory capability in explaining the benefits obtained from the implementation of electronic medical record systems.

4.3. Indirect Effects

The indirect effect analysis was conducted to evaluate the mediating role of actual use in the relationship between the independent variables and net benefits. The results indicate that actual use partially mediates the relationship between electronic medical record content and net benefits, with a path coefficient of 0.136, a t-statistic of 1.989, and a p-value of 0.047.

Similarly, actual use was found to mediate the relationship between perceived ease of use and net benefits, with a path coefficient of 0.126, a t-statistic of 2.296, and a p-value of 0.022. These results suggest that both content quality and ease of use influence the net benefits of EMR implementation indirectly through increased system utilization.

Table 5. Path Coefficient, t-Statistics, dan P-Values (Indirect Effect)

	Original Sample (O)	T Statistics (|O/STDEV|)	P Values	Conclusion
Electronic Medical Record Content → Actual Use → Net Benefits (H7)	**0,136**	**1,989**	**0,047**	**Significant**
Ease Of Use → Actual Use → Net Benefits (H8)	**0,126**	**2,296**	**0,022**	**Significant**

Overall, the findings demonstrate that electronic medical record content and perceived ease of use play important roles in influencing the utilization of EMR systems and the benefits derived from their implementation. The results also highlight the importance of actual system use as a mediating factor in achieving optimal outcomes from electronic medical record systems.

5. Discussion

The findings of this study provide important insights into the factors that influence the successful implementation of Electronic Medical Records (EMR) systems in hospital settings. This research specifically examined the influence of electronic medical record content and perceived ease of use on the net benefits of EMR implementation, with actual use serving as

an intervening variable. The results demonstrate that both system characteristics and user behavior play a crucial role in determining the benefits obtained from the implementation of EMR systems.

The results of this study are consistent with the Information Systems Success Model proposed by William H. DeLone and Ephraim R. McLean, which emphasizes that information quality and system use are important determinants of the success of information systems. According to the model, the success of an information system can be evaluated through several dimensions, including system quality, information quality, system use, user satisfaction, and net benefits. In this study, electronic medical record content represents information quality, while actual use represents the level of system utilization by users. The findings indicate that these factors significantly contribute to the net benefits obtained from EMR implementation.

The first important finding of this study is that electronic medical record content has a significant influence on the actual use of EMR systems. This result indicates that when the information contained in the EMR system is complete, accurate, relevant, and reliable, physicians are more likely to utilize the system in their clinical activities. High-quality information helps healthcare professionals access patient data more efficiently and supports better clinical decision-making. This finding supports the argument that information quality is a critical factor influencing the success of information systems.

This result is consistent with previous studies that have emphasized the importance of information quality in healthcare information systems. Research by Holmgren et al. (2012) showed that the availability of reliable and comprehensive patient information significantly improves the usability of electronic health records and encourages healthcare professionals to rely on the system during clinical practice. Similarly, Sohn et al. (2020) found that high-quality content in electronic health records improves the effectiveness of healthcare services and increases user engagement with the system. These findings suggest that improving the quality of electronic medical record content can enhance the level of system adoption among healthcare professionals.

The results of this study also indicate that perceived ease of use has a significant effect on the actual use of EMR systems. This finding suggests that when physicians perceive the EMR system as easy to learn, easy to operate, and not requiring excessive effort, they are more likely to use the system in their daily work activities. In healthcare environments where professionals often face heavy workloads and time constraints, system usability becomes a critical factor influencing technology adoption.

This finding is consistent with the Technology Acceptance Model developed by Fred D. Davis, which states that perceived ease of use plays a significant role in influencing users' acceptance and usage of new technologies. When users perceive a system as user-friendly, they tend to develop positive attitudes toward the system and are more willing to incorporate it into their work processes. Previous studies in healthcare information systems have also shown that usability significantly influences the adoption of digital health technologies.

Another important finding of this study is that actual use has a significant influence on the net benefits of EMR implementation. This result suggests that the benefits of electronic medical records can only be achieved when healthcare professionals actively use the system in their daily clinical activities. When physicians consistently utilize the EMR system, they are able to access patient information more efficiently, reduce documentation errors, and improve coordination among healthcare providers.

This finding strongly supports the Information Systems Success Model of William H. DeLone and Ephraim R. McLean, which emphasizes that system use is a key determinant of the benefits generated by information systems. According to the model, the positive outcomes of an information system, such as improved productivity and enhanced service quality, can only be realized when the system is actively used by its intended users. In the context of healthcare services, the consistent use of EMR systems can significantly improve clinical workflows, enhance patient safety, and support better healthcare service delivery.

The mediation analysis conducted in this study further reveals that actual use plays an important intervening role in the relationship between system characteristics and net benefits. The results show that electronic medical record content and perceived ease of use influence net benefits not only directly but also indirectly through actual use. This finding indicates that system characteristics affect organizational benefits primarily by encouraging users to utilize the system more actively.

This result is consistent with previous studies that have highlighted the mediating role of system use in information system success. Yusof et al. (2008) emphasized that healthcare

information systems can only generate meaningful benefits when users actively adopt and integrate them into their work processes. Similarly, research by Xie et al. (2025) found that the active use of digital health technologies by healthcare professionals significantly contributes to improved healthcare service efficiency and better patient outcomes.

In addition, the results of this study show that electronic medical record content and perceived ease of use also have direct effects on the net benefits of EMR implementation. This finding indicates that system characteristics themselves can contribute directly to the benefits obtained from the system. When the EMR system provides reliable information and is easy to use, healthcare professionals can perform their tasks more efficiently, which ultimately improves the quality of healthcare services.

From a practical perspective, the findings of this study highlight the importance of improving both the quality of electronic medical record content and the usability of EMR systems in hospitals. Hospital management and system developers should ensure that electronic medical record systems provide accurate, complete, and relevant information that meets the needs of healthcare professionals. At the same time, system interfaces should be designed to be user-friendly and easy to operate in order to encourage greater adoption among users.

Furthermore, hospitals should provide adequate training and technical support to healthcare professionals to ensure that they are able to use EMR systems effectively. Training programs can help physicians and other healthcare staff develop the necessary skills to operate the system and integrate it into their clinical workflows. By improving both system quality and user competence, healthcare organizations can maximize the benefits obtained from the implementation of electronic medical record systems.

Overall, this study contributes to the growing body of knowledge on healthcare information systems by providing empirical evidence on the factors that influence the benefits of EMR implementation. The findings confirm the relevance of the Information Systems Success Model in explaining the effectiveness of EMR systems in hospital settings and highlight the importance of system characteristics and user behavior in achieving successful digital transformation in healthcare services..

6. Conclusion

This study examined the influence of electronic medical record (EMR) content and perceived ease of use on the net benefits of EMR implementation, with actual use acting as an intervening variable at RSM Hospital. The findings indicate that both electronic medical record content and perceived ease of use significantly influence the actual use of the EMR system. These results suggest that when the information contained in the system is complete, accurate, and relevant, and when the system is perceived as easy to operate, healthcare professionals are more likely to utilize the EMR system in their daily clinical activities.

The results also show that actual use has a significant influence on the net benefits of EMR implementation. This finding confirms that the benefits of electronic medical record systems, such as improved work efficiency, better clinical decision-making, and enhanced healthcare service quality, can only be achieved when the system is actively used by healthcare professionals. In addition, the analysis demonstrates that actual use plays a mediating role in the relationship between EMR content, perceived ease of use, and the net benefits of the system.

Overall, this study highlights the importance of improving both the quality of electronic medical record content and the usability of EMR systems in order to encourage greater system utilization. By enhancing these factors, healthcare organizations can maximize the benefits of EMR implementation and improve the effectiveness of healthcare service delivery.

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