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RESEARCH PAPER

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Development of Medical Record Technology and Information Systems on the Performance of RSU Pacitan Employees

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ABSTRACT

The development of Electronic Medical Record (RME) technology and information systems is an important need in the health sector to improve operational efficiency and service quality. This research analyzes the effect of implementing RME, technology user training, IT infrastructure, and data security and privacy on the performance of RSU Pacitan employees. Using quantitative methods with a cross-sectional design, data was collected from 30 respondents via a Google Form questionnaire and analyzed using SPSS. The results show that the four variables have a significant effect on employee performance (R^2 = 0.878), with the implementation of RME (coefficient 0.232) making administrative services easier, technology training (0.722) increasing employee self-confidence, and IT infrastructure (0.339) supporting productivity. Meanwhile, data security and privacy (-0.376) have a moderate influence because they play a more significant role in creating a safe work environment. This research confirms the importance of implementing EMR in supporting employee performance and recommends further research to analyze other aspects of EMR, as well as becoming the basis for hospital digital transformation policies.

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1. INTRODUCTION

Medical records are essential for healthcare organizations that collect all the data, information, and related findings needed to care for patients, families, communities, and populations [1]. Because the quality and effectiveness of care are directly related to the accuracy and quality of the complete and accurate documentation records of all services provided to patients, this documentation often fails to completely and accurately record data elements due to factors such as busy schedules, the complexity of the care process and lack of sufficient knowledge about the technical aspects of documentation and its impact on the patient [2]. This underlies the emergence of electronic medical records to improve the medical record system from traditional to electronic medical records. Pacitan General Hospital (RSU) is a type D private hospital that has started implementing rules for using electronic medical records, especially in outpatient polyclinic services. RSU Pacitan is located in Pacitan Regency, East Java Province. His presence at Pacitan RSU Medical Record Technology and Information Systems is expected to impact employee performance. Therefore, this research aims to analyze how the development of medical record technology and information systems affects the performance of RSU Pacitan employees.

Emphasized in Minister of Health Regulation No. 24 of 2022 concerning Medical Records, issued on September 12, 2022, has regulated the implementation of RME [3]. This regulation supports the sixth pillar of health transformation in health technology transformation. The previous policy, Minister of Health Regulation Number 269 of 2008, has been updated to meet the demands of technology, services, policies, and laws in the health sector that are developing in Indonesia [4]. RME technology is a digital version of conventional medical records (in paper form) commonly used in health facilities [5]. The use of RME is very relevant to today's increasingly sophisticated technological developments, thus encouraging hospital services to adopt RME for effective and efficient nurses in hospital management services [6]. This condition is confirmed. The Indonesian Ministry of Health is also targeting all hospitals and other health service facilities to have electronic medical records implemented no later than December 31, 2023. However, not all health service facilities in Indonesia have implemented RME practices. The main obstacle faced is that compiling RME requires collecting data sources spread across various departments, such as the radiology, laboratory, and prescription departments. This limitation makes it difficult for hospitals to access these data, especially if the data source comes from physical

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data stored at that location [7]. According to the Henry J. Kaiser Family Foundation, a non-profit healthcare organization based in the United States (US), 2019 shows that 45% of US citizens think that electronic health records have improved the quality of care in the medical sector [8]. Therefore, the growth of health information technology is expected to encourage the development of electronic medical records in the world of health.

Electronic medical records were introduced to improve the safety of healthcare consumers and reduce the overall costs of providing healthcare. By replacing paper-based documentation, digital platforms aim to achieve this goal by offering a continuous model of care by being the constant that connects healthcare providers and patients [9]. In line with advances in the world of health, the government has taken firm steps by requiring health facilities to switch to RME. According to Setiatin & Susanto (2021), Every note, statement, or interpretation made by doctors and other health workers during diagnosing and treating patients is entered and stored in digital form through a computerized system known as RME [10]. The benefits of medical records will be enhanced and strengthened by using RME because RME is a supporting technology that allows users to provide faster, precise, and quality services compared to paper-based medical records.

Readiness for RME adoption may be influenced by healthcare professionals working in organizations with IT infrastructure and computer access. Factors influencing health professionals' readiness for RME are computer skills, RME training, RME knowledge, and RME attitude. However, a person with computer skills will not have much difficulty using the RME system. According to Hailegebreal et al. (2023), health professionals who have taken RME training are more likely to be ready for the RME system than those who have not taken RME [11]. Health professionals with sound knowledge are more likely to be prepared for the RME system than those with poor knowledge. Based on the same source, professionals who recognize the benefits of electronic medical record systems may be more encouraged to employ them due to their awareness. Because of their propensity to do so, they may also be more ready to accept technological advantages and prepared to adopt RME systems [11].

Implementing RME in health facilities often faces several obstacles related to limited human resources. Research results concluded that the problem of limited human resources is still a significant obstacle in primary health facilities in Indonesia [12]. It is essential to ensure that the workload and workflow of officers are appropriate in addition to the quality improvement efforts undertaken in primary care. However, amid limited human resources, technological developments must be welcomed positively. The most advanced country in the world in implementing electronic medical record technology is South Korea, which has implemented an RME of 90.5 percent in-hospital services [13]. However, unlike Japan, it implements Electronic Medical Records in health services as a QR code to make it easier for patients and hospital nurses [14]. Meanwhile, Singapore, one of the best countries in technological development, prioritizes digitalization of its public services, including health services [15]. Technology is intended to make human work more manageable, including employees. Employees cannot be separated from using technology when working [16]. The use of information technology has become very relevant in business activities at all levels of organizations. Information technology is not only limited to the strategic or managerial level but has also penetrated the operational level to improve employee performance. The research results of Simanjuntak et al. (2022) confirmed that performance expectations, or hopes, positively impact the use of information systems; if performance expectations are higher, the system is used more [17]. The results of research by Ginting et al. (2024) regarding aspects of performance expectations, respondents felt confident that using RME would improve performance and form a positive attitude of users towards RME, especially in terms of RME helping to do work more efficiently and quickly. RME helps to enhance the quality of work at home sick [18].

The challenges faced by RSU Pacitan require the training of nurses to increase the use of electronic medical records. Socialization is important, and the benefits of RME in health services are not yet fully understood, especially regarding the knowledge of RME to the public. Plus, information technology continues to grow more sophisticated and touches public facility services and essential health services to be maximized at RSU Pacitan. Therefore, the application of RME technology development in supporting the quality of health services in hospitals must be improved and recommended to policymakers. This can include inventory management, patient tracking, system integration to minimize human error, and improving coordination between different units. The positive experience of using RME technology will help nurses at RSU Pacitan with their daily tasks. Furthermore, users will be more likely to accept electronic medical record technology as a helpful tool rather than a burden or obstacle. Thus, this research aims to analyze the development of medical record technology and information systems and the performance of RSU Pacitan employees.

2. MATERIALS AND METHOD

A. Study Design and Study Setting

This research uses quantitative research methods to answer research questions. A quantitative approach is used because it can determine and analyze random samples in data collection, use instruments, and perform statistical data analysis [19]. This research design uses cross-sectional research. Cross-sectional research studies the dynamics of the correlation between risk

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factors and effects by approaching, observing, or collecting data at one time (point-time approach) [20].

B. Sample Size and Sampling

The population of this study included all employees of the outpatient clinic at RSU Medical Mandiri Pacitan. In this research, a sample of 30 people was taken. The validation sample was determined by selecting nurses who had direct contact with the electronic medical record service at RSU Pacitan and were willing to fill out a questionnaire to provide data. Thus, 30 valid and relevant employee data became the main data source by filling out the research questionnaire.

C. Variables

This includes the application of electronic medical record (RME) technology, technology user training, information technology infrastructure, and data security and privacy. The application of RME technology increases patient data management efficiency and facilitates access to medical information. Technology user training is important to ensure employees have adequate skills in operating the RME system. Adequate information technology infrastructure supports the smooth operation of the system. In addition, data security and privacy play a crucial role in maintaining the confidentiality of patient information and increasing user trust.

D. Data Collection Instruments

Data for this research was gathered through a questionnaire distributed to 30 employees—the questionnaire aimed to obtain relevant information regarding the variables studied. After data collection, the responses were analyzed using simple and multiple linear regression methods to examine the relationships between independent and dependent variables. The analysis was conducted using SPSS software, a widely used statistical tool that provides accurate and reliable results. Simple linear regression was used to assess the impact of a single independent variable, while multiple linear regression analyzed the effects of multiple independent variables on the dependent variable.

E. Statistical Analysis

Data analysis used appropriate statistical analysis techniques via SPSS and used a Likert scale approach for the questionnaire value indicators (1. Strongly Disagree, 2. Disagree, 3. Agree, and 4. Strongly Agree). The SPSS application is relevant in analyzing quantitative research data because it can calculate coding data quickly with a large number of responses and case study-based data [21].

F. Ethical Concerns

This study is approved by the University of Muhammadiyah Yogyakarta, Health Research Ethics Committee, with the date 24 February 2024 and approval number No. 115/EC-KEPK FKIK UMY/II/2024. Before data collection was performed, all respondents were explained the purpose of this study and asked to fill out a written informed consent form, in which all respondents consented to their willingness to participate in the study.

3. RESULTS

The number of respondents to this research was 30 people. The characteristics of the respondents in this study were observed based on gender, age, education, position, and length of service for RSU Pacitan employees. The results of the analysis of the characteristics of the respondents in this study are as follows.

Table 1. Respondent Characterist

Characteristics	Frequency (n)	Percentage (%)	Characteristics	Frequency (n)	Percentage (%
Gender			Total	30	100
Man	4	13.33	High school/equivalent	8	26.66
Woman	26	86.67	Diploma	13	43.34
Total	30	100	S-1	9	30
Age			S-2	-	-
17-25	12	40	Total	30	100
26-34	15	50	**Position**		
35-43	3	10	Poly Nurse	5	16.66
44-52	-		Registration Officer & RM	12	40
53-61	-	-	Cashier	8	26.68
Total	30	100	Pharmacy	5	16.66
Education			Total	30	100
High school/equivalent	7	23.33	**Working Time**		
Diploma	13	43.34	< 1 year	4	13.33
S-1	9	30	1-5 years	16	53.33
S-2	-	-	> 10 years	-	-
Others (junior high school)	1	3.33	Total	30	100

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The descriptive analysis of respondents' characteristics based on gender showed that the majority of 13.33% of employees were male, and as many as 86.67% were female. Characteristics based on age show that most employees are aged 26-34 years 50%, aged 17-25 years 40% and a small number of employees aged 35-43 years 10%. Characteristics of respondents according to education: it is known that the majority of employees have a diploma education, 43%, 30% of employees have a bachelor's degree, 23.33% of employees have high school/equivalent education, and 3.33% of employees with other education levels (SLTP). The characteristics of respondents according to the current position are mostly registration & RM officers at 40%, cashiers at 26.68%, poly nurses at 16.66%, and pharmacists at 16.66%. According to work experience, 53.33% of respondents had a work period of 1-5 years, 33.34% had a work period of 6-10 years, while a small portion of 13.33% had a work period of <1 year. Furthermore, the data on the study's independent and dependent variables are visualized to show the resulting influential relationships.

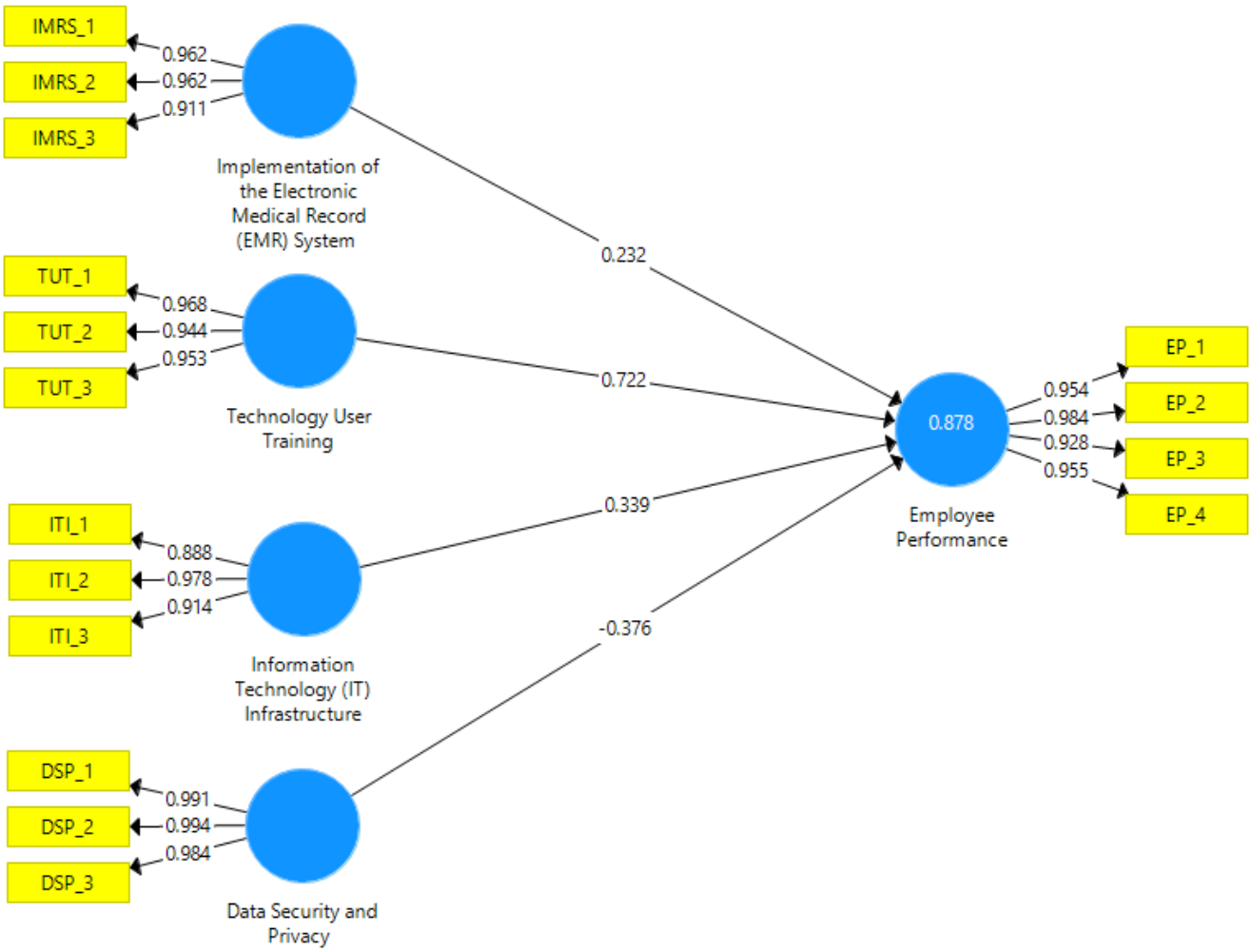

Figure 1. Results of *Inner and Outer Model* with PLS Algorithm Method

Figure 1 above shows a path model used to analyze the relationship between several independent variables and the dependent variable, namely Employee Performance. This model results from Partial Least Squares Structural Equation Modeling (PLS-SEM) analysis, which measures causal relationships between latent constructs. In Figure 1, four latent constructs influence Employee Performance. The four constructs are Implementing the Electronic Medical Record (EMR) System, Technology User Training, Information Technology (IT) Infrastructure, and Data Security and Privacy. Each of these constructs is measured through several indicators marked with labels such as IMRS_1, TUT_1, ITI_1, and DSP_1. The Implementation of the EMR System construct has three indicators (IMRS_1, IMRS_2, and IMRS_3) with loading factor values above 0.9, which shows that these indicators have a substantial contribution to the construct. The path from this construct to Employee Performance shows a coefficient of 0.232, indicating a positive influence, although not too strong compared to other constructs.

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Furthermore, technology user training is measured by three indicators (TUT_1, TUT_2, TUT_3), all of which have high loading factors above 0.9. This construct shows a relatively strong positive influence on Employee Performance with a coefficient of 0.722. This indicates that technology user training has a significant impact on improving employee performance. The Information Technology (IT) Infrastructure construct is measured by three indicators (ITI_1, ITI_2, ITI_3), which have good loading factors above 0.9. Interestingly, although this construct has a positive relationship with employee performance (coefficient 0.339), its influence is lower than that of technology user training. This could indicate that IT infrastructure is important but not as powerful as technology user training in influencing employee performance. Unlike other constructs, Data Security and Privacy shows a negative coefficient of -0.376 on Employee Performance. This suggests an increased focus on data security and privacy may hurt employee performance. One possible explanation is that strict security procedures can slow down work processes or increase administrative burden, reducing work efficiency.

On the right side of the model, Employee Performance is measured through four indicators (EP_1, EP_2, EP_3, EP_4) with very high loading factors, all above 0.9. This shows that these indicators are very representative of measuring employee performance. The R^2 value for Employee Performance is 0.878, meaning these four constructs can explain 87.8% of employee performance variability. This shows that the model has excellent predictive ability. This model shows that technology user training significantly improves employee performance, followed by IT infrastructure and EMR system implementation. Conversely, excessive focus on data security and privacy can negatively impact performance. These findings provide important insights for management in managing factors contributing to employee productivity, especially regarding information technology adoption in the work environment.

Table 2. Composite Reliability and Cronbach Alpha Examination Results

Variable	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)	Result
Employee Performance	0.968	0.971	0.977	0.913	Reliable
Implementation of the Electronic Medical Record (EMR) System	0.941	0.953	0.962	0.894	Reliable
Technology User Training	0.952	0.956	0.969	0.912	Reliable
Information Technology (IT) Infrastructure	0.918	0.926	0.949	0.861	Reliable
Data Security and Privacy	0.990	0.990	0.993	0.980	Reliable

Table 2 above displays the results of the reliability and construct validity tests of the model used in the analysis, with several important statistical indicators such as Cronbach's Alpha, rho_A, Composite Reliability, and Average Variance Extracted (AVE). The five variables tested include Employee Performance, Implementation of the Electronic Medical Record (EMR) System, Technology User Training, Information Technology (IT) Infrastructure, and Data Security and Privacy. All variables are declared reliable based on the results of this measurement. Cronbach's Alpha values for all variables were above 0.9, indicating a very high level of internal consistency. For example, Data Security and Privacy have the highest Cronbach's Alpha value of 0.990, indicating that the indicators used to measure this construct are consistent. Values above 0.7 are generally considered good, so values closer to 1.0 indicate excellent reliability. The same applies to other variables, such as Employee Performance (0.968) and Technology User Training (0.952), which also show strong consistency between the indicators.

Furthermore, rho_A, an alternative to Cronbach's Alpha for measuring construct reliability, shows consistent results with values above 0.9 for all variables. The highest value was also found in Data Security and Privacy (0.990), indicating that this construct is not only internally stable but also very good at reflecting the structural consistency of indicators. The rho_A value is usually considered more accurate in the context of SEM models because it considers the contribution of each indicator to the latent construct. Composite Reliability (CR) also shows very high results for all variables, ranging from 0.949 to 0.993. This value measures the extent to which the indicators represent the construct, with a commonly used minimum threshold of 0.7. These results indicate that all constructs have excellent measurement reliability. For example, the Implementation of the EMR System has a CR value of 0.962, confirming that the indicators consistently contribute to the construct.

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Average Variance Extracted (AVE) measures convergent validity, namely the extent to which a construct's indicators are highly correlated. An AVE value above 0.5 is considered adequate, whereas, in this table, all constructs have very high AVE values, even reaching 0.980 for Data Security and Privacy. This shows that the measured latent construct explains most of the indicator variance. This high AVE value strengthens the belief that the indicators reflect the concept they want to measure. Overall, all variables in this model are declared reliable regarding internal consistency and convergent validity. This provides a strong basis for further analysis because the constructs used have been proven stable and accurate in representing the measured concepts. This high reliability also supports the conclusions of the previous path model, where the relationships between variables can be interpreted with confidence that the results reflect the actual phenomena in the field.

Table 3. Results of Cross Loadings

	Employee Performance	Implementation of the Electronic Medical Record (EMR) System	Technology User Training	Information Technology (IT) Infrastructure	Data Security and Privacy
X1_1	0.921	0.962	0.908	0.849	0.790
X1_2	0.838	0.962	0.873	0.735	0.718
X1_3	0.734	0.911	0.858	0.763	0.758
X2_1	0.937	0.892	0.968	0.914	0.844
X2_2	0.825	0.837	0.944	0.807	0.789
X2_3	0.873	0.936	0.953	0.860	0.822
X3_1	0.734	0.620	0.742	0.888	0.679
X3_2	0.844	0.852	0.892	0.978	0.897
X3_3	0.756	0.826	0.874	0.914	0.955
X4_1	0.731	0.795	0.839	0.882	0.991
X4_2	0.726	0.774	0.843	0.903	0.994
X4_3	0.733	0.803	0.864	0.921	0.984
Y1_1	0.954	0.846	0.857	0.828	0.730
Y1_2	0.984	0.847	0.876	0.787	0.680
Y1_3	0.928	0.758	0.828	0.717	0.608
Y1_4	0.955	0.922	0.953	0.872	0.790

Table 3 above shows the results of the loading factor analysis between indicators (such as X1_1). This loading factor measures the relationship between the indicator and the construct it represents, where a value above 0.7 is generally considered good. The most important result from the analysis data in Table 3 is that most indicators have high loading factors on their primary constructs. For example, X1_1 has a value of 0.962 for implementing the EMR System, indicating a powerful relationship. The same applies to other indicators, such as X2_1 with Technology User Training (0.968) and X4_2 with Data Security and Privacy (0.994). These values indicate that the indicators are valid in representing the construct being measured. Apart from that, although several cross-loading values (the relationship between indicators and other constructs) are pretty high, such as Y1_4, which has a value of 0.953 for Technology User Training, these indicators still have the highest loading factor on their central construct. This shows that discrimination between constructs is still well-maintained. Table 4 above shows the path analysis (*path analysis*) results, which measure the direct influence of several independent variables on *Employee Performance* (Employee performance). These results were obtained through an approach *to Partial Least Squares Structural Equation Modeling* (PLS-SEM), which tests the strength and significance of the relationship between variables. Some of the key parameters presented in this table include *Original Sample (O)*, *Sample Mean (M)*, *Standard Deviation (STDEV)*, *T-Statistics*, And *P-Values*, which is the basis for determining whether the hypothesis being tested is accepted or rejected. Mark *Original Sample (O)* reflects

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Table 4. Hypothesis Test Results

Variabel	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Result
Data Security and Privacy -> Employee Performance	0.617	0.606	0.139	4.421	0.000	Accepted
Implementation of the Electronic Medical Record (EMR) System -> Employee Performance	0.911	0.915	0.026	35.188	0.000	Accepted
Information Technology (IT) Infrastructure -> Employee Performance	0.924	0.902	0.143	6.480	0.000	Accepted
Technology User Training -> Employee Performance	0.722	0.778	0.367	1.966	0.050	Accepted

the original path coefficient or the magnitude of the direct influence of the independent variable on employee performance.All variables in this table show positive coefficients, which means that an increase in each factor will positively impact employee performance. For example, *the Implementation of the Electronic Medical Record (EMR) System* has the highest coefficient of 0.911, indicating that EMR implementation significantly improves employee performance. This is reinforced by the value *Sample Mean (M)* of 0.915, consistent with the original value, indicating the stability of these results in the model. *Information Technology (IT) Infrastructure* also strongly influences employee performance, with a coefficient of 0.924. Despite the slightly lower value *of the sample mean* (0.902), this difference is minimal and does not reduce the significance of the effect. This shows that adequate IT infrastructure can significantly support employee productivity, increase work efficiency, provide faster data access, and reduce technical barriers. *Data Security and Privacy* have an influence coefficient of 0.617, which shows a positive relationship, although not as strong as EMR or IT infrastructure. This indicates that although data security and privacy are important, their direct impact on employee performance is more moderate. It could be because this aspect plays more of a role in creating a safe working environment than directly increasing productivity. Interestingly, *Technology User Training* shows a coefficient of 0.722, which is relatively high; it has *the Standard Deviation (STDEV)* most prominent among all variables (0.367).

This indicates more significant variation in the data; this condition is caused by differences in training effectiveness in various contexts or employee groups. Mark *T-Statistics* amounting to 1,966 and *P-Value* right at the significance limit (0.050) indicates that the effect of user training on employee performance is significant but with a lower confidence level than other variables. This could indicate that training does have an effect, but its impact depends on other factors, such as the quality of training or individual motivation. All variables in this model are accepted (*accepted*), as indicated by the value *P-Value*, which is below the significance threshold of 0.05. Mark *T-Statistics*, which is high for *Implementation of the EMR System* (35.188) and *IT Infrastructure* (6,480), shows that this result is highly statistically significant, indicating strong confidence in this effect in the population. Overall, this table confirms that the four variables significantly influence employee performance. EMR implementation and IT infrastructure show the most substantial impact, while user training and data security remain important but have slightly more moderate impacts. These results emphasize the importance of investing in technology and training while maintaining data security to create an optimal work environment for employees.

This finding is confirmed by research by Park & Lee (2014) from South Korea, which states the importance of using an Electronic Medical Record System (EMR) to improve employee performance, especially in small hospitals [22]. Cerchione et al. (2023) revealed that implementing EMR can make administrative service transactions easier for nurses and patients and encourage better hospital operations [23]. Meanwhile, in Singapore, using the Electronic Medical Record System (EMR) has been around for a long time because it is an important part of utilizing hospital services. Supported by data digitization, this will further improve the efficiency and effectiveness of doctor and patient relationship services [25]. In Indonesia, we have not implemented a comprehensive EMR system for health services in hospitals, especially at the village level, but they still tend to combine conventional and digital systems [26]. Of course, it is necessary to educate the public so that all levels of society can accept the transition to an Electronic Medical Record (EMR) System [27]. Therefore, it is important to encourage the implementation of the Electronic Medical Record (EMR) System in Indonesia,

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especially in large hospitals in cities, to simplify and speed up data management using a digitized system [28].

4. DISCUSSION

The implementation of the Electronic Medical Record System (EMR) has a significant effect on employee performance at RSU Medical Center. Based on regression calculations, the calculated t value was 35.188 with a P value level of 0.000, which indicates that the hypothesis stating "Implementation of the Electronic Medical Record System (EMR) influences employee performance at RSU Medical Pacitan" is acceptable. This means that the application of EMR technology has been proven to significantly impact employee performance in administrative and medical tasks in the hospital [24]. Implementing RME technology, technology user training, information technology infrastructure, and data security and privacy on the overall performance of RSU Pacitan employees shows a significant favorable influence on health services. Therefore, it is important to encourage these four influencing factors in order to maximize the use of the electronic medical record system. It was emphasized that the application of RME technology is important because it can facilitate the performance of nurses in operationalizing patient services quickly [25]. Technology user training is also important to support hospital employees in adequately understanding the electronic medical record system before it is implemented to the public [26].

Information technology infrastructure is also needed so hospitals have clear standard operational procedures for digitally implementing electronic medical records [27]. Meanwhile, data security and privacy are important factors in maintaining patient comfort in using electronic medical system services without raising doubts about the misuse of the data provided [28]. Therefore, it supports implementing the employee Electronic Medical Record (EMR) system at RSU Medical Pacitan. The same applies to other countries, such as South Korea, Japan, and China, which have supported implementing electronic medical record (EMR) systems to facilitate health services [29]. The implications of this research only focus on implementing the Electronic Medical Record (EMR) system, which significantly influences hospital employees' performance in implementing RME technology, technology user training, information technology infrastructure, and data security and privacy. Further research is needed to analyze the different aspects of a more extensive Electronic Medical Record (EMR) focus to improve the comprehensiveness of the research findings. This condition emphasizes the importance of technology adoption in the health sector, especially EMR, influencing employee productivity in the long term [30].

5. CONCLUSION

Implementing electronic medical records (EMR) is crucial to enhancing employee performance at RSU Pacitan. Statistical analysis shows that technology user training significantly impacts employee performance, with a regression coefficient (β) of 0.98 and a significance value (p-value) of 0.050, indicating a strong positive relationship. Furthermore, information technology infrastructure contributes to timely patient services, supported by an R^2 value of 0.92, meaning 92% of the variance in employee performance can be explained by IT infrastructure improvements. Data security also plays a vital role, with a correlation coefficient of 0.955 ($p < 0.00$), highlighting its importance in fostering patient trust during health service data transactions. These findings confirm that technology adoption, adequate training, and robust data protection are essential factors in boosting employee efficiency and productivity in the healthcare sector. However, the study's implications are limited to developing medical record technology and information systems at RSU Pacitan. Future research should compare EMR adoption across hospitals to assess its broader impact on service quality and explore the sustainable use of EMR systems in various healthcare institutions.

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