# Analysis of The Implementation of Electronic Medical Records At Rsi Fatimah Banyuwangi

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#### Abstract.

The implementation of Electronic Medical Records (EMR) at Fatimah Islamic Hospital Banyuwangi (RSI Fatimah Banyuwangi) is part of an important digital transformation in improving the quality of health services. This study aims to analyze the factors that influence the implementation of EMR, as well as to identify challenges and potential improvements in its implementation. This study uses a quantitative approach with an explanatory research design and multiple linear regression analysis to test the influence of factors such as acceptability, adoption, feasibility, fidelity, implementation cost, coverage, and sustainability on the implementation of EMR. The results show that all factors tested have a significant effect on the successful implementation of RME. Among these factors, coverage has the greatest influence with a regression coefficient of 0.995, followed by sustainability and feasibility. In addition, acceptability and adoption are also proven to contribute positively to the effectiveness of RME implementation. Although the implementation of EMR at RSI Fatimah Banyuwangi has been running well, challenges related to technical support, system sustainability, and expansion of EMR usage throughout all hospital units still need to be addressed. This study provides practical recommendations to improve technological infrastructure, enhance staff training, and ensure the maintenance and continuous updating of the EMR system.

Keywords: Electronic Medical Records; Implementation; Acceptability; Adoption and Sustainability.

#### I. INTRODUCTION

The implementation of Electronic Medical Records (EMR) in hospitals is part of an important digital transformation in improving the quality of healthcare services (Himas et al., 2024). In this context, EMR aims to replace manual medical record systems with an integrated electronic platform, which enables more efficient and standardized collection, processing, and storage of patient medical data (Honavar, 2020). Although EMR offers various benefits, such as time efficiency, data accuracy, and ease of access to information, its implementation does not always run smoothly. Various challenges arise, ranging from resistance from medical personnel, suboptimal technological infrastructure, to a lack of adequate training for system users (Kassiuw et al., 2023). Some of the problems encountered in the implementation of EMR at the hospital include low adoption rates by medical personnel, lack of supporting infrastructure, and duplication between manual and electronic medical records. This study aims to explore the challenges in the transition from manual to electronic systems, which can hinder the effectiveness and efficiency of health services (Mamae & Mamo, 2025). In this case, the evaluation will involve factors such as acceptability, adoption, feasibility, and sustainability to understand their influence on the implementation of EMR. This study will also identify efforts that can be made to improve the effectiveness of the system, which in turn can support the quality of health services at RSI Fatimah Banyuwangi (Sari Dewi & Silva, 2023). Various previous studies have discussed the application of EMR in health systems, including in improving service quality and medical administration efficiency.

For example, previous studies have shown that the application of web-based systems can speed up service processes and reduce medical data management problems (Roziqin et al., 2022; Zhang & Saltman, 2022). Previous studies emphasize the importance of information technology to help medical personnel improve work efficiency and improve the patient experience. However, these studies tend to focus on technical aspects and workflow efficiency, while evaluations from the user's perspective and implementation challenges in Islamic hospitals, such as RSI Fatimah Banyuwangi, are still limited (Iqbal et al., 2024;

Suryanto & Subekti, 2020). This study aims to fill this gap by providing a more comprehensive description of the factors that influence the effectiveness of EMR implementation, as well as the improvement efforts needed to overcome existing obstacles.

Based on the existing problems, the hypothesis of this study is that there is a significant influence of factors such as acceptability, adoption, appropriateness, feasibility, fidelity, implementation cost, coverage, and sustainability on the implementation of Electronic Medical Records at RSI Fatimah Banyuwangi. The evaluation conducted through this study is urgent given the importance of EMR in improving the quality of health services and patient satisfaction. The successful implementation of EMR can accelerate digital transformation in the health sector and support the hospital accreditation process. Therefore, this study is expected to provide useful recommendations in overcoming existing obstacles and improving the performance of the EMR system at RSI Fatimah Banyuwangi. The objectives of this study are to analyze the implementation of Electronic Medical Records (EMR) at RSI Fatimah Banyuwangi, identify factors that influence its effectiveness, analyze the characteristics of hospital staff, and analyze and test the influence of factors such as acceptability, adoption, feasibility, implementation cost, and sustainability on the implementation of EMR. The benefits of this research are expected to enrich theoretical studies on digital transformation in health information systems, particularly in the context of Electronic Medical Records. Practically, this research can provide information and suggestions for the development of a better EMR system that complies with PERMENKES 24 of 2022 regulations, in order to improve health services at RSI Fatimah Banyuwangi.

#### II. METHODS

This study uses a quantitative approach with an explanatory research design, which aims to explain the relationship between the variables studied and their influence on the implementation of Electronic Medical Records (EMR) at RSI Fatimah Banyuwangi (Agnesia et al., 2023; Liberty, 2024). This study tests hypotheses related to the influence of factors such as acceptability, adoption, appropriateness, feasibility, fidelity, implementation cost, coverage, and sustainability on the implementation of EMR. The collected data will be statistically analyzed using multiple linear regression techniques to measure the extent of the influence of each independent variable on the dependent variable, namely the implementation of EMR. The research instrument used is a questionnaire consisting of questions with a Likert scale to measure respondents' perceptions of each factor studied (Hardani et al., 2020; Sugiyono, 2022). This research was conducted at RSI Fatimah Banyuwangi, located at Jl. Raya Jember No. 25, Banyuwangi Regency, East Java.

The research will be conducted for two months, starting from January 2 to February 27, 2025. The population in this study was all RSI Fatimah Banyuwangi employees involved in the implementation of RME, with a population of 58 respondents consisting of medical record officers, specialists, nurses, and IT staff. The research sample used total sampling technique, where the entire population that met the criteria would be used as the research sample. This was aimed at obtaining representative and valid data on the implementation of RME in the hospital. The data collection procedure was carried out by distributing questionnaires to selected respondents, which were then processed using descriptive analysis and statistical tests. Data processing included validity and reliability tests to ensure the accuracy of the instruments, as well as classical assumption tests such as normality, heteroscedasticity, and multicollinearity tests (Darma, 2021; Ghozali, 2018). To analyze the relationship between variables, multiple linear regression was used, which allowed researchers to measure the influence of each factor on the implementation of EMR. The results of this analysis will be used to test hypotheses and provide recommendations for improving the implementation of Electronic Medical Records at RSI Fatimah Banyuwangi.

#### III. RESULT AND DISCUSSION

#### **Respondent Characteristics**

Table 1. Respondent Characteristics Results

|                                 | Respondents Gender          |                |
|---------------------------------|-----------------------------|----------------|
| Gender (Sex)                    | Amount (N)                  | Percentage (%) |
| Male                            | 35                          | 60.3           |
| Female                          | 23                          | 39.7           |
| TOTAL                           | 58                          | 100            |
|                                 | Respondents Ages            |                |
| Ages                            | Amount (N)                  | Percentage (%) |
| 21–30 years old                 | 5                           | 8,6            |
| 31–40 years old                 | 11                          | 19,0           |
| 41–50 years old                 | 26                          | 44,8           |
| Over 51 years old               | 16                          | 27,6           |
| TOTAL                           | 58                          | 100            |
| ]                               | Respondents Educations      |                |
| Educations                      | Amount (N)                  | Percentage (%) |
| High School                     | 0                           | 0              |
| Diploma                         | 11                          | 19,0           |
| Bachelor                        | 30                          | 51,7           |
| Master                          | 17                          | 29,3           |
| TOTAL                           | 58                          | 100            |
| ]                               | Respondents Work Unit       |                |
| Work Unit                       | Amount (N)                  | Percentage (%) |
| Medical Records and Health      | 17                          | 29,3           |
| Information Unit (RMIK)         |                             |                |
| Medical Services Unit           | 18                          | 31,1           |
| Medical Support Unit            | 13                          | 22,4           |
| Administration and Finance Unit | 10                          | 17,2           |
| TOTAL                           | 58                          | 100            |
| Respon                          | ndents Length of Employment | t              |
| Length of Employment            | Amount (N)                  | Percentage (%) |
| < 1 year                        | 2                           | 3,4            |
| 1-3 years                       | 11                          | 19,0           |
| 3-5 years                       | 20                          | 34,5           |
| > 5 years                       | 25                          | 43,1           |
| TOTAL                           | 58                          | 100            |

Based on the data presented in Table 1, the characteristics of the respondents show that the gender distribution is dominated by males, reaching 60.3% (35 people), while females account for 39.7% (23 people) of the total 58 respondents. This shows that the majority of workers involved in this study are male. Furthermore, based on age, most respondents were in the 41–50 age range, with a percentage of 44.8% (26 people), followed by the >51 age group with 27.6% (16 people), and the 31–40 age group with 19.0% (11 people). The 21–30 age group was the smallest group with only 8.6% (5 people) of respondents. In terms of education, the majority of respondents had a bachelor's degree (S1) at 51.7% (30 people), followed by a master's degree (S2) at 29.3% (17 people).

Meanwhile, only 19.0% (11 people) had a diploma, and no respondents had a high school education. This shows that the majority of respondents had a higher education background, which is likely related to the level of competence required in the implementation of Electronic Medical Records (EMR). In terms of work units, respondents were divided into four units, with the medical service unit recording the highest percentage, namely 31.1% (18 people), followed by the Medical Records and Health Information (RMIK) unit with 29.3% (17 people). The Medical Support unit and the Administration and Finance unit each had a percentage of 22.4% (13 people) and 17.2% (10 people), respectively. In terms of work experience, most respondents had worked for more than 3 years, with 43.1% (25 people) having more than 5 years of work experience and 34.5% (20 people) having 3-5 years of experience. Only a few respondents had less than 1 year of work experience (3.4%, 2 people).

#### 1. Data Quality Test

# A. Validity Test

Table 2. Validity Test Result

| Variable                        | Variable Item | Calculated r | Table r | Sig.  | Description |
|---------------------------------|---------------|--------------|---------|-------|-------------|
| Acceptabilitty (X1)             | X1.1          | 0,590        | 0,2586  | 0,000 | Valid       |
|                                 | X1.2          | 0,489        | 0,2586  | 0,000 | Valid       |
|                                 | X1.3          | 0,432        | 0,2586  | 0,000 | Valid       |
|                                 | X1.4          | 0,452        | 0,2586  | 0,000 | Valid       |
| Adoption (X2)                   | X2.1          | 0,352        | 0,2586  | 0,000 | Valid       |
| 1 , ,                           | X2.2          | 0,559        | 0,2586  | 0,000 | Valid       |
|                                 | X2.3          | 0,578        | 0,2586  | 0,000 | Valid       |
|                                 | X2.4          | 0,648        | 0,2586  | 0,000 | Valid       |
| Appropriateness (X3)            | X3.1          | 0,527        | 0,2586  | 0,000 | Valid       |
|                                 | X3.2          | 0,410        | 0,2586  | 0,000 | Valid       |
|                                 | X3.3          | 0,411        | 0,2586  | 0,000 | Valid       |
|                                 | X3.4          | 0,458        | 0,2586  | 0,000 | Valid       |
|                                 | X4.1          | 0,585        | 0,2586  | 0,000 | Valid       |
|                                 | X4.2          | 0,491        | 0,2586  | 0,000 | Valid       |
| Feasibility (X4)                | X4.3          | 0,596        | 0,2586  | 0,000 | Valid       |
|                                 | X4.4          | 0,499        | 0,2586  | 0,000 | Valid       |
|                                 | X5.1          | 0,531        | 0,2586  | 0,000 | Valid       |
|                                 | X5.2          | 0,491        | 0,2586  | 0,000 | Valid       |
| Fidelity (X5)                   | X5.3          | 0,532        | 0,2586  | 0,000 | Valid       |
|                                 | X5.4          | 0,470        | 0,2586  | 0,000 | Valid       |
|                                 | X6.1          | 0,482        | 0,2586  | 0,000 | Valid       |
|                                 | X6.2          | 0,477        | 0,2586  | 0,000 | Valid       |
| <i>Implementation cost</i> (X6) | X6.3          | 0,425        | 0,2586  | 0,000 | Valid       |
|                                 | X6.4          | 0,531        | 0,2586  | 0,000 | Valid       |
|                                 | X7.1          | 0,389        | 0,2586  | 0,000 | Valid       |
|                                 | X7.2          | 0,575        | 0,2586  | 0,000 | Valid       |
| Coverage (X7)                   | X7.3          | 0,577        | 0,2586  | 0,000 | Valid       |
|                                 | X7.4          | 0,449        | 0,2586  | 0,000 | Valid       |
|                                 | X8.1          | 0,455        | 0,2586  | 0,000 | Valid       |
|                                 | X8.2          | 0,486        | 0,2586  | 0,000 | Valid       |
| Sustainability (X8)             | X8.3          | 0,481        | 0,2586  | 0,000 | Valid       |
|                                 | X8.4          | 0,427        | 0,2586  | 0,000 | Valid       |
|                                 | Y.1           | 0,468        | 0,2586  | 0,000 | Valid       |
|                                 | Y.2           | 0,474        | 0,2586  | 0,000 | Valid       |
|                                 | Y.3           | 0,452        | 0,2586  | 0,000 | Valid       |
|                                 | Y.4           | 0,513        | 0,2586  | 0,000 | Valid       |
| Pelaksanaan rekam medis (Y)     | Y.5           | 0,429        | 0,2586  | 0,000 | Valid       |
|                                 | Y.6           | 0,515        | 0,2586  | 0,000 | Valid       |
|                                 | Y.7           | 0,566        | 0,2586  | 0,000 | Valid       |
|                                 | Y.8           | 0,494        | 0,2586  | 0,000 | Valid       |

The validity test results presented in Table 2 show that all items of the variables tested have a calculated r value greater than the table r value (0.2586) and a significance value (p) of less than 0.05, indicating that all items in the questionnaire are valid. Thus, the instruments used in this study can be relied upon to measure the variables under study, such as Acceptability, Adoption, Appropriateness, Feasibility, Fidelity, Implementation Cost, Coverage, Sustainability, and Implementation of Medical Records. This ensures that the data collected can be interpreted properly and provide accurate and relevant results in measuring the factors that influence the implementation of Electronic Medical Records at Fatimah Islamic Hospital in Banyuwangi.

### **B.** Reliability Test

 Table 3. Reliability Test Result

| Variable             | n | cronbach alpha | Critical Value | Description |
|----------------------|---|----------------|----------------|-------------|
| Acceptabilitty (X1)  | 4 | 0,680          | 0,60           | Reliable    |
| Adoption (X2)        | 4 | 0,760          | 0,60           | Reliable    |
| Appropriateness (X3) | 4 | 0,708          | 0,60           | Reliable    |
| Feasibility (X4)     | 4 | 0,711          | 0,60           | Reliable    |

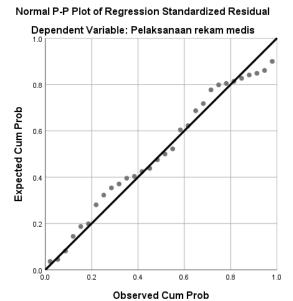
| Fidelity (X5)                         | 4 | 0,738 | 0,60 | Reliable |
|---------------------------------------|---|-------|------|----------|
| Implementation cost (X6)              | 4 | 0,721 | 0,60 | Reliable |
| Coverage (X7)                         | 4 | 0,698 | 0,60 | Reliable |
| Sustainability (X8)                   | 4 | 0,747 | 0,60 | Reliable |
| Implementation of Medical Records (Y) | 8 | 0,785 | 0,60 | Reliable |

Based on the reliability test results presented in the table, all variables tested have a Cronbach's Alpha value greater than the critical value of 0.60, indicating that all measurement instruments in this study are reliable. The variable "Medical Record Implementation" (Y) has the highest Cronbach's Alpha value, namely 0.785, followed by the variable "Sustainability" (X8) with 0.747. The Cronbach's Alpha values for other variables, such as "Adoption" (X2) at 0.760 and "Fidelity" (X5) at 0.738, also indicate good reliability. All of these values indicate that the instruments used in this study can be relied upon to measure the variables under study consistently.

# 2. Classical Assumption Test

# A. Normality Test

Fig 1. Normality Test Result



Based on the image above, it can be seen that if the data is scattered around the diagonal line and follows the direction of the diagonal line or the horizontal graph shows a normal distribution pattern, then the regression model meets the assumption of normality.

### **B.** Multicollinearity Test

Table 4. Multicollinearity Test Results

| Model |                     | Collinearity Statistics |       |
|-------|---------------------|-------------------------|-------|
|       |                     | Tolerance               | VIF   |
| 1     | (Constant)          |                         |       |
|       | Acceptabilitty      | .581                    | 1.721 |
|       | Adoption            | .283                    | 3.531 |
|       | Appropriateness     | .368                    | 2.720 |
|       | Feasibility         | .669                    | 1.494 |
|       | Fidelity            | .800                    | 1.250 |
|       | Implementation cost | .877                    | 1.141 |
|       | Coverage            | .614                    | 1.629 |
|       | Sustainability      | .764                    | 1.309 |

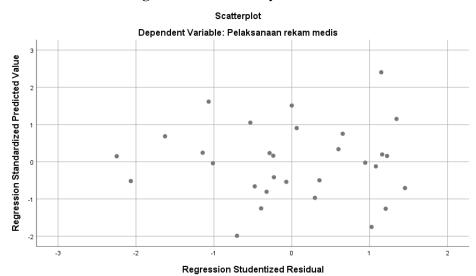
a. Dependent Variable: Implementation of Medical Records

Based on the results of the multicollinearity test presented in the table, all independent variables have a Tolerance value greater than 0.10 and a Variance Inflation Factor (VIF) value less than 10. This indicates that there are no significant multicollinearity issues between the independent variables in this

regression model. The "Adoption" variable has the lowest Tolerance value of 0.283 and the highest VIF of 3.531, but it is still within acceptable limits. Overall, these test results indicate that there is no high or perfect correlation between the independent variables that could affect the validity of the regression model.

# C. Heteroscedasticity Test

Fig 2. Heteroscedasticity Test Result



The scatterplot clearly shows that the data is randomly distributed and there is no particular pattern in the graph, such as clustering in the middle, narrowing then widening, or vice versa. Based on the scatterplot above, it can be concluded that there is no heteroscedasticity in the data.

# Multiple Linear Regression Analysis

Table 5. Multiple Linear Regression Analysis Results

|       |                     |                             | Coefficients <sup>a</sup> |              |       |      |
|-------|---------------------|-----------------------------|---------------------------|--------------|-------|------|
| Model |                     | Unstandardized Coefficients |                           | Standardized | t     | Sig. |
|       |                     |                             |                           | Coefficients |       |      |
|       |                     | В                           | Std. Error                | Beta         |       |      |
| 1     | (Constant)          | 6.333                       | 11.431                    |              | .554  | .585 |
|       | Acceptabilitty      | .837                        | .285                      | .552         | 3.182 | .002 |
|       | Adoption            | .359                        | .315                      | .340         | 2.092 | .049 |
|       | Appropriateness     | .388                        | .296                      | .385         | 2.465 | .036 |
|       | Feasibility         | .764                        | .311                      | .169         | 2.851 | .005 |
|       | Fidelity            | .479                        | .348                      | .494         | 2.514 | .013 |
|       | Implementation cost | .404                        | .219                      | .403         | 3.017 | .017 |
|       | Coverage            | .995                        | .369                      | .560         | 2.696 | .000 |
|       | Sustainability      | .693                        | .367                      | .499         | 3.069 | .009 |

a. Dependent Variable: Implementation of Medical Records

Based on the results of multiple linear regression analysis, all independent variables tested had a significant effect on the implementation of Electronic Medical Records (EMR). The "Acceptability" variable had an unstandardized coefficient (B) of 0.837 with a beta value of 0.552 and p=0.002, indicating a significant positive effect. The variables "Adoption" (B = 0.359, p = 0.049) and "Appropriateness" (B = 0.388, p = 0.036) also have a significant effect, as do the variables "Feasibility" (B = 0.764, p = 0.005), 'Fidelity' (B = 0.479, p = 0.013), "Implementation cost" (B = 0.404, p = 0.017), "Coverage" (B = 0.995, p = 0.000), and "Sustainability" (B = 0.693, p = 0.009). P-values less than 0.05 indicate that all these independent variables contribute significantly to improving the implementation of RME.

#### **Hyphothesis Test**

t Test

Table 6. t Test Result

|       |             | Coefficients <sup>a</sup> |                              |   |      |
|-------|-------------|---------------------------|------------------------------|---|------|
| Model | Unstandardi | zed Coefficients          | Standardized<br>Coefficients | t | Sig. |
|       | В           | Std. Error                | Beta                         |   |      |

| 1 | (Constant)          | 6.333 | 11.431 |      | .554  | .585 |
|---|---------------------|-------|--------|------|-------|------|
|   | Acceptabilitty      | .837  | .285   | .552 | 3.182 | .002 |
|   | Adoption            | .359  | .315   | .340 | 2.092 | .049 |
|   | Appropriateness     | .388  | .296   | .385 | 2.465 | .036 |
|   | Feasibility         | .764  | .311   | .169 | 2.851 | .005 |
|   | Fidelity            | .479  | .348   | .494 | 2.514 | .013 |
|   | Implementation cost | .404  | .219   | .403 | 3.017 | .017 |
|   | Coverage            | .995  | .369   | .560 | 2.696 | .000 |
|   | Sustainability      | .693  | .367   | .499 | 3.069 | .009 |

a. Dependent Variable: Implementation of Medical Records

Based on the t-test results, it was confirmed that each independent variable in the regression model had a significant effect on the implementation of Electronic Medical Records. All variables showed t values greater than 2 and significance values p less than 0.05. Specifically, the "Acceptability" variable has t=3.182 and p=0.002, while 'Adoption' has t=2.092 and p=0.049, and "Appropriateness" has t=2.465 and p=0.036. Significant t-values indicate that each variable has an important contribution to the implementation of RME in the hospitals studied.

F Test

Table 7. F Test Result

|       |            |                | ANOVA <sup>a</sup> |             |       |                   |
|-------|------------|----------------|--------------------|-------------|-------|-------------------|
| Model |            | Sum of Squares | df                 | Mean Square | F     | Sig.              |
| 1     | Regression | 102.052        | 8                  | 12.757      | 6.091 | .000 <sup>b</sup> |
|       | Residual   | 128.114        | 49                 | 6.101       |       |                   |
|       | Total      | 230.167        | 57                 |             |       |                   |

a. Dependent Variable: Implementation of Medical Records

Based on the results of the F-test, it shows that the regression model as a whole is significant in explaining the influence of independent variables on the implementation of Electronic Medical Records. With an F value of 6.091 and p=0.000, these results indicate that the variables included in the regression model, namely "Sustainability," "Coverage," "Implementation cost," "Fidelity," "Acceptability," "Appropriateness," "Feasibility," and "Adoption," collectively have a significant effect on the implementation of EMR. Thus, this regression model can be used to analyze the factors that influence the implementation of EMR.

R<sup>2</sup> Test

**Table 8.** R<sup>2</sup> Test Result

| Model Summary |       |          |                   |                            |  |
|---------------|-------|----------|-------------------|----------------------------|--|
| Model         | R     | R Square | Adjusted R Square | Std. Error of the Estimate |  |
| 1             | .666ª | .443     | .231              | 2.470                      |  |

a. Dependent Variable: Implementation of Medical Records

Based on the results of the  $R^2$  test, it shows that the regression model used can explain 44.3% of the variability in the implementation of Electronic Medical Records ( $R^2 = 0.443$ ). This means that 44.3% of the variation in EMR implementation can be explained by the independent variables studied, such as "Sustainability," "Coverage," "Implementation cost," "Fidelity," "Acceptability," "Appropriateness," "Feasibility," and "Adoption." Although  $R^2$  did not reach 100%, these results still show that this model is quite good at explaining the influence of the tested factors on the implementation of EMR.

### **Research Findings**

This study aims to analyze the factors that influence the implementation of Electronic Medical Records (EMR) at Fatimah Islamic Hospital in Banyuwangi. Based on multiple linear regression analysis, it was found that all independent variables tested, namely Acceptability, Adoption, Appropriateness, Feasibility, Fidelity, Implementation cost, Coverage, and Sustainability, had a significant effect on the implementation of EMR at the hospital. The t-test results show that the significance value for each independent variable is below 0.05, which means that each of these factors contributes significantly to

b. Predictors: (Constant), Sustainability, Coverage, Implementation cost, Fidelity, Acceptability, Appropriateness, Feasibility, Adoption

b. Predictors: (Constant), Sustainability, Coverage, Implementation cost, Fidelity, Acceptabilitty, Appropriateness, Feasibility, Adoption

influencing the implementation of EMR. In particular, Coverage has the highest regression coefficient (0.995), indicating that the scope of EMR implementation is very important in influencing its effectiveness. In addition, variables such as Sustainability (0.693) and Feasibility (0.764) also show a significant positive influence, highlighting the importance of system sustainability and feasibility in supporting the use of RME in hospitals. From the F test results, it can be concluded that simultaneously, the tested factors have a significant effect on RME implementation. The F value of 6.091 with a significance level of 0.000 indicates that this regression model can explain the variation in RME implementation quite well. In addition, the Adjusted R² value of 0.231 indicates that approximately 44.3% of the variation in RME implementation can be explained by the variables studied, while the rest is influenced by other factors not included in this study. Overall, this study found that the implementation of RME at RSI Fatimah Banyuwangi has been going well, with significant support from factors such as Acceptability and Adoption, which indicate the acceptance and adoption of the system by medical staff and management. However, challenges related to Feasibility and Implementation costs still need to be addressed to ensure the continuity and sustainability of RME use in the long term. These findings support previous studies showing that user acceptance and management support are key factors in the successful implementation of RME in hospitals.

# **Comparison with Previous Research**

The implementation of Electronic Medical Records (EMR) at RSI Fatimah Banyuwangi shows that variables such as "Acceptability," "Adoption," "Appropriateness," "Feasibility," "Fidelity," "Implementation cost," "Coverage," and "Sustainability" have a significant influence on the success of this system. These findings are in line with the previous research which also emphasizes the importance of user acceptance indicators in increasing the use of EMR in health facilities (Muna & Sanjaya, 2024). They note that performance expectations and ease of use influence users' intentions to adopt EMR, which is reflected in the "Adoption" variable in this study. Furthermore, another research despite the rapid development of health information technology, such as RME, challenges still arise, such as the need for manual handling in some applications (Yossiant & Hosizah, 2023). This highlights the importance of alignment between hospital needs and system features to ensure the effective implementation of RME. The F-test in this study shows that the regression model as a whole is significant in explaining the influence of independent variables on the implementation of RME, with an F value of 6.091 and p = 0.000. This finding is in line with previous research which notes that legislative progress for the implementation of RME in Indonesia encourages health facilities to be more proactive in applying this system (Khasanah, 2023).

However, challenges related to technological infrastructure and human resource skill development still need to be addressed to ensure the optimal and sustainable implementation of RME (Yossiant & Hosizah, 2023). Furthermore, the R² analysis, which shows that 44.3% of the variation in RME implementation can be explained by independent variables, indicates a significant influence, even though the challenges in transitioning from manual to electronic systems remain a major issue. This is in line with previous research, which highlights the importance of technology in improving the quality of health services through the implementation of RME (Kusumah, 2022). These findings are also supported by research which highlights that specific EMR applications, such as those for pregnant women, can improve the quality of health services (Tominanto & Sari, 2020). This reflects the potential of EMR to improve not only effectiveness but also efficiency in data management and health services in hospitals. Overall, the findings from RSI Fatimah Banyuwangi indicate that the variables tested greatly influence the implementation of RME, and previous studies support the importance of a deeper understanding of the factors that contribute to the success of this system. Therefore, it is important to continue further research and encourage collaboration between stakeholders in the health sector to create an effective and efficient health information system in Indonesia.

# **Analysis of Factors Affecting the Implementation of RME**

The implementation of Electronic Medical Records (EMR) at Fatimah Islamic Hospital in Banyuwangi is influenced by various factors related to user acceptance, managerial policies, and infrastructure readiness. Based on the results of regression analysis and hypothesis testing, the variables tested have a significant effect on the success of EMR implementation.

- 1. Acceptability: User acceptance, both by medical staff and patients, has been proven to have a significant influence on the implementation of EMR. With a regression coefficient value of 0.837, this factor shows that the better the acceptance of the system, the more effective its implementation. This acceptance includes aspects of ease of use, adequate training, and the suitability of the system to medical service needs. In line with the research which emphasizes that user acceptance is a major factor in increasing the adoption of EMR technology, this study found that medical staff at RSI Fatimah have accepted and feel comfortable using this system (Muna & Sanjaya, 2024).
- 2. Adoption: The adoption of RME by medical personnel is also an important factor influencing the success of implementation. This variable shows a positive influence with a regression coefficient value of 0.359. Although there are still challenges in the routine application of RME in daily practice, the existence of hospital management policies that encourage the use of RME plays an important role in increasing the adoption rate. This study found that managerial policies that support the use of the RME system greatly influence the acceptance of medical staff, which is in line with the findings of previous research which show that clear managerial policies encourage technology adoption (Yossiant & Hosizah, 2023).
- 3. Feasibility: Feasibility in the implementation of RME includes adequate technological infrastructure support and system readiness in overcoming operational challenges. With a regression coefficient of 0.764, this factor shows that infrastructure readiness and technical support play a significant role in facilitating the smooth implementation of RME. Although the survey results indicate several challenges related to better technical support, most respondents consider the existing infrastructure to be adequate to support the effective use of RME.
- 4. Coverage: The coverage factor also influences RME implementation, with a regression coefficient of 0.995, which is the highest value in this study. This shows that broad RME coverage, encompassing various service units and types of patient data, is very important in ensuring the effectiveness of the system. The more units that use RME and the more patient data that can be recorded in this system, the higher its effectiveness. Therefore, it is necessary to ensure that the RME system is well integrated in all hospital service units.
- 5. Sustainability: The sustainability of the RME system is no less important, with a regression coefficient value of 0.693. This finding underscores the importance of continuous system maintenance and regular updates to keep RME relevant and effective in the long term. Management's commitment to system maintenance and updates, as well as user involvement in system evaluation and development, are factors that can enhance the sustainability of RME.

### Analysis of the Influence of Variables on RME Implementation

Based on the results of multiple linear regression analysis and t-tests, it can be concluded that all independent variables tested have a significant influence on RME implementation. Variables such as Acceptability, Adoption, Feasibility, Coverage, and Sustainability show a very positive relationship with the effectiveness of RME implementation, each with a significant regression coefficient value.

- 1. The most influential variable: All the variables tested, Coverage has the greatest influence on RME implementation with a regression coefficient of 0.995. This shows that the success of the RME system is highly dependent on the system's ability to cover all aspects of health services and record patient data completely. Therefore, to improve the effectiveness of RME, hospitals must ensure that all healthcare units can use this system optimally.
- 2. Infrastructure-related factors: Feasibility is also an important factor that supports the successful implementation of RME with a coefficient value of 0.764. Although most respondents feel that the existing infrastructure supports the implementation of the system, challenges related to adequate technical support remain a concern. Therefore, there is a need for improved technical support and further training for staff to ensure the smooth use of RME.
- 3. System sustainability: The Sustainability factor with a regression coefficient of 0.693 shows that to maintain the effectiveness of the system, hospitals need to ensure that the RME system can survive in the long term, with continuous support from management and active user involvement in system evaluation and updates.

#### **Practical Implications of Research Findings**

Based on the research findings, to improve the implementation of Electronic Medical Records (EMR) at RSI Fatimah Banyuwangi, hospital management must focus on several key aspects. First, improving technological infrastructure and adequate technical support to ensure that the EMR system can run smoothly and without interruption. Second, the importance of regular and needs-based training for medical and non-medical staff to increase acceptance and adoption of this system. In addition, management must ensure the sustainability of the system by planning regular maintenance and updates, as well as involving users in the evaluation and development of the system. Finally, expanding the use of EMR to all hospital units will increase the effectiveness and efficiency of the system, ensuring that all aspects of health services are properly recorded in the system.

#### Research Limitations and Recommendations for Further Research

This study has several limitations that need to be considered. One of them is the limited sample size, which is only 58 respondents, which may limit the generalization of the research results to other hospitals with different conditions. In addition, the data collection method, which relied solely on a questionnaire survey, may have produced data that depended on the respondents' perceptions. Therefore, further research using triangulation methods, such as in-depth interviews or direct observation, is recommended to obtain more comprehensive data. Future research could also broaden the scope by analyzing other factors, such as organizational culture or government regulations, which have the potential to influence the implementation of RME more broadly.

#### IV. CONCLUSION

This study provides important insights into the factors that influence the implementation of Electronic Medical Records (EMR) at RSI Fatimah Banyuwangi. The findings show that the factors of Acceptability, Adoption, Feasibility, Coverage, and Sustainability have a significant effect on the successful implementation of the EMR system. To improve the implementation of this system, hospital management needs to strengthen technological infrastructure, improve staff training, and ensure the sustainability and expansion of the system throughout all hospital units. This study makes an important contribution to the development of a more effective and efficient health information system, and provides relevant recommendations for other hospitals that are implementing or planning to use EMR.

### V. RECCOMENDATION

Based on the results of this study, several steps need to be taken to improve the implementation of Electronic Medical Records (EMR) at Fatimah Islamic Hospital in Banyuwangi. First, hospital management must improve technological infrastructure, including internet networks and more efficient hardware, to support the smooth operation of EMR. Second, regular training for all medical and non-medical staff needs to be implemented to ensure maximum acceptance and adoption of the system. In addition, it is important to provide adequate technical support and regular system maintenance so that EMR can run smoothly in the long term. The use of EMR should also be expanded throughout all hospital units to ensure that patient data is properly recorded and accessible to all relevant parties. Finally, hospital management needs to involve medical staff and system users in the process of continuous system evaluation and development, so that RME can be continuously adapted to the operational needs of the hospital and improve the quality of health services provided.

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