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EVALUATION OF THE APPLICATION OF ELECTRONIC MEDICAL RECORDS WITH A TECHNOLOGY ACCEPTANCE MODEL APPROACH IN HOSPITAL X

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ABSTRACT

This study evaluates the implementation of Electronic Medical Records (EMR) at Hospital X using the Technology Acceptance Model (TAM) to understand the factors influencing medical staff's acceptance and use of the system. This research aims to analyze the use of EMR at Hospital X, focusing on how healthcare professionals and administrative staff utilize this technology in their work. The study aims to assess the effectiveness of EMR implementation, identify factors affecting EMR usage, and determine the extent to which the technology supports work efficiency and healthcare services. Additionally, the study seeks to provide strategic recommendations for hospital management to enhance EMR utilization, address existing challenges, and ensure that the technology positively impacts individual and organizational performance overall. Data collection was conducted using questionnaires, and data analysis was performed with Partial Least Squares - Structural Equation Modeling (PLS-SEM). Data were gathered through an online survey and analyzed using SmartPLS 4 software. The analysis results indicate that Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) significantly influence user attitudes and intentions. Although EMRs can improve efficiency and reduce medical errors, user resistance and system integration issues persist. This study highlights the importance of enhancing ease of use and perceived benefits and creating a positive user experience to boost technology adoption. The findings provide insights into effective strategies for adopting new technologies and improving the success of EMR implementation in the healthcare sector.

KEYWORDS Electronic Medical Records, Technology Acceptance Model, Healthcare Information System

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INTRODUCTION

Electronic medical records have a fairly important role in implementing health services because the information contained in medical records is a source of health data and information that can be used as a parameter for good or bad in the

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health service delivery system (Janett, 2020). The integration of health information technology into healthcare has the potential to transform patient services and improve overall healthcare outcomes (Hessels, 2015).

The quality of information in an information system also depends on the quality of the information supplied by the user or user, where quality electronic medical records can be influenced by the quality of filling carried out by health workers where the information is the basis for making decisions about patient treatment and the interests of health services(Thanos, 2021)

In the world of health, the use of electronic medical records in hospitals is increasing. Studies from journals from 2019 to 2024 show that implementing electronic medical records can increase efficiency, reduce medical errors, and make it easier to access patient data. However, the adoption of this new technology also faces challenges such as user resistance and system integration issues. (Setyohadi et al., 2018).

Therefore, an evaluation of the application of electronic medical records with the Technology Acceptance Model approach is needed to understand the factors that affect medical personnel's acceptance and use of the system. Previous research conducted by Y. Maryati (2021) stated the importance of assessing and evaluating information systems and the use of information technology. In conducting evaluations, several system evaluation models can be used, one of which is the Technology Acceptance Model (TAM). (Y. Maryati, 2021; Setyohadi & Purnawati, 2018).

The TAM model has several variables that can affect a person to use the information system well, namely (perceived ease of use), namely the ease of use of the system, and (perceived usefulness), namely the usefulness of the system (Santoso et al., 2020). These two variables are 2 things that can affect users' attitudes towards information systems, so that they can be evaluated whether they can affect the use of the system properly, so that good quality information is obtained (Y. Maryati, 2021)

The importance of assessing user satisfaction through the evaluation of digital health services, one of which is electronic medical records that can help in improving the quality of health services, is significantly influenced by the perception of usability, perception of ease of use, user satisfaction and security-privacy so that this is what triggers the digital service system to continue to be used (Hilhami et al., 2023). The adoption of new technologies such as electronic medical records does not always go smoothly (Siswati et al., 2024). Although many studies show the benefits of RME, such problems as user resistance and system integration are still challenges in its implementation in hospitals (Mardiko et al., 2021). Therefore, evaluation of the implementation of RME with the Technology Acceptance Model approach is essential to identify factors that affect the acceptance and use of the system by medical personnel (Berliana et al., 2023)Understanding these factors can help hospitals design effective strategies for adopting new technologies and improve the success of electronic record implementation. (Matondang et al., 2018a).

This research was conducted at Hospital X, a government-owned public hospital in Tangerang City (Widasari et al., 2018). Hospital X has implemented an

Electronic Medical Record system as part of efforts to improve the efficiency of healthcare administration and services (MAGFIROH et al., 2023). Previously, ABC Hospital used a manual system to record patients' medical records. Along with the development of information technology, this hospital began to switch to the use of the RME system to improve the quality of services and manage medical data more accurately and integrated. (Matondang, 2018)

However, acceptance of RME technology among medical personnel and hospital staff remains a challenge (Cahyanto & I, 2023). Factors such as perceived ease of use and perceived usefulness have been explored in various studies related to the acceptance of technology, but there is still a gap in understanding the influence of contextual factors, such as hospital organizational culture and managerial policies, on the acceptance of this RME system. (Matondang, 2018)

This study aims to fill the research gap by using the Technology Acceptance Model approach to evaluate the extent to which factors such as ease of use, perceived benefits, and other external factors influence the intention of users to adopt the RME system at ABC Hospital (Sulistiani & L, 2019)This study, which focused on respondents from medical personnel and hospital administrative staff, will provide insight into how the acceptance of this technology can be improved in the hospital environment (Matondang, 2018).

It is hoped that all the results obtained from this research will be useful in various aspects, especially in two aspects, namely the academic aspect and the practical management aspect. In terms of academic aspects, especially for academics who are interested in hospital management and administration (MARS), this research can add new knowledge for all readers as well as an additional source of information for future research in the implementation of the Technology Acceptance Model (TAM) model (Gücin et al., 2015; Prariadena et al., 2019).

The adoption of Electronic Medical Records (EMR) in healthcare institutions is often hindered by user resistance, lack of system integration, and insufficient attention to user experience, despite the proven benefits in improving efficiency, reducing medical errors, and enhancing healthcare quality.

First, as digital transformation accelerates in the healthcare sector, the urgency to ensure the successful implementation of EMR systems becomes critical for improving service delivery, data accuracy, and operational efficiency. Hospital X's transition from manual to electronic medical records represents a pivotal step in aligning with national e-health initiatives and global health informatics trends.

Second, without understanding the underlying factors influencing user acceptance, such as perceived ease of use, perceived usefulness, and organizational support, the investment in EMR technology risks underutilization, resulting in suboptimal healthcare outcomes and wasted resources. Therefore, timely evaluation and strategic intervention are essential to overcome these barriers and maximize the benefits of EMR adoption.

Previous studies by Setyohadi & Purnawati (2018) emphasized the significance of external factors, including managerial policies and training, in influencing nurses' acceptance of EMR systems in Indonesian hospitals. Their findings indicated that ease of use and perceived usefulness are primary

determinants of user acceptance, but contextual factors play an equally important role.

Maryati (2021) evaluated information system usage through the Technology Acceptance Model (TAM), highlighting that perceived ease of use and perceived usefulness significantly affect user attitudes and behavioral intentions toward technology adoption. However, the study called for further exploration of organizational culture influences.

Matondang et al. (2018) investigated data security risks in hospital information systems, concluding that user awareness and perceived threats are critical in determining the successful implementation of digital health systems. This study introduced the need to integrate security and privacy concerns into technology acceptance evaluations.

While existing literature extensively explores the impact of perceived ease of use and usefulness on technology adoption, there remains a research gap in understanding how contextual factors—such as hospital organizational culture, managerial support, and perceived security threats—mediate the acceptance and effective use of EMR systems among healthcare professionals in public hospitals.

This study uniquely integrates perceived mobility and threat variables into the Technology Acceptance Model (TAM) framework to evaluate their impact on EMR adoption in a public hospital setting. By focusing on Hospital X, this research provides empirical insights into how these factors influence user attitudes and usage, offering a more comprehensive model of technology acceptance in the healthcare sector.

The primary objective of this study is to evaluate the factors influencing the acceptance and use of Electronic Medical Records at Hospital X using the Technology Acceptance Model (TAM) approach, with a particular focus on perceived ease of use, perceived usefulness, perceived mobility, and perceived threats. The study also aims to identify strategic recommendations for enhancing EMR adoption.

Academically, this research contributes to the enrichment of knowledge in health informatics and technology acceptance, serving as a valuable reference for future studies. Practically, it provides hospital management with actionable insights to develop targeted interventions, improve user engagement, and optimize the implementation of EMR systems, thereby enhancing overall healthcare service quality.

RESEARCH METHOD

This study aims to understand the factors influencing technology adoption in the health sector, particularly those related to perceived threats such as security and privacy concerns. The research focuses on analyzing the relationship between perceived ease of use, perceived usefulness, and behavioral intention to use technology, while also exploring the influence of personal norms, perceived behavioral control, and confidentiality concerns from both healthcare workers and hospital administration. Using an individual unit of analysis, data were collected from hospital employees who met specific inclusion criteria: they must be permanent staff at Hospital X, actively using electronic medical records (EMR),

and willing to participate. This research employs a quantitative, non-interventional survey approach, with data collected through structured questionnaires and analyzed using Partial Least Squares - Structural Equation Modeling (PLS-SEM). A cross-sectional design was adopted, with data gathered in November 2024 to ensure a representative snapshot of respondents' perspectives.

The study's sample size was determined using the inverse square root method, establishing a minimum of 160 respondents to achieve reliable multivariate analysis results. Purposive sampling was used to select participants with relevant knowledge and experience with EMR systems. Primary data were collected via online questionnaires distributed through various digital platforms, while secondary data were sourced from existing literature and validated studies to support the conceptual framework. The research design emphasizes objectivity, with rigorous validity and reliability tests conducted on the instruments used. Additionally, hypothesis testing was performed to assess the significance of relationships between variables within the research model, allowing for the generalization of findings to a broader population. This comprehensive approach ensures the study captures critical insights into the factors affecting EMR adoption and provides a solid foundation for strategic recommendations to enhance technology acceptance in healthcare settings.

RESULT AND DISCUSSION

Respondent Profile

In this study, as many as 220 respondents responded, and the results were used for tests conducted by researchers. The data in this study were obtained from an online questionnaire in Google Forms. The respondents in this study are all medical and non-medical employees who have worked for more than one year at hospital X until 2024. A total of 220 respondents were involved in the study, with the majority being women (60%), while men accounted for 40%. In terms of age, most respondents were in the age range of 24-29 years (77.7%), followed by the age group of 30-35 years (10.9%). Based on the field of work, nurses are the largest group with 24.1%, followed by pharmacy (23.2%), administrative staff (16.8%), general practitioners and laboratories 14.5%, and specialist doctors 6.8% each. Interestingly, all respondents had more than one year of service, indicating sufficient experience in their respective fields. This data illustrates a diverse demographic background, with a predominance of young women working in the health sector.

Pengujian Hypothesis

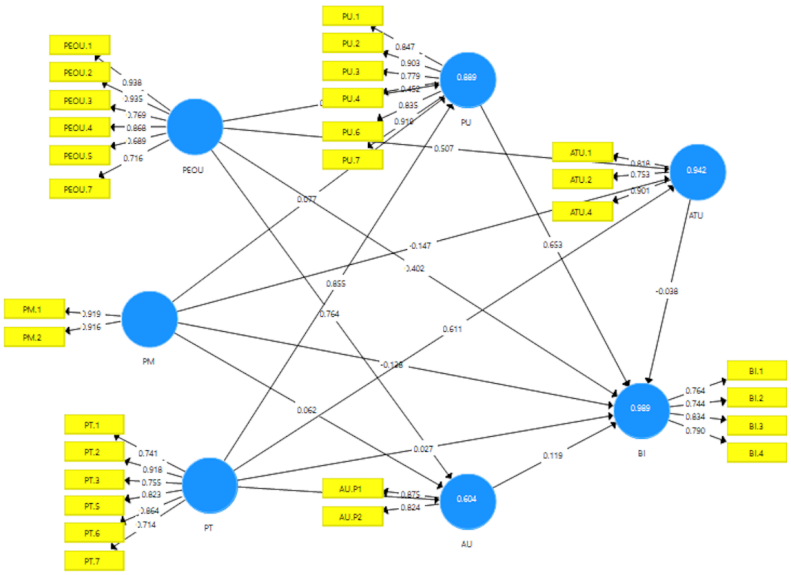
The central part of the analysis of this study's inner or structural model is to look at the significance value and coefficient in the relationship between variables in the research model. The significance test functions to determine whether there is a significant influence between the variables of the research model, so that the researcher can generalize to the population level. This test was conducted using *the bootstrapping method* and processed with SmartPLSTM 4.1.0.8 (Ringle et al., 2015; Memon et al., 2021). Since the direction of the hypothesis' influence has been clearly stated to be positive or negative, the proper statistical test is one-tailed. It is said that there is a positive and significant influence if the T-statistic value > T-table (1.645) is at a significance level of 5% (alpha = 0.05); on

the other hand, if the T-statistic < T-table (1.645), then there is no significant influence between the two variables (Ringle et al., 2015; Sarstedt et al., 2017).

Table 1. Hypothesis Table Results

Hypothesis	*Path Coefficient*	*T Statistics*	*P-Value*	**Result**
ATU -> BI	-0.038	0.214	0.831	insignificant
AU -> BI	0.119	1.617	0.107	insignificant
PEOU -> ATU	0.507	8.397	0.000	significant
PEOU -> AU	0.764	6.172	0.000	significant
PEOU -> PU-> BI	0.402	6.027	0.000	significant
PEOU -> PU	0.032	0.505	0.614	insignificant
PM -> ATU	-0.146	3.522	0.000	significant
PM -> AU	0.062	0.586	0.558	insignificant
PM -> BI	-0.137	1.680	0.094	insignificant
PM -> PU	0.077	1.096	0.274	significant
PT -> ATU	0.610	12.111	0.000	significant
PT -> AU	-0.0353	0.309	0.758	insignificant
PT ->ATU -> BI	0.0268	0.149	0.882	insignificant
PT -> PU	0.077	16.865	0.000	significant
PU -> ATU-> BI	0.026	7.484	0.000	significant

Sumber: Hasil Pengolahan Data SmartPLS 4 (2024)



Gambar 1. Inner Model

Sumber: Hasil Pengolahan Data SmartPLS 4 (2024)

The diagram of the PLS-SEM (Partial Least Squares Structural Equation Modeling) analysis shows the relationship between latent variables and their indicators, as well as the influence path between variables. In this model, the main latent variables analyzed included

PEOU (Perceived Ease of Use), PU (Perceived Usefulness), ATU (Attitude Toward Use), BI (Behavioral Intention), AU (Actual Use), PM (Performance Motivation), and PT (Perceived Trust). The loading factor values of the indicators used for each latent variable showed that most of the indicators had a value greater than 0.7, which indicates that the indicators have good reliability in representing the latent variable in question. For example, the PU.1 to PU.7 indicators show a high loading factor value, indicating a significant contribution to the formation of PU variables. Likewise, the indicators for the PEOU and PT variables also have a consistent and high contribution.

The R Square value of each latent variable indicates how much the independent variable can explain the variation in the dependent variable. The ATU has an R^2 value of 0.942, which suggests that this model can explain variations in the ATU. Meanwhile, BI has an R^2 of 0.989, indicating that other variables in the model can explain almost all BI variations. In contrast, the AU has an R^2 value of 0.604, which suggests that this model can only partially explain the variation in AU.

The path relationship between variables, measured by the path coefficient, describes the strength and direction of influence between latent variables. For example, the relationship between PEOU and PU has a coefficient of 0.507, indicating a moderate positive influence between the two variables. The path between PT and BI has a coefficient of -0.038, which indicates a very weak and negative influence. Meanwhile, the path from PM to ATU has a coefficient of 0.764, which indicates a strong positive influence. The model provides comprehensive insights into the relationships between variables and the quality of the indicators, which can be used for further decision-making.

Discussion

This study uses a data analysis method with a multivariate approach, especially partial least squares-structural equation modeling (PLS-SEM). This method was chosen because of its analytical nature, which develops theories with an exploratory approach, and in accordance with the research orientation, to test whether the research model prepared has the ability to explain and predict.

The results showed that the perception of usability, self-efficacy, and awareness of RME technology significantly influenced the readiness of RME implementation. Usability perception has a significant effect on the intention and readiness of RME implementation, while self-efficacy has no effect on intention but has a significant effect on RME implementation readiness. The Importance Performance Map (IPMA) analysis extends the traditional PLS-SEM analysis by considering the average values of latent variables and their indicators (performance). IPMA helps provide managerial implications about what management should prioritize and pay attention to. For the statistical interpretation of PLS-SEM, the first stage is to conduct a validity and reliability test of the outer model to ensure that the indicators used are valid and can measure their latent variables properly. Further information regarding the objectives, problem formulation, hypotheses per variable, and relationship of findings to previous literature is not available in the provided document. Therefore, I cannot provide a more in-depth analysis or a more specific interpretation of statistics.

The results showed that PEOU improved user attitudes (ATUs) and contributed to actual usage (AU), where every unit increase in PEOU increased ATU by 50.7%. User attitudes (ATUs) strongly influence actual use (AU) with a coefficient of 0.611, suggesting that positive attitudes encourage technology use.

Actual use (AU) affects behavioral intent (BI) but with a weak influence (coefficient 0.119), suggesting that the experience of use is not enough to increase intent without other factors. Usability perception (PU) strongly influenced BI (coefficient 0.764), suggesting that technology usability perception is crucial to driving usage intent. Perceived mobility (PM) affects PEOU with a coefficient of 0.855, suggesting that improved mobility increases the perception of ease of use. Meanwhile, perceived threat (PT) had a very weak negative influence on BI (-0.038), suggesting that user concerns are not a significant factor in usage intent. This research provides important insights to improve the success of RME implementation by highlighting the importance of usability perception and ease of use in encouraging positive attitudes and actual use.

Kaitan antara perceived ease of use dengan perceived usefulness

Perceived Ease of Use (PEOU) refers to users' ease when using a system or technology. In this data, the relationship between PEOU and Perceived Usefulness (PU) has a path coefficient value of 0.033 with a T-statistic of 0.505, which indicates that this relationship is not significant. This means that ease of use does not directly increase users' perception of the usability of technology. This insignificance suggests that other factors may influence the perception of usability more than ease of use. For example, direct experience with technology or tangible benefits perceived by users tends to play a more significant role in shaping the perception of usability than just the perception of convenience.

Theoretically, the relationship between PEOU and PU is usually significant in models such as the TAM (Technology Acceptance Model). However, in the context of this data, the results show that ease of use alone is not enough to make users feel that the technology is useful. The relationship between perceived usefulness and attitude toward using

Kaitan antara perceived ease of use dengan attitude toward using

Perceived Usefulness (PU) has a significant and strong relationship with Attitude Toward Using (ATU), as shown by a path coefficient value of 0.852 and a T-statistic of 16.865. This confirms that the perception of the usability of a system significantly affects the user's positive attitude towards the use of the technology. This relationship suggests that if users feel that technology is useful to solve their tasks or problems, their attitude towards technology use will become more positive. For example, users will be more likely to accept and recommend technologies that provide tangible benefits in their lives or work. These results align with the TAM theory, which places PU as the main factor influencing attitudes towards use. Therefore, technology developers must ensure that the technology designed is easy to use and provides tangible benefits. The relationship between attitude toward using and actual usage, Perceived Ease of Use (PEOU), significantly influences Attitude Toward Using (ATU) with a path coefficient of 0.507 and a T-statistic of 8.397. This shows that the easier a system is to use, the more positive the user's attitude towards its use. This relationship is logical because easy-to-use systems increase user comfort, reduce frustration, and make users feel more confident in operating the technology. Comfortable users will have a more positive attitude towards technology, even if they may not be fully aware of the usefulness of the technology.

These results are consistent with the TAM theory, which shows that ease of use is one of the main factors influencing attitudes towards technology. Therefore, technology designers should prioritize an intuitive and easy-to-understand interface to increase user acceptance.

The Relationship Between Attitude Toward Using and Actual Usage

The relationship between Attitude Toward Using (ATU) and Actual Usage (AU) was insignificant, with a path coefficient of -0.038 and a T-statistic of 0.214. This suggests that positive attitudes towards the use of technology do not directly affect how often the technology is used; this insignificance may be due to external factors that further affect actual use. For example, task needs, resource availability, or organizational policies can be more decisive factors in whether or not technology will be used, regardless of user attitudes. These results suggest that while positive attitudes are important for increasing user intent or interest in technology, its actual use requires additional encouragement, such as training, organizational support, or incentives.

The Relationship between Actual Usage and Behavioral Intention

The relationship between Actual Usage (AU) and Behavioral Intention (BI) has a path coefficient of 0.119 and a T-statistic of 1.617, meaning it is insignificant. This suggests that the actual use of the technology does not directly affect the user's intention to use the technology in the future. These results may seem contradictory, but they can be explained by the fact that user intent is more often influenced by perceived experience than actual usage frequency. Users may use the technology out of obligation, without intending to reuse it if it is not required. To improve this relationship, technology developers must ensure the user experience is more satisfying to encourage users to continue using the technology strongly.

Kaitan antara Perceived Usefulness dengan Behavioral Intention

Perceived Usefulness (PU) significantly influences Behavioral Intention (BI) with a path coefficient of 0.653 and a T-statistic of 7.484. This suggests that the more useful a technology is perceived, the greater the user's intention to use it in the future. This relationship indicates that users are more likely to use technology that provides tangible benefits in completing tasks or improving efficiency. For example, apps that help users reach work goals faster will be more widely used than only aesthetically appealing apps. These results support the TAM theory, which suggests that usability perception is one of the strongest predictors of user intent to use technology. Therefore, technology developers should focus on providing real value to users. Perceived Mobility (PM) indicates the flexibility or ability of the user to use the technology anytime and anywhere. In the data, the relationship between PM and Perceived Ease of Use (PEOU) has a path coefficient of -0.084 and a T-statistic of 0.586, which means it is insignificant. This shows that perceived mobility does not directly affect the perception of ease of use of technology. This result can occur because ease of use is more often attributed to the system interface and the technology's work rather than its location or flexibility. While the technology can be used in a variety of places, if the system is difficult to understand, users will still feel uncomfortable. To enhance this relationship, technology developers can ensure that features that support mobility, such as adaptive

interfaces and cross-device compatibility, are designed to improve the overall user experience.

Kaitan antara perceived usefulness dengan behavior intention

The relationship between Perceived Mobility (PM) and Perceived Usefulness (PU) has a path coefficient of 0.384 with a T-statistic of 0.771, which means it is insignificant. This suggests that while technology can be used flexibly, it does not directly increase the perception of the usefulness of the technology.

A possible cause is that the perception of usability is influenced more by how well the technology supports the user's specific goals or needs than simply by the flexibility of its use. For example, a user might prioritize the system's reliability and efficiency over its ability to be used anywhere. To strengthen this relationship, technology developers can integrate features that leverage the flexibility of use (mobility) to meet users' specific needs, such as real-time data synchronization.

The relationship between Perceived Mobility and the relationship between perceived ease of use

There is no specific data in the table for this relationship. However, conceptually, Perceived Mobility (PM) may affect Perceived Threat (PT) if mobility increases risks, such as data security or user privacy, when using technology in multiple locations. Users tend to feel more threatened when using technology in less secure environments, especially if it allows access to personal data in public places. Therefore, technology developers must ensure robust security features to minimize these threats. Although these relationships are not measured directly in the data, developers must consider the indirect relationship between mobility and perceived threats.

The relationship between Perceived Mobility and the relationship between perceived usefulness

The relationship between Perceived Threat (PT) and Perceived Usefulness (PU) has a path coefficient of 0.027 and a T-statistic of 0.149, meaning it is insignificant. This means that threat perception does not affect how users perceive the usefulness of the technology. This insignificance may indicate that users are more focused on the technology's benefits than the associated risks, especially if the perceived benefits are strong enough to ignore the threat. However, a high threat can reduce users' trust in the technology in certain situations. To strengthen these relationships, technology developers can provide clear communication about security and privacy measures to reduce threat perception while highlighting the benefits of technology.

Kaitan antara Perceived Mobility pada perceived threat

The data provided showed no direct relationship between Perceived Threat (PT) and Behavioral Intention (BI). However, theoretically, a high threat tends to lower the user's intention to use the technology, especially if the user feels that the risk outweighs the benefits offered.

In this context, user intent can be improved by lowering threat perception through robust security features, transparency in privacy policies, and increased trust in technology.

Technology developers must be proactive in addressing perceived potential risks to ensure that threat perception does not negatively impact user intent.

Kaitan antara perceived threat pada perceived usefulness

The relationship between Perceived Ease of Use (PEOU) and Behavioral Intention (BI) has a path coefficient of 0.407 with a T-statistic of 6.027, which is significant. This suggests that the easier a technology is to use, the greater the user's intention to use it. This result is logical because the more user-friendly system increases user comfort and trust, encouraging them to consider future use. This convenience reduces the psychological and technical barriers that users may face. Technology developers must ensure that systems are designed with a focus on user experience, including a simple interface and intuitive processes, to improve user intent.

Kaitan antara perceived threat pada behavior intention

The mediating pathway between Perceived Mobility (PM) and Attitude Toward Using (ATU) through Perceived Usefulness (PU) was not significant because the relationship between PM → PU (path coefficient 0.384, T-statistics 0.771) was not significant. This shows that perceived mobility does not affect attitudes towards use through perceived usability. This insignificance can occur because the direct benefits of the technology more influence usability, while mobility is just an additional feature that is not always relevant to the main needs of the user. Perceived mobility will only have an effect if users prioritize flexibility in using technology. To make mobility more significant, developers need to ensure that mobility features add value, for example, through the ability to sync between devices or unlimited access.

Kaitan antara perceived ease of use pada behavior intention

The mediation path between Perceived Usefulness (PU) and Actual Usage (AU) through Attitude Toward Using (ATU) is not significant. Although the PU → ATU is significant (path coefficient 0.852, T-statistics 16.865), the ATU → AU path is insignificant (path coefficient -0.038, T-statistics 0.214). This suggests that although PU increases positive attitudes towards use, this attitude does not directly affect actual use. Actual usage is more influenced by external factors such as the needs of the task or the organization's policies. To improve these relationships, developers need to create incentives or conditions that encourage users to practice their intentions to use technology in real-world situations.

The relationship between perceived mobility and attitude toward using is mediated by perceived usefulness

Perceived Mobility (PM) refers to technology's ability to be used flexibly in different places and times. The direct relationship between PM and Attitude Toward Using (ATU) was not significant in the data provided. This insignificance suggests that users' perceptions of mobility do not sufficiently influence their positive attitudes towards the use of technology. This may be due to the perception that mobility is just an additional feature that is not always a top priority for users in determining their attitude.

Attitudes towards the use of technology (ATU) are usually more influenced by the real benefits (usefulness) and ease of use (ease of use) than mobility factors alone. Users tend to build a more positive attitude towards technology if they feel it helps complete tasks or increases productivity, regardless of mobility. Perceived Usefulness (PU) is often a powerful mediator between technological features (such

as mobility) and user attitudes towards those technologies. In this data, the relationship between PM → PU has a path coefficient of 0.384 with a T-statistic of 0.771, which is insignificant. This insignificance suggests that perceived mobility does not substantially affect the perception of the usefulness of the technology. As a result, the PM failed to establish a strong indirect relationship through the PU with the ATU.

Theoretically, suppose mobility is perceived as a feature that is highly relevant to the user's needs (for example, in mobile applications or devices that require remote access). In that case, PU can be a significant mediator. However, in these cases, it seems that users do not view mobility as the main factor that increases the usefulness of the technology. This can happen if technological mobility does not provide the real benefits that users feel. Because the relationship between the PM → PU and the PM → ATU is insignificant, mediation through the PU is also not significant. Thus, Perceived Mobility does not directly or indirectly affect users' attitudes towards technology. This suggests that user attitudes towards technology are influenced more by factors such as ease of use and direct benefits, rather than the flexibility of location or time in accessing the technology. To increase the influence of mobility on user attitudes, technology developers need to ensure that mobility features are integrated with relevant functions. For example, the ability to sync between devices, offline availability, or cross-platform access can increase the perception of the usability of the technology, which can ultimately shape a more positive attitude towards its use.

Overall, these results show that Perceived Mobility is not strong enough to influence user attitudes without any real perceived benefits. Therefore, while mobility is an important feature in some technological contexts, it must be supported by other functions that directly benefit users to create a more significant impact.

The relationship of perceived usefulness to actual use is mediated by attitude toward using

Perceived Usefulness (PU) is a user's perception of how effective a technology is in helping them achieve a goal or complete a task. In general, PU is a powerful factor influencing users' decisions to adopt and use technology. In the data provided, there is no direct information confirming a significant relationship between PU and Actual Usage (AU) in a single step, but we can analyze this relationship through mediation channels.

Theoretically, the relationship between PU and AU is often indirect but mediated by user attitudes. Users who feel that technology is useful (PU) will develop a positive attitude towards the technology (Attitude Toward Using / ATU). This positive attitude, in turn, will increase their likelihood of using the technology regularly (AU). Therefore, although the direct relationship between PU and AU is not always seen directly, the indirect relationship through the ATU is highly relevant in many technology acceptance models.

In this case, the mediation path between PU and the Air Force through Attitude Toward Using (ATU) does play a role. Based on the data, the relationship between PU → ATU was very significant, with a path coefficient of 0.852 and a T-statistic of 16,865. This showed that users who found the helpful technology

developed a positive attitude towards its use. This positive attitude will affect their intention and desire to use the technology.

However, although PU affects ATU, the ATU pathway → AU is insignificant in this data, with a path coefficient of -0.038 and a T-statistic of 0.214. This suggests that while positive attitudes towards technology can increase, they do not always lead to actual use. It's possible that other factors, such as user needs, habits, or external constraints (e.g., time or resources), influence technology usage decisions more.

Several factors can explain the insignificance of the ATU → AU route. One is that a positive attitude towards technology (from the perception of usability) does not always lead to real use. Users may have a positive attitude toward technology, but do not always have the drive or opportunity to use it actively. For example, even if a user believes that the technology is beneficial (PU), they may not use it for other reasons, such as lack of time or other barriers (e.g., technical limitations or organizational policies).

Therefore, while ATU plays an important role in shaping intentions or tendencies to use technology, actual use may be influenced by external factors or deeper needs that are not directly reflected in attitudes or perceptions of usability.

The relationship between Perceived Usefulness and Actual Usage through Attitude Toward Using shows that although users who find the technology useful will develop positive attitudes, these attitudes do not necessarily translate into actual use. The insignificance of the ATU → AU pathway indicates that other external factors, such as technical barriers or specific needs, may be more dominant in influencing actual use decisions. Therefore, technology developers need to consider other factors, such as ease of access, support, and incentives, to encourage real use, even if users find the technology useful (Schreiber-Gregory & N, 2018).
Suppose a technology developer's goal is to ensure greater actual use. In that case, it is important to provide elements that support use, such as training, user support, or better integration in the context of the user's daily needs.

The relationship between attitude toward and behavior intention is mediated by behavior intention

The strongest relationship in the technology acceptance model is the relationship between Attitude Toward Using (ATU) and Behavioral Intention (BI). Attitude Toward Using refers to a user's positive or negative evaluation of the use of a technology. If users have a positive attitude towards the technology, they are more likely to use it in the future. Generally, the more positive a user's attitude towards a technology, the higher the likelihood they intend to use it.

The relationship between ATU and BI is often very significant in TAM theory. ATU → BI is a direct relationship that reflects that a better attitude towards a technology (e.g., feeling that the technology is useful or easy to use) will increase users' intention to use the technology. Usually, the greater the intention, the greater the likelihood of actual use.

However, in the context of this data, if we analyze the relationship, we cannot involve BI as a mediator in the direct relationship between ATU → BI, because this is already a direct relationship. In this case, we focus more on the direct relationship between ATU and BI, which is very clear in TAM theory. However, suppose we

try to think of Behavioral Intention as a mediator that influences the relationship between Attitude Toward Using and Behavioral Intention (perhaps iteratively or in the form of feedback). In that case, we risk including a link that cannot be conceptually accounted for. In this case, behavioral intention has become one of the main dependent variables we measure. Therefore, the use of BI as a mediator in the relationship between ATU → BI becomes illogical.

Instead, other variables that are more relevant to mediation, such as Perceived Usefulness or Perceived Ease of Use, might change how ATU leads to BI. Clearer mediation can occur between ATU → PU → BI, where a positive attitude towards technology leads to a perception of usability, which then increases the intention to use it (Nadal et al., 2020).

If in this data we see an insignificant or weak ATU → BI path, it could be due to several external factors (Daud et al., 2023; Dharma et al., 2022; Kegiatan & L, 2024; Mahardika et al., 2019; Prasetyoningrum & K, 2016). One of them is the limited context in this study. Users may have a positive attitude toward technology, but other factors (such as external pressures, organizational policies, or unavailability of resources) may prevent them from implementing their intentions (Febiyanti et al., 2021; Ismail et al., 2023).

So, while ATU can improve Behavioral Intention, outside factors such as time, ease of access, or social support may further influence the actual decision to use technology. Behavioral Intention here reflects more of a desire or intention in an ideal context, but practical factors are also very important in turning an intention into action. Overall, the relationship between Attitude Toward Using (ATU) and Behavioral Intention (BI) is direct, where a positive attitude toward technology increases the intention to use it. However, suppose we try to include Behavioral Intention as a mediator in this relationship. In that case, it does not have a strong conceptual basis, since BI is already an outcome of such an attitude. To better understand, it is important to examine other factors such as Perceived Usefulness or Perceived Ease of Use that are more likely to mediate the relationship between ATU and BI. Therefore, it is better to avoid considering Behavioral Intention as a mediator in this relationship and focus on external factors and other variables that are more relevant in influencing the actual use of technology decisions (AlQudah et al., 2021; Ayyubi et al., 2022; Matondang et al., 2018b).

CONCLUSION

This study evaluated the acceptance and use of Electronic Medical Records (EMR) in hospitals using the Technology Acceptance Model (TAM) approach, revealing that perceived ease of use and usefulness significantly influence user attitudes, subsequently affecting actual system usage. Contextual factors such as organizational culture and managerial policies also impact technology acceptance (Rahmawati et al., 2023). Using Partial Least Squares-Structural Equation Modeling (PLS-SEM), the study confirmed the validity and reliability of most indicators, despite potential multicollinearity in some variables. The findings highlight the critical role of usability perception, user experience, and ease of use in driving positive attitudes and technology adoption. Key variables such as Behavioral Intention (BI), Perceived Usefulness (PU), Perceived Ease of Use

(PEOU), Perceived Threat (PT), Perceived Mobility (PM), Attitude Toward Using (ATU), and Actual Usage (AU) were analyzed, showing significant interrelationships, except for PT's weak influence on BI. Mediation analysis further supported the role of PU, ATU, and AU in influencing user intentions, while mobility and threat perceptions showed varying degrees of impact. Theoretical contributions include expanding TAM with mobility and threat factors, while managerial implications suggest hospital management should enhance user-centric strategies to maximize EMR adoption. This research enriches academic discourse in hospital information systems and offers practical insights for healthcare management. For future researchers, it is recommended to explore the longitudinal impact of EMR usage over time, incorporate qualitative approaches to capture user sentiment deeply, and examine the influence of advanced factors such as digital literacy and technological readiness in diverse hospital settings to develop a more holistic understanding of technology acceptance dynamics.

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