


Factors Affecting Healthcare Professional's Adoption of the Electronic Medical Records Systems at Shabaan Hamdoun Hospital, Tlemcen

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Abstract:

The purpose of this research is to examine the factors affecting the use of Electronic Medical Records (EMR) by medical staff members, including doctors and nurses, at Shabaan Hamdoun Hospital in Maghnia, Tlemcen Province. In order to investigate their effects on healthcare professionals' desire to embrace the system and its actual use, the study used the Technology Acceptance Model (TAM) and added external variables such data security, self-efficacy, management support, and infrastructure. A custom created questionnaire was used to gather information from a sample of 156 healthcare professionals, drawn from a population of 381 healthcare workers. Using SPSS 27, multiple linear regressions were used to evaluate the data and look at the correlations between the variables. The findings demonstrated that healthcare professionals' intention to use electronic medical records is positively and directly influenced by perceived usefulness, ease of use, data security, self-efficacy, and management support. While infrastructure had no significant impact, suggesting it may not be the primary barrier. Additionally, the actual use of the system was strongly and positively affected by the intention to use.

Keywords: Electronic Medical Records; Health System; Healthcare Professionals; Technology Acceptance Model.

JEL Classification: I110; O330.

Introduction

By increasing access to health information and offering more effective healthcare services, ICT has enormous potential to improve the quality of healthcare in the global healthcare system. In high-income nations, where the adoption of Electronic Medical Records systems has grown steadily over the past 15 years—with a 46% global rise in the last five years—the system is being progressively implemented in healthcare facilities. However, only 15% of low-income countries and 35% of middle-income countries have implemented national electronic medical record systems (Oo et al., 2021).

Algeria is one of the countries moving towards the adoption and implementation of an Electronic Medical Records system in its healthcare institutions. These records are designed to accurately capture and present data reflecting the patient's clinical condition, including symptoms, examination results, and treatment plans. This system is a valuable tool for healthcare providers in managing all aspects of patient care. However, their ability to display information differently from paper records sets electronic medical records apart, offering previously stored data in innovative and new formats (Carter, 2001).

Electronic Medical Records (EMRs) are a fundamental part of all digital initiatives, serving as a central repository for clinical information related to patient care. EMRs have the ability to significantly improve healthcare quality in addition to expediting administrative procedures. Through the combination of analytical tools and decision-making resources, these records allow for on-the-spot assessment of diagnoses and care plans, guaranteeing adherence to established care protocols. When utilized effectively, this feature has the potential to decrease discrepancies in healthcare provision and improve the quality of clinical judgment. Healthcare providers are increasing their investment in EMRs due to the expected advantages, a trend that is likely to persist (Council et al., 1997).

Despite the benefits associated with implementing EMRs, the adoption of this technology remains limited. It has not reached high levels of acceptance and use among medical staff, who are its primary users. This is because digitalization has significantly transformed personal and professional lives, both inside and outside institutions. These changes have impacted individuals' behavior in various aspects of daily life where they play the role of users. For instance, in the context of adoption or usage behavior, exposure to digital technologies highlights issues such as information security and the blurring of boundaries between work and non-work contexts (Metallo et al., 2020).

Therefore, we observe that individuals' adaptation to using technology does not occur at the same pace, as their perceptions, experiences, and skills vary. Some individuals embrace technology and find it easy to use, while others hesitate to adopt it and lack the necessary skills to use it effectively. It is essential to highlight the individual's experience; previous studies on EMRs have demonstrated that the limited adoption of their usage in hospitals is caused by various distinct obstacles. One of the obstacles includes the absence of understanding or familiarity with EMR systems, as well as resistance from staff. In numerous developed and developing countries, similar obstacles have been found, including low levels of computer literacy which are seen as a major hindrance to the implementation of EMRs (Hasanain et al., 2015). Therefore, the success of implementing this system depends on how much users accept it, leading us to explore the factors that influence individuals' behavior in adopting new technology.

Multiple theories have examined how people accept technology. In this research, we utilized the Technology Acceptance Model (TAM), created by Davis (1989), to anticipate and clarify the utilization of information technology. The main goal of TAM is to offer a framework for monitoring how external factors influence internal beliefs, attitudes, and intentions. TAM was developed with the aim of achieving these objectives by identifying a small set of crucial variables outlined in past studies on the cognitive and emotional aspects impacting technology adoption (Davis et al., 1989). Evaluating the preparedness of healthcare workers in healthcare facilities is essential for the effective implementation of the system in Algeria. While numerous studies have focused on EMR adoption in developed nations and identified factors affecting individual adoption, these factors may differ in other countries.

Our research focuses on determining the factors that impact users' willingness to adopt electronic medical record systems and examining the obstacles to the system's implementation in health institutions in Algeria. There is a notable lack of research focusing on this subject in the Algerian context. Our research stands out by addressing the acceptance and implementation of this technology in health institutions in Algeria, filling a research gap and offering insights to enhance strategies for utilizing these systems. Thus, given the previously mentioned factors, the research question that is put forward is:

RQ: What are the factors that impact healthcare professionals' willingness to accept and utilize electronic medical record systems in Algerian hospitals?

The structure of this paper is designed to tackle the research issue. The starting point involves looking at the topic's background and proposing different hypotheses. Next, we outline the methods and tools utilized for gathering and examining data. The findings are subsequently showcased, followed by an analysis that considers whether the hypotheses are supported or disproved. In conclusion, the paper wraps up with a recap and points out the primary constraints of the research.

1-Theoretical Background and Hypothesis:

The initial efforts to develop what is now known as electronic medical records (EMRs) began in the 1960s with the COSTAR system, created by "Barnett" at the Computer Science Laboratory of Massachusetts General Hospital. These efforts were followed by additional developments at Duke University and the Registries Institute at Indiana University Medical Center, which led to the creation of advanced EMR systems containing data for thousands of patients. Today, more than 200 companies offer commercial versions of EMRs. However, despite these successes, EMR technology has not yet become widespread. Only 3% to 5% of physicians are estimated to use or have access to EMRs regularly. Given nearly forty years of development, it is not easy to understand why EMRs are not more commonly used as a clinical tool. The answer may lie in the complexity of the challenges surrounding the design and implementation of these systems (Carter, 2001).

1-1- Definition of the EMR:

An Electronic Medical Record (EMR) is a collection of health information on an individual, which is created, managed, and accessed by authorized physicians and staff within a single healthcare facility (Williams & Samarth, 2010). On the other hand, an EMR is also defined as a computerized health information system that provides detailed information about a patient (Nematollahi et al., 2017). Additionally, (Oo et al., 2021) describe it as the digital version of paper charts that contain patient information, providing access to evidence-based decision support tools that assist doctors in making medical decisions. This technology is also considered a means to enhance the quality of electronic health services more efficiently than paper records. EMRs include the recording of patient information, medications, prescriptions, tracking of pharmacy tasks, laboratory results, and all health data related to the patient during each visit. Based on the previous definition, it can be concluded that the EMR is a tool

that links information from all departments and provides it to healthcare providers.

1-2- What is Meaningful Use?

The ARRA outlines that "the meaningful use of certified electronic medical record technology must lead to patient-centered care that is evidence-based, prevention-oriented, efficient, and equitable." However, the question lies in how this will be practically implemented. To demonstrate that physicians are using EMRs in a "meaningful" way, they must meet specific goals to qualify for incentive payments. Physicians must prove that they are using electronic records to perform several tasks, including: capturing health data digitally in a secure way, monitoring crucial medical conditions and sharing the information for coordinating care, helping with managing diseases and medications, and reporting on healthcare quality metrics and public health data (Skolnik, 2010).

1-3- Technology Acceptance Model (TAM):

The research is based on the TAM, which was first presented by Fred D. Davis in 1986. TAM was created with the aim of simulating the approval of information systems by users (Putra, 2018) . This model suggests that the use of a system (US) is based on the intention to use (ITU) it, which is affected by beliefs about its usefulness and ease of use (Davis et al., 1989).

1-3-1- Perceived Usefulness (PU) and Perceived Ease of Use (PEU):

PU refers to an individual's belief that using a specific application system will enhance their work performance in a workplace setting. PEU represents the level of effort the user expects to put into using the system (Davis et al., 1989).

Multiple research studies have verified the accuracy and dependability of these concepts in anticipating user intention, including (Venkatesh & Davis, 2000); (Chau & Hu, 2002); (Tung et al., 2008); (Hsu & Wu, 2017); (Aldosari et al., 2018); (Ng et al., 2024). Hsu & Wu (2017) explored the effectiveness of introduce a Nursing Information System (NIS) in a teaching hospital in Taiwan using the (TAM) framework. Their study included 158 nurses from various departments. The results showed that PU and PEU significantly affected the users' ITU the Nursing Information System. In another study by (Tubaishat, 2018) examined the PU and PEU of (EHRs) among nurses in Jordan. conducted across 15 hospitals with a sample of 1539 nurses. The study revealed that nurses viewed EHRs as both beneficial and user-friendly, with these perceptions being positively correlated. Similarly, (Zhou et al., 2019) investigated the factors influencing

older adults intentions to use telehealth services in China. The study spanned four cities and included a sample of 436 elderly individuals, gathered through a multi-stage cluster sampling method. The research hypothesized that older adult's acceptance of telehealth services would be influenced by their perceptions of satisfaction with medical services, PEU, and information quality. The finding indicated that these factors greatly influenced their willingness to adopt telehealth services. These studies collectively suggest that the desire to use technology is impacted by both PU and PEU. Accordingly, the following hypotheses are proposed:

H1: PU has a positive effect on the behavioral intention to use EMR systems.

H2: PEU has a positive effect on the behavioral intention to use EMR systems.

1-3-2- Data Security (DS):

The EMR application needs to address privacy and security concerns for both healthcare providers and patients, as providers fear unauthorized changes to records and patients fear unauthorized data access. This system must adhere to the privacy and security standards set by regulatory organizations in the country to ensure patients and service providers that health data is stored securely and privacy is upheld (Sinha et al., 2012). It is noticeable that this dimension affects the user's desire to implement the system, as it poses a barrier due to concerns about the loss of patients' medical data or breaches.

Among the studies that revealed the impact of this variable is the study by (Vitari & Ologeanu-Taddei, 2018), which aimed to determine the influence of different categories of clinical staff (doctors, paramedical professionals, and administrative staff) on their intention to use EHR and the factors influencing it. The study was conducted in a French teaching hospital with over 2500 beds, and the sample included 1741 participants. The study variables included intention to use EHR, PEU, PU, anxiety, self-efficacy, trust, incompatibility, and data security. The findings indicated that the ITU EHR can be predicted by the PU and PEU, highlighting the importance of considering the motivations and perceptions of different staff categories when implementing electronic health record systems. Additionally, the study by (Ondogan et al., 2023) investigates the use of (EMR) and their relationship with communication and information sharing among healthcare workers. The research was carried out at a university hospital in Turkey that has 963 beds, and the sample included 214 doctors and 214 nurses. The study found that doctors preferred EMR over paper forms, in contrast, nurses preferred both options, with the reasons for favoring paper forms related to legal requirements and a lack of trust in

electronic records. Thus, concerns about the security and privacy of personal data and distrust in EMRs reduce the motivation to use them.

In light of the previous discussion, the hypothesis is proposed as follows:

H3: Data security has a positive impact on the behavioral intention of healthcare professionals to use the EMR systems.

1-3-3- Self-efficacy (SE):

Adopting digital technology requires healthcare providers to possess various competencies to integrate digitization into their daily work. Competence in information and communication technology is a vital skill that allows people to utilize and share information effectively through online platforms. Hence, medical professionals need to possess sufficient proficiency in utilizing modern technology to deliver top-notch ethical care for patients and proficient communication abilities in health prevention, diagnosis, and treatment (Jarva et al., 2022).

Many studies have sought to determine the extent to which this particular determinant influenced the act of adoption. Like for instance, the outline that (Kruszyńska-Fischbach et al., 2022) used to evaluate primary health care institutions in Poland on how they can accept Electronic Health services. This involved 371 primary health care managers in various parts of the country. The development of the empirical model is guided by available literature and comprises six dimensions or elements, which are overarching formulation of a strategy, Implementation of a structure, Culture, competence, technology, and acceptance and use. It also needs to be pointed out that the findings of the research established that these dimensions are supportive in technology development. (Edo et al., 2023) also sought to explore the factors that impact the uptake of Digital Health Technologies (DHT) by healthcare professionals in Nigeria. There were 301 healthcare professionals in the study sample. The research employed (TAM) and (UTAUT), incorporating a novel aspect: perceived availability. The results of the research validated that PU, perceived physical condition, technological anxiety, user innovativeness, social influence, and perceived availability all play a meaningful role in influencing behavioral intention. These studies demonstrate the significance of self-efficacy and its influence on healthcare sector workers' system usage intention.

This is what we aim to reveal in our study, and thus our proposed hypothesis is:

H4: Self-efficacy has a positive impact on the behavioral intention of healthcare professionals to use the EMR systems.

1-3-4-Infrastructure:

Infrastructure is the internal support that allows something essential to function continuously. It encompasses all parts of the system that support vital activities, requiring these components to work together due to the increasing demand for specific services. Therefore, effective infrastructure must be scalable and capable of expanding to adequately support rising demands (Schatz & Jr, 2011). In a Nigerian study by (Idoga et al., 2019) Examining the factors affecting healthcare professionals' willingness to use cloud health facilities, it was discovered that performance expectations, cloud health expertise, IT infrastructure, and social influence all played a significant role in influencing their BI. The following hypothesis is suggested:

H5: IT infrastructure has a positive impact on the behavioral intention of healthcare professionals to use the EMR systems.

1-3-5- Top Management Support (TMS):

Many barriers have been recognized in the execution of electronic health technologies, with current studies showing that the absence of pre-planning is a key factor. The organization's strategic readiness, along with robust backing from executive managers and leaders, plays a crucial role in transforming healthcare delivery through new technologies and impacting the willingness to adopt digital solutions (Kruszyńska-Fischbach et al., 2022). Research conducted by (Aldosari et al., 2018), at Imam Abdurrahman Al Faisal Hospital of the National Guard in Dammam, Saudi Arabia, gathered information from 153 nurses to investigate their adoption of (EMRs). The research expected a positive relationship between nurses' views on how beneficial and user-friendly EMRs are, and suggested that nurses' acceptance of EMRs would be impacted by various factors including their demographics, support from senior management and IT, and the quality of the system. The research findings showed a significant correlation between PU and PEU. In light of this, the following hypothesis was proposed:

H6: Top management support has a positive effect on healthcare professionals' behavioral intention to use the EMR systems.

1-3-6- Behavioral Intention (BI) to Use the System (US):

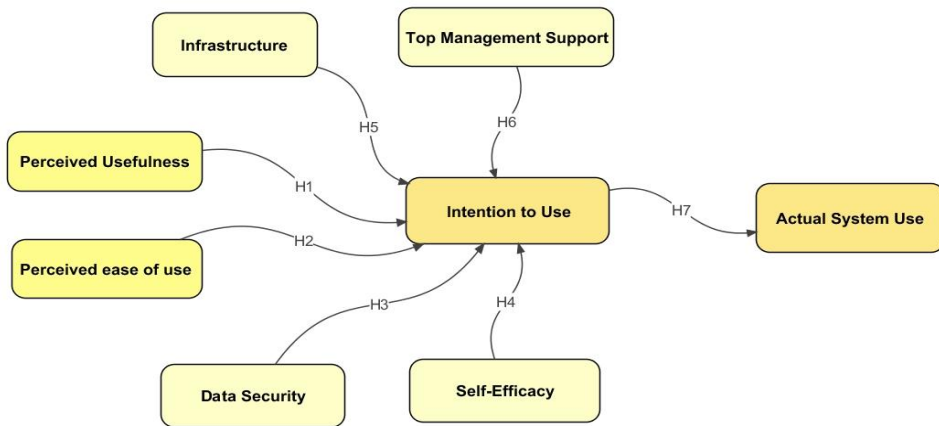
Characteristically examined under the social psychology theory, behavioral intention is referred to as an individual's intention to conduct a behavior. In the confines of a hospital, behavioral intention on the use of EMR concerns an individual's readiness or willingness to use the system. TAM has it that once a person's design intention is activated, the utilization of the system is inevitable. (Alexandra et al., 2021). It has been proven by a number of researches, for example (Nematollahi et al., 2017), that there is a

correlation between the healthcare professionals' motivation to use and the use of the EMR system. Consequently, the following assumption is put forward:

H7: Behavioral intention has a positive effect on the actual use of the EMR systems.

From the above, the proposed model for our study is as follows:

Figure number (01): Study Model



2- Methodology and Tools:

2-1- Method of study:

The study utilized the descriptive-analytical approach as its main framework. This method is commonly used to analyze the traits and trends in the gathered data, enabling thorough examination of the connections among variables.

2-2- Data Collection Tool:

Participants were required to respond to a number of questionnaires to aid in data collection. These questions were tailored to meet the requirements of the study and referred to the works of other scholars. Demographic information of the research sample was the first part of the survey together with questions relating to their technological and EMRs awareness and the inclination to using this technology. The second part had eight sections with each having several variables following the proposed model being put on a five-point Likert scale. The structure of values on the Likert scale was (1: strongly disagree, 2: Disagree, 3: neutral, 4: Agree, 5: Strongly agree).

2-3- Target Population:

The research population consists of 381 healthcare professionals working at Shabaan Hamdoun Hospital in Maghnia, Tlemcen Province, which has a capacity of 274 beds. The population is distributed among 53 physicians, 228 nurses, and 40 laboratory technicians. A total of 180 questionnaires were randomly distributed during the period from June to the end of August. According to Morgan's Law, this sample size is considered appropriate and close to the ideal size. However, only 156 fully completed questionnaires were retrieved and subsequently used in data analysis.

2-4- Statistical Analysis:

Following the information acquisition, the data set was accordingly examined by means of the most recent SPSS application version in the quantitative processing. The analysis included the following steps: frequency and percentage analysis to describe the preliminary data, testing the reliability of the measurement tool, and hypothesis testing using data analysis tools such as multiple regressions to understand how variables affect each other, and analyzing relationships between variables using tests like correlation analysis.

3- Results:

3-1- Demographic Characteristics:

Table number (01): Sample Characteristics

Characteristics		Frequency	Percentage
Gender	Male	54	34,6
	Female	102	65,4
	Total	156	100
Age	≤ 30	43	27,6
	31-50	88	56,4
	≥51	25	16,0
	Total	156	100
Educational Level	Bachelor's	41	26,3
	Master's	33	21,2
	Doctorate	38	24,4
	Other Certification	44	28,2
	Total	156	100
Profession	Doctor	44	28,2
	Nurse	48	30,8
	Nurse Assistant	29	18,6
	Laboratory Tech	35	22,4
	Total	156	100
Years of Service	5Year	39	25,0
	6-10 years	47	30,1
	11 years.	70	44,9
	Total	156	100

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Level of IT Skills	Low	26	16,7
	Medium	109	69,9
	High	21	13,5
Access to a Computer at the Workplace	Yes	43	27,6
	No	113	72,4
Access to the Internet at the Workplace	Yes	101	64,7
	No	55	35,3
Knowledge of EMRs	Low	47	30,1
	Medium	102	65,4
	High	7	4,5
Previous Experience with EMRs	Yes	124	79,5
	No	32	20,5
Readiness to Adopt	Not Ready	50	32,1
	Ready	106	67,9

Source: Prepared by the authors, based on the outputs of SPSS 27.

The table presents demographic and professional data for a sample of 156 individuals, with the majority of participants being female, accounting for 65.4% of the sample, which is significantly higher than the 34.6% of males. Most individuals in the sample are aged between 31-50 years 56.4%, representing the most productive age group in the healthcare institution. Meanwhile, individuals aged 30 years or younger make up 27.6%, indicating a substantial number of newly joined staff at the hospital, while those over 51 years constitute 16%, showing that the majority of workers are in the middle of their careers. Regarding educational level, the largest proportion of individuals hold other certifications 28.2%, followed by those with a Bachelor's degree at 26.3%, indicating a moderate percentage of the sample has received university education. Doctorate holders represent 24.4%, and Master's degree holders make up 21.2%. This suggests a relatively high level of education among the sample. Additionally, we noted that nurses represent the largest percentage at 30.8% of the sample, followed by doctors at 28.2%. Nurse assistants account for 18.6%, highlighting the important role these professionals play in the healthcare system, while laboratory technicians constitute 22.4%, reflecting the significance of laboratory analysis in the healthcare sector. The majority of individuals in the sample have more than 11 years of experience 44.9%, indicating that most possess extensive experience in their fields. Individuals with 6-10 years of experience represent 30.1%, a moderate percentage, while those with 5 years or less account for 25%, indicating that a quarter of the sample consists of relatively new employees.

The next aspect concerning demographic information involves the proficiency of Information and Communication Technology (ICT) skills.

69.9% of people possess a moderate skill level, with 16.7% having low skills, and 13.5% having high skills. This outcome suggests that most participants have a moderate level of digital skills, but a few could be lacking due to insufficient education or limited advanced technology training. When it comes to computer access at work, just 27.6% of people have access, while the majority, 72.4%, does not. A low percentage of computer access could hinder the advancement of technology use in the workplace, particularly for jobs involving digitalizing medical records. Even though the rate of computer access is low, 64.7% of people are able to connect to the Internet, showing that Internet availability is more widespread compared to computer availability. Using mobile devices to access medical information may be helpful for staff, but it might not be enough to fully support complex systems such as Electronic Medical Records. 65.4% of people possess a fair knowledge of these systems, whereas 30.1% have limited knowledge and just 4.5% have extensive understanding. This highlights the necessity for additional training and education to improve comprehension of these systems, as the number of people with advanced knowledge is minimal, impeding the complete maximization of EMRs. Moreover, it was discovered that 79.5% of people lack prior familiarity with EMRs, underscoring the necessity for more training and a conducive workspace for digital advancement, while only 20.5% have prior exposure to this system. The analysis findings show that 67.9% of healthcare professionals are prepared to embrace EMRs, with 32.1% not ready. This high level of preparedness is a clear indication of a digital-first stance. However, the remaining one-third of the employees who feel unready could point at resistance to the new task, shortage of knowledge or even absence of facilities.

3-2- Reliability of the Measurement Tool:

The reliability of the measurement tool and the consistency of its results were assessed using the Cronbach's Alpha test. The total reliability score of 92.9% is exceptional and well above the 70% target for social sciences. Furthermore, the questionnaire dimensions displayed strong internal consistency, with Cronbach's Alpha values ranging from 0.72 to 0.87, as detailed in the table provided:

Table number (2): Internal Consistency of the Model Variables

Variable	Number of Items	Cronbach's Alpha (α)
PU	09	0.856
PEU	06	0.792
DS	03	0.786
SE	04	0.846
INF	03	0.805

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TMS	03	0.721
ITU	04	0.872
ASU	03	0.861
Total	35	0.929

Source: Prepared by the authors, based on the outputs of SPSS 27.

3-3-Correlation Coefficient Analysis Between Variables:

Correlation is a statistical measure of the degree to which and the direction in which two variables are related. It helps in finding out by how much one variable changes with respect to another. We computed the Pearson's correlation coefficient which is as follows in the next table.

Table number (03): Correlation Matrix of Variables

Variables	ASU	PU	PEU	DS	SE	INF	TMS	ITU	Sig
ASU	1								
PU	,399**	1							0.001
PEU	,500**	,471**	1						0.001
DS	,707**	,363**	,476**	1					0.001
SE	,361**	,468**	,571**	,338**	1				0.001
INF	,231**	,169*	,361**	,252**	,515**	1			0.004
TMS	,197*	,178*	,330**	,176*	,474**	,832**	1		0.013
ITU	,769**	,381**	,498**	,932**	,355**	,258**	,224**	1	0.001

(**) The correlation is significant at the 0.01 level, (*) at the 0.05 level.

Source: Prepared by the authors, based on the outputs of SPSS 27.

The correlation between actual system use and the other variables reveals multiple relationships that affect the extent of system use. PU, with a coefficient of (0.399), and PEU, with a coefficient of (0.500), are moderately positively correlated with ASU, meaning that as users perceive more benefits and PEU, the likelihood of system use increases. On the other hand, DS is strongly positively correlated with ASU at (0.707), indicating that a system that provides strong security is used more frequently. SE, with a coefficient of (0.361), also has a moderate positive correlation with use, reflecting that individuals who feel competent in using the system tend to use it more. In contrast, INF (0.231) and TMS (0.197) have less significant effects, as they show weak correlations with actual use, meaning their impact is less compared to other factors. Finally, the intention to use (0.769) is strongly correlated with actual use, indicating that individuals who intend to use the system are more likely to do so in practice.

3-4- Hypothesis Testing:

Multiple linear regression analysis was utilized to examine the impact of several variables (PU, PEU, DS, SE, INF, and TMS) on the ITU in the study hypotheses testing. The results were as follows:

3-4-1- Correlation Coefficient for the Overall Model:

The analysis of multiple linear regressions demonstrates a high correlation between the independent variables and the dependent variable, showing a correlation coefficient of 0.937, signifying a notable influence of these variables on "intention to use." The R² value shows that 87.7% of the variance in the intention to use is accounted for by the independent variables. The adjusted R² value of 0.872 affirms the significance of the variables considered in elucidating the variation while avoiding overfitting. The model's accuracy is reflected by the low standard error of 0.23636, and the model is statistically significant as the p-value is less than 5%.

3-4-2- Analysis of Variance Table:

Table number (04): ANOVA

ANOVA ^a						
Modèle		Somme des carrés	ddl	Carré moyen	F	Sig
1	Régression	59,419	6	9,903	177,264	,000 ^b
	de Student	8,324	149	,056		
	Total	67,744	155			

Source: Prepared by the authors, based on the outputs of SPSS 27

The ANOVA results indicate that the statistical model explaining "intention to use" with the independent variables is highly statistically significant. The F value is 177.264 with Significance at 0.000, showing that the model is extremely significant at a 95% confidence level, suggesting that the independent variables have a substantial impact on the dependent variable's variations.

Now, we test the study hypotheses:

Table number (05): Regression Coefficients Results

Modèle		Unstandardized coefficients		standardized coefficients	T	Sig
		B	Std.Error	Beta		
1	(Constante)	0.239	0.157		1.526	0.129
	PU	0.203	0.084	0.188	2.409	0.017
	PEU	0.395	0.075	0.409	5.247	0.001

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	DS	0,857	0,032	0,900	26,847	0,001
	SE	0.218	0.063	0.302	3.444	0.001
	INF	-0.72	0.043	0.092	-1.694	0.092
	TMS	0.106	0.046	0.121	2.311	0,022

A dependent variable: Intention to use

Source: Prepared by the authors, based on the outputs of SPSS 27

The results indicate that several factors significantly affect the intention to use, with a significance level of less than 0.05. Firstly, PU has a positive effect on the ITU, with a B value of 0.203, T = 2.409, and statistical significance of Sig= 0.017, thus accepting the first hypothesis. PEU also shows a strong effect, with B = 0.395, T = 5.247, and high statistical significance of Sig = 0.001, leading to the acceptance of the second hypothesis. The results of these two hypotheses are consistent with the studies by (Ng et al., 2024) , (Aldosari et al., 2018) and (Tubaishat, 2018). DS has the most significant impact, with a coefficient value of B = 0.857, T = 26.847, and a significance level of Sig = 0.001, indicating a substantial effect and thus accepting the third hypothesis. This result aligns with the study by (Vitari & Ologeanu-Taddei, 2018) but contradicts the findings of (Idoga et al., 2019). Similarly, SE has a positive effect, with B = 0.218, T= 3.444, and statistical significance of Sig= 0.001, leading to the acceptance of the fourth hypothesis. On the other hand, INF did not show a statistically significant effect, with a B value of -0.72, T = -1.694, and Sig = 0.092, which is greater than 0.05. This implies that the ITU is not significantly affected by infrastructure, and therefore, the fifth hypothesis is rejected. This outcome goes against the research by (Idoga et al., 2019). Top management support also shows a significant effect, with B = 0.106, T = 2.311, and a significance level of Sig = 0.022, leading to the acceptance of the sixth hypothesis.

This result aligns with the study by (Aldosari et al., 2018). In conclusion, PU, PEU, DS, SE, and TMS all have statistically significant effects on the ITU, and therefore, the hypotheses related to these variables are accepted. INF does not significantly affect the ITU, meaning the hypothesis related to it is rejected.

After analyzing the factors influencing the user's ITU the system, we are now examining the hypothesis that this intention will impact the actual system usage.

The results are as follows:

Table number (06): Regression Coefficients Results

Modèle		Unstandardized coefficients		standardized coefficients	T	Sig.
		B	Std.Error	Beta		
1	(Constante)	1.012	0.207	/	4.886	0.001
	Intention to use	0.762	0.051	0.769	14.928	0.001

A dependent variable: Actual System Use

Source: Prepared by the authors, based on the outputs of SPSS 27.

The outcomes of this model suggest that the ITU has a significant and positive impact on the actual usage of the system. The value of coefficient B is 0.762, while T is 14.928, indicating a significant relationship with Sig. = 0.001, which is highly statistically significant at a level below 0.05. Overall, it can be stated that the intention to use is a crucial and greatly influential aspect in this model. As a result, we validate the seventh hypothesis, which corresponds with the results of the research conducted by (Ondogan et al., 2023).

Here is a recap of the findings for each hypothesis:

Table number (07): Summary of Hypothesis Testing Results

Variable	Statistical Significance Level	Hypothesis
Perceived Usefulness H1	0.017	Accepted
Perceived Ease of Use H2	0.001	Accepted
Data Security H3	0.001	Accepted
Self-Efficacy H4	0.001	Accepted
Infrastructure H5	0.092	Rejected
Top Management Support H6	.0022	Accepted
Usage Intention H7	0.001	Accepted

Source: Prepared by the authors.

4- Discussion of the Results:

The analysis of the data in this research revealed a significant acceptance of information technology by healthcare professionals at "Shabaan Hamdoun" Hospital, alongside adequate levels of digital skills and knowledge of electronic medical records. However, challenges were observed regarding the availability of computers in the workplace and the need for greater technological expertise. Nevertheless, the majority expressed willingness to use electronic medical records. Future initiatives should prioritize enhancing access to devices and technology, as well as providing specialized training to improve proficiency in using electronic medical records.

Through this study, we sought to explore the factors influencing healthcare professionals' adoption of electronic medical record systems. Based on the research findings, the decision of healthcare professionals is influenced by several important factors, as outlined below:

Perceived usefulness: This plays a major role in persuading healthcare professionals to adopt these systems. If they perceive the systems as enhancing work efficiency and improving the quality of healthcare services, they are more likely to use them. This necessitates raising awareness about the system's benefits through awareness campaigns and showcasing successful cases where the system has been implemented.

Ease of use: Healthcare professionals, particularly those with limited technical knowledge, tend to prefer systems that are easy to use and understand, which reduces their hesitation to adopt new technologies. This is a critical factor to consider, making it essential to design systems that are intuitive and provide clear user interfaces.

Data security: This remains a crucial and influential factor, Healthcare professionals prioritize protecting patient information by maintaining privacy and confidentiality. A system lacking robust security measures may raise doubts and rejection, leading to a lack of trust and affecting the intention to use it. Therefore, it is imperative to strengthen security in digital systems to safeguard data.

Self-efficacy: The competence of employees and their confidence in their ability to use technology effectively can increase their readiness to adopt it. This underscores the importance of providing training and continuous support at all stages.

Top management support: This plays a pivotal role as a motivating factor. Physicians and nurses recognize the importance of the project when they receive support from leadership, which enhances their confidence in implementing these systems.

As for the infrastructure, although it plays a critical role in the digital transformation process, it was not a major obstacle in this specific case. However, improving the availability of devices for all employees remains essential. This indicates that adoption issues are more closely linked to human and organizational aspects.

Overall, these factors, including perceived usefulness, ease of use, data security, self-efficacy, and top management support, contribute to creating an ideal environment for implementing electronic medical records. They also influence healthcare professionals' intention to adopt this system,

thereby ensuring the effectiveness of digital transformation in healthcare institutions.

5- Conclusion:

In conclusion, this study shows that the implementation of electronic medical records (EMRs) among medical professionals is greatly influenced by various important factors. Healthcare professionals are motivated to adopt these systems by the perceived benefits of usefulness and ease of use, in order to enhance healthcare quality and streamline daily tasks. Nevertheless, security is a key consideration because it is not feasible to progress with EMR utilization without guaranteeing the safeguarding of patients' medical information. Belief in one's ability and the utilization of technology also boost the acceptance of these systems, highlighting the significance of ongoing training and technical assistance for healthcare providers. The backing of top management is crucial for the success of this implementation, as it emphasizes the significance of digital transformation and the organization's dedication to it for healthcare workers. Despite its significance, the research findings suggest that infrastructure is not the primary barrier to adoption, underscoring the belief that organizational and human factors play a greater role in driving digital transformation. Therefore, it can be argued that building trust, offering assistance, guaranteeing the tangible advantages of utilization, enhancing education, and establishing a safe and lasting setting for EMRs is crucial elements for attaining success in this shift within healthcare organizations and enhancing the effectiveness and excellence of healthcare services rendered.

6- Study Limitations:

Despite the importance of this study, which is one of the few pieces of literature within the geographic boundaries of Algeria, where there is a scarcity of studies addressing the topic of digital transformation in the healthcare sector, it is not without limitations, which we mention as follows:

- **Sample size:** The small sample may not fully represent all healthcare professionals across specializations and regions, affecting result generalizability.

- **Geographical setting:** Conducted in Tlemcen, Algeria, findings may not apply to regions with different infrastructures or health policies.

- **Unstudied factors:** Organizational culture and financial incentives were not examined, limiting the scope.

- **Technological change:** Rapid advancements in electronic medical records could impact the study's long-term relevance.

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