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Performance Evaluation of Electronic Medical Record Systems Using the HOT-Fit Framework (Human, Organization, Technology)

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ABSTRACT

Electronic medical record (EMR) systems are essential to digital health transformation, yet their implementation faces human, organizational, and technological challenges. This study aims to evaluate EMR system performance using the HOT-Fit framework and explore user experiences. A qualitative phenomenological study was conducted at Lubuk Buaya Health Center, Padang, involving five informants selected through purposive sampling, including medical personnel, paramedics, and medical records officers. Data were collected through in-depth interviews, participatory observations, and documentation, then analyzed using Miles and Huberman's model. Data validity was ensured through source and method triangulation. The findings revealed that user competence and readiness, organizational policy support and training, and system quality and infrastructure influence EMR implementation. However, limited training and inadequate network infrastructure remain major challenges. The study concludes that EMR system performance is not optimal due to misalignment among the three HOT-Fit components. Continuous training, stronger management support, and improved technological infrastructure are needed to optimize EMR implementation.

Keywords: *Electronic Medical Record, HOT-Fit, System Performance, Health Center*

INTRODUCTION

Digital transformation in the healthcare sector has become a global agenda driven by the need for more efficient, accurate, and integrated service systems. The World Health Organization has established a global health digitization strategy to strengthen health systems through the adoption of digital technologies for consumers, healthcare workers, service providers, and

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industry to achieve health for all. This strategy places digitization of medical records as one of the main pillars of healthcare transformation in various countries, including developing countries such as Indonesia. This global momentum has been reflected in the Indonesian government's efforts through various regulations that encourage the acceleration of digitization of health facilities at the primary and referral levels (WHO, 2021).

The government of Indonesia responded to the direction of digital transformation by establishing the Minister of Health Regulation No. 24 of 2022 concerning Medical Records, which requires all health care facilities—from independent practices, puskesmas, clinics, hospitals, to pharmacies and laboratories—to implement electronic medical records (EMR) by December 31, 2023. This regulation was prepared with the aim of improving the quality of health services, providing legal certainty, and realizing digital-based and integrated medical record management nationally. This obligation applies equally regardless of the scale and readiness of the infrastructure of each health facility. Consequently, all health centers in Indonesia are required to immediately switch from a manual system to an electronic system in a relatively short period of time (Ministry of Health, 2022).

However, these regulatory obligations are not necessarily followed by implementation readiness in the field. National data shows that there are still 4,807 health centers in Indonesia that had not implemented electronic medical records until the deadline set. These findings indicate a significant gap between top-down policies and operational realities at the primary service level. This gap is an important urgency to be studied further, considering that the success of EMR implementation depends heavily on contextual factors in each health facility (Virgy, 2022).

To understand the success and failure of the implementation of health information systems, including EMR, a comprehensive evaluation framework is needed. Human, Organization, Technology, and Net Benefits (HOT-Fit) is an evaluation model that is widely used because it is able to assess the success of information systems from three main dimensions simultaneously, namely humans, organizations, and technology, which interact with each other to affect the resulting benefits. This model is considered relevant for the context of primary health facilities because it accommodates the complexity of interactions between users, organizational policies, and the quality of the system itself. Various studies in Indonesia have adopted this framework to evaluate the implementation of EMR in various types of health facilities (Kurniawati & Sevtiyani, 2023).

From the human aspect, various previous studies have found that user readiness and competence are important determinants of EMR success. Research at Puskesmas Kawalu Kota Tasikmalaya found that user competence and uneven training levels affect the optimization of the use of electronic medical record systems at the operational level. The low confidence of health workers in operating the new system is also a recurring obstacle found in various research sites. This finding confirms that the human aspect is not just a matter of technical ability, but also involves acceptance and psychological adaptation to changes in work (Rusdiana, 2024; Nainggolan et al., 2025).

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From the organizational aspect, management support and clarity of policy structure are also determining factors. Evaluation research of electronic medical record information system in hospital X found that aspects of organizational structure have been running quite well, but the barriers still appear in the staffing in the management of the system and not yet optimal communication between parts of the organization. Leadership support and continuous communication and user education are crucial elements that determine the extent to which users can adapt to the new system. Without consistent organizational support, the potential for technical success of the system becomes less than optimal in the field (Mulyana, Situmorang, & Fatikasari, 2023; Nainggolan, Panduwayasa, et al., 2025).

From the aspect of technology, the quality of supporting systems and infrastructure is a challenge, especially in health facilities with limited resources. Research at RSUD Mulia Puncak Jaya Regency found that the efficiency of the electronic medical record system was hindered by limited human resource capabilities, unsustainable training, and unstable internet networks. Similar constraints related to the completeness of features and network stability were also found in the evaluation of the implementation of EMR in other puskesmas. This condition shows that technological factors cannot stand alone, but are closely interrelated with human readiness and organizational support (Nugraha & Octavia, 2024).

So far, the majority of HOT-Fit research in Indonesia is still dominated by a quantitative or mixed-method approach that focuses on measuring satisfaction scores and user perceptions numerically. However, some researchers have begun to realize the importance of a qualitative approach to explore the meaning and user experience in more depth, such as research on the application of e-Puskesmas applications with a HOT-Fit approach that was carried out qualitatively in Siak regency. This approach allows researchers to capture nuances of experience that cannot be recorded through closed questionnaire instruments. This methodological shift is an important basis for subsequent health information system evaluation studies, including in the context of this study (Jambago, Priwahyuni, Yunita, & Jepisah, 2022).

Regionally, the challenges of EMR implementation are also evident in Padang City. Research conducted at 23 health centers in Padang City found that only 47.8% of health workers were declared ready to implement EMR, with factors such as education level, work experience, knowledge, and perception being significant determinants of readiness. This finding reinforces the indication that the gap in EMR implementation is not only a national issue, but is also very pronounced at the city level, including in primary health facilities such as puskesmas. This condition is increasingly relevant considering that Padang City is one of the regions with a fairly large number of health centers and various levels of digital readiness (Siswati, Ernawati, & Khairunnisa, 2024).

One of the health centers in Padang that has started the process of digitizing information systems since before the EMR obligation period was set is the Lubuk Buaya Health Center. The implementation of the Puskesmas Management Information System (SIM-PUS) in the medical records and Health Information unit at the puskesmas has been started through mentoring and

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officer training activities since 2019–2020, as an effort to overcome the problem of collecting medical record data that was previously manual. Information systems at that time were positioned as an important means of organizational decision-making and the reduction of information uncertainty for their users. Nevertheless, the study is still focused on the early stages of implementing the system and has not touched on a comprehensive evaluation of system performance from the perspective of its user experience after years of implementation running (Putra et al., 2020).

Since the initiation of the implementation of SIM-EFA, no in-depth study has been found that specifically evaluates the performance of the electronic medical record system at the Lubuk Buaya Health Center using the HOT-Fit Framework as a whole, especially in terms of the subjective experience of health workers as direct users of the system. In fact, the dynamics of interaction between human, organizational, and technological aspects of the field have most likely evolved and changed since the initial implementation was carried out. This gap is an important research gap to fill, as ongoing evaluation is needed to ensure the system remains relevant to evolving service needs. Without in-depth evaluation, potential operational problems experienced by users are at risk of not being fully identified by puskesmas managers.

To address this gap, a qualitative approach is considered more appropriate than a purely quantitative approach. Qualitative research on the implementation of electronic medical records shows that this approach is able to uncover the dynamics, barriers, and meaning of the implementer's experience richer than just a satisfaction score. The subjective experience of health workers in interacting with the EMR system every day contains emotional, cognitive, and social nuances that are difficult to reduce to purely numerical data. Therefore, deep excavation of meaning is a relevant methodological need for the context of this research (Amin, Setyonugroho, & Hidayah, 2021).

Among the various qualitative designs available, phenomenology is considered the most appropriate because this approach specifically aims to reveal and understand the essence of an individual's life experience of a particular phenomenon in a deep and authentic way. The phenomenological approach does not demand a large number of samples, but rather emphasizes the depth of exploration of the experience of informants who actually experience the phenomenon under study directly. This makes a relatively small number of informants, such as five health workers active users of the EMR system, remain methodologically representative as long as the excavated data reaches a point of Saturation (Saturation) of meaning. Purposive selection of informants towards parties who really interact intensively with the system is the key to the validity of findings in phenomenological design (Fadli, 2021).

Based on a series of problems, data, and research gaps that have been described, researchers are interested in conducting a study entitled "Performance Evaluation of Electronic Medical Record Systems Using the HOT-Fit Framework (Human, Organization, Technology) at the Lubuk Buaya Health Center in Padang". This interest is based on the need for a more holistic

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understanding of the interaction between human, organizational, and technological aspects that shape the performance of EMR systems in the field, not just satisfaction numbers alone.

METHODS

This study uses a qualitative type of research with a phenomenological design because it aims to understand the meaning and subjective experience of informants to use the EMR system in depth (Fadli, 2021). The study was conducted at the Lubuk Buaya Health Center in Padang with five informants selected using purposive sampling techniques, with inclusion criteria were as follows: medical personnel, paramedics, and medical records officers who actively use the EMR system for at least the last year, willing to become informants voluntarily, and had direct experience in the operation of the system in their respective service units. Exclusion criteria are set for health workers who have served less than a year, are on sabbatical, or are not willing to be interviewed in depth. The instruments used in this study were semi-structured interview guide prepared by domain HOT-Fit (Human, Organization, Technology), voice recording devices, field notes, and observation sheets to document the interaction of informants with the EMR system directly in the workplace. Data collection techniques were conducted in three ways, namely in-depth interviews with each informant for 30-60 minutes, participatory observation of the practice of using the system in the service room, as well as documentation studies on standard operating procedures (SOPs), system usage reports, and other supporting data relevant to the focus of the study.

Data analysis was conducted using thematic analysis techniques Miles and Huberman model, which includes three main stages, namely data reduction, data presentation, and conclusion/verification, in order to identify the main themes that represent the experience of informants in each domain HOT-Fit. The validity of the data is strengthened through source triangulation, by comparing information from different informants roles (medical personnel, paramedics, and medical records officers), as well as method triangulation, by comparing the results of interviews, observations, and documentation studies to ensure consistency of findings. This study pays close attention to the ethical aspects of research, starting with the submission and obtaining ethical clearance from the Ethics Committee of the relevant institution before data collection is carried out. Each informant was given an explanation of the objectives, procedures, benefits, and risks of the study, and then asked to sign an informed consent form as a form of willingness to participate voluntarily without coercion, with the right to resign at any time without any consequences. The confidentiality of the identity of informants were maintained through the use of initial codes in reporting the results, and all data were stored securely and only used for academic purposes of this research.

RESULTS

This study produced an in-depth description of the experiences of five informants in interacting with the EMR system at the Lubuk Buaya Health Center in Padang. Based on the

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process of data reduction, data presentation, and inference using the Miles and Huberman model, nine sub-themes were identified that were grouped into three main HOT-Fit domains, as presented in Table 1.

Table 1. Themes And Categories of Research Results Based on Domain HOT-Fit

Domain	Themes	Categories/Sub-Themes
Human	User adaptation process	Initial difficulties of using the system
		Increased self-confidence through habituation
	Satisfaction and workload	Daily working time efficiency
		Dependence on self-learning
Organization	Leadership support	Active role of head of puskesmas
		Lack of socialization of system updates
	Structure of division of labor	Clarity of data input responsibilities
Technology	System interface quality	Ease of use display
	Infrastructure constraints	Instability of the internet
	Completeness of features	Absence of report automation

The researchers' analysis revealed that the sub-themes identified in Table 1 illustrate that the performance of the EMR system at the Lubuk Buaya Health Center in Padang does not run evenly in each HOT-Fit domain, but rather shows a pattern that varies between aspects that are already running well and aspects that still need to be improved. In the human domain, a progressive pattern of development was found, in which the negative perception at the beginning of the use of the system gradually changed to a more positive perception as the experience with the system increased. In the realm of the organization found a more diverse pattern of strong support for aspects of leadership but weak in the aspect of continuous socialization, giving the impression that organizational support is partial and not comprehensive. Meanwhile, in the realm of technology, there is a clear contrasting pattern between satisfaction with interface design and dissatisfaction with the supporting infrastructure, which shows that the quality of system software is not always directly proportional to the quality of the infrastructure that supports it. These patterns, when read as a whole, indicate that the performance of the EMR system is the result of non-linear interactions between domains improvements in one domain (such as ease of interface in domain technology) can help speed up the adaptation process in other domains (human), but weaknesses in certain domains (such as internet networks in domain technology, or socialization in domain organization) can still hold back the optimal benefits that users should feel. This initial interpretation became the basis for more detailed explanations on each of the following domains.

1. Human Domain: Dynamics Of Adaptation And User Satisfaction

The experience of informants in the human domain describes an adaptation process that takes place gradually and not instantaneously. In the early days of using the system, almost all informants expressed feelings of confusion and distrust, especially for those who had not previously used electronic-based systems in their daily work. This feeling slowly turns into

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comfort once the informant gets used to it through the repetition of work routines, although such confidence is not yet fully overarching especially when faced with newly introduced system features or updates. In terms of user satisfaction, the EMR system is generally perceived to help speed up administrative work compared to the previous manual method. Nevertheless, this satisfaction was followed by complaints about the limitations of the training, which was given only once at the beginning of the implementation. As a result, the mastery of the system by some informants is more shape through self-directed learning and informal interaction between work colleagues, not through a structured coaching path from the puskesmas.

2. Domain Organization: Uneven Managerial Support

In the organization domain, informants consistently appreciate the role of the head of the puskesmas who actively encourages compliance with complete and timely data filling. This leadership support is perceived as an important driving factor that affects the consistency of the use of the system in the field. However, this support has not been matched by continuous socialization mechanisms, especially when there are updates or changes to the system, so informants often have to adjust independently without official assistance. The structure of the division of tasks in the management of the system is also clearly identified, where medical records officers play a major role in data input, while personnel in other service units act as a complement to clinical data. However, this clear division of duties in practice sometimes creates a grey area when there is an overlap of responsibilities in certain situations, potentially causing technical confusion among officers.

3. Domain Technology: User-Friendly But Infrastructure-Constrained Interface

From the technological aspect, almost all informants assessed that the interface of the EMR system was quite simple and easy to understand, even for users who previously had minimal digital literacy. The positive perception of this system design is one of the factors that facilitate the adaptation process in the human domain as described earlier, indicating the existence of close inter-domain relationships within the HOT-Fit Framework. Nevertheless, infrastructure constraints in the form of internet network instability are the most frequently complained of obstacles by informants, which directly affects the slowdown in service processes in the field. In addition, the limitations of automation features, especially in the aspect of monthly reporting that is still done manually, are perceived to hinder the work efficiency of medical records officers, so that the benefits of the system cannot be felt optimally in all aspects of work.

DISCUSSION

The results of this study show that the performance of the EMR system in the Lubuk Buaya Health Center in Padang is not a product of a single factor, but the result of cross-influence between the human domain, organization, and technology. This conclusion is in line with a literature review on the evaluation of HOT-Fit-based P-Care systems in a number of puskesmas in

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Indonesia, which also confirms that the quality of primary health information Systems is highly dependent on the synergy of the three domains, not on the dominance of one aspect only. The HOT-Fit model are built to capture the multidimensional nature of the success of information systems, so it makes sense if the constraints on one domain also shift the way users view other domains. On this basis, improving the performance of the EMR system should not stop at one point of improvement, but must be carried out simultaneously and together (Fitriani, Purnami, & Prasetjo, 2022).

In the human domain, the initial difficulties experienced by informants when starting to use EMR systems illustrate the general pattern that the transition from manual to electronic means is almost always accompanied by reluctance and nervousness of users in the initial phase. A similar pattern is also evident in qualitative research on the application of electronic medical records, which found that the initial user experience was tinged with confusion and doubt before finally forming a more stable acceptance attitude over time. Theoretically, this picture fits with the basic idea of HOT-Fit which places system use and user satisfaction as two core dimensions in the human domain, both of which change dynamically with length of use. Researchers consider that this kind of adjustment period will always be repeated every time there is a system update, so consistent assistance from the early stages is the key to shortening the transition period (Amin, Setyonugroho, & Hidayah, 2021).

The increasing confidence of informants through the repetition of daily work indicates that the ability to use health information technology is not only a matter of technical ability, but also the result of a gradual social learning process in the work environment. This finding is in line with the results of a study on factors that affect the acceptance of electronic medical record systems, which emphasizes that experience gained through repeated system use are one of the strong determinants of the level of acceptance of technology among health workers. In terms of technology acceptance theory, this shift can be interpreted as a shift from perceived difficulty to perceived ease of use that is built through repeated interaction with the system. This condition indicates that the long-term sustainability of EMR is largely determined by the constancy of the use of the system, not merely by the quality of training at the initial stage (Widyastuti, Sari, & Nugroho, 2020).

The informant's complaint about the limited advanced training deserves special attention, as this has the potential to hinder the maximum use of the system in the long term. Studies on the readiness of health workers in running EMR in a number of Padang City health centers also show the same pattern, where the absence of continuous training is one of the main causes of low readiness to use the system optimally. In the HOT-Fit frame, the lack of advanced training can be read as the weakness of the domain organization in providing sufficient support for the human domain, so that these two domains are difficult to separate in practice firmly. Researchers suspect that this limitation is not born from a lack of concern on the part of management, but from the limited resources and time available at the puskesmas level to hold training regularly (Siswati, Ernawati, & Khairunnisa, 2024).

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In the organization domain, the active involvement of the head of the puskesmas in encouraging the completeness of data filling is in line with the results of the evaluation of the electronic medical record information system at hospital X, which found that leadership support became one of the determining elements of success on the organizational structure side. Consistent leadership tends to foster a work culture that is more obedient to data filling procedures, so that the quality of information produced by the system is maintained. In HOT-Fit theory, the dimension of structure in the domain organization is positioned as an element that directly affects how optimally the system can be utilized by users in the field. The researcher is of the view that the effectiveness of this leadership support will be increasingly felt if it is accompanied by a routine evaluation mechanism that absorbs direct feedback from implementing officers (Mulyana, Situmorang, & Fatikasari, 2023).

However, the findings about the lack of continued socialization around system updates reflect the distance between normative leadership support and its technical implementation in the field. Similar conditions also emerged in a study that highlighted the importance of continuous socialization as one of the conditions for the successful implementation of electronic medical records in primary health facilities, where inconsistent socialization tends to cause differences in understanding between employees of the same system. Seen from the perspective of the learning organization, continuous socialization should be an integral part of the change management cycle, not just a ceremony at the opening stage of implementation. Researchers assess that this gap risks widening the distance between fast-adjusting and slow officers, resulting in variations in individual performance despite being in the same work unit (Rani, Widyaningrum, & Puspita, 2021).

Regarding the distribution of tasks in the management of the system, the finding of a gray area of responsibility between medical records officers and personnel in other service units reinforces the general picture of the literature review of HOT-Fit-based information system evaluation in various Indonesian health centers, which highlights that the clarity of role distribution is often a recurring challenge in the implementation of Primary Health Information Systems. Theoretically, this kind of role ambiguity can reduce the quality of the environment dimension in the organization's domain, because a blurred work environment risks creating overlapping responsibilities and weakening individual accountability for data completeness. Researchers suspect this ambiguity arises because the organizational transition process has not been followed by a complete SOP revision since the system was first introduced. This condition confirms the need for periodic review of the task structure as the system needs develop (Fitriani, Purnami, & Prasetjo, 2022).

In the technology domain, the informant's impression that the appearance of the EMR system is quite simple and easy to digest is a positive finding that matches the results of a study on the quality of the system and information in the use of electronic medical records in hospitals, which confirms that the user-friendly interface design significantly raises the level of acceptance of the system by health workers. This ease of use is an important foundation for the continued use of

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the system, because users with different levels of digital literacy are still able to operate the system without significant technical problems. In the hot-Fit frame, the dimension of system quality in domain technology is indeed one of the prerequisites before the system is able to provide optimal benefits for its users. Researchers suspect that the simplicity of this interface helps speed up the adjustment process in the human domain as seen in previous findings, which indicates the existence of an interplay between the two domains (Simbolon, Ginting, Boris, & Simbolon, 2024).

Nevertheless, the constraints of unstable internet networks complained by almost all informants become significant obstacles that also often appear in various studies of EMR implementation in primary health facilities with limited infrastructure, including in the evaluation of EMR implementation in Mulia hospital Puncak Jaya Regency which also found unstable internet networks as one of the main barriers to system efficiency. This network instability directly erodes the dimension of service quality in the technology domain, because users cannot fully rely on the system in service situations that demand response speed. This condition is a separate problem for primary health facilities in Indonesia, considering the equitable distribution of digital infrastructure between regions is still a structural problem that has not been resolved nationally. Researchers suspect that these network barriers also slow down the process of entering data in real-time, which in turn hinders the smooth operation of patient services in a number of units (Nugraha & Octavia, 2024).

The limitations of the report automation feature found in this study are also in line with the findings in the evaluation of the implementation of EMR in Puskesmas Cireundeu Kota Tangerang Selatan, which found that many EMR systems in primary health facilities are still not equipped with adequate automatic reporting features, so that some administrative processes still have to be done manually. This limitation becomes a kind of irony, considering that one of the main goals of digitizing medical records is precisely to reduce the administrative burden on health workers as a whole. From the point of view of Information Systems theory, the incompleteness of this feature can be viewed as a weakness in the information quality dimension, because the system output is not fully reliable to support automated managerial decision making. Researchers suspect that the limitations of this feature are most likely due to the fact that the system used has not experienced a meaningful version update since the beginning of its implementation, so that the growing reporting needs have not been fully accommodated (Sucipto, Kuntoadi, Firmansyah, Lestari, Utama, & Wahyuningtyas, 2024).

In general, the pattern of inter-domain interrelationships revealed in this study shows that human readiness, organizational support, and technology quality go hand in hand and strengthen or weaken each other. These findings confirm the reliability of the HOT-Fit Framework as an evaluation model capable of capturing the complexity of the success of Health Information Systems in primary facilities, as confiEMRd by numerous literature reviews that confirm the relevance of this model to various types and scales of health facilities in Indonesia. However, this study provides an additional nuance in the form of a deeper understanding of how these three domains are subjectively experienced by users, something that is rarely revealed through

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quantitative approaches that rely solely on satisfaction scores. This wealth of stories is a valuable methodological contribution that distinguishes this study from most previous HOT-Fit studies (Fitriani, Purnami, & Prasetjo, 2022).

When compared with the initial research on the implementation of SIM-EFA in Lubuk Buaya Puskesmas at the beginning of implementation, the findings of this study indicate that although the system has been running for years, the fundamental issues surrounding training, socialization, and network infrastructure are still not completely resolved. This indicates that the digitization process in primary health facilities is continuous and cannot be considered complete just because the system is technically running. The time span between the initial study and this study actually provides a longitudinal point of view that is valuable, because it shows that the basic problems in the application of primary health information systems tend to remain if not addressed in a planned and sustainable manner. Researchers suspect that without more serious structural intervention, the same pattern of obstacles could potentially continue to repeat even though the system undergoes technical updates in the future (Putra, Yasli, Oktamianiza, Leonard, & Yulia, 2020).

The findings of this study also confiEMRd the relevance of the regional context of Padang City, where the level of readiness for the implementation of EMR that has not been evenly distributed in various health centers was also reflected in the dynamics experienced by informants at the Lubuk Buaya Health Center. The compatibility of the findings at the puskesmas level individually with the findings at the city level shows that the issue of EMR implementation readiness is comprehensive and not just a single case at one particular facility. From the point of view of regional health policy, this conformity indicates the need for interventions that reach across health centers, not just completion separately in each facility. Researchers suspect that the limited coordination between the city health office and each puskesmas contributes to the unevenness of this readiness throughout the Padang City area (Siswati, Ernawati, & Khairunnisa, 2024).

In terms of methodological, the abundance of data generated through the phenomenological approach in this study confirms the advantages of a qualitative approach in revealing the side of experience that cannot be simplified into mere numbers. This approach allows researchers to capture the emotional, social, and context nuances that shape the way informants perceive the EMR system, something that goes hand in hand with the characterization of phenomenology as a method focused on understanding the core of a person's life experience. The depth of excavation of the five informants in this study proved to be able to bring out a variety of rich themes, although the number of informants is relatively small compared to quantitative research in general. This confirms that the validity of qualitative research is not measured by the large number of samples, but rather by the depth and achievement of the meaning saturation point of the data collected (Fadli, 2021; Nainggolan, K., dkk, 2025).

Based on all of the above findings and analysis, the researchers are of the view that the performance of the EMR system at the Lubuk Buaya Health Center in Padang is currently at the

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"running but not optimal" stage, where the system has provided tangible benefits in accelerating administrative processes, but has not been fully supported by a qualified organizational ecosystem and infrastructure to gain these benefits to the fullest. Researchers suspect that without special attention to the sustainability of training, strengthening socialization, and revamping the network infrastructure, the peak potential benefits of the EMR system will continue to be held at the same level in the long term. This condition is an important reflection for puskesmas management not to view system evaluation as a one-way activity, but as an ongoing process that must be continuously aligned with the dynamics of user needs in the field. This view becomes the basis for researchers in formulating operational implications on the conclusion of this study.

CONCLUSIONS

This study concluded that the performance of the Electronic Medical Record system at Puskesmas Lubuk Buaya Padang is shaped by the interaction of three HOT-Fit domains that dynamically influence each other. In the human domain, users experience a gradual process of adaptation from initial confusion to self- confidence developed through work habituation, but is constrained by the limitations of continuous training. In the organization domain, puskesmas leadership support was considered quite good in encouraging compliance with data entry, but has not been balanced by continuous socialization and consistent clarity of the task distribution structure. In domain technology, the system interface was considered simple and easy to understand, although the instability of the internet network and the limitations of the report automation feature are still real obstacles. Overall, the performance of the EMR system is at an ongoing but not optimal stage, because the benefits felt by users have not been fully supported by an adequate organizational ecosystem and technology infrastructure.

Operational implications of these findings is the need for management of Puskesmas Lubuk Buaya Padang to arrange a regularly scheduled continuous training program, not just done once in the early stages of implementation, so that all health workers have equal competence in operating the system. The management also needs to establish a standard socialization mechanism every time there is a system update, accompanied by periodic revision of the SOP of task distribution to eliminate the gray area of responsibility between officers. From the technical side, it is necessary to coordinate with the Padang City Health Office and internet service providers to improve network stability, as well as submitting the need for updating the report automation feature to system developers to reduce the manual workload of medical records officers. These recommendations are applicable and can be immediately adopted by puskesmas managers as concrete steps to optimize the performance of the EMR system on an ongoing basis.

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