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Evaluation of Healthcare Service Digitalization Using the HOT-Fit Method

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Abstract

Digital transformation in the healthcare sector has become a crucial element in enhancing the quality, efficiency, and transparency of public services. This study aims to evaluate the success of healthcare service digitalization at RSUD dr. Hasri Ainun Habibie Gorontalo using the HOT-Fit (Human, Organization, Technology, and Net Benefit) framework. The research employed a quantitative approach with survey instruments administered to 104 respondents, consisting of both medical and non-medical staff. The findings indicate that all HOT-Fit indicators fall within the "very high" category, particularly information quality (3.47) and user satisfaction (3.38), both of which show a strong correlation with the net benefits of digitalization. The main challenges identified include unstable internet connectivity and application fragmentation, although most users perceive the system as functioning effectively. Recommendations derived from this study include improving network infrastructure, developing integrated digital platforms (super apps), and providing advanced technical training for human resources. These results reinforce the significance of integrating human, organizational, and technological aspects to ensure the success of digital transformation in regional healthcare services.

Introduction

Digital transformation in healthcare services has become a hot topic and increasingly relevant over the past two decades (Marques & Ferreira, 2020; Mauro et al., 2024). One of the key drivers accelerating digital transformation in the healthcare sector is the COVID-19 pandemic (Cobianchi et al., 2020; Tortorella et al., 2021; Paul et al., 2024), which led approximately 65% of healthcare organizations to increase the adoption of digital technology as a means to provide better care to patients (Deloitte Insights, 2019). Digitalization in healthcare services is based on the assumption that leveraging the potential of technology can provide benefits for patients, healthcare professionals, and organizations in terms of improved efficiency and effectiveness (Kraus et al., 2021; Marques & Ferreira, 2020; Massaro et al., 2023). Digitalization also enables better interaction and specialization of healthcare services for patients (Alloghani et al., 2018; Tortorella et al., 2021). Furthermore, digital transformation can completely change the way doctors and leaders make decisions by supporting automation in data management processes (Secundo et al., 2019; Spanò & Ginesti, 2022). This is particularly relevant in the healthcare sector, where professionals and leaders now have access to a wide range of information, including staff records, electronic health records, clinical findings, diagnoses, prescription medications, procedures medical imaging, and mobile health. Thus, the use of new digital technologies can support the collection, processing, analysis, and management of data to improve understanding and decision-making (El Morr & Ali-Hassan, 2019; Ilangakoon et al., 2022). However, digital transformation in healthcare services must also be viewed from the perspective of the Indonesian context, particularly in rural areas, as healthcare service transformation is also occurring in rural hospitals (Nurhakim et al., 2024; Hossain et al., 2025; Listyaningrum et al., 2025). One of the healthcare facilities in rural areas owned by the

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Gorontalo Provincial Government is the Dr. Hasri Ainun Habibie General Hospital. This hospital is a type C referral hospital that is continuously encouraged to adopt practices that enhance the quality, comfort, and efficiency of medical services, with the aim of patient satisfaction (Hao et al., 2016). Since 2021, RS Ainun has begun implementing digitalization (RS Ainun Performance Report, 2021), marked by the introduction of applications to support healthcare services at the hospital.

Table 1. List of applications at Dr. Hasri Ainun Habibie Provincial General Hospital, Gorontalo

Application Name	Purpose
NEW-Invoice V.2	Automating the billing process for all hospital activities
ACCURACY (Accreditation Measurement Tool)	Assisting in meeting hospital accreditation standards
SIFANDI (Integrated Quality and Data Information System)	Integrates all hospital health and service quality data into a single system
E-Klik (Electronic Clinical Authority)	Used by healthcare professionals to record daily activity reports based on assigned clinical authority
SIKREN GAIS (Integrated Credential Information System)	Manages nursing credentials
PRESTASI (Program Plan, Targets, and Evaluation)	A tool for planning, measuring, and evaluating the achievement of hospital performance targets
SIMRS-SimGos	Improving hospital operational efficiency, integrating all hospital processes, enhancing healthcare quality, financial management, and ensuring regulatory compliance
Cepat Sehat	Developing new features for the SIMRS application
Mobile Ainun	Becoming part of the SIMRS application for Android users
SIRINE	Online patient registration

Source: Ainun Hospital, processed (2025)

However, the digitalization of healthcare services at Ainun Hospital requires evaluation to determine how effective this project is. One relevant evaluation method that can be used is the HOT-Fit method (Azmy et al., 2025; Samsudin et al., 2025; Osok et al., 2025). The Human Organization Technology Fit (HOT-Fit) model introduced by Yusof et al. (2008) and widely developed in Indonesia, is considered a comprehensive and applicable evaluative approach for analyzing the success of information systems in institutions. Several studies in Indonesia, such as those by Muhimmah (2013), Rozanda (2017), and Askuba (2018), indicate that the HOT-Fit model is highly relevant for use in public institutions, particularly hospitals, as it encompasses not only technical aspects but also human and organizational elements as supporting ecosystems. Djohan (2021) emphasizes that this model is superior because it does not stop at system evaluation alone but also provides comprehensive recommendations for sustainable development (Askuba, 2018; Djohan, 2021; Muhimmah, 2013; Rozanda, 2017).

This model consists of four main dimensions: human, organizational, technological, and *net benefit*: 1) The human aspect consists of two components, namely system users (including

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frequency, duration, expertise, resistance, and training) and user satisfaction, which includes perceptions of system usefulness and comfort; 2) The organizational aspect includes organizational structure (planning, strategy, leadership, communication) as well as external and internal work environments (regulation, funding, location, stakeholder relationships); 2) The technological aspect assesses system quality (response time, flexibility, security), information quality (accuracy, completeness, readability), and service quality (technical assistance speed, empathy, and technical support reliability); 3) The net benefit aspect refers to *the* tangible *outputs* of the system, such as work efficiency, error reduction, improved clinical outcomes, and cost savings.

This model is increasingly relevant in the context of digital public services, where the success of a system is not only determined by the quality of the software but also by the readiness of people and organizations to adopt it.

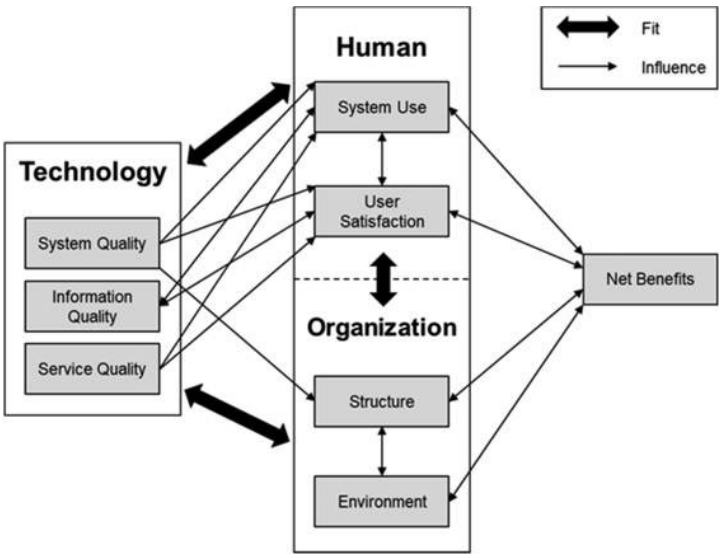

Figure 1. HOT-Fit Model

Methods

This research design uses the HOT-Fit method with a quantitative approach (Hardiyanti et al., 2024; Pamungkas et al., 2025; Munjirin et al., 2024). The research population consists of 415 users, including doctors, nurses, midwives, other medical personnel, and non-medical personnel consisting of hospital administrative staff. This study used 104 samples calculated using the Slovin formula, with a margin of error of 8.5%. The research location is at Dr. Hasri Ainun Habibie General Hospital in Gorontalo, and data collection was conducted from May to June 2023. The sampling technique used is random sampling. The research instrument employs a Likert scale measurement to evaluate the digitalization of healthcare services at Dr. Hasri Ainun Habibie General Hospital. The Likert scale measurements were categorized into scores: 1) strongly disagree; 2) disagree; 3) agree; 4) strongly agree, and were analyzed using IBM SPSS Statistics 26. This even-numbered Likert scale is designed to avoid bias resulting from the presence of a middle value (Voicu et al., 2013; Cho et al., 2024; Kankaraš & Capecchi, 2025). The indicators in the HOT-Fit concept include: 1) focus on needs, background, and objectives of digitalization ; 2) focus on resources, planning, and organizational readiness; 3) focus on program implementation, challenges, and internal dynamics; 4) focus on outcomes, impacts, and sustainability of digitalization; 5) focus on barriers to digitalization.

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Table 2. Respondent Characteristics

Characteristics	(n) 104	
Gender		
Male	22	21.2
Female	82	78.8
Age		
20	26	25
31-40	65	63
41-50	13	12
Employment Status		
Civil Servant (PNS and PPPK)	59	56.7
Contract Workers	45	43
Type of work		
Health staff	90	86
Non-health staff	14	13
Work Experience		
< 1 Year	7	6.7
1-3 years	4	3.8
3–5 years	11	10.6
> 5 Years	82	78.8

Source: Ainun Hospital, processed (2025)

Data processing consists of several stages. The first stage is data editing, which is done by checking the list of questions on the questionnaire given to respondents. The second stage is data coding, which involves converting data from letters to numbers. The third stage is data entry, which involves displaying numerical information in sequential columns. The data must then be entered into computer software and using the IBM SPSS Statistics 26 application to be presented and analyzed correctly after being coded. The final stage is data *cleaning*, which involves cleaning the data or ensuring that the data entered into the computer program has been reviewed for potential issues to ensure accuracy, freedom from errors, and readiness for analysis.

Results and Discussion

Model Testing

This study aims to analyze the factors influencing the success of digital health service implementation at Dr. Hasri Ainun Habibie General Hospital, using a quantitative approach based on the HOT-Fit theoretical framework (*Human, Organization, Technology, and Net Benefit*), as illustrated in the model visualization presented in Figure 1. Figure 2 HOT-Fit Research Model. The following section will discuss the results of validity, reliability, scoring, and correlation tests to provide an overview of the factors supporting and hindering the success of digitalization at Dr. Hasri Ainun Habibie General Hospital in Gorontalo.

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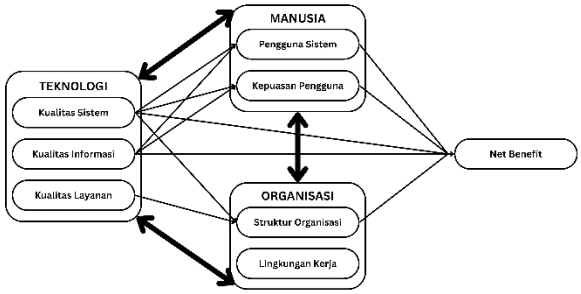

Figure 1. HOT-Fit theoretical framework (Human, Organization, Technology, and Net Benefit)

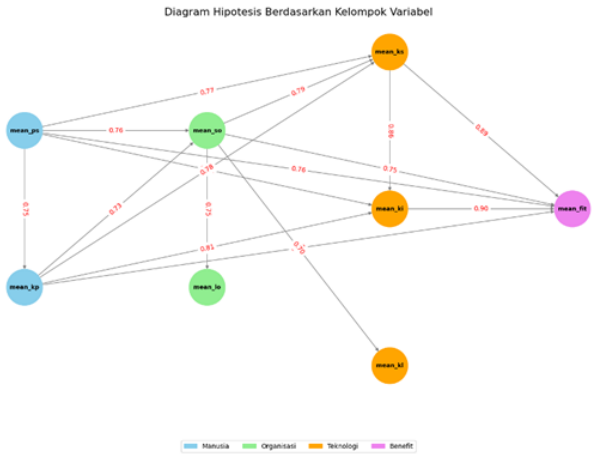

Figure 2. HOT-Fit Research Model

Validity Test

Before analyzing the data, the researcher conducted a validity test (Table 3) aimed at ensuring that the instruments used in the questionnaire had the capability to measure the desired research. The results of the Kaiser-Meyer-Olkin (KMO) test showed a value of 0.900, indicating an excellent result. This value indicates that the items used in the questionnaire have a very strong correlation, making the data suitable for analysis. Additionally, the Bartlett's Test of Sphericity also produced a significant value of 0.000 (<0.05), rejecting the null hypothesis that the correlation matrix has no relationship between variables. This means that the variables used in this study are interrelated and meet the assumptions for use in further analysis.

Table 3. Validity Test Results

Test Model	Score	Description
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.900	Very Good
Bartlett's Test of Sphericity	0.000	Significant

The high results of this inter-item validity indicate that the research instrument used is appropriate for measuring the HOT-Fit factors (*Human, Organization, Technology, and Net Benefit*) in the context of this study. The significant value of Bartlett's Test also reinforces that

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the data used is not random but consistent with each other. Thus, the author can proceed with the reliability analysis, scoring, and correlation analysis conducted subsequently.

Data Reliability (Cronbach's Alpha Test)

Next, a reliability test was conducted using Cronbach's Alpha. This test was performed by the author to ensure that the questionnaire instrument used was consistent and reliable. The results show that all research variables used in this study have reliability values above the threshold of 0.700 as shown in Table 4 below:

Table 4. Results of Data Reliability Test

Variable	Sub-Variable	Reliability Statistics	Description
Human	System Users	0.78	Fair
	User Satisfaction	0.940	Very High
Organization	Organizational Structure	0.73	Fair
	Work Environment	0.723	Satisfactory
Technology	System Quality	0.877	High
	Information Quality	0.901	Very High
	Service Quality	0.872	High
Net Benefit		0.949	Very High

High reliability values were observed in several variables, particularly in user satisfaction, information quality, and *net benefit*. This indicates that the instrument used in the questionnaire is effective for researching the implementation of digitalization at Dr. Hasri Ainun Habibie General Hospital in Gorontalo. Variables categorized as adequate, such as system usage, organizational structure, and work environment, remain suitable for use as their values exceed 0.700. These results will strengthen the validity of the research findings, as high reliability ensures that the data filled out by respondents is not random.

Scoring Results

Using a Likert scale (1-4), this study measured respondents' perceptions of the main variables within the HOT-Fit approach framework. The scoring results in Table 5 show that all variables in the "Very High" category with scores above 3.0 indicate an initial indication that the implementation of digitalization of health services at Dr. Hasri Ainun Habibie General Hospital in Gorontalo is considered successful.

Table 5. Scoring Results of the Data

Variable	Sub-Variable	Score	Overall Score	Description
Human	System User	3.3	3.35	Very High
	User Satisfaction	3.38		
Organizatio n	Organizational Structure	3.15	3.15	Very High
	Work Environment	3.15		
Technology	System Quality	3.35	3.35	Very High
	Information Quality	3.47		
	Service Quality	3.23		
Net Benefit			3.38	Very High

The high scores indicated in the scoring results show that the digitalization implementation carried out at Dr. Hasri Ainun Habibie General Hospital was considered successful by the

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respondents in this study. The sub-variable of information quality, with a score of 3.47, has the highest score. This result indicates that the information system used is effective in providing accurate and relevant data for patient care activities at Dr. Hasri Ainun Habibie General Hospital in Gorontalo. However, what is interesting is the difference in scores between Information Quality (3.47) and Service Quality (3.23), which is caused by technical obstacles such as unstable internet connectivity, mentioned by 87.2% of respondents as the main obstacle in the implementation of the digital system at the hospital. Despite these technical challenges, the overall Net Benefit score of 3.38 demonstrates that digitalization implementation has a positive impact at Dr. Hasri Ainun Habibie General Hospital, such as reduced administrative processing time and improved service transparency. These results align with the previously mentioned HOT-Fit theory, which states that the integration of human, organizational, and technological factors is necessary to achieve benefits in digitalization implementation.

Correlation Between Variables

To understand the relationship between variables in the HOT-Fit approach, the author conducted a correlation test using Spearman's Ranks with a significance level of p = 0.000 (α=0.05). The results show varying correlation results ranging from very strong, strong, moderate, to weak, as shown in Table 6 below:

Table 6. Correlation Test Results (Spearman)

Hypothesis	Correlation	Coefficient (r)	Significance (p)	Status
H1	PS => KP	0.751	0.	Accepted
H2	PS => SO	0.755	0.00	Accepted
H3	PS => LO	0.602	0.00	Not Accepted
H4	PS = KS	0.773	0	Accepted
H5	PS => KI	0.720	0	Accepted
H6	PS => KL	0.685	0.00	Not accepted
H7	PS => FIT	0.764	0	Accepted
H8	KP => SO	0.726	0.000	Accepted
H9	KP => LO	0.571	0	Not accepted
H10	KP => KS	0.776	0	Accepted
H11	KP => KI	0.806	0	Accepted
H12	KP => KL	0.664	0.000	Not accepted
H13	KP => FIT	0.916	0	Accepted
H14	SO => LO	0.746	0	Accepted
H15	SO => KS	0.788	0.000	Accepted
H16	SO => KI	0.679	0.000	Not Accepted
H17	SO => KL	0.704	0	Accepted
H18	SO => FIT	0.748	0.00	Accepted
H19	LO => KS	0.530	0.00	Not accepted
H20	LO => KI	0.495	0	Not accepted
H21	LO => KL	0.600	0	Not Accepted
H22	LO => FIT	0.549	0	Not Accepted
H23	KS => KI	0.837	0	Accepted
H24	KS => KL	0.686	0.000	Not accepted
H25	KS => FIT	0.889	0	Accepted
H26	KI => KL	0.602	0.000	Not accepted

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H27	KI => FIT	0.903	0	Accepted
H28	KL => FIT	0.683	0.000	Not Accepted

Based on the Spearman results, there is a very strong correlation between Kp and Fit and Ki and Fit. These results are consistent with the HOT-Fit theory that user satisfaction and information quality are the most influential factors on the benefits of digitization. The correlation between Ks and Fit (r=0.889) indicates that robust technological infrastructure is a prerequisite for the successful implementation of an information system. This result is also inversely related to the low correlation between Lo and Ki (r=0.495), which is interpreted as meaning that even though the work environment is supportive (score 3.15), it does not directly improve information quality. This result may occur as mentioned earlier, where there are technical barriers such as unstable internet connectivity.

Based on these results, the author also found that the correlation between variables such as So with Lo and Ks with Ki is a significant factor in the success of implementation at Dr. Hasri Ainun Habibie General Hospital. For instance, an organizational structure that supports (So) strengthens the work environment (So) at the hospital to adopt technology. However, the moderate correlation between Ps and Lo (r=0.602) also indicates that user adaptation to the system is more influenced by technological and human factors than by the work environment.

Demographics

To understand the context of respondents' perceptions toward the implementation of digital health services, the author analyzed demographic characteristics at Dr. Hasri Ainun Habibie General Hospital in Gorontalo based on gender, age, employment status, job type, and work experience. The data generally shows that the majority of respondents have more than 5 years of work experience and are in the productive age group (31-40 years), as specifically detailed below:

Gender

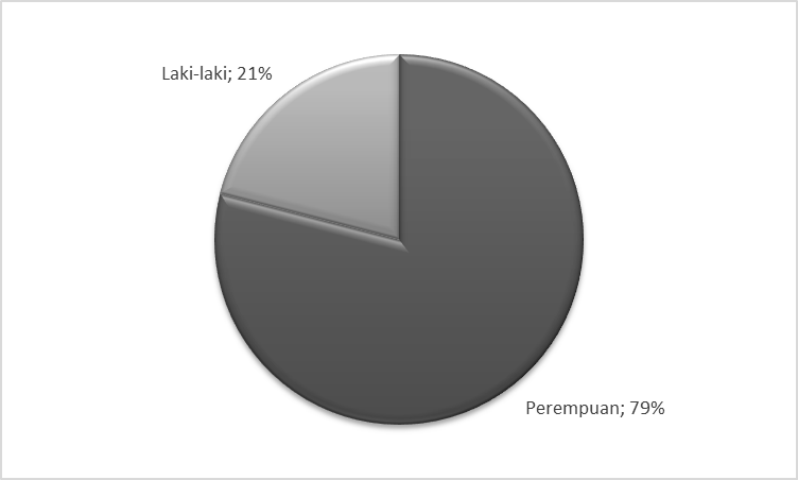

Figure 3. Gender Distribution of Respondents

Figure 3 shows that the majority of respondents are female, accounting for nearly 80%, reflecting the workforce structure at Dr. Hasri Ainun Habibie General Hospital. This is likely due to the characteristics of the healthcare sector, which is predominantly staffed by women, such as nurses, midwives, or administrative staff.

Age

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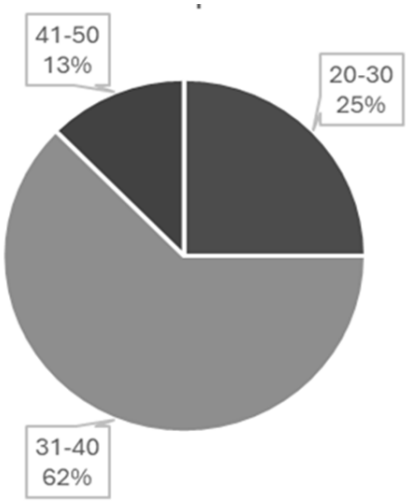

Figure 4. Age Data of Respondents

Next is the age of the respondents. Figure 4 shows that the majority of respondents are in the 31-40 age group, accounting for 63%. This age group is the productive age group and is adaptable to technology. These demographic characteristics support the interpretation that the respondents have a capable understanding of the digital systems used at Dr. Hasri Ainun Habibie General Hospital.

Employment Status

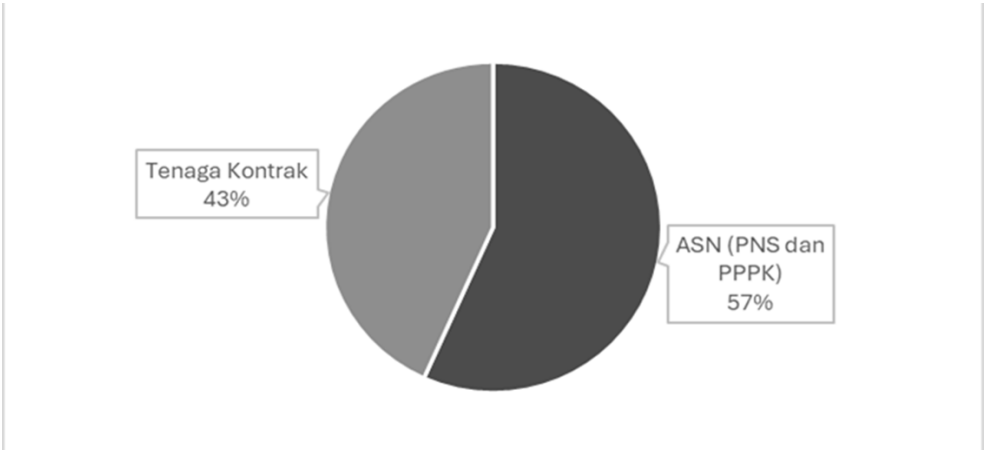

Figure 5. Employment Status of Respondents

Based on Figure 5, it can be seen that the composition of employment status indicates that more than half of the respondents are permanent employees (ASN/PPPK). This percentage suggests that permanent employees may have a long-term commitment to adapting or developing digital systems in hospitals, although this argument requires further research on how the commitment between permanent and contract employees toward digital system development differs. Furthermore, the dominance of permanent employees also implies that hospitals may rely more on this group in ensuring the continuity and sustainability of digital transformation programs. Meanwhile, contract employees, although potentially having high motivation and fresh perspectives, might face limitations in contributing to long-term initiatives due to the temporary nature of their employment status.

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Type of Work

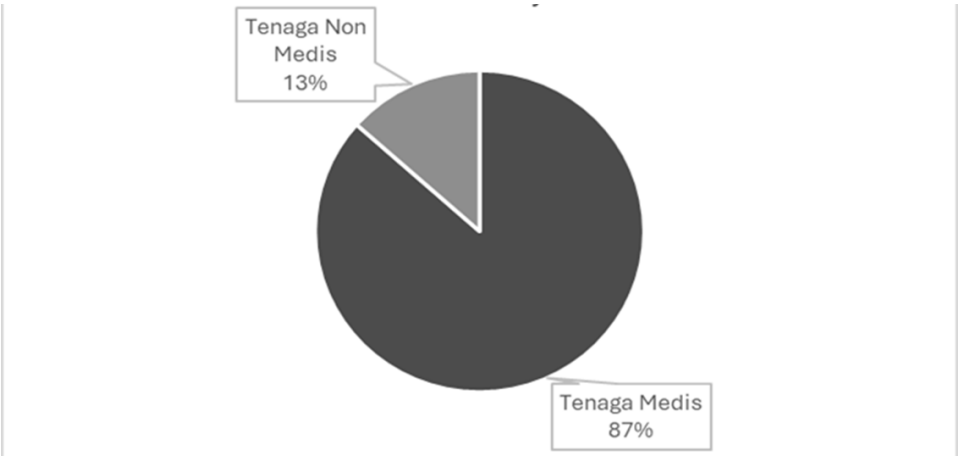

Figure 6. Data on Respondents' Job Types

Based on Figure 6, the data on the type of work of the respondents can be seen. This data shows a dominance of medical staff with a percentage of 86.5%, indicating that digital systems in patient care and healthcare services in hospitals are primarily used for electronic recording and management of healthcare data such as patient data, medical records, diagnoses, medical procedures, and pharmacy and laboratory services.

Work Experience

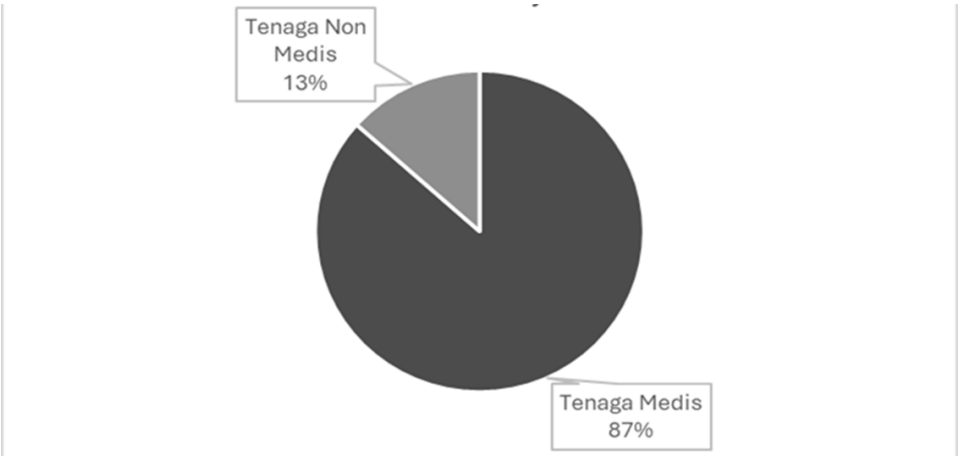

Figure 7. Work Experience Data of Respondents

Figure 7 shows that the majority of respondents have more than 5 years of work experience, with a percentage of 78.8%. This indicates that most respondents have extensive experience with workplace dynamics and the implementation of digitalization at Dr. Hasri Ainun Habibie General Hospital. This experience strengthens the validity of the data and findings, as the number of respondents serves as validation and is considered capable of providing assessments based on their experience and observations over an extended period in their work environment.

From the data, the author can see the demographic profile of the respondents, which provides important context and interpretation for the research. First, the dominance of medical staff (86.5%) and work experience of over 5 years (78.8%) indicates that the data from the " " is representative of the perceptions of hospital staff who are adaptive to digital systems. The productive age range of 31-40 years (63%) also supports this argument, as technological adaptation is facilitated by a productive age group that accelerates the adaptation process. This

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argument is further supported by high scores on the user satisfaction variable (3.38) and the Net Benefit variable (3.38).

Second, regarding the difference in the proportion of civil servants/PPPK (56.7%) and contract workers (43.3%) related to commitment to the work environment. Although there is no significant difference between the percentages of these two groups (or nearly equal percentages), the motivational characteristics of ASN/PPPK may influence the consistency of digitalization implementation. Meanwhile, contract workers may have different motivations depending on the duration of their employment contracts.

Third, with female respondents dominating (78.8%), this aligns with the WHO report stating that two-thirds of the global healthcare workforce are women (WHO, 2019), where women predominantly hold administrative positions and provide direct patient care in hospitals. However, further research is needed to explore how gender findings may influence perceptions of digital system quality. Lastly, the data shows that nearly all respondents (93.3%) have over one year of work experience. This reinforces the validity of the results, as respondents have undergone an adaptation process with the digital system. This extensive work experience could be one factor explaining why the Net Benefit score is 3.38 and the Technology score is 3.35, both falling into the "Very High" category.

Challenges and Recommendations for Improving Digitalization

Based on the collected data, the author asked respondents in the questionnaire to identify the main challenges related to the implementation of digitalization in healthcare services at Dr. Hasri Ainun Habibie General Hospital and provide feedback on the current system. The results showed that most of the challenges were technical in nature, while the feedback provided focused more on improving infrastructure and system integration.

Challenges in Digitalization Implementation

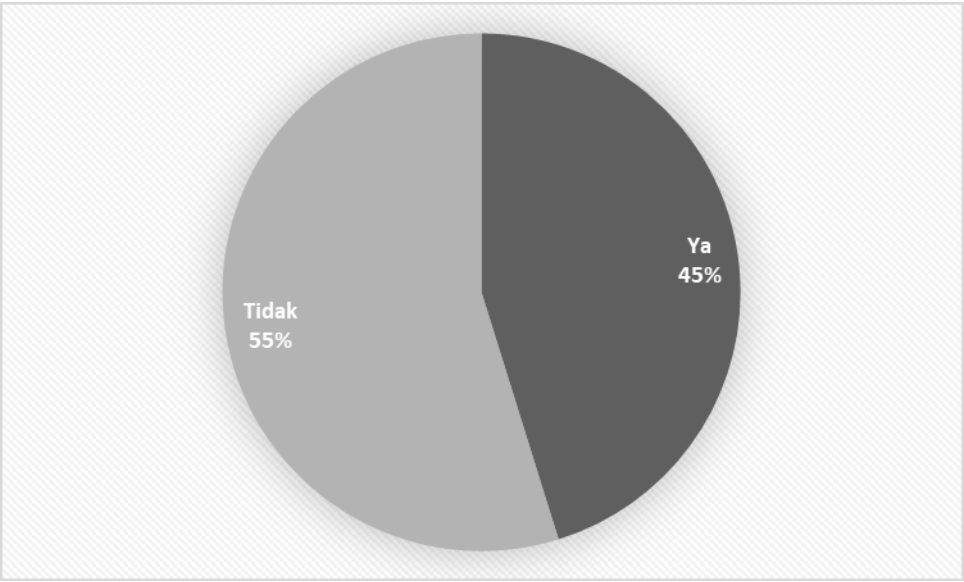

Figure 8. Presence or absence of barriers in digitalization implementation

Based on Figure 8, respondents were asked about the presence or absence of challenges in digitalization. 55% of respondents stated that there were no obstacles, meaning that the majority of respondents felt that there were no obstacles in the adaptation process or daily activities using the existing system. Meanwhile, 45% of respondents mentioned the presence of obstacles, with the obstacles outlined in Figure 9.

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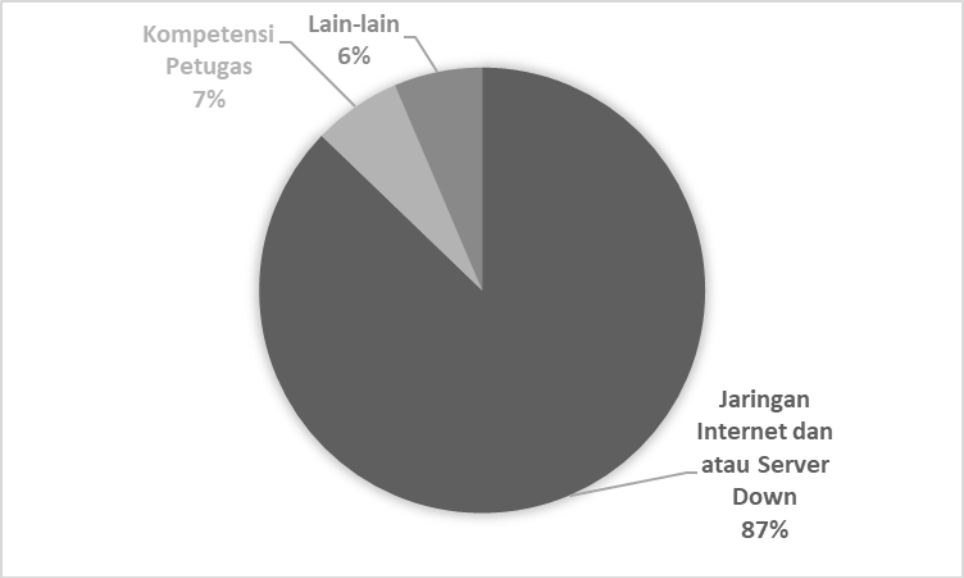

Figure 9. Digitalization Challenges

Figure 9 shows the respondents' answers regarding the obstacles they experienced related to the implementation of digitalization in health services. The majority of respondents mentioned internet connectivity and server downtime as the main obstacles, with a percentage of 87%. This issue directly impacts service quality with a score of 3.23 and system quality with a score of 3.35. Although both fall under the "Very High" category, the sub-variables are weaker compared to the sub-variables of information quality, which scored 3.47.

Regarding staff competence, only 7% of respondents mentioned limited competence as a barrier. This suggests that human factors related to the implementation of digital health services at Dr. Hasri Ainun Habibie General Hospital are not the primary challenge. Lastly, respondents mentioned other obstacles with a 6% percentage, such as insufficient training or system application fragmentation.

Recommendations

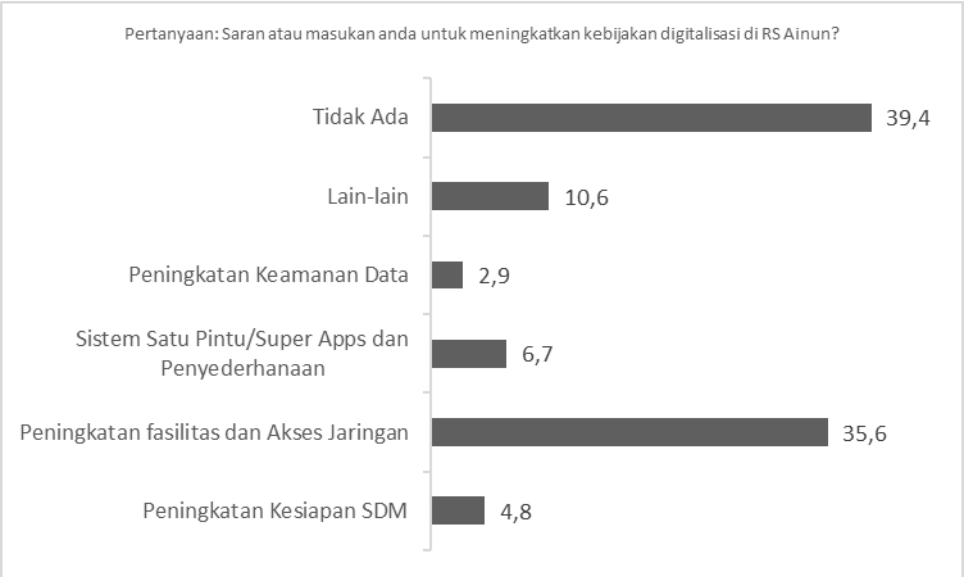

Figure 10. Respondent Input

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Figure 10 shows the respondents' input on digitalization policies at Dr. Hasri Ainun Habibie General Hospital. Based on the results, 36% of respondents suggested prioritizing improvements in technological infrastructure and network access. This aligns with the main challenges frequently mentioned by respondents. Meanwhile, 39% of respondents stated that there were no suggestions to be mentioned. The author argues that this could occur for three possible reasons. First, respondents believe that the digital system in the hospital environment is already optimal. Second, respondents are not concerned about technical issues, as they are focused on medical tasks, and as mentioned earlier, 87% of respondents are medical staff. Lastly, respondents are concerned about technical issues such as these, but they do not have arguments or suggestions to offer, as they are limited by their knowledge of technical solutions that could be implemented.

Next, regarding the one-stop system or super apps and simplification, 7% of respondents suggested integration to reduce application fragmentation and improve efficiency. The remaining respondents mentioned other recommendations such as enhancing data security or providing technical training. Based on the data, the author can argue that technical challenges such as network and server issues are the primary obstacles in implementing digital health services at Dr. Hasri Ainun Habibie General Hospital. Although the Technology (3.35) and Net Benefit (3.38) variables scored in the "Very High" category, this indicates that while respondents are generally satisfied with the existing system, infrastructure disruptions reduce the stability and consistency of daily system operations. The strong correlation between System Quality (Ks) and Net Benefit (Fit) with a coefficient of 0.889 and User Satisfaction (Kp) with Net Benefit (Fit) with a coefficient of 0.916 indicates that technological stability is a prerequisite for maximizing the benefits of the system.

The recommendation to improve the network by 36% is also in line with the main obstacles and needs to be prioritized. However, the high percentage of respondents who did not mention any suggestions or recommendations (39%) needs to be noted. This phenomenon could occur for several reasons. First, respondents felt that their primary focus was on patient care, making them less sensitive to issues related to digital system infrastructure, especially given that 87% of respondents were medical staff. Second, respondents may have adapted to these technical challenges, and with extensive work experience of over five years (79% of respondents), they may have normalized these obstacles. Lastly, there may be a lack of understanding about the potential of digital systems to operate more efficiently.

This finding explains that the implementation of health service digitalization at Dr. Hasri Ainun Habibie Regional General Hospital is heading towards success, but still faces technical obstacles that could reduce its potential for success. A strong correlation between User Satisfaction (US) and Net Benefit (Fit) and Information Quality (IQ) with Net Benefit (Fit) indicates that improving infrastructure will directly impact efficiency and service quality. The recommendation for a one-stop system (7%) supports the HOT-Fit theory, where the integration of human, organizational, and technological factors is necessary to achieve successful digitalization.

Digital Applications in Hospital Operations

The author attempted to identify the digital applications most frequently used by respondents in performing their duties at Dr. Hasri Ainun Habibie General Hospital. The results showed that there are several applications that have become the respondents' preferred systems.

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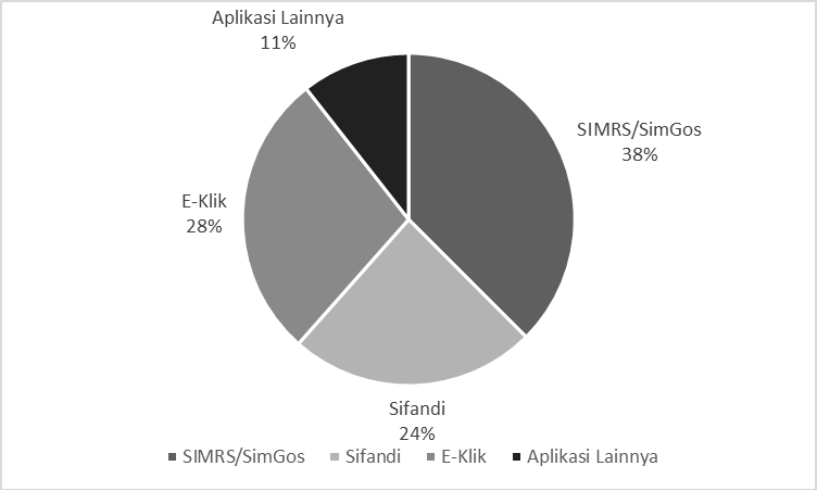

Figure 11. Applications Frequently Used by Respondents

Figure 11 presents the respondents' answers regarding the applications they frequently use in their tasks. Approximately 37% of respondents stated that the SIMRS/SimGos application is the one they use most frequently. SIMRS/SimGos is a Hospital Management Information System with functions such as patient data management, medical records, and financial administration. The dominance of this application aligns with the high score on the information quality sub-variable (3.47), indicating that the system is effective in providing accurate and integrated data.

Additionally, approximately 28% of respondents access the E-Klik (Electronic Clinical Authority) application, which is used by medical staff to record daily activity reports from their tasks. E-Klik enables doctors and nurses to document their interactions with patients. This feature supports high scores for User Satisfaction (3.38) and Net Benefit (3.38) because the system directly impacts the efficiency of patient care.

Additionally, approximately 24% of respondents use the Sifandi application, which focuses on integrating health data and hospital service quality into a single system. Although not as popular as the previous application, this application is important for maintaining transparency and accountability in hospital operations. Although not as popular as SIMRS/SimGos, lastly, approximately 11% of respondents mentioned other applications similar to those mentioned earlier.

The highest usage of the SIMRS/SimGos application indicates that this system is the primary application in hospital operations, particularly in data integration across departments. This supports the high score on the Net-Benefit variable (3.38), which represents the system's benefits in improving efficiency and transparency of services. However, the fragmentation of application usage (SIMRS/SimGos, Sifandi E-Klik, and other applications) poses a challenge for this implementation. As 6.7% of respondents suggested the development of a single-portal system or super apps to simplify the use of information systems.

Although each application has specific functions, the fragmentation of the information system can reduce operational efficiency. The strong correlation between System Quality (Ks) and Net Benefit (Fit) with a coefficient of 0.889 indicates that application integration has the potential to enhance the benefits of digitalization. The recommendations proposed by respondents regarding a one-stop system are in line with the HOT-Fit theory, where integrated technology is needed to improve organizational performance and user satisfaction. In addition, technical barriers such as unstable internet connections (87% of respondents) can exacerbate this fragmentation. Disruption to one application can hinder the entire workflow.

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Thus, the dominance of SIMRS/SimGos as the primary application represents the successful implementation of the information system at Dr. Hasri Ainun Habibie General Hospital. However, it is important to address the issue of fragmentation with other applications, as a strong correlation between User Satisfaction (Kp) and Net Benefit (Fit) indicates that system simplification will enhance user satisfaction and operational benefits.

Conclusion

The results have shown a comprehensive positive response to the digitalization of healthcare services in Dr. Hasri Ayun General Hospital in Gorontalo along with effective implementation of these services due to high scores of information quality and user satisfaction within the HOT-Fit framework. The indicators are closely related to the perceived advantages of the digital system. Nevertheless, there are still significant challenges, the main one being unstable internet connections and discontinuous programs, which hamper the most successful implementation and can undermine the efficiency and uniformity of operations within a long timeframe. To overcome these challenges and achieve sustainable digital transformation, the study suggests a set of recommendations: 1) strengthen digital infrastructure by ensuring a stable internet and server connection, in accordance with the recommendations of the majority of the respondents; 2) build an integrated platform, Super, to replace fragmented applications, facilitate workflows, and improve the user experience; 3) provide highly skilled technical training to keep the systems flexible and long-term viable; and 4) improve the internal governance and strategic efforts with the help of digital socialization, appointment of digital champions in each unit, and strengthened change management. The studies highlight the fact that successful healthcare digitalization requires not only the reliability of elite technology but also a combination of human, organizational, as well as infrastructural factors, aligned with the HOT-Fit paradigm, and, thus, a sustainable digital ecosystem in the hospital setting.

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