Perception on E-Health Readiness among Rural Health Workers: A Convergent Parallel Analysis

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ABSTRACT

This mixed-methods research utilized a convergent parallel design to assess e-Health readiness and explore perceptions related to digital health implementation among 198 healthcare workers and 12 qualitative participants in a municipality in Leyte during the second quarter of 2025. Quantitative results showed high overall e-Health readiness, with core readiness, technological readiness, learning readiness, societal readiness, and policy readiness all rated as high. Relationship testing revealed that age, sex, current position, years in service, type of facility, internet access, and training had no significant correlation with e-Health readiness, which indicated that digital preparedness was broadly consistent regardless of demographic differences. Qualitative findings provided depth and context, particularly regarding the perceived strengths of core, learning, societal, and policy readiness. Upon integration, the results for all dimensions converged; however, in technological readiness, the findings diverged. While the quantitative data suggested high scores, qualitative narratives highlighted persistent structural barriers such as limited ICT equipment, unstable internet connectivity in barangays, and a lack of dedicated IT support. Overall, the study revealed strong motivational readiness alongside persistent structural challenges. Based on these findings, the e-Health Readiness Enhancement and Adoption Plan was developed to address infrastructure, training, and policy support needs.

Keywords: E-Health Readiness; Digital Health; Mixed-Methods; Rural Healthcare Workers; Technology Adoption; Philippines, Core Readiness, Technological Readiness, Learning Readiness, Societal Readiness, Policy Readiness, E-Health Readiness Enhancement and Adoption Plan

INTRODUCTION

In today's digital world, technology continues to transform healthcare delivery, particularly in rural areas where access to services is often limited. E-Health, which involves the use of digital tools such as electronic health records, telemedicine, and mobile applications, has been promoted in the Philippines to strengthen healthcare systems, especially in geographically isolated areas. However, many rural health units continue to face challenges such as unstable internet, outdated equipment, lack of technical support, and low digital readiness among healthcare workers (David et al., 2021). Although e-Health offers benefits like improved information sharing and coordinated care, its success depends on the readiness of healthcare workers and systems to adopt these technologies. E-Health readiness includes core, technological, learning, societal, and policy dimensions (Khoja et al., 2007), yet implementation in rural settings remains slow due to limited training, confidence, and continued reliance on traditional methods (Jimenez et al., 2020; Remonte & Calimag, 2022).

The researcher's experience as a rural health volunteer and Public Health Associate revealed practical challenges such as manual record-keeping, data loss during disasters, and difficulty retrieving patient information, which make healthcare delivery inefficient. Despite the growing importance of e-Health, most studies focus on urban hospitals or system-level perspectives, with limited attention to the lived experiences of rural health workers. This creates a gap in understanding the actual readiness of municipal healthcare providers who are expected to use digital systems daily. Recent studies have also emphasized the need to go beyond surveys and include qualitative insights to better capture real-world challenges (Elepaño et al., 2025).

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This study aims to address this gap by assessing both the perceived readiness and experiences of rural health workers in a municipality in Leyte using a convergent parallel mixed-method design. Quantitative data will measure levels of e-Health readiness, while qualitative data will provide deeper insights into challenges and perceptions. The study supports Sustainable Development Goals 3, 9, and 8 by promoting improved healthcare access, strengthening digital infrastructure, and supporting healthcare workers. Its findings aim to guide administrators and policymakers in identifying gaps and developing targeted interventions such as training, infrastructure improvement, and policy support, ultimately contributing to more effective and inclusive digital healthcare systems.

Research Questions

This study aimed to was to assess the Perception of e-Heath Readiness among Rural Health Workers in a municipality in Leyte for the year 2025.

Specifically, it sought to answer the following question:

What was the profile of the respondents in terms of:

1.1 age;
1.2 gender;
1.3 current position;
1.4 years in service;
1.5 type of facility;
1.6 access to the internet; and
1.7 trainings related to digital or e health system?

What was the e-Health readiness as perceived by the rural health workers in terms of:

2.1 core readiness;

2.2 technological readiness;

2.3 learning readiness;

2.4 societal readiness; and

2.5 policy readiness?

How did the rural health workers perceive e-Health readinessWas there a significant relationship between:

4.1 profile and nursing competency;

4.2 profile and professional attitude; and

4.3 nursing competency and professional attitude among novice nurses?

Was there a significant relationship between the profile and the perception on e- Health readiness?

How did the perceptions converge with the quantitative findings?

What E-Health Readiness Enhancement Program can be proposed based on the findings of the study?

Statement of Null Hypothesis

H_{o1}: There was no significant relationship between the profile of the respondents and their perceptions on e-Health readiness.

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REVIEW OF RELATED LITERATURE AND STUDIES

E-Health Readiness. The increased interest in e-Health was stimulated by the COVID-19 pandemic, which limited access to healthcare services and made e-Health activation a major concern among health planners (Duplaga & Turosz, 2022; Kruszyńska-Fischbach et al., 2022; Yassen et al., 2023). Healthcare professionals are expected to adapt to rapidly evolving digital systems, requiring a workforce that is ready, equipped, and digitally literate (Jarva et al., 2022; Alotaibi et al., 2025; Jimenez et al., 2020). E-Health has been recognized as a solution to healthcare challenges, but its success depends on users' technological competence, infrastructure, and readiness (Jagde et al., 2021). However, many barriers remain, including lack of computers, weak internet connectivity, limited technical skills, and slow acquisition of digital tools, particularly in rural areas (Yusif et al., 2020; Jimenez et al., 2020). Healthcare providers continue to rely on traditional systems due to insufficient training and confidence, although many express dissatisfaction with paper-based processes and willingness to adopt digital systems (Ngusie et al., 2022; Jarva et al., 2022).

Studies highlight that readiness is influenced by perceived usefulness, job role, age, and educational background, while learning readiness and organizational support are important for successful adoption (Alotaibi et al., 2025; Yassen et al., 2023; Kruszyńska-Fischbach et al., 2022). Community support, stakeholder involvement, and user interaction also play key roles in e-Health readiness, with differences observed across population groups such as urban versus rural residents and varying educational levels (Duplaga & Turosz, 2022; Yusif et al., 2020). Supportive laws, guidelines, and stakeholder engagement are necessary to ensure smooth implementation, although cost and reimbursement issues remain common barriers (Yassen et al., 2023). Understanding e-Health readiness is essential for developing effective policies based on users' needs and system demands (Jagde et al., 2021).

Global and local initiatives have supported the development of e-Health, including WHO recommendations and the Philippine Universal Health Care Act, along with telemedicine guidelines, the National Health Data Repository, and the National Telehealth System (WHO, 2021; Chung et al., 2025; Juban et al., 2020). However, challenges such as cybersecurity threats, lack of trained personnel, limited infrastructure, unstable electricity, and insufficient technical support continue to hinder progress (de Claro & de Claro, 2024; Marcelo et al., 2023; Evio & Bonito, 2024). Despite these barriers, improvements are ongoing through increased digital adoption, policy support, and telemedicine initiatives aimed at enhancing healthcare access and delivery, particularly in underserved communities (Lu & Marcelo, 2021; Chung et al., 2025).

E-Health Readiness and Electronic Health Records (EHR) in the Philippines. A mixed-methods implementation study in the Philippines found that e-Health readiness, particularly for electronic health records (EHR), is highly influenced by contextual factors such as technical fit, user support, and adaptability to local workflows. User acceptability declined after transitioning from an OpenMRS-based system to a Microsoft-based EHR in urban and rural settings, while remote areas that retained OpenMRS maintained high acceptance (Elepaño et al., 2025). Similarly, studies on telerehabilitation during the COVID-19 pandemic showed good readiness and excellent acceptance among healthcare providers, although knowledge and skills remained limited (Leochico et al., 2022). Many providers reported inadequate experience, with common reliance on videoconferencing platforms and lower service fees compared to in-person care, indicating both adoption and existing capability gaps (Leochico et al., 2022).

Further findings revealed that while patients and caregivers reported above-average usability of digital health systems, healthcare providers experienced technical challenges such as unstable internet connections, affecting overall system usability (Valera et al., 2025). Differences in readiness were also observed based on occupation and level of expertise, particularly in core and learning readiness, while demographic factors such as age, gender, education, and years of experience showed no significant influence (Yassen et al., 2023). These findings highlight that e-Health readiness in the Philippines is shaped more by system-related and professional factors rather than individual characteristics, emphasizing the importance of technical support, training, and system adaptability in successful digital health implementation.

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume XI Issue IV April 2026

RESEARCH METHODOLOGY

Design. The mixed method research design utilized the convergent parallel design where the quantitative design utilized the descriptive correlational research design and the qualitative design utilized the descriptive research design. In this study, both qualitative and quantitative data were collected simultaneously. Structured surveys were administered to the rural healthcare workers to gather quantitative data while at the same time conducting interviews to collect qualitative insights regarding e-Health readiness. Independent data analysis was done after the collection of data, analyzing the quantitative data statistically, and the qualitative data was analyzed using thematic analysis. After, both quantitative data and qualitative data were merged or compared. Interpretation followed to draw the overall conclusion regarding the e-Health readiness perceptions of the rural healthcare workers at the municipality level.

Environment. This study was conducted in the Rural Health Unit in a municipality in Leyte together with its barangay health stations.

Respondents. The respondents for the quantitative survey were the 198 healthcare workers and the study's informants for the qualitative data collection were 12 rural health workers who were purposively selected from a larger population of 198 rural healthcare workers. Two informants were purposively selected from each of the six catchment areas totaling 12 informants.

Sampling Design. The selection of respondents for the quantitative part was conducted through complete enumeration, while purposive sampling was used for the qualitative part of the study.

Inclusion Criteria and Exclusion Criteria. For the quantitative part, all rural healthcare workers in a municipality in Leyte were included regardless of demographic and work-related characteristics, provided that they voluntarily agreed and gave consent, while non-health service personnel, those on leave, those who had resigned or retired, and those unwilling to participate were excluded. For the qualitative part, purposive sampling was used to select 12 healthcare workers (two from each of the six catchment areas) who were currently employed, had at least two years of continuous service, were familiar with healthcare delivery processes, actively involved in programs and reporting systems, and willing to participate in interviews; those with less than two years of service, not familiar with processes, not actively involved, on leave, resigned or retired, or unwilling to participate were excluded.

Instrument. This study utilized an adapted version of the eHealth Readiness Assessment Framework (eHRAF) developed by Khoja et al. (2007) to measure e-Health readiness among rural health workers. The quantitative instrument consisted of two parts: Part I included demographic variables, while Part II included 25 items across five domains: core, technological, learning, societal, and policy readiness using a 5-point Likert scale. The tool demonstrated high reliability (Cronbach's alpha = 0.78–0.91) and was pretested for suitability. Mean scores were computed per domain and overall, with higher scores indicating greater readiness, interpreted from very low to very high readiness levels. For the qualitative component, a semi-structured interview guide based on the same five domains was used to explore perceptions of e-Health readiness. The instrument included open-ended questions across five parts covering awareness, infrastructure, training readiness, community acceptance, and institutional support, and responses were analyzed using thematic analysis to identify key patterns and insights related to e-Health implementation.

Data Gathering Procedures. This study followed three phases: pre-data gathering, actual data gathering, and post-data gathering. In the pre-data gathering phase, the researcher prepared and presented research titles, selected an adviser, underwent design hearing, secured ethics approval, and obtained a notice to proceed. During actual data gathering, quantitative data were collected through face-to-face recruitment of healthcare workers at convenient times using Google Forms or printed questionnaires, with monitoring to prevent duplicate responses, while qualitative data were gathered through purposive sampling of 12 participants from six catchment areas who underwent in-depth, face-to-face interviews conducted in private settings with informed consent. In the post-data gathering phase, quantitative data were organized and analyzed using statistical methods and presented in tables with interpretations, while qualitative data were transcribed, coded, and analyzed thematically with

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume XI Issue IV April 2026

member-checking, triangulation, peer review, and expert consultation, and both data sets were integrated; thereafter, all collected data were deleted to ensure confidentiality.

Statistical Treatment of Data. The study utilized both descriptive statistics for quantitative data, including frequency distribution and percentage to present respondents' profile, and standard deviation and weighted mean to determine the level of e-Health readiness across five dimensions, while Chi-square was used to test significant relationships between profile and readiness and Cramer's V to measure the strength of association. For the qualitative data, recordings were transcribed and analyzed using coding and thematic analysis to identify patterns, with member-checking and triangulation ensuring credibility, and peer review and expert consultation enhancing validity. Both quantitative and qualitative data were collected and analyzed concurrently, then integrated to identify convergence and divergence, resulting in a comprehensive understanding of e-Health readiness, with participant validation confirming the accuracy of the findings.

Ethical Considerations. Ethical considerations are an essential component of any research study. The study was submitted to the ethics committee of both the university and the hospital. Ethical approval was sought prior to the start of data gathering to ensure that the welfare of the respondents was protected.

Presentation, Analysis, And Interpretation Of Data

Table 1 Profile of Healthcare Workers

Profile	*f*	*%*
Age		
18 to 25 years old (young adult)	5	2.50
26 to 44 years old (adult)	81	40.90
45 to 59 years old (middle-age)	79	39.90
60 and above (old age)	33	16.70
Sex		
Male	8	4.00
Female	190	96.00
Current Position		
BHW	117	59.10
BNS	43	21.70
BSPO	10	5.10
Job Order	10	5.10
Midwife	9	4.50
Nurse	4	2.00
Others (MHO, Physician, Dentist, Medical Technologist, Sanitation Inspector)	5	2.50
Years in Service		
Less than 1 year	32	16.20
1 to 3 years	65	32.80
4 to 6 years	21	10.60
7 years and above	80	40.40
Type of Facility		
BHS	158	79.80
RHU	40	20.20
Access to Internet		
No	91	46.00
Yes	107	54.00
Training related to digital or e-Health system		
No	150	75.80
Yes	48	24.20

Note. *n=198.*

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume XI Issue IV April 2026

As shown in Table 1, the participants are mostly adult and middle-aged rural health workers, reflecting the structure of rural health systems where experienced workers commonly handle community-based programs (Gandhi et al., 2022; Ngusie et al., 2022; Blondino et al., 2024). The workforce is predominantly female, consistent with the gender distribution in primary care and community health services in the Philippines and similar settings (Marcelo et al., 2023; Mandal et al., 2023). Most respondents are barangay health workers, followed by other community-based cadres, highlighting their role as frontline implementers and key users of digital health systems (Joshi et al., 2025; Blondino et al., 2024). There is a mix of tenure, with both experienced and newer workers, which is typical in rural health systems (Gelchu et al., 2025; Gandhi et al., 2022), and most are assigned to barangay health stations, the primary point of care in communities (Marcelo et al., 2023; Blondino et al., 2024).

The findings also show that while more than half have internet access, a significant portion still lack connectivity, reflecting ongoing infrastructure gaps (Joshi et al., 2025; Ngusie et al., 2022), and most have not received formal digital health training, consistent with limited ICT preparation in rural settings, although some level of exposure provides a foundation for e-Health implementation (Mandal et al., 2023; Gelchu et al., 2025; Marcelo et al., 2023).

Table 2 E-Health Readiness of Healthcare Workers

Dimensions	Mean score	SD	Interpretation
Core Readiness			
1. I believe eHealth can improve healthcare delivery in our community.	4.30	.865	Strongly agree
2. I am willing to use eHealth systems if they are introduced in our facility.	4.23	.898	Strongly agree
3. There is awareness among staff in our facility about the potential of eHealth.	3.97	.815	Agree
4. Patients in our community would benefit from using digital health services.	4.19	.855	Agree
5. Our facility needs digital solutions to improve patient care.	4.29	.776	Strongly agree
Factor mean	4.19	.665	High
Technological Readiness			
1. Our facility has access to reliable internet.	3.51	1.10	Agree
2. We have working computers and devices for health information purposes	3.55	1.14	Agree
3. There is technical support available when systems malfunction.	3.44	.990	Agree
4. The ICT equipment in our facility is adequate for our work needs.	3.60	1.09	Agree
5. Power supply in our facility is stable and supports digital operations.	3.76	1.00	Agree
Factor mean	3.57	.831	High
Learning Readiness			
1. I am open to being trained on how to use eHealth tools.	4.31	.940	Strongly agree
2. Our facility provides opportunities for digital health training.	4.09	.885	Agree
3. Health workers in our facility are interested in learning about ICT.	4.29	.757	Strongly agree
4. I believe eHealth skills are important for modern healthcare.	4.39	.772	Strongly agree
5. I am confident in my ability to learn new digital health systems.	4.31	.795	Strongly agree
Factor mean	4.28	.669	Very high
Societal Readiness			
1. The community will accept digital consultations (e.g., telehealth).	3.95	.868	Agree
2. Patients trust the use of technology for healthcare.	4.01	.834	Agree
3. Local leaders are supportive of digital health initiatives.	3.94	.778	Agree

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume XI Issue IV April 2026

4. There is willingness among patients to use mobile health applications.	3.98	.803	Agree
5. Social norms in the community do not hinder the use of technology.	3.73	.679	Agree
Factor mean	3.92	.634	High
Policy Readiness			
1. Our facility has clear policies related to the use of eHealth.	3.76	.902	Agree
2. There is government support for implementing eHealth in our municipality.	3.87	.874	Agree
3. I understand the protocols related to data privacy in digital health.	4.00	.884	Agree
4. We receive administrative support in adopting health technologies.	3.82	.811	Agree
5. There is a long-term plan for eHealth implementation in our locality.	3.91	.748	Agree
Factor mean	3.87	.657	High
Grand mean	3.97	.518	High

Note. *n=198.*

Legend: A score of 1.00 to 1.80 is very low (strongly disagree), 1.81 to 2.60 is low (disagree), 2.61 to 3.40 is moderate (neutral), 3.41 to 4.20 is high (agree), and 4.21 to 5.00 is very high (strongly agree).

The findings show that healthcare workers have an overall high level of e-Health readiness across all dimensions, reflecting strong acceptance of digital health and a positive climate for digital transformation (Bober et al., 2024; Ibrahim et al., 2025). Core readiness is consistently strong, as workers believe that digital solutions can enhance service delivery, improve patient outcomes, and are necessary in their facilities, with willingness to adopt e-Health systems already evident in practice (Gandhi et al., 2022). Technological readiness is also high but variable, with existing access to devices and internet, though gaps in reliability and adequacy remain (Marcelo et al., 2023; Yi et al., 2024). Learning readiness emerges as the strongest dimension, with workers highly motivated and confident in acquiring ICT skills (Woods et al., 2024). Societal readiness is high, reflecting perceived community acceptance and growing familiarity with digital communication (Kasaye et al., 2024; Jeilani et al., 2025), while policy readiness indicates awareness of government support, data privacy, and administrative processes that facilitate adoption (Aguila et al., 2025; Marcelo et al., 2023). Overall, both quantitative and qualitative findings show that human and social factors support e-Health implementation, while challenges are primarily structural.

Qualitative Discussion on Core Readiness strongly supports these findings. Under the theme *"E-Health Improves Documentation, Record Retrieval, and Continuity of Care,"* participants emphasized efficiency and ease of access, as Charlotte stated that electronic records would allow staff to "just edit" entries, while Miranda noted that records become "faster and easier" to retrieve, and Jules highlighted that systems can show "the patient's whole history… management and medication given." Under the theme *"E-Health Reduces Waiting Time, Travel Burden, and Improves Access to Services,"* participants described reduced patient burden, with Charlotte explaining that consultations would be "more convenient because they won't have to come here anymore," and Maggie noting that digital processes "lessen waiting time." Rory further shared that patients already communicate "through chat" and send photos for advice. These themes show that readiness is grounded in actual work practices.

In **Technological Readiness**, the themes *"Limited and Shared ICT Equipment Affects Workflow," "Unstable Internet Connectivity in Barangays Impedes Digital Implementation," "Lack of Dedicated IT Support Limits Sustainability,"* and *"Reliance on Personal Devices and Self-Funded ICT Resources"* highlight structural barriers, with Charlotte reporting laptops are "no longer working," Miranda stating "in the barangays, there is none" (internet), and Carrie emphasizing "We don't have IT."

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume XI Issue IV April 2026

In **Learning Readiness**, themes such as *"Openness and Motivation to Learn Digital Tools," "Learning by Doing: Hands-On Training Improves Skill Acquisition,"* and *"Confidence in Learning Digital Health Systems"* reflect strong motivation, as Maggie stated, "we will really try to learn," and Carrie emphasized that training must be "hands-on."

In **Societal Readiness**, themes including *"Growing Community Acceptance of Digital Consultation," "Digital Communication Improves Access for Remote Barrios,"* and *"Local Leaders Support Digital Health Initiatives"* show acceptance, with Rory sharing that patients reach out "through chat… even if it is a holiday," and Samantha noting patients can "just send a text or call."

In **Policy Readiness**, themes such as *"Compliance with Existing Health Reporting Policies and Protocols," "Awareness of Data Privacy and Patient Information Security,"* and *"Perceived Government Support for Digital Health Implementation"* highlight governance factors, with Jules stating that digital systems are "really necessary… to be paperless," and Portia emphasizing that trust depends on data being kept secure.

Overall, the findings indicate that rural health workers are willing and prepared to adopt e-Health, with strong readiness across core, learning, societal, and policy dimensions, while technological readiness remains constrained by infrastructure limitations. The qualitative themes and narratives demonstrate that readiness is practical and experience-based, with existing digital behaviors already embedded in daily workflows. From a public health perspective, the system is people-ready but infrastructure-dependent, where successful implementation requires strengthening internet reliability, equipment provision, and IT support systems (Kasaye et al., 2025; Yi et al., 2024).

Table 3 Relationship between Profile and e-Health Readiness

Independent variables	chi value	*p* value	Cramer's V value	Decision	Interpretation
Age	1.433E2	.572	--	Failed to reject Ho	Not significant
Sex	41.037	.784	--	Failed to reject Ho	Not significant
Current Position	2.506E2	.969	--	Failed to reject Ho	Not significant
Years in Service	1.692E2	.102	--	Failed to reject Ho	Not significant
Type of Facility	58.479	.166	--	Failed to reject Ho	Not significant
Access to internet	51.761	.367	--	Failed to reject Ho	Not significant
Training related to digital or ehealth system	52.634	.335	--	Failed to reject Ho	Not significant

Legend: Significant if p value is < .05. Dependent variable: eHealth Readiness. Cramer's V values: A value of >0.25 is very strong, >0.15 is strong, >0.10 is moderate, >0.05 is weak, and >0 is no association.

The results in Table 3 show that all statistical tests failed to reject the null hypothesis, indicating that age, sex, current position, years in service, type of facility, access to internet, and training related to digital or e-Health systems have no significant relationship with e-Health readiness (all $p > 0.05$), with negligible Cramer's V values confirming weak associations. This means that readiness is not determined by individual or work-related characteristics, but is instead shared across the healthcare workforce. Across all variables, findings consistently show that younger and older workers, males and females, different professional roles, varying years of service, and differing access to internet or training all demonstrate comparable readiness levels. This supports recent literature showing that as digital tools become integrated into routine healthcare tasks, differences across demographic groups diminish (Ngusie et al., 2022; Woods et al., 2024; Kasaye et al., 2025; Marcelo et al., 2023; Jeilani et al., 2025; Ibrahim et al., 2025). The results suggest that e-Health readiness is shaped more by shared organizational practices, daily exposure to digital tasks, and workplace culture rather than individual characteristics, reflecting a broader cultural shift where digital communication and documentation are becoming normalized in rural health settings.

The qualitative findings strongly support this interpretation and highlight that readiness is consistent across different groups, while differences are more related to learning pace rather than willingness. Participants emphasized motivation regardless of age or background, as Charlotte stated the importance of "updating your

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume XI Issue IV April 2026

learning" and not staying "stuck where you are" (Charlotte, L1–L7), while Portia noted that older workers "are not good at computers" but are still willing to learn with guidance (Portia, L1–2). These narratives confirm that demographic factors do not limit readiness but may influence the speed of adaptation. Supporting this, the theme that readiness is not constrained by personal characteristics is reinforced by participants' shared experiences of digital engagement in daily tasks. At the same time, qualitative data highlight that challenges are rooted in structural issues rather than individual limitations. As Jules emphasized, "no matter how much training is given, if the equipment is not there, it still won't work" (Jules, L1–2), while Iris noted that learning is limited when "gadgets are not provided" (Iris, L3). These statements align with findings that organizational readiness, ICT infrastructure, and institutional support are stronger predictors of digital adoption than demographic variables (O'Connor et al., 2021; Alami et al., 2022; Pham et al., 2023; Ibrahim et al., 2025).

Overall, both quantitative and qualitative findings converge in showing that e-Health readiness is a shared workforce characteristic and not dependent on demographic profile. This indicates that digital health programs can be implemented at scale without targeting specific subgroups, as all workers demonstrate similar readiness. From a public health perspective, this uniform readiness is advantageous because it reduces the risk of unequal adoption and supports system-wide implementation of digital interventions such as electronic registries, telehealth, and surveillance systems. However, the findings also emphasize that infrastructure remains the primary barrier, as limitations in internet connectivity, ICT equipment, and IT support may hinder full implementation despite high readiness (Yi et al., 2024). These results suggest that strengthening organizational and technological systems is essential to translate high readiness into effective and sustained e-Health implementation in rural health settings.

CONCLUSION AND RECOMMENDATIONS

Conclusion. The study revealed that healthcare workers demonstrated generally positive e-Health readiness, recognizing the potential benefits of digital systems for documentation, access to information, and efficient service delivery. Although many respondents lacked formal training and faced technological barriers such as inadequate equipment, unstable connectivity, and limited IT support, their willingness to adopt digital tools was evident across age groups, positions, and experience levels. Quantitative results further showed that demographic and professional characteristics were not significantly related to e-Health readiness, indicating that motivation and openness toward digital transformation were consistent regardless of profile differences.

Recommendations. Based on the findings, the recommendations emphasize strengthening e-Health readiness through public health practice, education, policy, and research. The e-Health Readiness Enhancement Program should be implemented in RHUs and BHS, focusing on improving technology, internet access, and IT support, while integrating digital processes into daily operations. The findings may be used for training, workshops, and academic instruction on digital health. Policies should formalize e-Health through resource planning, data privacy guidelines, and partnerships with DOH and DICT. The study should also be disseminated through publications, conferences, and local platforms to support wider adoption of digital health initiative.

E-Health Readiness Enhancement Program

Rationale

E-Health readiness is a crucial requirement for successful implementation of digital health initiatives in primary care facilities. The findings of the study revealed a high level of core and societal readiness among rural health workers, indicating favorable perceptions toward digitalization, reduced patient waiting time, improved access, and enhanced continuity of care. However, the study also showed moderate technological, learning, and policy readiness, with major concerns involving shared ICT devices, unstable internet connection, lack of formal IT support, limited hands-on training, and weak policy implementation.

Thus, this E-Health Readiness Enhancement Program is developed to strengthen the digital capacity of healthcare workers, provide institutional support mechanisms, and establish systems, protocols, and policies toward full e-Health implementation.

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume XI Issue IV April 2026

General Objectives

To improve the overall e-Health readiness of healthcare workers through enhanced technological resources, policy alignment, institutional support, and targeted capacity development.

Specific Objectives

This program seeks to achieve the following outcomes:

a. To provide adequate ICT equipment, stable connectivity, and dedicated technical support;

b. To increase the level of training and skills in digital systems, especially iClinicSys, YAKAP, electronic reporting, and digital documentation

c. To develop, disseminate, and monitor local e-Health policies, including data privacy, digital reporting protocols, and IT support systems;

d. To strength then multi-sectoral support from the LGU, DOH, and community partners for sustainable digital health implementation.

Areas of Concern	Key Actions	Responsible	Time Frame	Success Indicators
Limited ICT equipment	Procure laptops, tablets, printers; assign per user	LGU; RHU Head; Supply Officer; IT Unit	Second Quarter	Procurement records; signed accountability forms
Unstable internet connection	Install Wi-Fi repeaters; upgrade internet; provide mobile data	LGU; RHU; DOH; ICT Partner	Second to Third Quarter	Internet speed reports; barangay connectivity checklist
Lack of IT support	Hire 1 IT staff; create support system/logbook	Mayor; HRMO; RHU Head	Second Quarter	IT staff hired; support tracking system
Limited training	Conduct quarterly hands-on trainings; mentoring system	RHU Head; DOH Team; PHN	Quarterly	Attendance sheets; competency results
No local e-Health policies	Develop and approve digital policy manual	RHU Head; LGU Legal; MHO; PHN	Second Quarter	Approved policy; dissemination memo
Data privacy concerns	Conduct orientation; confidentiality agreements; post notices	RHU Head; Data Privacy Officer; LGU IT	Second Quarter	Signed forms; posted privacy notices
Low LGU support	Present findings; submit budget proposal; build LGU–DOH partnership	RHU Head; Coordinator; Researcher	Second to Third Quarter	Approved budget; MOA with DOH

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