INTERNASIONAL CONFERENCE ON
MULTIDISCIPLINARY APPROACHES IN HEALTH SCIENCE
VOLUME 3, No 1. Tahun 2025 , ISSN 3032-4408 (Online)
https://ejournal.poltekkes-denpasar.ac.id/index.php/icmahs

Healthcare Professionals' Experiences in Utilizing The Satu Sehat Mobile App for Hypertension Management in Indonesia

Ni Luh Putu Dian Yunita Sari [1*], I Kadek Prastikanala[1]
[1]Study Program of Bachelor Nursing, Stikes Bina Usada Bali, Indonesia

Article history
Posted : 2025-10-09
Reviewed : 2025-10-26
Received : 2025-12-13

Abstract

Hypertension remains the most prevalent non-communicable disease in the community. Uncontrolled blood pressure can lead to severe complications, which are potentially life-threatening and may impose a considerable burden on families. This study aims to examine healthcare professionals' experiences in utilizing the Satu Sehat Mobile Application as part of hypertension management in Indonesia. A qualitative approach with a phenomenological perspective was employed. Data were collected through in-depth interviews and systematically analyzed using transcription, thematic coding, and further processing with NVivo 12 software.The study involved healthcare professionals responsible for non-communicable disease (NCD) programs at public health centers (Puskesmas) in Indonesia. Participants were selected through purposive sampling, with inclusion criteria comprising willingness to participate, effective communication skills in Indonesian, and a minimum of five years' experience in managing hypertension cases. Twelve healthcare professionals were interviewed, with data saturation achieved after the tenth interview. Analysis revealed three overarching themes: (1) the application is perceived as highly beneficial, (2) it supports blood pressure monitoring, and (3) challenges remain in its implementation. While many participants found the application helpful in supporting their duties, several obstacles were noted, particularly within the community context. These challenges underscore the need for further development to optimize the application in meeting user needs. The findings of this study contribute to a deeper understanding of how healthcare professionals in Indonesia engage with the Satu Sehat Mobile Application in the management of hypertension.

Keywords: Digital, Healthcare Professional, Hypertension

Corresponding author: dian.yunita@binausadabali.ac.id

INTRODUCTION

Hypertension has emerged as a global public health concern, affecting more than 1.2 billion people worldwide (Zhou et al., 2021). According to the World Health Organization (WHO), the prevalence of hypertension is particularly high in low and middle-income countries, where health system capacity and continuity of care remain limited (WHO, 2023). Indonesia, as one of the most populous nations in Southeast Asia, faces a growing burden of hypertension, with national health surveys reporting prevalence rates that continue to rise across age groups. Alarmingly, many patients remain undiagnosed or inadequately treated, which significantly contributes to premature mortality and reduced quality of life (Harmadha et al., 2023).

The burden of hypertension in Indonesia extends beyond the individual level, imposing heavy socioeconomic and healthcare costs. Uncontrolled hypertension increases the risk of cardiovascular disease, stroke, and renal complications, which remain among the top causes of death in the country (Mohamed et al., 2021). Although pharmacological treatment is widely available, suboptimal blood pressure control persists due to poor treatment adherence, fragmented healthcare services, and disparities in access between urban and rural populations. These challenges highlight the urgent need for innovative and sustainable approaches that strengthen prevention, monitoring, and long-term management of hypertension.

In recent years, the Government of Indonesia has prioritized digital health transformation as part of its national strategy to improve health service delivery. One of the key initiatives is the Satu Sehat Mobile App, launched by the Indonesian Ministry of Health, which seeks to integrate personal health records, enhance patient engagement, and support healthcare providers in delivering more coordinated and data-driven care. The platform is designed not only as a repository of patient health information but also as a tool to improve monitoring of chronic diseases, including hypertension. By providing real-time access to medical data, the app has the potential to strengthen continuity of care and enable more effective clinical decision-making (Rifky & Jannatin, 2025).

Despite its promising features, the success of digital health interventions largely depends on the acceptance, experiences, and active involvement of healthcare professionals. The benefits of this application are felt by patients, healthcare workers, and even the national healthcare system. Patients benefit from easier access to treatment, simplified personal health management, and more efficient use of time and energy. Furthermore, healthcare workers benefit from integrated patient information, cross-facility collaboration, and improved decision-making. The national healthcare system is supported by data interoperability, health planning, and improved service quality. Previous studies have shown that healthcare workers often face challenges in adapting to new technologies, ranging from technical barriers, limited digital literacy, increased workload, to concerns about data security and system interoperability (Borges do Nascimento et al., 2023). These issues can hinder the effective use of digital platforms and may affect the quality of care provided (Mhlongo et al., 2023). In the context of hypertension management, understanding how healthcare professionals perceive and utilize the Satu Sehat Mobile App is critical for ensuring its meaningful integration into daily practice.

However, there is a limited body of evidence exploring the experiences of healthcare professionals in Indonesia regarding the use of this digital health platform, particularly in the management of chronic diseases such as hypertension. Most existing studies have focused on patient perceptions or technical aspects of digital health implementation, leaving a gap

Corresponding author: dian.yunita@binausadabali.ac.id

in understanding the perspectives of frontline providers who directly interact with both the system and the patients.

Therefore, exploring healthcare professionals' experiences in utilizing the Satu Sehat Mobile App for hypertension management is essential. Such insights can provide valuable information for policymakers, app developers, and health institutions to optimize digital health strategies, address existing challenges, and ensure that technological innovations translate into improved health outcomes. Furthermore, findings from this study are expected to contribute to the broader discourse on digital health adoption in resource-constrained settings, offering lessons that may be applicable beyond Indonesia. The aim of this study is to explore healthcare professionals' experiences in utilizing the Satu Sehat Mobile App for hypertension management in Indonesia.

METHOD

This study applied a qualitative phenomenological approach to gain an in-depth understanding of healthcare professionals' experiences in using the Satu Sehat Mobile App for hypertension management in Indonesia. Data collection was carried out through face-to-face, semi-structured interviews, and the findings were examined using thematic analysis.

The target group for this study was healthcare professionals employed in public health centers (Puskesmas). Participants were chosen through purposive sampling based on the following criteria: (1) being in charge of non-communicable disease (NCD) programs, (2) willingness to be involved, (3) ability to communicate effectively in Indonesian, and (4) at least five years of experience in hypertension case management. Those with communication or memory impairments were excluded. Twelve healthcare professionals took part in the study, with thematic saturation reached after the tenth interview.

Data were processed thematically with the aid of NVivo version 12 software. The analysis steps included importing and transcribing the interviews, reading and re-reading transcripts, and generating initial codes. Codes were then organized into nodes, which were refined into subthemes and broader themes. To illustrate the relationships among themes, a mind map was developed.

Approval for this study was granted by the Health Research Ethics Committee of STIKes Bina Usada Bali (Approval Number: 038/EA/KEPK-BUB-2023). Prior to participation, all respondents signed informed consent forms. Confidentiality and anonymity were upheld throughout the research process, and the researcher ensured participants' safety by avoiding coercion or harm.

RESULTS

The study involved 10 participants, whose characteristics are summarized in Table 1. The oldest participant was 45 years old (P9), while the youngest was 29 years old (P3). The profession is dominated by public health. The length of employment was also examined, with the longest tenure being 11 years and the shortest being 5 years.

Table 1. Characteristic of Participants (n=10)

No	Participant Code	Age	Profession	Length of Employment as a Healthcare Proffesionals
1	P1	35	Nurse	9 years
2	P2	36	Nurse	7 years
3	P3	29	Nurse	5 years
4	P4	42	Midwive	6 years
5	P5	36	Midwive	8 years
6	P6	30	Midwive	10 years
7	P7	39	Public health	5 years
8	P8	40	Public health	11 years

Corresponding author: dian.yunita@binausadabali.ac.id

9	P9	45	Public Health	11 years
10	P10	30	Public health	7 years

Source: Primary Data

In-depth interviews were conducted with twelve participants until data saturation was reached. Analysis revealed three overarching themes: (1) the application is perceived as highly beneficial, (2) it supports blood pressure monitoring, and (3) challenges remain in its implementation. A visualization of the themes and subthemes derived from the analysis is presented in Figure 1 below.

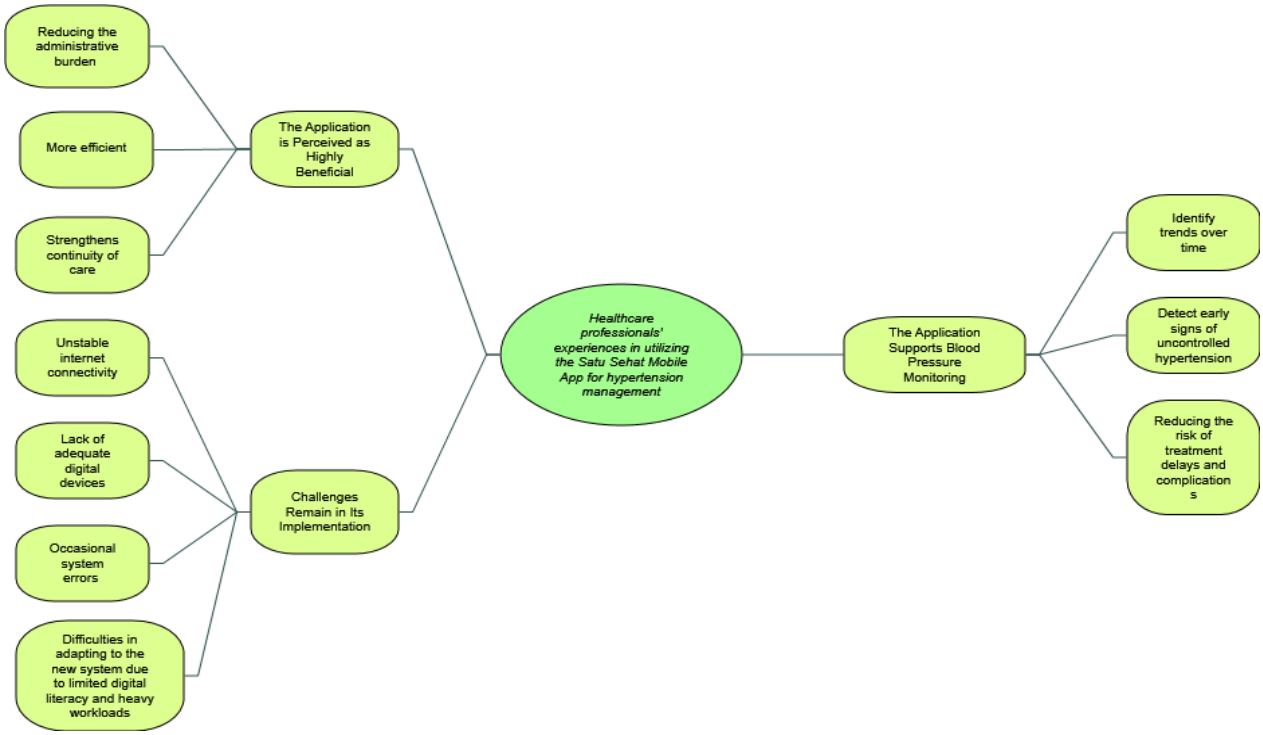

Figure 1. Mind Map of Healthcare Professionals' Experiences in Utilizing the *Satu Sehat Mobile App* for Hypertension Management

Each theme in this study comprises three to four subthemes, which were analyzed based on the participants' transcript data. The following is a detailed description of the research findings organized by each theme.

The Application is Perceived as Highly Beneficial

The first theme identified is the application is perceived as highly beneficial, which consists of three subthemes based on the participants' experiences and perceptions. These subthemes are reducing the administrative burden, more efficient, and strenghtens continuity of care.

Reducing the Administrative Burden

Two participants expressed that their administrative workload decreased after the introduction of the application.

"Since this application was introduced, I feel that my administrative burden has become lighter." (P1)

"Honestly, this application makes it easier for me to carry out documentation, especially because patients can access and complete the forms themselves." (P4)

These statements indicate that the application not only helps streamline the work of healthcare professionals but also improves efficiency by allowing patients to participate directly in data entry, thereby reducing repetitive administrative tasks.

More Efficient

Three participants emphasized that the presence of technology-based applications has made their work more efficient.

"I admit that with the introduction of several technology-based applications, our

Corresponding author: dian.yunita@binausadabali.ac.id

VOLUME 3, No 1. Tahun 2025 , ISSN 3032-4408 (Online)
https://ejournal.poltekkes-denpasar.ac.id/index.php/icmahs

work has become easier and much more efficient." (P2)
"The efficiency I experienced is mainly in terms of time…" (P3)
"I believe that with the presence of technology, we have become very efficient in terms of paper use and storage space." (P4)

These perspectives illustrate that the application contributes not only to time efficiency but also to resource management, thereby improving the overall workflow of healthcare professionals.

Strenghtens Continuity of Care

Two participants emphasized that the application enables continuity of care to be carried out more easily.

"With conventional approaches, it is difficult to remember patients and trace their medical history, but technology helps in this regard, making it possible to maintain continuity of treatment and education." (P7)
"There are many features within the application related to education, which provide opportunities to sustain treatment programs, with the expectation that blood pressure will become better controlled." (P8)

These accounts highlight the role of technology in strengthening long-term patient management, particularly in facilitating treatment follow-up and ongoing health education.

It Supports Blood Pressure Monitoring

The second theme identified is it supports blood pressure monitoring, which also consists of three subthemes based on the participants' experiences and perceptions. These subthemes are identify trends over time, detect early signs of uncontrolled hypertension, and reducing the risk of treatment delays and complications.

Identify Trends over Time

Two participants indicated that the application facilitates the monitoring of patients' blood pressure trends.

"This application allows patients to monitor their blood pressure trends over time." (P5)
"*The challenge is that many patients often forget their previous blood pressure readings. This application can help address that issue."* (P10)

These insights suggest that the application supports both patients and healthcare providers in tracking longitudinal health data, thereby enhancing disease management and promoting better self-care practices.

Detect Early Signs of Uncontrolled Hypertension

Two participants emphasized that the application enables the monitoring of early signs of uncontrolled blood pressure.

"We can observe patients' health trends and predict whether their condition is controlled or not." (P6)
"Not all patients consistently adhere to medication and a healthy lifestyle. This application can monitor their health trends." (P9)

These reflections demonstrate the potential of the application to support early detection and proactive management of hypertension, thereby assisting healthcare professionals in anticipating risks and guiding timely interventions.

Reducing The Risk of Treatment Delays and Complications

Two participants highlighted the potential of the application to prevent complications and reduce the risks associated with delayed treatment.

"The risk of delayed treatment may be prevented through the use of this application." (P3)
"Complications may be reduced if blood pressure is controlled by utilizing this application." (P4)

These perspectives suggest that the application plays a significant role not only in monitoring and managing hypertension but also in supporting timely interventions that may minimize adverse outcomes.

Corresponding author: dian.yunita@binausadabali.ac.id

Challenges Remain in Its Implementation

The third theme identified is challenges remain in its implementation, which also consists of four subthemes based on the participants' experiences and perceptions. These subthemes are unstable internet connectivity, lack of adequate digital devices, occasional system errors, and difficulties in adapting new system due to limited digital literacy and heavy workloads.

Unstable Internet Connectivity

Two participants pointed out that one of the main obstacles in utilizing the application is unstable internet connectivity.

"The obstacle is definitely the internet network." (P3)

"The main issue is disconnection due to unstable internet connectivity." (P4)

These reflections highlight the technological limitations that may hinder the optimal use of the application, particularly in areas with inadequate digital infrastructure.

Lack of Adequate Digital Devices

Two participants reported that some users were unable to install the application due to device incompatibility.

"Sometimes there are patients who cannot install it, perhaps because their smartphones are not supported." (P5)

"Several patients are unable to install the application; perhaps it is influenced by the type of device they are using." (P7)

These insights indicate that hardware limitations may present barriers to the accessibility and broader adoption of the application, particularly among patients with older or less advanced devices.

Occasional System Errors

Three participants stated that some patients experienced difficulties in accessing the system.

"Some hypertensive patients complained to me that they could not access the application." (P1)

"There were also patients who reported that the system had errors." (P4)

"Sometimes patients complained that they could not access the application for a period of time, perhaps due to high traffic." (P7)

These accounts highlight the importance of ensuring system reliability and accessibility, as technical errors and downtime may reduce patient trust and limit the consistent use of digital health applications.

Difficulties in Adapting New System due To Limited Digital Literacy and Heavy Workloads

Three participants emphasized that their heavy workloads and limited capacity to learn new systems sometimes made it difficult to adapt to the application.

"When it was first launched, I was somewhat skeptical and felt it was an additional burden." (P2)

"The workload inside and outside the facility is already quite high. Sometimes the introduction of a new system, even though technology-based, feels burdensome, but once mastered it is indeed more efficient." (P8)

"Some healthcare workers who are nearing retirement age find it difficult to adapt to the latest technology systems." (P10)

These insights reveal that while the application offers efficiency in the long run, the process of adoption can initially pose challenges, particularly for those with high workloads or limited digital literacy.

DISCUSSION

This study explored healthcare professionals' experiences in utilizing the *Satu Sehat Mobile App* for hypertension management in Indonesia. Three major themes emerged from the findings: the application is perceived as highly beneficial, it supports blood pressure monitoring, and several challenges remain in its implementation. These results provide valuable insights into the potential of digital health innovations to strengthen non-

Corresponding author: dian.yunita@binausadabali.ac.id

VOLUME 3, No 1. Tahun 2025, ISSN 3032-4408 (Online)
https://ejournal.poltekkes-denpasar.ac.id/index.php/icmahs

communicable disease (NCD) management in primary healthcare settings, particularly important given that hypertension is often asymptomatic but carries a high risk of severe complications if left unmanaged.

The Application is Perceived as Highly Beneficial

Participants emphasized the overall usefulness of the *Satu Sehat Mobile App* in supporting their daily practice. The system was described as reducing the administrative burden by simplifying data entry, retrieval, and reporting processes. Unlike traditional paper-based methods, the application allows for more efficient patient record management and facilitates timely decision-making (Uchechukwu & Ohinameuwa, 2025). Similar findings have been reported in studies of digital health applications in other low- and middle-income countries, where such innovations were shown to improve service efficiency, communication, and patient engagement (Kaboré et al., 2022; Saif-Ur-Rahman et al., 2023).

Beyond administrative advantages, healthcare professionals noted that the application strengthens continuity of care. The ability to track patients' health records consistently provides an opportunity for proactive follow-up, ultimately fostering better adherence to treatment plans. This resonates with the World Health Organization's (WHO) vision of integrated digital health systems that enhance care coordination and patient-centered services. In this context, the *Satu Sehat Mobile App* can be viewed not merely as a reporting tool but as an enabler of more holistic hypertension management.

The Application Supports Blood Pressure Monitoring

A critical contribution of the *Satu Sehat Mobile App* lies in its ability to enhance the monitoring of patients' blood pressure. Participants highlighted that the systematic recording of data enables healthcare providers to identify trends over time, detect early signs of uncontrolled hypertension, and intervene promptly. The availability of longitudinal data is

Digital platforms have been recognized globally as effective tools to facilitate remote monitoring, support clinical decision-making, and encourage patient self-management (Mannoubi et al., 2024). By allowing healthcare workers to maintain accurate and up-to-date records, the *Satu Sehat Mobile App* indirectly contributes to reducing the risk of treatment delays and complications. These findings align with evidence from previous studies showing that mobile health (mHealth) interventions can significantly improve blood pressure control and adherence to treatment, especially when integrated into routine primary healthcare systems (Stephen et al., 2023).

Moreover, the application has the potential to empower patients by making them more aware of their condition. Although this study focused on healthcare professionals' perspectives, the ability of digital health tools to engage patients in their own care is well documented. With appropriate integration, the Satu Sehat Mobile App could serve not only as a clinical tool but also as a platform for patient education and behavioral change in hypertension management.

Challenges Remain in Its Implementation

Despite the clear benefits, participants identified several barriers to the optimal use of the Satu Sehat Mobile App. Technical limitations such as unstable internet connectivity, lack of adequate digital devices, and occasional system errors were commonly reported. These challenges mirror findings from other digital health studies in resource-limited settings, where infrastructural deficiencies often impede the successful adoption of e-health solutions (King'ori, 2024). Without reliable connectivity and well-functioning systems,

Corresponding author: dian.yunita@binausadabali.ac.id

the potential of digital tools to improve healthcare delivery cannot be fully realized.

In addition to technical constraints, human resource challenges were also evident. Healthcare professionals expressed difficulties in adapting to the new system due to limited digital literacy and heavy workloads (Shrestha et al., 2022). For some, the introduction of the application was perceived as an additional task rather than a supportive tool. This highlights the importance of comprehensive training programs and ongoing technical support to build user confidence and ensure sustained adoption. Research consistently shows that the success of digital health interventions depends not only on technology itself but also on the readiness, motivation, and capacity of the users (Alotaibi et al., 2025). Finally, organizational and policy-level issues were also implied. Effective implementation of digital health tools requires strong governance, clear standard operating procedures, and alignment with broader health system priorities. Without sufficient policy support and resource allocation, healthcare workers may struggle to integrate the app into routine practice. Addressing these systemic challenges is therefore essential to maximize the benefits of the Satu Sehat Mobile App and ensure its sustainability.

Implications for Practice and Policy

The findings of this study suggest that digital health tools such as the Satu Sehat Mobile App can play a transformative role in strengthening primary healthcare services, particularly in the management of chronic diseases like hypertension. To enhance the app's effectiveness, it is necessary to address barriers at multiple levels. From a technical perspective, investments in digital infrastructure and system reliability are required. From a human resource perspective, training, mentoring, and workload adjustments should be prioritized. At the policy level, sustained funding, monitoring, and integration with other health information systems are critical.

These insights also contribute to the broader discourse on digital health equity. While the Satu Sehat Mobile App holds promise, disparities in access to digital resources between urban and rural areas may exacerbate inequalities in healthcare delivery. Policymakers should therefore ensure that the expansion of digital health solutions does not inadvertently widen the gap but instead strengthens equity in healthcare access.

Overall, the results of this study reveal that healthcare professionals perceive the Satu Sehat Mobile App as a highly valuable tool for hypertension management, particularly in improving data efficiency and supporting blood pressure monitoring. However, challenges related to technical infrastructure, user capacity, and organizational readiness persist. Addressing these issues is crucial for optimizing the integration of digital health solutions into Indonesia's primary healthcare system and achieving better outcomes in hypertension care.

CONCLUSIONS

This study highlights that healthcare professionals generally perceive the *Satu Sehat Mobile App* as a highly beneficial tool in supporting hypertension management. The application offers valuable features that facilitate blood pressure monitoring and improve continuity of care, thereby contributing to more efficient clinical practice and better patient outcomes. However, despite its potential, several challenges remain in its implementation, including technical limitations, varying levels of digital literacy, and the need for stronger system integration within existing healthcare services.

Addressing these challenges is essential to maximize the app's effectiveness and ensure its sustainable use in daily practice. Continuous training, infrastructure improvements, and user-centered

Corresponding author: dian.yunita@binausadabali.ac.id

refinements are required to strengthen adoption among healthcare professionals. Ultimately, optimizing the utilization of the *Satu Sehat Mobile App* could enhance hypertension management in Indonesia and serve as a model for advancing digital health solutions in similar resource-constrained settings.

Conflict of Interest

The researchers had no conflicts of interest in conducting this study.

Acknowledgment

The authors thank to the all participants for the participation in this study and also Stikes Bina Usada Bali for facilitating online databases in of this study.

REFERENCES

Alotaibi, N., Wilson, C. B., & Traynor, M. (2025). Enhancing digital readiness and capability in healthcare: a systematic review of interventions, barriers, and facilitators. *BMC Health Services Research*, *25*(1), 500. https://doi.org/10.1186/s12913-025-12663-3.

Borges do Nascimento, I. J., Abdulazeem, H., Vasanthan, L. T., Martinez, E. Z., Zucoloto, M. L., Østengaard, L., Azzopardi-Muscat, N., Zapata, T., & Novillo-Ortiz, D. (2023). Barriers and facilitators to utilizing digital health technologies by healthcare professionals. *Npj Digital Medicine*, *6*(1), 161. https://doi.org/10.1038/s41746-023-00899-4.

Harmadha, W. S. P., Muharram, F. R., Gaspar, R. S., Azimuth, Z., Sulistya, H. A., Firmansyah, F., Multazam, C. E. C. Z., Harits, M., & Putra, R. M. (2023). Explaining the increase of incidence and mortality from cardiovascular disease in Indonesia: A global burden of disease study analysis (2000–2019). *PLOS ONE*, *18*(12), e0294128. https://doi.org/10.1371/journal.pone.0294128.

Kaboré, S. S., Ngangue, P., Soubeiga, D., Barro, A., Pilabré, A. H., Bationo, N., Pafadnam, Y., Drabo, K. M., Hien, H., & Savadogo, G. B. L. (2022). Barriers and facilitators for the sustainability of digital health interventions in low and middle-income countries: A systematic review. *Frontiers in Digital Health*, *Volume 4-2022*. https://www.frontiersin.org/journals/digital-health/articles/10.3389/fdgth.2022.1014375..

King'ori, T. (2024). Harnessing Digital Health Technologies for Improved Healthcare Delivery and Disease Surveillance in Low-Resource Settings. *Global Perspectives in Health, Medicine, and Nursing*, *3*(1 SE-Articles), 1–10. https://forthworthjournals.org/journals/index.php/GPHMN/article/view/97.

Mannoubi, C., Kairy, D., Menezes, K. V., Desroches, S., Layani, G., & Vachon, B. (2024). The Key Digital Tool Features of Complex Telehealth Interventions Used for Type 2 Diabetes Self-Management and Monitoring With Health Professional Involvement: Scoping Review. *JMIR Med Inform*, *12*, e46699. https://doi.org/10.2196/46699.

Mhlongo, S., Mbatha, K., Ramatsetse, B., & Dlamini, R. (2023). Challenges, opportunities, and prospects of adopting and using smart digital technologies in learning environments: An iterative review. *Heliyon*, *9*(6). https://doi.org/10.1016/j.heliyon.2023.e16348.

Mohamed, S. F., Uthman, O. A., Mutua, M. K., Asiki, G., Abba, M. S., & Gill, P. (2021). Prevalence of uncontrolled hypertension in people with comorbidities in sub-Saharan Africa: a systematic review and meta-analysis. *BMJ Open*, *11*(12), e045880. https://doi.org/10.1136/bmjopen-

2020-045880

Rifky, P. M., & Jamnath, I. S. (2025). Kajian Literatur tentang Pengaruh Aplikasi Kesehatan Satusehat Mobile dan Mobile JKN terhadap Kesadaran Gaya Hidup Sehat di Indonesia (2019-2023). *Jurnal Penelitian Inovatif*, *5*(1 SE-Artikel), 327–352. https://doi.org/10.54082/jupin.920.

Saif-Ur-Rahman, K. M., Islam, M. S., Alaboson, J., Ola, O., Hasan, I., Islam, N., Mainali, S., Martina, T., Silenga, E., Muyangana, M., & Joarder, T. (2023). Artificial intelligence and digital health in improving primary health care service delivery in LMICs: A systematic review. *Journal of Evidence-Based Medicine*, *16*(3), 303–320. https://doi.org/https://doi.org/10.1111/jebm.12547.

Shrestha, A., Graham, D. M., Dumaru, P., Paudel, R., Searle, K. A., & Al-Ameen, M. N. (2022). Understanding the Behavior, Challenges, and Privacy Risks in Digital Technology Use by Nursing Professionals. *Proc. ACM Hum.-Comput. Interact.*, *6*(CSCW2). https://doi.org/10.1145/3555763.

Stephen, B. U.-A., Uzoewulu, B. C., Asuquo, P. M., & Ozuomba, S. (2023). Diabetes and hypertension MobileHealth systems: a review of general challenges and advancements. *Journal of Engineering and Applied Science*, *70*(1), 78. https://doi.org/10.1186/s44147-023-00240-6.

Uchechukwu, B. N., & Ohinameuwa, A. (2025). Enhanced Health (Record) Information Management System Using Mobile Application Development Framework. In *Journal of Science and Technology* (Vol. 30, Issue 3). https://doi.org/10.20428/jst.v30i3.2750.

WHO. (2023). Hypertension WHO. In *Hypertension* (pp. 12–14).

Zhou, B., Perel, P., Mensah, G. A., & Ezzati, M. (2021). Global epidemiology, health burden and effective interventions for elevated blood pressure and hypertension. *Nature Reviews Cardiology*, *18*(11), 785–802. https://doi.org/10.1038/s41569-021-00559-8.

Corresponding author: dian.yunita@binausadabali.ac.id