



User Experience in Accessing and Utilizing Digital Health Systems: A Phenomenological Study Exploring the Lived Experiences of Medical Practitioners and Patients on Telemedicine Platforms in Indonesia

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ABSTRACT

The use of digital health technologies, particularly telemedicine, has been growing rapidly in healthcare settings, yet the understanding of how healthcare professionals and patients experience these technologies remains limited. While existing studies have focused on the technological benefits, the lived experiences of users, especially in the context of Indonesia, have not been thoroughly explored. This study seeks to address this gap by investigating the experiences of medical practitioners and patients using telemedicine. Through a phenomenological approach, we aim to uncover the essential meanings and perceptions surrounding the adoption of telemedicine in healthcare. Data were collected through in-depth interviews with 20 healthcare practitioners and 5 patients, and analyzed using thematic analysis. The findings reveal three major themes: (1) trust in the platform and its services, which emerged as a critical factor influencing the adoption and sustained use of telemedicine; (2) convenience in accessing healthcare services, particularly for patients in remote areas, where telemedicine reduces travel and waiting times; and (3) the perceived efficacy of medical consultations through digital platforms, which varied significantly among users based on their previous experiences and technological literacy. In terms of policy implications, these results suggest the need for targeted strategies to enhance user trust by ensuring data privacy and platform reliability, as well as increasing the accessibility of telemedicine services in underserved regions. Moreover, there is a clear call for training programs aimed at improving digital literacy among both healthcare professionals and patients to optimize the benefits of telemedicine. The findings also emphasize the importance of regulatory frameworks that balance innovation with patient safety to foster broader acceptance and integration of telemedicine into national healthcare systems. These results contribute to a deeper understanding of digital health adoption and provide implications for future research and policy development in telemedicine.



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INTRODUCTION

The increasing integration of digital health technologies, particularly telemedicine platforms, into healthcare systems worldwide has significantly transformed how healthcare services are delivered (Aboye dkk., 2024). Telemedicine refers to the use of digital communication tools, such as video consultations and online health monitoring, to provide medical services remotely (Bhatt dkk., 2018). This shift is particularly notable in countries with large geographical distances and underserved populations, such as Indonesia, where access to healthcare is often limited due to infrastructure challenges. The phenomenon of telemedicine is not just a technological advancement but also a significant social and cultural shift in how individuals engage with healthcare services.

In recent years, telemedicine has emerged as a critical solution for improving healthcare access, especially during the COVID-19 pandemic, which accelerated its adoption (Canfell dkk., 2022). However, while the technological infrastructure and acceptance of telemedicine have expanded, there is limited understanding of the personal, subjective experiences of the key users—medical practitioners and patients, especially from a phenomenological perspective. This research addresses this gap by emphasizing the novelty of investigating lived experiences and how these insights extend beyond previous quantitative and technical studies. While studies have focused on the technical aspects, such as platform efficiency and user satisfaction, there is a gap in the literature regarding the lived experiences of individuals using these platforms. How healthcare professionals and patients perceive the effectiveness, challenges, and benefits of telemedicine remains underexplored, particularly from a phenomenological perspective that centers on lived experiences.

Previous research has employed a range of methods to examine the adoption and use of telemedicine, such as surveys and quantitative measures (Ghazal dkk., 2022). However, these approaches often overlook the nuanced, subjective experiences of users. The phenomenological approach, which emphasizes understanding the meaning individuals attach to their experiences, provides an ideal framework to address this gap. It allows for a deeper exploration of the challenges, perceptions, and emotions that emerge in the process of using telemedicine platforms, considering factors such as ease of use, trust in technology, and the perceived quality of care.

This research aims to fill this gap by exploring the subjective experiences of medical practitioners and patients in Indonesia as they engage with telemedicine (Hambleton, 2018). By understanding their lived experiences, this study seeks to offer unique insights into the barriers and facilitators of telemedicine adoption, providing a fresh perspective that enhances theoretical and practical understandings of digital health systems.

Research on the subjective experiences of individuals interacting with digital health systems, particularly telemedicine platforms, has become a critical area of inquiry. As digital health technologies continue to expand, understanding how users—both healthcare providers and patients—perceive and experience these systems is essential for optimizing their design and implementation (Hermansen dkk., 2023). The field of phenomenology, with its emphasis on the lived experiences of individuals, offers a unique perspective that is particularly relevant for exploring the complex, nuanced nature of telemedicine. This approach delves into how users interpret and make sense of their interactions with digital health tools, providing insights into factors such as trust, accessibility, emotional responses, and the perceived quality of care.

However, investigating the deep, personal meanings that individuals attach to their experiences with telemedicine presents several methodological challenges (Jarva dkk., 2022). One of the primary difficulties lies in capturing the full range of subjective experiences. Traditional quantitative methods, which focus on numerical data and statistical trends, are limited in their ability to convey the richness and complexity of individual experiences. While surveys and structured interviews can offer valuable insights into user satisfaction or usage patterns, they often fail to capture the deeper emotional and cognitive responses of users. These approaches cannot adequately reflect the context in which experiences occur or the personal interpretations of the phenomenon. As a result, most studies fail to address the underlying factors that influence the adoption and use of telemedicine from a truly holistic perspective.

Given these limitations, many previous studies on telemedicine have provided useful but incomplete views of the phenomenon (Malakhov, 2023). Most have focused on measurable outcomes, such as frequency of use or clinical effectiveness, which are important but insufficient for understanding the core experiences of users. In contrast, phenomenological research allows for a richer exploration of the lived experiences of users, making it a crucial method for fully comprehending the essence of telemedicine adoption and usage.

While practical approaches to understanding telemedicine, such as quantitative surveys and usability studies, have provided valuable insights into its usage patterns and technical aspects, these methods fall short of addressing the deeper, more nuanced experiences of the individuals involved. These conventional approaches tend to focus on measurable outcomes like user satisfaction,

frequency of use, or clinical efficacy, which, although important, do not fully capture the subjective meanings and emotions that users experience when interacting with telemedicine platforms. As such, these methods often overlook the personal, social, and psychological factors that shape how healthcare providers and patients engage with digital health technologies.

The limitations of these practical approaches highlight the need for a more holistic and in-depth exploration of the phenomenon. Telemedicine is not merely a tool for service delivery; it is a complex interaction between technology, healthcare providers, and patients, each bringing their own perspectives, expectations, and emotional responses to the table. To truly understand the essence of telemedicine, we must go beyond the surface-level data and explore the lived experiences of its users. This can only be achieved through a phenomenological approach, which is specifically designed to capture the meanings and significance individuals attach to their experiences.

Phenomenology allows for a deeper exploration of the personal, lived experiences of healthcare practitioners and patients, offering insights into how they interpret and make sense of telemedicine in their daily lives. By focusing on the subjective nature of these experiences, phenomenology offers an opportunity to uncover the hidden barriers and facilitators that influence the adoption, use, and effectiveness of telemedicine. In doing so, it provides a richer, more comprehensive understanding of how digital health systems function in real-world contexts, which can inform the development of more user-centered, effective, and emotionally resonant healthcare technologies.

In recent years, numerous studies have explored the use of telemedicine and digital health systems, often focusing on technical performance or user satisfaction. However, there is a notable gap in understanding the deeper, subjective experiences of users, especially healthcare providers and patients, when interacting with these technologies. Research has demonstrated that while telemedicine offers significant benefits in terms of access and efficiency, many users face challenges related to trust, usability, and emotional responses. Studies on digital health adoption have generally used quantitative methods, which capture broad patterns but fail to explain the meanings users attach to their experiences. The theoretical framework of Diffusion of Innovations (Rogers, 2003) has often been applied, yet these studies do not fully address the nuanced, lived experiences that underlie the adoption process, which this research seeks to uncover.

This study adopts a phenomenological approach to explore the lived experiences of both healthcare providers and patients in using telemedicine platforms. Phenomenology is particularly suited for investigating the subjective meanings individuals attach to their interactions with technology, allowing for a deeper understanding of their emotions, perceptions, and challenges. By focusing on the personal and social contexts that influence technology use, phenomenology enables a more holistic view of the telemedicine experience. This method allows us to capture the essence of how telemedicine is experienced in real-world settings, providing valuable insights into both the positive and negative aspects of its adoption. The goal is to move beyond surface-level data and understand how these experiences shape users' attitudes and behaviors towards digital health systems.

The article is structured to guide the reader through a comprehensive exploration of the phenomenon. The introduction sets the stage by explaining the broader context of digital health and telemedicine, along with the current knowledge gaps. Next, the methodological approach is outlined, with an emphasis on the phenomenological framework used to uncover the lived experiences of the participants. The process of data collection through interviews and observations is described, followed by a thematic analysis of the findings. The discussion section interprets the results in light of existing literature, and the conclusion provides a summary of key insights, along with implications for practice and future research.

RESEARCH METHODS

Study Design

This study employed a phenomenological approach to explore the lived experiences of medical practitioners and patients using digital health systems, specifically telemedicine platforms, in

Indonesia (Mohamed dkk., 2022). The phenomenological design was chosen due to its focus on understanding and describing the subjective experiences and perceptions of individuals in relation to a particular phenomenon. This approach allows for a deep exploration of how participants make sense of their interactions with telemedicine, shedding light on the meanings and challenges they attribute to their experiences. Phenomenology is particularly relevant in capturing the complexities and nuances of human experience, making it an ideal method to address the research questions regarding the perceptions, challenges, and benefits of telemedicine usage in healthcare settings. In this study, a descriptive phenomenological approach was applied, emphasizing the detailed, first-person accounts of participants' experiences without the imposition of pre-existing theories or hypotheses.

Participants

The participants were selected through purposive sampling, focusing on individuals who had direct experience with telemedicine platforms. The study included 20 medical practitioners—comprising general practitioners, specialists, and nurses—and 10 patients who had actively used telemedicine platforms in the past three months. Inclusion criteria for medical practitioners included being a licensed healthcare provider with experience using telemedicine for consultations, while patients were required to have used telemedicine for health-related consultations during the last three months. Exclusion criteria included healthcare providers who did not use telemedicine in their practice or patients who had not engaged with telemedicine platforms during the specified period. Demographically, participants ranged from 25 to 55 years of age, with diverse professional backgrounds in the healthcare sector. The group of patients represented various age groups, with a majority aged 30–50 years, reflecting the demographic most likely to use telemedicine platforms regularly. Gender distribution was approximately 50% male and 50% female, ensuring a balanced representation of perspectives.

Data Collection

Data were collected through semi-structured interviews and direct observation. Interviews were conducted face-to-face or via online platforms, depending on the participant's preference, and lasted approximately 45 to 60 minutes. A semi-structured interview guide was developed, focusing on key themes related to the participants' experiences with telemedicine, such as ease of access, perceived benefits, challenges, and data security concerns (Perla & Massaro, 2022). The guide allowed for flexibility to explore specific issues raised by participants. All interviews took place in a comfortable, private setting to ensure participants felt at ease sharing their experiences. Observations were conducted during telemedicine consultations, with the aim of capturing the dynamics of the interactions between medical practitioners and patients. Data were recorded with participants' consent, and all interviews were transcribed verbatim for analysis.

Data Analysis

The data were analyzed using thematic analysis, a common method in phenomenological research, which involves identifying, analyzing, and reporting patterns or themes within the data. The thematic analysis followed the six-step framework proposed by Braun and Clarke (2006): (1) familiarization with the data through repeated reading of interview transcripts and observation notes; (2) generating initial codes to highlight significant features of the data; (3) searching for themes by grouping related codes; (4) reviewing themes to ensure they accurately reflected the data set; (5) defining and naming themes to capture their essence; and (6) producing the final report that integrates these themes into a coherent narrative. Thematic analysis was chosen for its ability to identify key themes that emerged from participants' lived experiences. The analysis followed a systematic process: first, the interviews and observations were read and re-read to gain an in-depth understanding of the data; then, initial codes were generated based on significant statements and phrases. These codes were grouped into broader themes that reflected the participants' experiences of using telemedicine platforms. The data analysis process was supported by NVivo software, which facilitated the organization and management of the data but did not drive the thematic identification itself. Through iterative cycles of coding, categorizing, and refining themes, the analysis produced a comprehensive understanding of the experiences and challenges faced by both medical practitioners and patients in the telemedicine context.

Ethics

Ethical approval for this study was obtained from the relevant research ethics committee. Informed consent was obtained from all participants prior to their involvement in the study. Participants were fully informed about the purpose of the research, the nature of their involvement, and their right to withdraw at any time without consequence. To protect participants' privacy, all data were anonymized, and pseudonyms were used to ensure confidentiality. Data were stored securely and only accessible to authorized research personnel. The study adhered to ethical guidelines for research involving human subjects, including ensuring that all participants' personal and health information was kept confidential and used solely for the purpose of the study.

RESULTS

Ease of Access

One of the most prevalent themes across both medical practitioners and patients was the ease of access to healthcare services facilitated by telemedicine. Many participants expressed that the digital platform made it more convenient to access healthcare, particularly for individuals in remote areas. A general practitioner, Dr. H., stated, "Telemedicine has made it easier for patients in rural areas to consult with specialists without the need to travel long distances. It saves time and effort." Similarly, a patient (Patient 3) shared, "I no longer need to leave my home for consultations. It's much easier to get advice when I need it most." However, some participants highlighted technical issues such as poor internet connectivity that hindered their experience. Dr. M., a specialist, remarked, "Sometimes, the connection is unstable, which disrupts the consultation process. It's frustrating for both the doctor and the patient."

Limitations in Diagnosis

A significant challenge identified by the medical practitioners was the limitation of telemedicine in providing comprehensive diagnoses. Several practitioners noted that conducting consultations remotely made it difficult to assess patients thoroughly, particularly for conditions requiring physical examination. Dr. R., a general practitioner, noted, "It's hard to make a complete diagnosis without seeing the patient in person. For example, when dealing with skin conditions, I cannot properly assess the severity through a screen." Patients echoed similar concerns, with Patient 6 mentioning, "I worry that the doctor might miss something important because they can't examine me physically." These limitations led to a general preference for telemedicine consultations to be used primarily for non-emergency cases or follow-up consultations.

Data Security Concerns

Another prominent theme that emerged was the issue of data security, particularly concerning the confidentiality of personal health information stored on digital platforms. While medical practitioners generally acknowledged the importance of safeguarding patient data, many patients expressed concerns regarding the security of their medical information. Patient 2 stated, "I'm not sure if my personal data is safe. I always wonder who has access to it, and if it could be misused." Dr. N., a medical professional, added, "As healthcare providers, we are aware of the risks. It's crucial to ensure that the platform adheres to strict data protection regulations. Without that, patients won't feel secure using telemedicine." This theme highlighted the need for stronger data protection measures and greater transparency to build trust among users.

Navigation Challenges for Patients

During the observations, it became evident that many patients, particularly those who were not tech-savvy, experienced difficulties navigating the telemedicine platform. While some practitioners were familiar with the technology and could use it efficiently, patients often struggled with the interface. Patient 7 shared, "I find it hard to figure out how to start the consultation. I'm not sure if I'm doing it right." This issue was exacerbated for older patients, who were less familiar with digital platforms. Dr. F., a nurse, remarked, "I've had patients who can't even log in to the platform,

which delays the consultation process. We need a more user-friendly interface, especially for elderly patients."

Perception of Telemedicine in Enhancing Healthcare Accessibility

Despite the challenges, many patients and medical practitioners acknowledged the overall positive impact of telemedicine on healthcare accessibility. Telemedicine was seen as an essential tool for bridging the gap between healthcare providers and patients, especially in a country as vast as Indonesia. Dr. J., a specialist, mentioned, "Telemedicine has expanded the reach of healthcare to underserved populations. It's an indispensable part of the future of healthcare in Indonesia." Patients also appreciated the convenience, with Patient 1 noting, "It's so much easier to speak with a doctor about simple issues without having to go to a clinic."

The findings from the interviews and observations underscore both the potential and limitations of telemedicine in the Indonesian healthcare system. The ease of access and enhanced healthcare reach were viewed as major benefits by both practitioners and patients, while limitations in diagnosis, concerns over data security, and navigation difficulties for patients were key challenges. These insights are crucial for the development of more effective, user-friendly, and secure telemedicine platforms that can be better integrated into the healthcare infrastructure.

DISCUSSION

The primary findings of this study reveal the complex, multifaceted experiences of both healthcare providers and patients using telemedicine platforms (Polat, 2021). These experiences highlight key elements such as accessibility, the limitations of remote diagnoses, and concerns over data security. While these findings reaffirm prior research emphasizing the technical and operational challenges of telemedicine, they extend the discourse by uncovering the emotional and psychological dimensions of user experiences, which are critical for broader adoption and satisfaction. The findings demonstrate that while telemedicine offers convenience and efficiency, its implementation is fraught with challenges that hinder full adoption and satisfaction, particularly in the absence of direct physical contact and in addressing concerns regarding privacy. These results contribute to a deeper understanding of the subjective, lived experiences of users, which were not sufficiently captured by previous research that focused on broader metrics such as usage rates or satisfaction scores.

In answering the central research question, this study emphasizes the emotional and psychological dimensions of using telemedicine, revealing that both healthcare providers and patients experience varying levels of comfort, trust, and anxiety in interacting through digital platforms (Schofield dkk., 2019). For instance, patients often expressed heightened anxiety about the adequacy of remote diagnoses and the potential for miscommunication. Meanwhile, healthcare providers highlighted the dual challenge of maintaining high-quality care while managing technical constraints. These insights underscore the need for a more nuanced understanding of how digital health tools impact not just the efficiency of healthcare delivery but also the interpersonal aspects of patient-care provider relationships. This research highlights the importance of considering emotional and social factors in the design and implementation of telemedicine platforms to improve user experiences and enhance adoption.

When compared with existing literature, the findings align with, and at times extend, prior research on digital health adoption and telemedicine (Shah dkk., 2017). Previous studies have emphasized the technical and operational challenges of telemedicine, such as connectivity issues and diagnostic limitations (Shankar et al., 2020), which were also echoed in this study. However, the phenomenological approach used here has brought to light deeper insights into the emotional and social dynamics that influence users' perceptions of these challenges. For instance, concerns about data security and the lack of trust in digital systems, as observed in this study, resonate with Rogers' (2003) theory of Diffusion of Innovations, which suggests that perceived risk and uncertainty can significantly hinder the adoption of new technologies. The findings further support the notion that the success of telemedicine depends not only on technical infrastructure but also on addressing these subjective, emotional concerns, as emphasized by recent studies (González et al., 2021). In this sense,

the current study contributes a more holistic view of telemedicine adoption by exploring the user experience beyond the technical scope and highlighting the human factors that shape technology use.

Implications of the Findings

The findings of this study provide deep insights into the user experience of telemedicine, which is more complex than just technical or functional aspects (Velardo dkk., 2017). Practically, the results of this study can be used to design interventions that are more sensitive to the emotional and psychological needs of users, both patients and medical practitioners. In a social and cultural context, the findings highlight how uncertainty, anxiety, and distrust toward technology can hinder the use of telemedicine, particularly in communities with a high dependence on face-to-face interaction (Theis dkk., 2019). Therefore, it is crucial for policymakers and healthcare providers to consider not only technical factors but also social and cultural factors when designing and promoting telemedicine platforms. This also suggests that further training for medical practitioners in digital communication and addressing trust and patient privacy issues is essential to improving user experience and increasing the adoption of this technology in the future.

Study Limitations

Although the findings of this research provide valuable insights, there are several limitations to note. One of these is the limited number of participants, which focused on medical practitioners and patients from a specific geographic region (Woods dkk., 2022). This may limit the ability to generalize the findings to a broader population or to more diverse global contexts. Furthermore, while this phenomenological approach is in-depth, it still relies on the subjective interpretations of participants, which may be influenced by individual experiences and personal perceptions. This methodological limitation emphasizes the need for further research involving a larger and more diverse sample, as well as exploration in different cultural and social contexts. Future research could also broaden the scope by including more contextual variables, such as differences in education levels or access to technology.

Prospective Statement for Future Research

This research paves the way for further exploration into how telemedicine experiences may holistically affect the doctor-patient relationship. Future studies could expand this perspective by investigating its impact on patients with chronic medical conditions or other vulnerable groups, to understand how their experiences in telemedicine differ from those of other groups. Additionally, further studies could explore the long-term effects of telemedicine on the quality of interpersonal relationships in healthcare, as well as its impact on patient satisfaction and treatment outcomes. By deepening our understanding of the factors influencing the use and acceptance of telemedicine, this research could contribute significantly to the design of more inclusive health and technology policies based on social needs.

CONCLUSION

This study investigates the experiences of patients and medical practitioners in using telemedicine, focusing on the meanings and subjective perceptions involved in the adoption of this technology. The main findings show that although telemedicine offers convenience and accessibility, the user experience is often influenced by uncertainty, anxiety, and issues of trust in the technology. These findings fill a gap in the existing literature by demonstrating that the telemedicine experience is not only dependent on technical factors but also on significant emotional and social aspects. The results provide practical insights for healthcare providers to design policies that are more sensitive to the needs of patients and medical professionals in the digital context. Policymakers should also consider integrating telemedicine with existing healthcare systems to create a seamless hybrid model of care, combining the benefits of in-person and digital consultations. Future studies could further explore how cultural and demographic factors influence telemedicine user experiences and investigate ways to enhance the acceptance of this technology across various communities. Through a

phenomenological approach, this research paves the way for a deeper understanding of human interactions with technology in healthcare.

CONFLICT OF INTEREST

This article has undergone an independent and objective review process. The editor handling this article was not involved in the co-authorship of any previous publications with the authors, and to maintain independence, the peer review process was conducted by a different editor who had no direct relationship with the authors.

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