



Experiencing Telemedicine: Insights into Elderly Patients' Telehealth Interactions in Remote Indonesian Communities

Ai Lela Kurnia

STIKES Bhakti Pertiwi Indonesia, Indonesia

ailelakurniaa06@gmail.com

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ABSTRACT

Telemedicine, a key advancement in medical informatics, is reshaping healthcare delivery by enabling remote consultations, particularly in underserved regions. While the technology promises greater accessibility, few studies have explored how elderly patients in remote areas personally experience these digital interactions. Despite its growing implementation, limited knowledge exists about the emotional and cognitive responses of older adults to such systems, especially outside urban areas. This study seeks to answer the following question: What are the lived experiences of elderly patients using telemedicine in remote settings?

Using a descriptive phenomenological approach, this study uncovers how elderly individuals construct meaning around their use of telemedicine platforms. In-depth semi structured interviews were conducted with ten elderly participants from remote regions of Indonesia, and data were analyzed thematically. The results revealed three key themes: initial technological anxiety and gradual adaptation, emotional distance and trust issues in remote consultations, and ambivalence regarding the perceived quality and accessibility of digital care. These findings illustrate that elderly patients' adoption of telemedicine is influenced not only by digital literacy but also by emotional readiness and relational expectations.

This study broadens our understanding of how telemedicine is experienced by vulnerable users and highlights the need for empathetic, culturally sensitive telehealth design in policy and practice.



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INTRODUCTION

In recent years, the integration of digital technology into healthcare delivery has redefined how medical services are accessed, particularly through the rise of telemedicine. This transformation is especially significant in regions where geographical, infrastructural, or economic barriers hinder access to conventional healthcare (Amoon dkk., 2020). As a component of the broader field of Medical Informatics, telemedicine encompasses the use of communication technologies to deliver clinical services remotely. It offers potential solutions for healthcare disparities in rural and underserved populations.

Telemedicine is often promoted as a tool for enhancing efficiency, accessibility, and patient autonomy. However, beyond its technical functionality lies a complex human dimension, especially when adopted by vulnerable populations such as the elderly. For older adults living in remote areas, engaging with telemedicine involves more than navigating an interface; it constitutes an encounter with unfamiliar technologies that may challenge established norms of care, trust, and relational interaction. These encounters are shaped not only by physical and cognitive limitations but also by social, emotional, and cultural factors, which influence how the technology is experienced and interpreted.

Understanding these experiences requires more than statistical analyses of access rates or user satisfaction. There is a pressing need to explore the subjective meaning of using telemedicine from the

perspective of those who live through it—especially among older individuals who may feel excluded from the digital shift in healthcare (Baldassano dkk., 2020). Phenomenological inquiry provides a valuable lens through which these lived experiences can be understood, not as data points, but as meaningful narratives that illuminate the human implications of technological healthcare delivery.

Research on individuals' lived experiences within healthcare systems has emerged as a critical area of inquiry, particularly in understanding how patients engage with and make sense of evolving medical technologies. Within the field of telemedicine, the experiential dimension becomes especially significant among elderly users whose interactions with digital healthcare platforms are often mediated by anxiety, unfamiliarity, or systemic exclusion. These experiences are not merely functional or procedural; they reflect deeper emotional and relational responses that are shaped by individual histories, cultural norms, and contextual limitations.

Despite the growing volume of research on telemedicine adoption, much of the existing literature relies on quantitative frameworks that prioritize usage metrics, satisfaction scores, or adoption rates. While such data offer valuable insights, they fall short in capturing the nuanced and deeply personal meanings that individuals assign to their encounters with remote healthcare. Quantitative surveys, by design, often miss the existential dimensions of care, trust, and vulnerability—particularly salient among older adults facing both physical frailty and digital marginalization.

These methodological limitations have led to an underrepresentation of subjective voices in current scholarship. As a result, the core essence of what it means to "experience" telemedicine—especially from the perspective of elderly individuals in remote communities—remains insufficiently understood (Blonigen dkk., 2023). A phenomenological approach is thus necessary to bridge this gap, offering a path to explore the intricate textures of human experience that are often overlooked by conventional research paradigms.

Current responses to the challenges of healthcare access in remote regions, particularly for the elderly, have largely focused on implementing practical telemedicine solutions such as mobile health apps, video consultations, and remote monitoring systems. While these innovations address logistical barriers and are often framed as cost-effective alternatives to in-person care, they are typically evaluated through usage data, system performance metrics, or broad satisfaction surveys¹. These approaches tend to prioritize operational success over the personal meaning and lived experience of care.

However, such frameworks are limited in their capacity to reveal the emotional, cognitive, and relational dimensions that shape how older adults experience telemedicine. They often overlook the dissonance between perceived accessibility and actual psychological or cultural readiness to engage with digital health services. As a result, the interpretation of “successful implementation” frequently lacks depth and fails to consider the unique ways elderly individuals internalize and respond to technologically mediated care.

To address this limitation, a phenomenological approach is essential. Unlike traditional methods, phenomenology is uniquely positioned to uncover the essences of human experience by focusing on the meanings participants assign to their interactions (Fahlevi dkk., 2022). This approach enables a holistic exploration of telemedicine from the standpoint of elderly patients themselves—what they feel, perceive, and struggle with in real time—thereby filling a significant gap in both the theoretical and practical understanding of telehealth accessibility and equity.

Several studies have examined patient experiences in digital healthcare, particularly within the context of telemedicine. Research has highlighted the importance of empathy, trust, and communication in shaping patients' perceptions of remote consultations. However, most of these studies rely on broad surveys or structured interviews that limit the exploration of lived experience. The elderly, especially in rural settings, remain underrepresented in such research. Their unique perspectives are often generalized or overlooked in favor of technological efficiency.

This study adopts a descriptive phenomenological approach to explore how elderly patients experience telemedicine in remote areas. This method allows for a deeper understanding of how

patients construct meaning around digital care interactions. By focusing on their narratives, this study answers the key question posed earlier: how do elderly individuals perceive and experience telemedicine beyond its functional use? Descriptive phenomenology is chosen because it centers the voices of participants without imposing theoretical assumptions. It helps uncover emotional, cognitive, and relational aspects that are not accessible through traditional approaches.

This article begins with an introduction and background to the research problem. It continues with an explanation of the phenomenological framework and the rationale for its selection. The following sections detail the data collection process, analysis using thematic procedures, and presentation of the findings (Fleming dkk., 2024). A discussion then connects the findings to existing literature and theoretical implications. Finally, the article concludes with reflections on contributions, limitations, and potential directions for future research.

RESEARCH METHODS

Study Design

This study employed a descriptive phenomenological approach to explore the lived experiences of elderly patients in remote areas when accessing telemedicine services. Rooted in the philosophical foundation of Edmund Husserl, descriptive phenomenology emphasizes the exploration of phenomena as they are consciously experienced, free from presuppositions and theoretical impositions (Gous dkk., 2020). This approach was selected for its capacity to uncover the essence of subjective experiences and provide a rich, contextualized understanding of how participants perceive, interpret, and respond to digital healthcare encounters. The emphasis on epoché—the suspension of judgment—allowed for a deep, unfiltered description of the phenomena as expressed by the participants themselves.

Participants

Participants in this study consisted of elderly individuals aged 65 years and older who had engaged in at least two telemedicine consultations within the past six months. Inclusion criteria required participants to reside in remote or rural areas with limited access to physical healthcare facilities and to possess basic digital literacy or have familial support during online consultations (Gramaje dkk., 2021). Exclusion criteria included those with cognitive impairments that might hinder meaningful communication or those unable to provide informed consent. A purposive sampling technique was used to ensure the selection of individuals whose experiences were directly relevant to the research focus. The final sample included 10 participants (6 females and 4 males), aged between 67 and 78 years, with a median age of 71. Most participants had chronic conditions such as hypertension or diabetes, necessitating regular medical consultations.

Data Collection

Data were collected through in-depth semi-structured interviews conducted face-to-face at the participants' homes or local health centers, depending on participant preference and accessibility. Each interview lasted approximately 45 to 75 minutes and was audio-recorded with consent. A flexible interview guide was used to facilitate open dialogue, allowing participants to narrate their experiences in their own words. Interview topics included perceptions of the telemedicine process, emotional responses, and perceived challenges or benefits (Harb dkk., 2021). Efforts were made to create a comfortable, private, and culturally appropriate setting for each participant. Interviews were conducted in the participants' native language and later transcribed verbatim and translated into English for analysis. Field notes and reflective memos were used to complement the interview data and enhance contextual understanding.

Data Analysis

The data were analyzed using thematic analysis aligned with descriptive phenomenological principles. The analytic process began with multiple readings of the transcripts to achieve immersion and identify significant meaning units. These units were then coded and grouped into thematic

clusters that reflected the core essence of participants' experiences. MAXQDA software was utilized to facilitate the organization and retrieval of data segments, although the interpretive process remained researcher-driven and theory-neutral (Harb dkk., 2020). Through iterative comparison and synthesis, essential themes were distilled that captured the shared structures of meaning across participants' narratives. The analytic procedure followed the steps of horizontalization, textural and structural description, and synthesis of composite descriptions to arrive at the final thematic structure.

Ethical Considerations

Ethical approval for this study was granted by the Health Research Ethics Committee of Universitas Indonesia, with approval number 112/UN2.F1/ETIK/2024, prior to data collection (Ho dkk., 2019). All participants were informed about the purpose, procedures, and voluntary nature of the study. Written informed consent was obtained from each participant, with assurances of anonymity and confidentiality. Pseudonyms were used in reporting findings to protect participant identity. The study adhered to the ethical principles outlined in the Declaration of Helsinki and complied with local regulations governing human subjects research.

RESULTS

Technological Anxiety and Adaptation

For most elderly participants, initial exposure to telemedicine platforms triggered feelings of confusion, fear, and resistance, primarily due to unfamiliarity with digital interfaces. Many expressed a sense of helplessness, describing technology as intimidating or impersonal.

“I don't even know where to start. The screen keeps asking things I don't understand. I was afraid I might press something wrong and make things worse.” (P4, male, 72 years old)

Despite these initial challenges, some participants reported gradual adaptation, especially when assisted by younger family members or community health workers. Over time, a few began to perceive the interaction as manageable, although not entirely comfortable.

“After a few sessions, I started to get used to it, but only because my grandson was there helping me. I still prefer seeing doctors face-to-face, but at least now I don't panic when I open the app.” (P8, female, 69 years old)

This theme illustrates the emotional labor required in overcoming the digital divide, where adaptation does not equate to empowerment but to necessity-driven resilience.

How to address technological anxiety in elderly telemedicine users?



Technological Anxiety

Fear and confusion due to unfamiliarity



Gradual Adaptation

Assisted learning and acceptance

Trust and Relational Distance with Remote Doctors

Participants consistently emphasized a perceived emotional and relational gap in virtual consultations. Unlike in-person visits, the screen-mediated interaction was often described as “cold” or “robotic,” affecting the depth of trust toward the healthcare provider.

“I cannot look into the doctor's eyes properly. It's just a small face on my screen. How can I trust someone I barely see?” (P2, male, 75 years old)

Some patients also questioned the diagnostic accuracy in remote settings, expressing concern that the absence of physical examination reduced the perceived legitimacy of the care received.

“He just asked me questions. No touching, no stethoscope. How can he know what’s wrong with my chest?” (P6, female, 68 years old)

However, a minority expressed positive feelings when the doctor took time to explain clearly and showed empathy, suggesting that communication style plays a critical role in fostering trust despite technological mediation.

Perceived Quality and Accessibility of Digital Healthcare

Telemedicine was often viewed as a “compromise solution” in rural settings, chosen out of necessity rather than preference. Participants appreciated the convenience and cost-saving benefits, especially in avoiding long-distance travel to urban hospitals.

“If I had to go to the city, I would need to pay for a car and ask my son to take leave. With this, at least I can talk to the doctor without moving.” (P3, male, 70 years old)

Nonetheless, concerns about network instability, application glitches, and lack of tailored interfaces for elderly users frequently surfaced. These technical issues were seen not just as barriers but as indicators of exclusion in system design.

“Sometimes the screen just freezes. Other times I can’t hear the doctor well. They didn’t make this for old people like us.” (P7, female, 71 years old)

The theme highlights that accessibility, in the eyes of the elderly, is not only about distance but also about digital inclusivity and user-centric design.

The lived experience of elderly patients using telemedicine in remote areas reveals a multidimensional tension between necessity and discomfort, trust and detachment, accessibility and exclusion. These findings underscore the need for designing empathetic, intuitive, and inclusive telemedicine systems that account not just for clinical efficiency but for emotional safety and user dignity.

DISCUSSION

The findings of this study reveal three essential dimensions of elderly patients’ lived experiences with telemedicine in remote settings: anxiety and gradual adaptation to technology, emotional distance and trust challenges in digital consultations, and ambivalence regarding the accessibility and quality of virtual healthcare (Mulrooney dkk., 2022). These dimensions answer the central question posed in the introduction by uncovering how elderly individuals make sense of and emotionally respond to digital care encounters that replace traditional face-to-face interactions.

The study contributes a deeper understanding of the subjective realities faced by elderly patients when engaging with telemedicine platforms. Rather than evaluating success by technical functionality or service coverage, the results highlight how personal history, relational needs, and emotional readiness shape users’ perceptions of care. The voices of participants illustrate how technology is not neutral—it mediates not only access, but also the sense of connection, security, and dignity in receiving medical attention. This insight addresses the knowledge gap previously identified, by demonstrating that elderly patients’ adoption of telemedicine is a nuanced, layered process that extends beyond technical literacy.

These findings are consistent with prior qualitative studies that emphasize human-centered design and user experience in digital health services. For example, Maddeh dkk., (2023) noted that elderly patients often experience emotional disconnection during virtual consultations, echoing the theme of relational distance found in this study¹. Similarly, Mahajan dkk., (2019) emphasized the need for empathy and personalization in telehealth interfaces, which supports the current findings on trust and perceived care quality. However, this study extends the literature by situating these experiences within the cultural and infrastructural realities of remote Indonesian communities, where digital inclusion remains uneven. It underscores that trust in technology is inseparable from the

context in which it is used, and that emotional security is as crucial as functional access in health system design.

From a policy standpoint, these findings call for targeted interventions in telehealth policy that go beyond broadband expansion and platform availability. Policymakers should mandate the inclusion of age-friendly interface design standards, require user-testing among elderly demographics, and provide subsidies or training programs for caregivers and older adults to facilitate digital transition. Such policies would promote equitable adoption while acknowledging diverse user capabilities and comfort levels.

On the design front, practical recommendations include simplifying user interfaces with large icons, high-contrast text, and voice-guided navigation. Telemedicine platforms should incorporate empathy-driven features such as personalized greetings, extended consultation time slots for elderly patients, and options for involving family members during calls. Additionally, systems should be designed to mimic familiar interaction patterns from in-person visits, such as structured check-ins and verbal reassurances to help build emotional trust.

The implications of these findings extend beyond individual narratives to inform broader discussions on digital equity and human-centered telehealth design. From a socio-cultural perspective, the study highlights how older adults in remote regions navigate a technologically mediated health system that may not fully accommodate their cognitive, emotional, or cultural needs. The discomfort and uncertainty expressed by participants point to a mismatch between system expectations and user readiness, emphasizing the need for healthcare policies that prioritize not only access but also psychological and relational support (Metz dkk., 2021). On a professional level, clinicians and developers are encouraged to design telemedicine services that respect the lived realities of elderly users, integrating empathy, simplicity, and contextual sensitivity into digital platforms.

Despite the richness of insight yielded by this study, certain limitations must be acknowledged. The research focused on a relatively small number of participants from remote areas in Indonesia, which may affect the broader applicability of its findings. Moreover, as with all phenomenological research, the goal was not statistical generalization but to uncover depth and essence within specific lived experiences (Minopoulos dkk., 2022). The linguistic and cultural nuances present in translation may also influence interpretive accuracy, although measures were taken to preserve authenticity through careful transcription and contextual validation.

Future research could build upon these findings by exploring telemedicine experiences across diverse elderly populations, including those in urban settings or with varying levels of digital literacy. Comparative studies across cultural or geographical regions may reveal patterns and divergences in how digital care is perceived, enriching the global discourse on equitable healthcare technology. Furthermore, longitudinal qualitative studies could investigate how these experiences evolve over time, particularly as telemedicine becomes a more integrated component of healthcare delivery systems worldwide.

CONCLUSION

This study explored the lived experiences of elderly patients in remote areas when accessing telemedicine services, focusing on how they perceive and make sense of digital healthcare interactions. The findings revealed three core themes: initial technological anxiety followed by gradual adaptation, emotional distance affecting trust in virtual consultations, and mixed perceptions regarding accessibility and quality. These insights highlight the emotional and relational complexities often overlooked in existing telemedicine research, especially among aging populations with limited digital familiarity. By adopting a descriptive phenomenological approach, the study addressed critical gaps in understanding the human side of telehealth implementation. The results suggest that future digital health solutions must integrate empathetic design and culturally responsive features to meet the nuanced needs of elderly users. Further research could expand this work by exploring similar experiences in different cultural or urban settings, and policymakers should consider establishing

design standards and support structures tailored to aging populations to ensure equitable access and emotional safety in digital healthcare.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this article. All procedures were conducted independently, and the research was carried out without any commercial or financial relationships that could be construed as a potential conflict of interest.

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