Available online at https://ejournal.corespub.com/index.php/ijhms/index

International Journal of Health, Medicine, and Sports

e-ISSN: 3026-7455

Vol. 2, No. 4, pp. 98-103, 2024

Elderly Perceptions and Barriers in Accessing Digital Health Services: A Case Study in Tanjung Jaya Village, Panimbang District

Deva Putra S[1*], Setyo Luthfi Okta Y[2]

[1,2]*Communication in Research and Publications, Bandung, Indonesia*

**Corresponding author email: devazxone@gmail.com*

Abstract

In the era of rapid digitalization, digital health services such as telemedicine and health applications have become essential tools for improving healthcare access, especially for vulnerable groups like the elderly. However, older adults often face various challenges when attempting to access these services, including issues related to digital literacy, physical limitations, and concerns over data security. This study aims to explore the perceptions of elderly individuals in Tanjung Jaya Village, Panimbang District, towards digital health services and the barriers they encounter. Using a qualitative approach, in-depth interviews were conducted with 12 elderly participants who had experience with or knowledge of digital health services. The findings reveal that most participants have a neutral perception of digital health services, with some expressing concerns over the complexity of technology and the security of their personal data. The primary barriers identified include low digital literacy, physical limitations, and a lack of trust in digital platforms. Solutions suggested by participants include direct training, assistance from family or medical staff, and the development of elderly-friendly applications. These findings highlight the need for tailored support and more accessible, user-friendly digital health services for older adults to enhance their engagement and improve their health outcomes.

Keywords: Digital health services, elderly perceptions, digital literacy, health, technology barriers, elderly-friendly applications

1. Introduction

In today's digital era, information and communication technology (ICT) has penetrated almost all aspects of human life. One area that has undergone a major transformation through the application of technology is the health sector. Digital health services such as telemedicine, health applications, and online consultations are increasingly being used to facilitate access and improve the quality of health services. However, despite the many benefits provided by this technology, certain age groups, such as the elderly, often face difficulties in accessing these services (Wilson et al., 2021).

As vulnerable members of society, the elderly have special needs when it comes to health care. They often face various physical and psychological problems, which affect their ability to access health services directly. At the same time, their increasing dependence on digital health services poses new challenges on how the elderly can make the most of this technology (Jokisch et al., 2022).

The purpose of this study was to identify the perceptions of the elderly towards digital health services and the barriers they face in accessing these services. Perception is an important factor in technology adoption, while the barriers faced can be obstacles that prevent the elderly from accessing digital health services. It is hoped that by understanding both aspects, solutions can be found to improve the digital inclusion of the elderly (Kaihlanen et al., 2022).

As socially vulnerable people, the elderly often face limitations in terms of digital skills. Although some training programs are available to help improve their technical skills, many older adults still find it difficult to adapt to new technologies (Low et al., 2021). Most digital health services require a good understanding of how to use equipment such as smartphones, computers, and related applications. Therefore, it is important to know the extent to which older adults have the knowledge and skills necessary to access digital health services (Sun et al., 2020).

One of the main barriers that older adults face in accessing digital health services is a lack of digital literacy. Digital literacy includes the ability to use hardware and software effectively (Choudhary and Bansal, 2022). Many older adults are not familiar with technology and feel anxious or afraid to use health applications. In addition, physical

problems such as visual impairment, hearing impairment, and limited mobility can exacerbate difficulties in using technology (Choukou et al., 2021).

Data security is also a serious concern for older adults. As a group that is vulnerable to fraud and data misuse, older adults often feel anxious about sharing personal information through digital platforms. These concerns affect their level of trust in digital health services and ultimately make them reluctant to use this technology (Alagood et al., 2023).

Another barrier is the physical and psychological limitations of older adults. Visual and hearing impairments make it more difficult to use digital applications and devices. In addition, older adults may find it difficult to adapt to digital interactions that lack the social aspect of face-to-face interactions. These physical limitations may prevent them from participating in online training and consultation programs, which are usually conducted independently (Shi et al., 2023).

Nevertheless, some older adults have positive perceptions of digital health services. Others see technology as a tool for obtaining health information faster and more easily accessible. In addition, they see the potential of digital health services to reduce the burden of traveling to health facilities, which is a major challenge for people living in remote areas or with physical limitations (Zhou et al., 2021).

However, these perceptions do not alwayss reflect reality. Many older adults feel frustrated and disappointed by the use of technology that is not age-friendly. Overly complicated health applications, unintuitive interfaces, and lack of technical support can confuse older adults and make them reluctant to use services. Therefore, it is important to understand the causes of these perceptions and how these barriers can be overcome (Mace et al., 2022).

The purpose of this study is to explore the perceptions of the elderly towards digital health services in Tanjung Jaya Village, Panimbang district, and to understand the barriers they face in accessing these services. This study will use a qualitative approach with an in-depth interview method with a number of elderly participants. The results of this study are expected to provide clearer insights into the needs and expectations of the elderly in using digital health services, as well as provide recommendations to improve the accessibility of these services for the elderly group.

2. Methods

2.1. Type of Study

This study will use a descriptive qualitative approach that aims to explore the perceptions, understandings, and barriers that older adults experience when accessing digital health services. A qualitative approach was chosen because the focus of this study is to understand older adults' subjective experiences when using technology, which cannot be measured quantitatively. This study will use in-depth interview techniques and thematic analysis to identify key themes related to older adults' perceptions and barriers.

2.2. location of the study

This study was conducted in Tanjung Jaya village, Panimbang district, Banten Province. This location was chosen based on the consideration that the level of technology use among the elderly in this village is varied and will provide diverse insights into the barriers and perceptions of the elderly regarding digital health services.

2.3. participants

The participants in this study were older adults aged 60 years or older living in the village of Tanjung Jaya. To ensure a diversity of perspectives, participants were selected through purposive sampling, in which individuals who had experience with or knowledge of digital health services were selected. The number of participants ranged from 12 people, and the criteria were as follows:

- Older adults who have used or are currently using digital health services (e.g., telemedicine and health apps).
- Older adults who are able to communicate clearly and provide information openly.

2.4. data collection methods

Data were collected through in-depth interview techniques conducted face-to-face with each participant. These interviews were conducted using an interview guide that covered several key topics, including:

- Older adults' perception of the benefits and utility of digital health services.
- Barriers (technical, physical, and social) faced in accessing digital health services.
- Expected solutions and support to improve access to and use of digital health services by older adults. Interviews lasted no longer than 30 to 60 minutes and all interviews were recorded with the permission of the participants to facilitate the transcription and data analysis process.

2.5. data analysis

Data obtained from the interviews will be analyzed using thematic analysis. The analysis process begins with the transcription of the interviews, which are then carefully read to identify patterns and themes that emerge in the data. The analysis process includes the following steps

- Familiarize yourself with the data: read and listen to the interviews to understand the overall information.
- Coding the data: Marking the pieces of data that are relevant to the topic under study and labeling each code.
- Explore themes: categorize similar codes into broader themes such as positive perceptions, physical barriers, digital literacy, etc.
- Review themes: double-check that the resulting themes truly represent the data.
- Reporting: The results of the analysis will be compiled into a thematic report detailing the perceptions and barriers of older adults.

2.6. Interview Data

The following are excerpts from interviews with 12 elderly participants in Tanjung Jaya Village:

Participant 1 : "I don't know much about the app. I've tried it once, but I don't understand how to use it. If possible, it would be better if there was someone who could help me directly."
Participant 2 : "I am actually interested in being able to consult a doctor from home, but I am not sure if the application is safe. I am worried that my data will be misused."
Participant 3 : "I have used a mobile phone, but I don't know how to use the application to consult a doctor. I prefer to come to the clinic."
Participant 4 : "If someone teaches me how to use the application, maybe I can try. But now I'm afraid of clicking the wrong thing and causing problems."
Participant 5 : "Sometimes when I try to open the application, I don't understand the language. Everything feels so fast."
Participant 6 : "I feel more comfortable if I can come directly to the hospital, so that there is someone who can help me. If it is through an application, I am afraid that I cannot communicate clearly."
Participant 7 : "I don't really trust technology, especially if it is only a consultation via cellphone. I am not sure that it can replace a doctor who is in front of me ."
Participant 8 : "My phone is good enough, but I need someone else's help to operate the health application."
Participant 9 : "If someone can explain further, I might try. But if I just go straight to it, I'm confused ."
Participant 10 : "I think it can help me to check without going far, but I'm worried that the app will make me more confused."
Participant 11 : "I heard that there are people who can consult a doctor by phone, that's a good idea, but I don't know how to register yet."
Participant 12 : "I think if it's easy to use and safe, I'll definitely try it. But now, I need someone else's help to get started."

2.7. Validity and Reliability

To ensure data validity, this study used triangulation techniques by collecting data from various sources, namely interviews with the elderly and field observations related to the use of health technology. In addition, member checking was carried out by returning the interview results to the participants to ensure that the interpretations given were in accordance with their understanding. To increase reliability, the researcher will also conduct an audit trail, which is to document the entire research process from data collection to analysis.

2.8. Research Ethics

This study will comply with the principles of research ethics by maintaining the confidentiality of participant identities and ensuring that participants provide informed consent before participating in the study. Participants were given an explanation of the purpose of the study, the interview process, and their rights, including the right to withdraw at any time without consequence. All data obtained will be stored securely and used only for research purposes.

3. Results and Discussion

3.1. Analysis of elderly perceptions of digital health services

Figure 1 shows the number of participants with positive, neutral, and negative perceptions of digital health services.

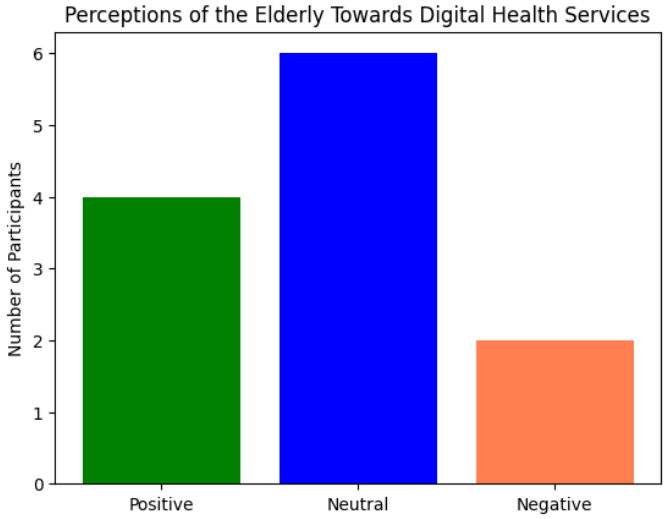

Figure 1: Elderly Perceptions of Digital Health Services

From the graph results, it can be seen that the majority of elderly people, 6 out of 12 participants, have a neutral perception of digital health services. This shows that although they do not completely reject technology, they are also not completely sure or enthusiastic about using it. Only a small number of 4 participants have a positive perception, which indicates an interest in the use of digital technology in the health sector, but this is still limited to a small portion of the population. Meanwhile, there are also 2 participants who have negative perceptions, which may indicate distrust of technology or fear of difficulties in using digital applications.

3.2. Analysis of elderly barriers in accessing digital health services

Figure 2 shows the distribution of barriers faced by the elderly in accessing digital health services.

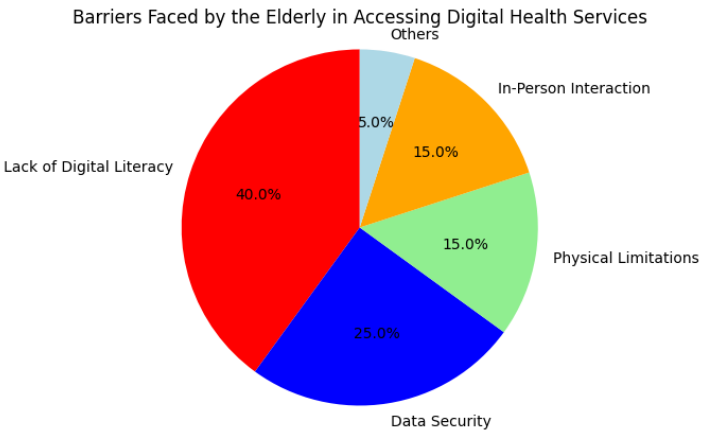

Figure 2: Barriers For The Elderly in Accessing Digital Health Services

The graph above shows that the main barrier faced by the elderly in accessing digital health services is the lack of digital literacy, which reaches 40%. This shows that the majority of the elderly have difficulty understanding or using digital technology, such as health service applications or websites. The next barrier is data security (25%), which

reflects the elderly's concerns about privacy and the potential misuse of their personal data. Physical limitations (15%) and a preference for face-to-face interaction (15%) indicate that physical problems or discomfort in using digital devices are significant barriers for the elderly. Meanwhile, only 5% mentioned other problems, which may be related to more personal or situational factors.

3.3. Analysis of solutions expected by the elderly

Figure 3 shows the solutions expected by the elderly to facilitate their access to digital health services.

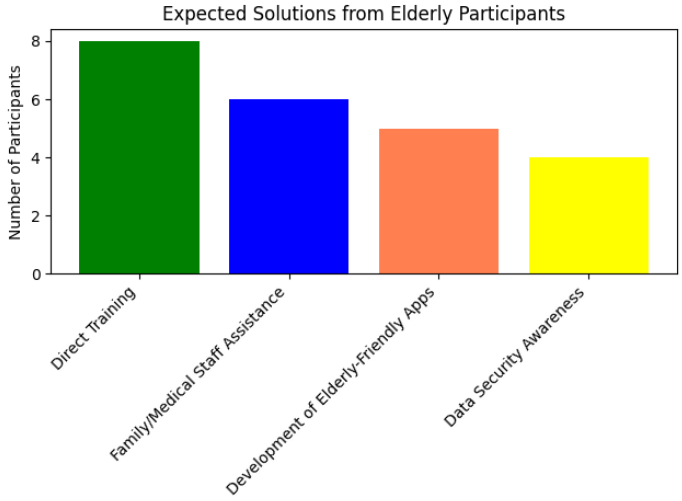

Figure 3: The Solution Expected By The Elderly

This graph shows that the majority of elderly participants (8) want direct training so that they can better understand how to use digital health services. This indicates a great need for more practical and easily accessible educational programs for the elderly. Assistance from family or medical personnel is also a solution expected by 6 participants, indicating that the elderly feel more comfortable if there is direct assistance when using digital applications. The development of elderly-friendly applications (5 participants) and the socialization of security (4 participants) indicate that the elderly hope that the applications they use can be adjusted to their physical and cognitive needs, and ensure that they feel safe in using technology.

3.4. Analysis of participant distribution by age and gender

The distribution of participants by age and gender can be seen in Figure 4.

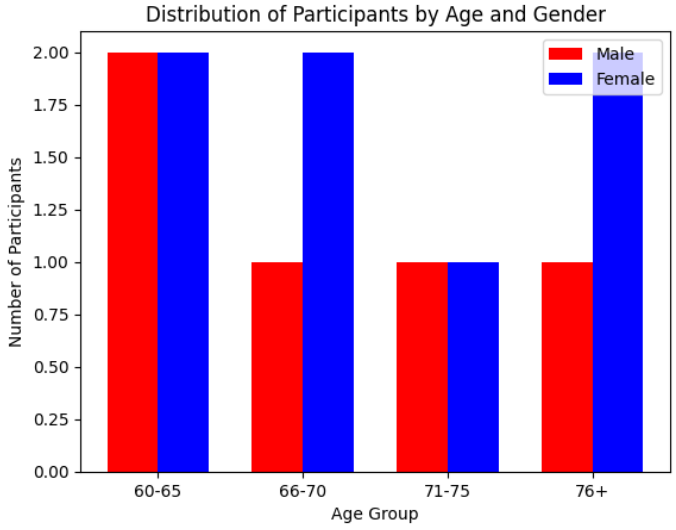

Figure 4: Participants By Age and Gender

This graph shows the distribution of age and gender of participants. It can be seen that the majority of participants were female, with more females in each age group than males. Most participants were in the 60-65 age group, which may indicate that this age group is more open to participating in research related to digitalization, or they are more active in seeking health services despite their physical limitations.

4. Conclussion

The study on elderly perceptions and barriers in accessing digital health services in Tanjung Jaya Village reveals several important findings regarding the challenges and expectations of older adults in using technology for healthcare.

Firstly, the majority of elderly participants held a neutral perception of digital health services, indicating that while they did not completely reject the idea of using technology, they were also not particularly enthusiastic or confident about it. Only a small proportion of participants had a positive perception, reflecting some level of interest, but this enthusiasm was limited. A smaller group expressed negative perceptions, which can be attributed to distrust and fear of difficulties with technology, highlighting a need for increased education and reassurance.

Second, the primary barrier to accessing digital health services is the lack of digital literacy, which affects most of the elderly participants. This indicates that many elderly individuals struggle to understand or use digital tools effectively. Concerns about data security were also significant, with a notable percentage of participants worried about privacy and misuse of personal information. Additionally, physical limitations and a preference for face-to-face interaction were cited as barriers, showing that older adults still feel more comfortable with traditional, in-person healthcare settings. These barriers highlight the need for more accessible and inclusive health services for the elderly, especially those with limited digital skills.

In terms of solutions, the elderly expressed a strong desire for direct training, with most participants favoring personalized assistance to help them navigate digital health services. The assistance of family members or medical personnel was also identified as a key support mechanism. Additionally, there was a call for the development of elderly-friendly applications, designed to accommodate their physical and cognitive needs, as well as increased emphasis on security to ensure their comfort and trust in using technology.

The participant distribution by age and gender showed that a higher proportion of female participants were involved, particularly from the 60-65 age group. This suggests that this demographic is relatively more engaged and open to exploring digital health solutions, possibly due to greater health awareness or availability of time to participate in such studies.

The findings suggest that while digital health services hold potential for improving healthcare access for the elderly, significant efforts are needed to address their digital literacy, security concerns, and physical limitations. By implementing targeted training programs, offering personalized support, and developing age-appropriate applications, the accessibility and effectiveness of digital health services for the elderly can be significantly improved.

References

Alagood, J., Prybutok, G., & Prybutok, V. R. (2023). Navigating privacy and data safety: The implications of increased online activity among older adults post-covid-19 induced isolation. *Information*, *14*(6), 346.

Choudhary, H., & Bansal, N. (2022). Barriers affecting the effectiveness of digital literacy training programs (DLTPs) for marginalised populations: a systematic literature review. *Journal of Technical Education and Training*, *14*(1), 110-127.

Choukou, M. A., Maddahi, A., Polyvyana, A., & Monnin, C. (2021). Digital health technology for indigenous older adults: a scoping review. *International journal of medical informatics*, *148*, 104408.

Jokisch, M. R., Schmidt, L. I., & Doh, M. (2022). Acceptance of digital health services among older adults: Findings on perceived usefulness, self-efficacy, privacy concerns, ICT knowledge, and support seeking. *Frontiers in public health*, *10*, 1073756.

Kaihlanen, A. M., Virtanen, L., Buchert, U., Safarov, N., Valkonen, P., Hietapakka, L., ... & Heponiemi, T. (2022). Towards digital health equity-a qualitative study of the challenges experienced by vulnerable groups in using digital health services in the COVID-19 era. *BMC health services research*, *22*(1), 188.

Low, S. T., Sakhardande, P. G., Lai, Y. F., Long, A. D., & Kaur-Gill, S. (2021). Attitudes and perceptions toward healthcare technology adoption among older adults in Singapore: a qualitative study. *Frontiers in Public Health*, *9*, 588590.

Mace, R. A., Mattos, M. K., & Vranceanu, A. M. (2022). Older adults can use technology: why healthcare professionals must overcome ageism in digital health. *Translational behavioral medicine*, *12*(12), 1102-1105.

Shi, Y., Ma, D., Zhang, J., & Chen, B. (2023). In the digital age: a systematic literature review of the e-health literacy and influencing factors among Chinese older adults. *Journal of Public Health*, *31*(5), 679-687.

Sun, X., Yan, W., Zhou, H., Wang, Z., Zhang, X., Huang, S., & Li, L. (2020). Internet use and need for digital health technology among the elderly: a cross-sectional survey in China. *BMC public health*, *20*, 1-8.

Wilson, J., Heinsch, M., Betts, D., Booth, D., & Kay-Lambkin, F. (2021). Barriers and facilitators to the use of e-health by older adults: a scoping review. *BMC public health*, *21*, 1-12.

Zhao, B., Zhang, X., Huang, R., Yi, M., Dong, X., & Li, Z. (2021). Barriers to accessing internet-based home care for older patients: a qualitative study. *BMc geriatrics*, *21*, 1-9.