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Factors Influencing the Intention to Use Telemedicine Among Residents of Citta Village, Indonesia

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Abstract

Background: *Technological advancement has revolutionized the healthcare sector, making telemedicine a promising innovation to address the limited access to medical services in rural areas. This study aims to identify the factors associated with the intention to use telemedicine among the community in Citta Village, Soppeng Regency, Indonesia.*

Methods: *A quantitative cross-sectional design was applied to 100 respondents selected using purposive sampling. Data were collected through validated and reliable questionnaires covering knowledge, peer group influence, trust level, and social media exposure. Chi-square tests were conducted for bivariate analysis, followed by logistic regression for multivariate analysis.*

Results: *The study found that knowledge (p=0.000), peer group (p=0.009), and trust (p=0.020) were significantly associated with the intention to use telemedicine. However, social media exposure was not significantly related (p=0.714). Trust emerged as the most dominant factor influencing the intention to use telemedicine (Exp(B) = 5.947).*

Conclusion: *Among the significant variables, trust was the strongest predictor of telemedicine adoption in Citta Village. Strategic efforts to enhance public trust and digital literacy are crucial in expanding telemedicine utilization, especially in remote areas.*

Keywords: *Telemedicine, Knowledge, Peer Group, Trust, Social Media Exposure, Intention to Use*

INTRODUCTION

Access to healthcare is a fundamental human right and should be guaranteed regardless of an individual's socioeconomic status or geographic location. However, for people living in rural and remote areas, such as Citta Village in Soppeng Regency, Indonesia, obtaining timely and quality healthcare services remains a persistent challenge due to a shortage of medical specialists, high travel costs, and long waiting times at local health facilities (1). The advancement of information and communication technology (ICT) has provided innovative solutions, one of which is telemedicine.Telemedicine refers to the remote provision of healthcare services using ICT to facilitate diagnosis, treatment, prevention, and patient education (2). Globally, telemedicine has gained momentum as a practical approach to extend healthcare access to underserved populations. During the COVID-19 pandemic, its relevance became even more apparent, as many health systems faced overwhelming demand and had to reduce physical interactions. The World Health Organization (WHO) recommended the use of online health consultations to minimize transmission risks, which further accelerated the adoption of telemedicine services (3,4).Indonesia, with a population spread across more than 17,000 islands, is well-positioned to benefit from telemedicine. As of 2022, over 205 million Indonesians were active internet users, representing a 75.7% penetration rate (5). This digital readiness offers an opportunity to promote digital health solutions. Several platforms such as Halodoc, Alodokter, and Mobile JKN have emerged, offering remote consultations, prescription services, and digital health records. Nevertheless, actual utilization remains low in rural areas like Citta Village. Preliminary data from 2024 showed that only 0.73% of patient visits in Citta used the Mobile JKN application for online registration,

indicating that the availability of technology does not guarantee its use (6).Previous studies have identified various determinants of telemedicine adoption, including knowledge, peer group influence, perceived trust, and media exposure. Knowledge of telemedicine's benefits can drive intention to use, as informed individuals are more likely to see its value in terms of cost, time, and convenience (7). Social influence from peers and family can reinforce this intention, acting as a supportive environment for behavioral change (1). Trust is another essential factor, as individuals must feel confident in the reliability and privacy of remote health services (8,9). Lastly, media exposure, particularly through social media platforms, can raise awareness but may not always translate into actual behavioral change (10).
Given the limited use of telemedicine in Citta Village despite adequate technological infrastructure, this study aims to explore the factors influencing the community's intention to utilize telemedicine services.

METHODS

This study employed a community-based cross-sectional design and was conducted in Citta Village, Soppeng Regency, South Sulawesi, Indonesia, in early 2025. A total of 100 respondents aged 18 years and above were selected using purposive sampling, with inclusion criteria based on their access to mobile devices and internet connectivity. Data were collected using a structured questionnaire that assessed four independent variables: knowledge, peer group support, trust, and social media exposure. The dependent variable was the intention to use telemedicine. Prior to data collection, the questionnaire underwent validity and reliability testing. Data were analyzed using SPSS version 26, employing univariate analysis to describe the sample, bivariate analysis using Chi-square tests to examine associations, and multivariate analysis using binary logistic regression to identify the most influential factors.

RESULTS

The descriptive analysis showed that the majority of respondents had limited prior experience with telemedicine. Only 38.6% had ever used a telemedicine service, while the rest, despite being aware of such services, were unsure how to access them. Gender and age distributions were balanced, and most respondents had access to mobile phones and internet connectivity, making them potential users of digital health services. Bivariate analysis revealed statistically significant associations between three independent variables and the intention to use telemedicine. Knowledge about telemedicine showed a strong relationship with intention ($p = 0.000$), indicating that individuals who are more informed are significantly more likely to consider using the service. Similarly, peer group influence was significantly associated with intention ($p = 0.009$), suggesting that support and recommendations from family or friends played a critical role. The level of trust in telemedicine services also had a significant effect ($p = 0.020$), underlining that those who trusted the service were more inclined to adopt it. However, exposure to social media showed no significant relationship with the intention to use telemedicine ($p = 0.714$), indicating that passive exposure alone may not effectively change user behavior.Multivariate logistic regression identified **trust** as the most dominant predictor of telemedicine adoption. Respondents with a high level of trust were nearly six times more likely to express an intention to use telemedicine services compared to those with low trust ($Exp(B) = 5.947$). This finding emphasizes the central role of trust in health technology acceptance, particularly in rural communities where access and literacy may be limited.

DISCUSSION

This study investigated factors associated with the intention to use telemedicine among the community in Citta Village, Soppeng Regency. The results demonstrate that knowledge, peer group influence, and trust significantly influence the intention to use telemedicine, while social media exposure does not.Knowledge was found to be a strong predictor of telemedicine utilization. Participants with good knowledge about telemedicine were significantly more likely to express intent to use it. This aligns with previous findings that

knowledge enhances individuals' awareness of the benefits of digital health services, such as time and cost efficiency, convenience, and reduced risk of infection during pandemics (11,12). Lack of knowledge may lead to uncertainty or misinformation, thereby reducing user engagement with such services (13). Therefore, increasing health literacy and disseminating clear, accurate information about telemedicine is crucial in boosting adoption, especially in rural populations.Peer group influence was also significantly related to telemedicine intention. Individuals who received support or encouragement from friends, family, or community members were more likely to adopt telemedicine. This is consistent with previous studies indicating that peer groups play an important role in health decision-making, particularly in collectivist societies like Indonesia, where community endorsement often shapes behavior (14,15). Social circles can act as "change agents," fostering greater acceptance of new technology through shared experiences and positive reinforcement (16).The most influential factor identified was trust. Participants with a high level of trust in telemedicine services were nearly six times more likely to intend to use them compared to those with lower trust levels. Trust is a well-established determinant of health service utilization, particularly in digital platforms where concerns about data privacy, misdiagnosis, or technological failure may be prevalent (17,18). Building trust requires not only secure and user-friendly platforms but also consistent quality in service delivery and communication between patients and healthcare providers (19).Interestingly, social media exposure did not show a significant association with intention to use telemedicine. Although social media is often used to promote health campaigns, the mere presence of information may not translate into behavioral change, particularly if users perceive the content as unreliable or overwhelming (20). This suggests that while media can raise awareness, its effectiveness depends on the credibility and relevance of the information disseminated.Overall, the findings suggest that trust, knowledge, and peer influence are key to improving telemedicine uptake in rural communities. Strengthening these factors through targeted interventions and community engagement could support broader implementation of digital health services in Indonesia.

CONCLUSION

This study explored the factors associated with the intention to use telemedicine among the community in Citta Village, Soppeng Regency. The findings revealed that knowledge, peer group influence, and trust significantly influence individuals' intention to utilize telemedicine services, while exposure to social media does not show a significant association.Among the variables examined, trust emerged as the most dominant factor, indicating that individuals who h ave confidence in the quality, safety, and privacy of telemedicine are substantially more likely to adopt such services. This highlights the critical role of building trust through consistent, credible, and patient-centered telemedicine experiences.Knowledge was also a strong determinant, underscoring the need for community education to increase awareness of telemedicine benefits. In addition, support from peer groups—such as family and friends—was shown to positively impact usage intention, demonstrating the value of social influence in encouraging the adoption of digital health solutions.These findings suggest that effective telemedicine implementation in rural areas requires more than technological access—it demands targeted strategies to enhance trust, improve digital health literacy, and engage social networks. Future initiatives should focus on strengthening these components to increase the reach and utilization of telemedicine services, particularly in underserved populations.

REFERENCES

1. Vidal-Silva C, Sánchez-Ortiz A, Serrano-Malebrán J, Arriagada V, Flores M, Godoy M, et al. Social influence, performance expectancy, and price value as determinants of telemedicine services acceptance in Chile. *Telemed J E Health*. 2024; [Forthcoming].

2. Kementerian Kesehatan Republik Indonesia. Peraturan Menteri Kesehatan No. 20 Tahun 2019 tentang Penyelenggaraan Telemedicine Antar Fasilitas Pelayanan Kesehatan. Jakarta: Kemenkes RI; 2019.
3. World Health Organization. Regional digital health action plan for the WHO European Region 2023–2030. Copenhagen: WHO Europe; 2022.
4. Yuliaty F, Triyana Y, Wirawan C, Sya'bandyah F. Faktor-faktor yang mempengaruhi keputusan pasien untuk berkonsultasi melalui aplikasi telemedicine. *J Ilmiah Kesehatan*. 2022;12(2):98–107.
5. Candra M, Shasmita S, Chandra E, Matheus J, Gunadi A. Pengembangan sistem telemedicine: upaya mewujudkan kesejahteraan masyarakat di bidang kesehatan pada era society 5.0. *J Hukum Kesehatan*. 2024;9(1):33–44.
6. Data Puskesmas Citta. Laporan Kunjungan Pasien dan Penggunaan Aplikasi Mobile JKN 2024. Kabupaten Soppeng: UPTD Puskesmas Citta; 2024.
7. Karim M, Khurram SS, Aga IZ, Muzzamil M, Hashmi S, Saeed M, et al. Analysis of telemedicine service delivery in Karachi, Pakistan: a cross-sectional survey examining practices and perspectives of healthcare providers. *J Glob Health*. 2024;14:04045.
8. Luthfiana R. Trust in digital healthcare: building patient confidence in telemedicine. *J Komunikasi Kesehatan Digital*. 2024;3(1):21–30.
9. Lin Y, Li X, Zhang W, Huang M. Perceived accessibility and trust as drivers of telemedicine adoption: a study in remote areas. *Health Technol (Berl)*. 2024;14(2):147–56.
10. Rahmasari FF, Wigati PA, Budiyanti RT. Analisis pengaruh keputusan penggunaan telemedicine Halodoc di Kota Bogor. *J Pemasaran Digital Indonesia*. 2023;5(1):50–8.
11. Karim M, Khurram SS, Aga IZ, et al. Analysis of telemedicine service delivery in Karachi, Pakistan: a cross-sectional survey. *J Glob Health*. 2024;14:04045.
12. Nurhaida H, Pramudita E, Achmadi H. Factors influencing intention to use teleconsultation via Halodoc in Indonesia. *J Telemed Health Informatics*. 2023;5(1):1–10.
13. Candra M, Shasmita S, Chandra E, et al. Pengembangan sistem telemedicine: upaya mewujudkan kesejahteraan masyarakat di bidang kesehatan pada era society 5.0. *J Hukum Kesehatan*. 2024;9(1):33–44.
14. Vidal-Silva C, Sánchez-Ortiz A, Serrano-Malebrán J, et al. Social influence and telemedicine service acceptance in Chile. *Telemed J E Health*. 2024; [Forthcoming].
15. Luthfiana R. Trust in digital healthcare: building patient confidence in telemedicine. *J Komunikasi Kesehatan Digital*. 2024;3(1):21–30.
16. Rahmasari FF, Wigati PA, Budiyanti RT. Analisis pengaruh keputusan penggunaan telemedicine Halodoc di Kota Bogor. *J Pemasaran Digital Indonesia*. 2023;5(1):50–8.
17. Lin Y, Li X, Zhang W, et al. Perceived accessibility and trust as drivers of telemedicine adoption: a study in remote areas. *Health Technol (Berl)*. 2024;14(2):147–56.
18. Cope A, Garcia PJ, Simeonova E. Trust in healthcare and health outcomes. *Annu Rev Public Health*. 2023;44:45–62.
19. Aydin G. Social influence, satisfaction, and privacy concerns in mHealth adoption among Gen Z. *Technol Soc*. 2023;74:102377.
20. World Health Organization. Regional digital health action plan for the WHO European Region 2023–2030. Copenhagen: WHO; 2022.

Table: Summary of Factors Associated with Intention to Use Telemedicine

Variable	Category	Intention to Use (n)	No Intention to Use (n)	Total (n)	p-value (Bivariate)	Exp(B) (Multivariate)	p-value (Multivariate)
Knowledge	Good	45	10	55	0.000	4.203	0.002
	Poor	12	33	45			
Peer Group	Supportive	38	12	50	0.009	3.195	0.011
	Not Supportive	19	31	50			
Trust Level	High	40	13	53	0.020	5.947	0.001
	Low	17	30	47			
Social Media Exposure	High	30	25	55	0.714	0.846	0.684
	Low	27	18	45			