

## REVIEW ARTICLE

# Analysis of factors affecting telemedicine use satisfaction: A literature review

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## Abstract

In the digital era, the role of telemedicine is increasingly vital in ensuring equitable and quality health access for all without being hindered by geography or economy. This literature aims to identify indicators of telemedicine service user satisfaction that impact the effectiveness and acceptance of telemedicine services. This study involved PubMed and Google Scholar. Inclusion criteria were published in the last 5 years, including studies that explore and analyze telemedicine user satisfaction indicators, through both quantitative and qualitative approaches, providing an understanding of the factors that influence users' perceptions of telemedicine quality. User satisfaction is an important indicator of telemedicine success. So that service providers must consider these factors in improving telemedicine services. From this literature, factors that influence user satisfaction were identified, including the availability of technology, the quality of telemedicine services, the level of trust in the security of personal data, the ease of use of telemedicine, and the interaction between patients and telemedicine service providers. (*Afr J Reprod Health 2024; 28 [10s]: 460-463*).

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**Keywords:** Telemedicine; user satisfaction; factors

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## Résumé

À l'ère du numérique, le rôle de la télémédecine est de plus en plus vital pour garantir un accès équitable et de qualité à des soins de santé pour tous, sans être entravé par la géographie ou l'économie. Cette littérature vise à identifier les indicateurs de satisfaction des utilisateurs des services de télémédecine qui ont un impact sur l'efficacité et l'acceptation des services de télémédecine. Cette étude a impliqué PubMed et Google Scholar. Les critères d'inclusion ont été publiés au cours des 5 dernières années, y compris des études qui explorent et analysent les indicateurs de satisfaction des utilisateurs de télémédecine, à travers des approches quantitatives et qualitatives, permettant de comprendre les facteurs qui influencent les perceptions des utilisateurs sur la qualité de la télémédecine. La satisfaction des utilisateurs est un indicateur important du succès de la télémédecine. Les prestataires de services doivent donc tenir compte de ces facteurs pour améliorer les services de télémédecine. À partir de cette littérature, des facteurs qui influencent la satisfaction des utilisateurs ont été identifiés, notamment la disponibilité de la technologie, la qualité des services de télémédecine, le niveau de confiance dans la sécurité des données personnelles, la facilité d'utilisation de la télémédecine et l'interaction entre les patients et le service de télémédecine. fournisseurs. (*Afr J Reprod Health 2024; 28 [10s]: 460-463*).

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**Mots-clés:** Télémédecine ; satisfaction des utilisateurs ; facteurs

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## Introduction

In the era of ever-evolving information and communication technology, telemedicine has emerged as an innovative solution in providing more efficient and affordable healthcare accessibility. Telemedicine allows patients to communicate with healthcare providers virtually, overcoming geographical constraints and reducing the need for

physical visits to healthcare facilities. In this literature review, it is important to understand the factors that influence telemedicine usage satisfaction, as an important measure of the effectiveness and adoption of modern health system technology.

The use of telemedicine has been a revolutionary breakthrough in the provision of healthcare in this modern era. Telemedicine allows

individuals to obtain remote medical consultation, diagnosis, and treatment through communication technology platforms. As such, it provides greater accessibility to healthcare, especially for those with physical or geographical limitations. The results of a study showed that the awareness of telemedicine services among people with Parkinson's disease is quite high, getting 90.2%. Telemedicine utilization among people with disabilities was also significant, with 82.8% of respondents reporting having used telemedicine services in the past 12 months<sup>1</sup>.

In the midst of today's global dynamics, where public health challenges are increasingly complex, it is important to understand the factors that influence telemedicine usage satisfaction. User satisfaction is a key indicator in assessing the effectiveness and quality of the telemedicine services provided. Evaluating the extent to which patients are satisfied with their telemedicine usage experience not only provides insight into the quality of service provided, but also influences user adoption and retention rates. Therefore, a thorough analysis of the factors that influence the satisfaction level of telemedicine usage is important. From a study conducted on endocrine surgery patients using telemedicine services in Miami Florida, it was found that overall, patients had a positive perception of telemedicine visits in endocrine surgery practices. Patients reported a high level of satisfaction with the outcome of their telemedicine visit and expressed a high likelihood of recommending telemedicine to others<sup>2</sup>.

## Methods

Specifically, this study aims to collect and investigate the scientific literature that contributes to the level of patient satisfaction in utilizing telemedicine services, investigate the complex relationships and interactions between the various factors that affect telemedicine usage satisfaction, with the aim of understanding the broader dynamics, provide guidance and recommendations for healthcare providers and policy makers in designing and improving telemedicine services, by achieving these objectives, it is hoped that this literature review will provide in-depth insight into the factors that affect telemedicine usage satisfaction so as to better meet patient expectations and needs.

This literature review was conducted by collecting relevant journals and searched using the identification of academic databases, namely PubMed and Google Scholar and ensuring that the

selected sources are reputable and credible. The publication time from 2019 to 2023 was searched worldwide because the use of telemedicine is still not very common for many countries, so the possibility of related publications is also still small. Identification of keywords related to the research topic, namely "Telemedicine" and "patient satisfaction". Then selected based on the highest number of references, search for research articles published on the internet through open access channels, after which an initial selection is made based on the title and abstract to select the articles that are most relevant to the research topic, obtained about 9 journals then read the articles thoroughly and considered the quality of research, methodology, and relevance. Then the articles that made a significant contribution to the analysis of telemedicine user satisfaction factors were recorded. Identify and extract important information from each selected article, including factors affecting telemedicine user satisfaction, key findings and research conclusions.

## Results

A number of studies highlight the importance of technical factors in influencing telemedicine usage satisfaction. Network quality and availability of technological infrastructure are seen as critical elements. The results of this study<sup>3</sup> suggest that telemedicine has the potential to address challenges in access to sexual and reproductive health (SRH) services during the COVID-19 pandemic and beyond, especially in rural and hard-to-reach areas. One study<sup>4</sup> mentioned that such sustained outreach programmes can keep the trend of the benefits of using telemedicine applications at the forefront. Telemedicine can provide non-invasive services and improve access to health services. Studies from<sup>5</sup> countries show that satisfaction levels increase significantly when patients have better access to stable and fast networks. This underscores the importance of investing in technological infrastructure to maximise the benefits of telemedicine.

Good interactions between patients and telemedicine service providers were also found to influence user satisfaction. Study from<sup>6,7,5,8</sup> showed that patients who perceived active engagement from telemedicine service providers tended to have higher levels of satisfaction. This shows the importance of effective communication in telemedicine services.

Non-technical factors also play an important role. The level of trust in the security of personal data is a key factor affecting satisfaction with the use of telemedicine. Study<sup>6</sup> found that patients who have high confidence in data security tend to be more satisfied with the telemedicine usage experience.

The ease-of-use factor also contributes significantly to user satisfaction. Studies from research<sup>2</sup> show that an easy-to-use telemedicine platform increases the level of user satisfaction. This emphasises the importance of designing telemedicine platforms that are easy to use.

In addition to individual factors, the literature also highlights the dynamics of interactions between different factors. For example, trust in data security can moderate the relationship between network quality and user satisfaction<sup>9</sup>. These findings demonstrate the complexity of factors that influence telemedicine user satisfaction.

Factors influencing midwives' use of telehealth during the pandemic in Indonesia include internal factors such as age, knowledge and motivation, and external factors such as facilities and government policies. The midwives faced challenges, but they found telehealth useful and planned to continue using it in the future<sup>10</sup>. Factors such as effort expectancy, social influence and self-efficacy play an important role in accelerating telehealth adoption among health workers in Indonesia<sup>11</sup>.

## Discussion

This literature analysis offers important insights for healthcare providers and policy makers in designing effective telemedicine services and improving user satisfaction. This research identifies three main factors: quality of service, ease of use, and trust in data security.

Firstly, the availability of technological infrastructure and network quality are critical to the telemedicine user experience. Without adequate infrastructure and a stable network, user satisfaction may decrease, thus emphasising the need for significant investment in technology, especially in areas with limited internet access.

Secondly, the ease of use of telemedicine platforms is critical for accessibility and widespread adoption. An easy-to-use platform not only increases convenience but also improves interaction between patients and healthcare providers, contributing to higher satisfaction.

Thirdly, trust in data security is critical for telemedicine adoption. Privacy and security concerns can deter users, making it imperative for service providers to implement strict security measures and maintain transparency in data management.

Furthermore, these factors can vary based on geographic, cultural, and demographic contexts, thus requiring a customised approach to service design<sup>12</sup>. Taking these variations into account, well-designed telemedicine services can significantly improve user satisfaction and expand access to quality healthcare, especially in hard-to-reach areas. As such, service providers and policymakers need to develop comprehensive and integrated policies<sup>13</sup>.

## Conclusions

In conclusion, telemedicine user satisfaction is influenced by various factors, including technical aspects, interactions between patients and health providers, confidence in data security, and ease of use of the platform. Understanding and considering these factors in the development and implementation of telemedicine services will ensure a better user experience. As such, improving the quality of telemedicine services can contribute to the development of a health system that is more inclusive and responsive to the needs of society.

## Authors Contribution

Annisa Nurida: conceptualizing and designing the research; writing the manuscript  
 Djazuly Chalidyanto: reviewed empirical studies and edited the manuscript.  
 Mochammad Bagus Qomaruddin: providing suggestions for improvement from the results of the review by the journal reviewer team.

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