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Research Article

Influence of resistance to use, perceived ease of use, perceived usefulness, and facilitating conditions in the intention to use telemedicine in Peru

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Abstract

Telemedicine revolutionizes medical care by providing remote access to healthcare services, improving efficiency, reducing geographic barriers and providing timely, life-saving care for patients. Current research aims to evaluate the influence of resistance to use, facilitators to use, perceived ease of use and perceived usefulness of telemedicine on the intention to use telemedicine by citizens of Peru. The study collected responses from individuals in Peru through an online survey, and the data was analyzed by multivariate statistical techniques. The results showed that perceived ease of use had a positive and significant effect on perceived usefulness; then, perceived ease of use had a positive and significant effect on the intention to use telemedicine. Also, resistance to use did not have a significant effect on intention to use telemedicine. The bootstrapping analysis showed that the effects between the variables were statistically significant. The outcomes obtained may provide ideas to healthcare managers in public and private sectors for planning health programs based in telemedicine and can make diagnosis and treatments with remote patients.

Keywords

Telemedicine, resistance to use, perceived ease of use, perceived usefulness, Perú

Introduction

Accessibility to health services is a fundamental pillar for the well-being of society. Efficient and timely access to medical care is essential to prevent, diagnose and treat diseases. However, at present, the difficulty in obtaining medical appointments has become a significant challenge, especially for those suffering from chronic diseases. Chronic diseases, such as diabetes, hypertension and cardiovascular disease, require ongoing care and careful management (Ofman et al. 2004). These patients face the reality that obtaining medical appointments has become a complicated task, further exacerbating their situation (Kuo et al. 2020). Problems of access to medical care mean that patients cannot be constantly monitored by health professionals, which, as has been reported before, leads to worsening of their illnesses and increased costs for the health care system (Allegrante et al. 2019).

While access to health services is a public health problem, different services have been offered to solve the difficulty of patient care; in this context, telemedicine has emerged as a key component in the digital revolution that is transforming the delivery of health services (Battineni et al. 2021). This modality takes advantage of information and communications technology to offer medical care at a distance, providing a series of significant benefits for both patients and health professionals. One of the most notable benefits of telemedicine is improved access to healthcare (Barbosa et al. 2021), especially in rural or remote areas where the availability of healthcare services may be limited. However, many patients in the city, but living in remote urban areas, would also benefit from telemedicine because it allows patients to connect with health professionals without the need to travel long distances (Imberti et al. 2021), resulting in more timely and efficient care. In addition, this approach also facilitates care for people with reduced mobility or disabilities, improving their quality of life (Petretto et al. 2023; Tamura et al. 2023).

On the other hand, telemedicine contributes to reducing costs for patients and health systems in general (Etges et al. 2022; Sharifi Kia et al. 2023). By eliminating the need to travel, the costs associated with transportation are significantly reduced. Additionally, virtual consultations are often more affordable than in-person visits, benefiting those without health insurance or with limited coverage. For health systems, implementing telemedicine can lead to improved efficiency in resource utilization and a decrease in emergency room visits (Zeltzer et al. 2023). Telemedicine facilitates greater continuity in medical care. Patients can maintain a constant connection with their care providers, making it easier to track chronic conditions, adjust treatments, and regularly monitor health. This is especially beneficial for those with chronic illnesses that require constant management and for those who need frequent adjustments to their medication (Kesavadev and Mohan 2023; Omboni 2024).

Telepharmacy is a key extension of telemedicine that seeks to optimize medication use (Keeys et al. 2014; Livet et al. 2021). Through telepharmacy, patients can receive pharmaceutical advice remotely, including reviewing their medications and ensuring that these are being taken as directed to achieve the therapeutic goal (Cigolle and Phillips 2023; Emadi et al. 2022). This approach helps improve adherence to treatments and minimizes medication-related errors; Likewise, it allows the detection and reporting of adverse reactions as a contribution to pharmacovigilance (Edrees et al. 2022; Sungsana et al. 2023). Telepharmacy plays a fundamental role in improving adherence to treatments. Pharmacists can offer personalized reminders about taking medications, as well as provide additional information about the importance of following the treatment plan. This is especially valuable for patients with chronic diseases who require long-term medications, as non-adherence can have significant health consequences.

Particularly relevant in the context of pandemics or outbreaks of communicable diseases, telemedicine helps reduce the spread of infections by minimizing the need for in-person visits to medical facilities. Patients can receive necessary care and medications from the safety of their homes, decreasing exposure to potential pathogens (Alhmoud et al. 2022; Harindhanavudhi et al. 2022). Telemedicine makes it easier to collect and manage health data more efficiently. Patients can access their medical records electronically, allowing them to easily share relevant information with their care providers. This contributes to more personalized and evidence- based care, as healthcare professionals have access to a more complete set of information (Record et al. 2021).

Before the pandemic, telemedicine was limited and focused on certain small groups of patients. During the pandemic, many patients had no other option than to be treated through telemedicine, in order to have their illnesses taken care of. Despite this, the question arises as to whether patients want telemedicine after the pandemic or if the preference for in-person medical appointments remains and, likewise, to know what factors explain this intention to use telemedicine. The current research was carried out in Peru. The study aims to analyze the effect of influence of social influence, resistance to use, perceived ease of use, perceived usefulness, and facilitating conditions in the intention to use telemedicine in Peru.

Previous studies

In the last decade and more during the COVID-19 pandemic, in the various health systems the implementation of telemedicine was gaining space, benefiting the control of different diseases such as dyslipidemia (Bingham et al. 2020), cardiovascular disease (Kuan et al. 2022), Alzheimer's disease (Angelopoulou et al. 2022), inflammatory bowel disease (Pang et al. 2022), HIV (El-Nahal et al. 2022), diabetes (Onishi et al. 2022), Parkinson's disease (Podlewska and van Wamelen 2022), epilepsy (Kikuchi et al. 2022) and other diseases (Chua et al. 2022; Ma et al. 2022).

Telemedicine is a valuable option for patients who may have limited access to healthcare services, while also helping to decongest hospitals and improve the quality of care. However, some patients may perceive telemedicine as impersonal and lacking in warmth. For others, physical contact with their healthcare provider, direct eye contact, and an in-person smile are essential components of their care. Telemedicine interventions have seen web-based consultations (Musa Mamman et al. 2022; Shibata and Hoshide 2023), telemonitoring (Fountoulakis et al. 2015; Lee et al. 2020; Ayoub et al. 2022), remote consultations (Shea et al. 2006; Sood et al. 2017; Lo et al. 2023), and Internet-based consultations (Lu et al. 2020; Cunha et al. 2023). Among the professionals involved in telemedicine physicians (Shea et al. 2006; Fountoulakis et al. 2015; Lee et al. 2020; Garavand et al. 2022), nurses (Shea et al. 2006; Isidori et al. 2022; Plunger et al. 2022), pharmacists (Lu et al. 2020; Howard et al. 2022; Li et al. 2022) and multidisciplinary teams (Sood et al. 2017; Caponnetto et al. 2021) are all

mentioned. Different barriers have been reported for the implementation of telemedicine (Bakshi and Tandon 2022; Furlepa et al. 2022; Kruse and Heinemann 2022). A more detailed analysis of what has been published on telemedicine is presented below.

To obtain the documents corresponding to this analysis, a search was carried out in December 28th, 2023 on the Scopus website (https://www.scopus.com/), and the algorithm was used: TITLE-ABS-KEY (telemedicine) AND PUBYEAR > 2019 AND PUBYEAR < 2024 AND (EXCLUDE (PUBSTAGE, "aip")) AND (LIMIT-TO (DOCTYPE, "ar")) AND (LIMIT-TO (SUBJAREA, "DENT") OR LIMIT-TO (SUBJAREA, "IMMU") OR LIMIT- TO (SUBJAREA, "PHAR") OR LIMIT-TO (SUBJAREA, "PSYC") OR LIMIT-TO (SUBJAREA, "MEDI") OR LIMIT-TO (SUBJAREA, "HEAL") OR LIMIT-TO (SUBJAREA, "NURS")). Fig. 1 shows the process and steps of article selection.

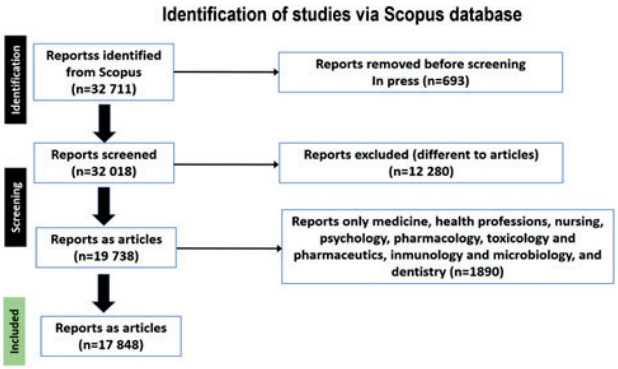

Figure 1. Process of article selection.

A total of 32 711 papers were found, of which 32 018 papers were published and 693 in press. In addition, 20 318 articles, 4 962 reviews, 1 820 letters, 1 563 conference papers, 1 446 editorials, 1 437 notes, 732 book chapters, 202 short surveys, 73 erratum, 69 review conferences, 63 books, 25 retractions, and 1 data paper were found.

The areas analyzed for this publication were medicine (27 174), health professions (2 779), nursing (2 325), psychology (1 162), pharmacology, toxicology and pharmaceutics (542), immunology and microbiology (491), and dentistry (183). Only article-type documents were selected; thus 19 738 documents were selected. Considering the areas with business topics and the highest number of publications, we considered selecting: medicine, health professions, nursing, psychology, pharmacology, toxicology and pharmaceutics, immunology and microbiology, and dentistry. Including these limitations, 17 848 articles were considered for the review, which showed that 160 countries participated in publications. Table 1 details the top ten countries, mentioning the number of articles.

Table 1. Top 10 countries in articles on telemedicine during 2020–2023.

Rank	Country	Articles
1	USA	12 938
2	UK	2 852
3	Italy	2 179
4	India	1 914
5	Australia	1 813
6	Canada	1 725
7	Germany	1 675
8	China	1 633
9	Spain	1 229
10	France	933

Table 2 shows the top 10 institutions with the most published articles, representing 23.97%. The United States, Canada, Italy and UK were the top countries with publications of articles on telemedicine.

Table 2. Top institutions in the number of articles of telemedicine during 2020–2023.

Rank	Institution	Country	Articles	Percentage (%)
1	Harvard Medical School	USA	1 015	5.14
2	University of California, San Francisco	USA	528	2.68
3	University of Toronto	Canada	508	2.57
4	Massachusetts General Hospital	USA	464	2.35
5	University of Pennsylvania	USA	419	2.12
6	University of Washington	USA	390	1.98
7	University of Michigan, Ann Arbor	Italy	357	1.81
8	VA Medical Center	USA	354	1.79
9	Brigham and Women's Hospital	UK	352	1.78
10	University of Pennsylvania	USA	345	1.75

Table 3 details the journals with more articles published about telemedicine. From 2000 to 2023, 4361 documents were published in the top 10 journals, representing 24.43% of the articles. Telemedicine and E Health was the journal with the most articles (879), accounting for 4.92% of the

Table 3. Top journals of publications on telemedicine 2020–2023.

Rank	Journals	Articles	CiteScore 2022	SJR 2022	Impact Factor (2022)	H-index of journal	Country
1	Telemedicine and E Health	879	8.1	1.237	4.7	87	USA
2	Journal of Medical Internet Research	850	12.1	1.992	7.4	178	Canada
3	International Journal of Environmental Research and Public Health	542	5.4	0.828	–	167	Switzerland
4	BMJ Open	451	4.4	1.06	2.9	139	UK
5	Jmir Mhealth and Uhealth	409	10.9	1.51	5.0	84	Canada
6	Journal of Telemedicine and Telecare	362	12.6	1.22	6.344	84	UK
7	Plos One	253	6.0	0.89	3.752	404	USA
8	Studies in Health Technology and Informatics	224	1.4	0.29	0.277	64	Netherlands
9	BMC Health Services Research	200	4.0	0.96	2.908	133	UK
10	Frontiers in Public Health	191	3.8	1.13	5.2	80	Switzerland

total number of publications; it was followed by Journal of Medical Internet Research and International Journal of Environmental Research and Public Health with 850 and 542 publications, respectively. The Journal of Telemedicine and Telecare was the journal with the highest CiteScore 2022 (12.1) and SJE 2022 (1.992). Then, Journal of Medical Internet Research has the highest Impact Factor (7.4). Finally, Plos One was the journal with the highest H-index (404).

Finally, Table 4 presents the more relevant authors of publications on telemedicine, showing their filiations, countries, and total H-index.

Table 4. Relevant authors of articles of telemedicine 2020–2023.

Rank	Authors	Filiation	Articles	Country	H-index of author
1	Ateev Mehrotra	Harvard Medical School	55	USA	58
2	Uscher-Pines, L.	RAND Corporation	36	USA	34
3	James Paul Marcin	University of California, Davis	35	USA	42
4	Haiden A. Huskamp	Harvard Medical School	30	Australia	40
5	Anthony C. Smith	The University of Queensland	27	Australia	40
6	Kori Sauser Zachrison	Massachusetts General Hospital	26	USA	14
7	Henrik. N. Chavannes	Leids Universitair Medisch Centrum	25	Netherlands	51
8	Rebbca J. Gomperts	Women on Waves, Amsterdam	24	Netherlands	18
9	Liam J. Caffery	The University of Queensland	23	Australia	29
10	Alisa B. Busch	McLean Hospital	23	USA	25

Every time there are changes in technology, users tend to reject it, citing various reasons for continuing to use the previous technology as much as possible. For this reason, it is necessary to know what factors have an effect on the acceptance of services based on telemedicine and that allow the necessary corrections and incentives to be made in order to obtain the greatest benefit from these types of health programs. The implementation of telemedicine requires a significant investment of resources, so if you can know what factors interact to increase acceptance, it will be easier to plan the implementation.

Theory

Technology acceptance model (TAM)

The acceptance of technology refers to the reasons why people adopt a new service that involves the use of technology. As technology constantly evolves, and new products are introduced, the acceptance of technology becomes an important factor in the decision to purchase a product or service. For example, mobile devices have become popular due to the acceptance of technology as a crucial element in their development and commercial offering. In this context, the Technology Acceptance Model (TAM) (Davis and Venkatesh 1996) is an important framework for understanding the acceptance of technology. The TAM consists of two primary constructs: perceived ease of use and perceived usefulness. However, when considering the acceptance of telemedicine, additional factors such as social influence, resistance to change, and facilitating conditions must be taken into account. Previous studies have incorporated these factors into the TAM framework to better understand the acceptance of telemedicine.

Variables and hypothesis

Variables

Intention to use telemedicine – IUTM

The desire to use a particular technology can change over time, as the gadgets we use in our daily lives continue to evolve rapidly. Factors that can influence this change include greater availability, more affordable prices, increased usage by others in the environment, ease of use, and perceived benefits. There is also evidence of evaluating the intention to use healthcare technology in different patient populations, such as diabetes (de Kreutzenberg 2022), epilepsy (Kubota et al. 2022), asthma (Persaud 2022) and other diseases.

Perceived usefulness – PUSE

To what extent technology can help improve someone's performance depends on how deeply they think about it. In this study, "perceived usefulness" refers to how much concrete utility technology can provide, specifically in replacing traditional healthcare. This usefulness could be based on factors such as saving time by not having to attend appointments in person, avoiding the need to travel to a face-to-face appointment, the convenience of being able to stay at home, and even getting better health outcomes. Previous studies have looked at perceived usefulness in the healthcare system, including the acceptance of electronic health records (Abd-alrazaq et al. 2019) and medical care based in mobile phones (Nadal et al. 2020; Tao et al. 2020).

Perceived ease of use – PEUS

Perceived ease of use is a vital aspect of Technology Acceptance Model (TAM), which determines how easy it is for individuals to use the available technology. The level of digital literacy (Kemp et al. 2021; Oh et al. 2021) can impact the perception of ease of use. People with high digital literacy adapt more easily to new technologies. Several studies have analyzed the perceived ease of use concerning different kinds of technologies (Brown 2002; Caffaro et al. 2020).

Facilitating conditions – FACO

Laptops and several mobile devices have become increasingly affordable, making them accessible to a larger population (Bender 2021). However, there are still many people who face limitations in accessing these technologies due to their low range (Szymkowiak et al. 2021). This makes it difficult for them to use complete communication systems such as video calls or access meeting rooms with other participants (Shao and Lee 2020). In order to address this issue, facilitators can help by selecting appropriate technology that considers the connectivity and type of device for a successful and fast connection. This construct is

crucial as it determines whether a person has the necessary resources and intention to use telemedicine services.

Resistance to use – RESU

Numerous studies have examined the issue of resistance to technology (Tsai et al. 2019; Kwangsawad and Jattamart 2022; Shankar and Nigam 2022) but such studies are not widely performed in health settings in developing countries, particularly in relation to telemedicine services. The use of new technology always carries a risk of misuse (Baniasadi et al. 2020), and in the case of healthcare, it could lead to inefficiencies in the treatment of health problems, resulting in health complications, loss of time and money. During the COVID-19 pandemic, telemedicine services have often been the only alternative (Alsabeeha et al. 2022; Lin et al. 2023), but this does not necessarily mean that people will continue to use them in the long term. Therefore, it is essential to measure the resistance towards telemedicine services, which becomes evident when people have the freedom to choose the type of medical care they receive.

Effects among variables and hypothesis

RESU has a negative and significant effect on the IUTM

Users may feel insecure about sharing sensitive medical information through digital platforms, fearing potential data protection vulnerabilities. This fear of privacy violation may deter people from adopting telemedicine, even if they recognize its benefits. Another crucial aspect is the lack of familiarity and comfort with the technology among certain user groups, especially those who have not grown up with digital devices or are not accustomed to conducting medical consultations online. Some people may doubt the diagnostic efficacy of online consultations and the ability of healthcare professionals to provide adequate treatment without direct physical interaction. This perception may affect their intention to use telemedicine, as users may prefer more traditional methods.

Hypothesis 1: RESU has a negative and significant effect on the IUTM

FACO has a positive and significant effect on the IUTM

In the context of telemedicine, facilitating conditions are elements that make the use of this technology more convenient and accessible for individuals. These conditions may include the availability of appropriate technology, such as devices and reliable internet connections, as well as the ability of users to acquire the skills necessary to participate in virtual medical consultations. When these facilitating conditions are present, users experience greater comfort and fewer barriers to telemedicine adoption. The intention to use telemedicine highlights the importance of creating a conducive and supportive environment for users, eliminating obstacles and providing the necessary conditions for the adoption of telemedicine to be successful and effective.

Hypothesis 2: FACO has a positive and significant effect on the IUTM

PEUS has a positive and significant effect on IUTM

Perceived ease of use refers to an individual's subjective perception of the simplicity and convenience associated with using a specific technology, in this case, telemedicine. This perception plays a significant role in forming the intention to use telemedicine, which in turn impacts its effective adoption. When individuals perceive telemedicine to be easy to use, they are more likely to develop a positive intention to use it. The perceived ease of use contributes to the formation of positive attitudes and increases the perception of control over the adoption of this technology. An intuitive user interface, simple registration and navigation processes, and the absence of technical obstacles contribute to greater perceived ease of use.

Hypothesis 3: PEUS has a positive and significant effect on IUTM

PEUS has a positive and significant effect on PUSE

Perceived ease of use refers to an individual's subjective perception of the simplicity and ease of operating a technology, while perceived usefulness focuses on the user's belief about how using that technology will improve their performance. The relationship between the two is crucial in an individual's decision to adopt or reject a technology. The idea is that if a user perceives a technology to be easy to use, they are more likely to perceive it as useful as well. Perceived ease simplifies interaction, reducing barriers and making technology more accessible. This, in turn, influences the perception of usefulness: if the technology is easily used, it is expected to effectively fulfill its functions. Perceived ease of use directly affects perceived usefulness, since an easier user experience tends to strengthen the user's belief in the usefulness of the technology.

Hypothesis 4: PEUS has a positive and significant effect on PUSE

PUSE has a positive and significant effect on IUTM

The more useful the user perceives telemedicine to be in improving their healthcare, the more likely they will intend to use it. The perceived usefulness of telemedicine is linked to several aspects. Convenience is a key factor. If users perceive that telemedicine makes it easier to access medical care without having to physically travel, this increases its perceived usefulness. Additionally, the ability to receive medical care in real time and the ability to access

specialists without geographic restrictions contribute to the perception of usefulness. The quality of interaction and communication with health professionals through telemedicine also influences perceived usefulness. If users feel that telemedicine provides them with an effective and satisfying healthcare experience, they are more likely to see value in its use. When users see telemedicine as a valuable tool to improve their healthcare, they are more inclined to adopt it as an integral part of their healthcare options.

Hypothesis 5: PUSE has a positive and significant effect on IUTM

PEUS through PUSE has a positive and significant effect on IUTM

The perception of ease of use has been described as having an effect on the perception of usefulness, which is part of the TAM. However, this relationship is a route that allows explaining the intention to use technology. This measuring effect of the perception of usefulness must be tested in different contexts such as the current one in telemedicine.

Hypothesis 6: PEUS through PUSE has a positive and significant effect on IUTM

Research model

Fig. 2 shows the research model to analyze the effects among of variables.

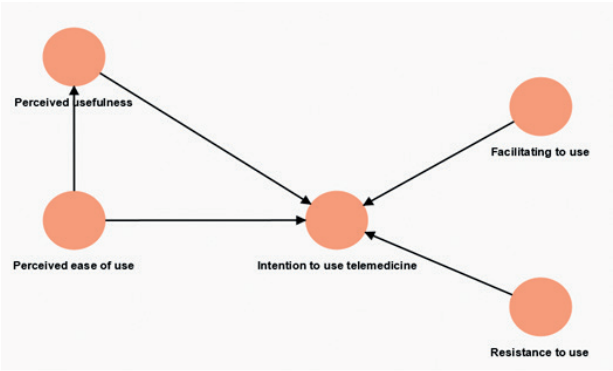

Figure 2. Research model.

Material and methods

Current research uses a prospective, non-experimental, cross and correlational design. The objective is to analyze the effects among the variables of the model to explain the intention to use the telemedicine programs.

Sample and data collection

The data collection was performed from citizens in Peru through a non-probabilistic sampling. Between October 15 and November 30, 2023, 386 online questionnaires were conducted, shared by Internet. The questionnaire was distributed by email and WhatsApp.

Instrument of collection of data

The questionnaire begins with the explanation of the research in which they were going to participate. After this, a statement is presented to confirm if they wish to participate in the study. The questionnaire was based in a Likert 5-points scales. Table 5 shows the items and the sources of them.

Table 5. Internal consistency analysis using partial least square structural equation modeling (PLS-SEM).

Scale	Items	Cronbach's Alpha	Source of items
Intention to use	4	0.832	Developed by authors
telemedicine	5	0.888	Adapted from Davis and Venkatesh (1996)
Perceived ease of use	5	0.824	Adapted from Davis and Venkatesh (1996)
Perceived usefulness	4	0.781	Adapted from Riffai et al. (2012)
Facilitating to use	4	0.711	Adapted from Santos and Ponchio (2021)
Resistance to use			

Data analysis

A multivariate technique called partial least square structural equation modeling (PLS-SEM was used to analyze the data). The multivariate analysis for the current research includes the determination of the construct and discriminant validity and internal consistency. To verify the statistical significance, it was used the non-parametric technique of bootstrapping based in a resampling technique (5000 resamples).

Results

Demographic data

The online questionnaire was fulfilled by 386 participants. 57.25% of respondents were women, ranging among 21 and 44 years. The participants were from Peru exclusively.

Reliability

Table 5 shows outcomes for reliability coefficients (Cronbach's Alpha) higher than the expected minimum value (0.7) based in mutlivariate analysis using PLS-SEM technique.

Composite reliability

The coefficients of sub-scale composite reliability were between 0.809 and 0.894 (Table 6). An acceptable level of composite reliability must be greater than 0.7. Overall, the values obtained for the six sub-scales confirm the reliability of the questionnaire.

Discriminant validity

The Fornell-Larcker criterion was used to analyze multicollinearity. Table 7 presents this criterion in all sub-scales, showing the discriminant validity of the instrument tested.

Table 6. Construct validity by PLS-SEM.

Scale – Items	Loading factors	Composite reliability	Average variance extracted
Intention to use telemedicine (IUTM)			
Assuming I had access to telemedicine, I would use it	0.905	0.809	0.733
I would be willing to use telemedicine as a replacement for my medical appointments	0.723		
I'm open to using telemedicine services for remote medical assistance if needed	0.899		
I plan to share information about telemedicine with my relatives and friends	0.914		
Perceived ease of use (PEUS)			
I think learning to use telemedicine would not be very difficult for me	0.921	0.894	0.747
I estimate that telemedicine services will be easily usable from my cell phone	0.843		
My ease with the use of technology will allow me to use telemedicine without problems	0.792		
It would be easy for me to interact with doctors through telemedicine	0.902		
I want the telemedicine systems to be simple and easy to comprehend	0.908		
Perceived usefulness (PUSE)			
Telemedicine would improve my healthcare	0.875	0.877	0.762
Telemedicine services will allow me to save time traveling	0.822		
Telemedicine appointments can be made on time	0.863		
I believe that utilizing telemedicine would enhance my accessibility to healthcare services	0.873		
I believe that incorporating telemedicine into my daily routine would be beneficial	0.886		
Facilitating conditions (FACO)			
I will have access to all necessary resources for using telemedicine services	0.803	0.761	0.729
From my cell phone I could easily access telemedicine services	0.741		
I want to gain enough knowledge so that I can use the telemedicine service	0.801		
Telemedicine suits well with my healthcare routine	0.721		
Resistance to use (RESU)			
I would prefer not to use telemedicine if it's possible	0.827	0.742	0.761
I think it is risky to treat myself with telemedicine services	0.728		
I have some concerns regarding the quality of telemedicine services	0.759		
I would rather receive medical treatment through conventional healthcare facilities	0.771		

Table 7. Discriminant validity by Fornell-Larcker criterion.

Scale	FACO	IUTM	PEUS	PUSE	RESU
FACO	0.836				
IUTM	0.702	0.765			
PEUS	0.557	0.524	0.756		
PUSE	0.521	0.511	0.622	0.822	
RESU	-0.113	-0.125	-0.119	-0.128	0.870

Bootstrapping

The criterion used was 5000 resamples. The original value is expected to be similar to the average obtained value. Table 8 shows that all relations are significant (p values <0.05).

Table 8. Significance of path and hypothesis test.

Hypothesis	Original sample	Mean sample	Standard deviation	t-statistic	p-value	Hypothesis test
RESU → IUTM	0.066	0.066	0.049	9.324	0.129	Rejected
FACO → IUTM	0.221	0.226	0.061	1.991	0.018	Accepted
PEUS → IUTM	0.559	0.557	0.072	0.689	0.000	Accepted
PEUS → PUSE	0.703	0.702	0.059	5.728	0.000	Accepted
PUSE → IUTM	0.298	0.292	0.044	0.506	0.002	Accepted

Table 9 shows the specific indirect effects to demonstrate the mediator influence of perceived usefulness between perceived ease to use and intention to use telemedicine.

Discussion

The purpose of this study was to identify the factors that influence people's intention to use telemedicine. The results showed that the respondents believed that telemedicine would improve the quality of medical care, which is an important factor for the continuity of use. This may be due to the fact that telemedicine allows for more accessible medical appointments, making it easier for people to receive medical attention, especially in developing countries where this can be a challenge (Kadir 2020; Suzuki et al. 2020; Yousef et al. 2021). Additionally, telemedicine is perceived as a way to improve access to health services without disrupting people's daily lives, as is often the case with long waiting times in public health services (Latifi et al. 2019; Palozzi et al. 2020; Barbosa et al. 2021). Furthermore, respondents found learning to use telemedicine to be easy, as current telemedicine systems are user-friendly and intuitive for patients. The study also highlighted the importance of the new form of communication and trust-building that can be established between patients and health professionals through telemedicine. While traditional in-person consultations allow for physical examination and emotional bonding, telemedicine offers a unique opportunity for patients to build trust with their healthcare providers through virtual consultations.

Social networks have become an integral part of people's lives, with the opinions of others having a significant impact on their lives. This need for validation of actions has resulted in people sharing many aspects of their lives, including personal and sensitive information like health problems or deep thoughts. Often, people use social media to express their frustration towards political or sports actors. The experiences of other people can influence one's

Table 9. Specific indirect effects.

Hypothesis	Original sample	Mean sample	Standard deviation	t-statistic	p-value	Hypothesis test
PEUS → PUSE → IUTM	0.164	0.161	0.058	2.009	0.007	Accepted

opinion, which can be requested through a chat message or posted voluntarily to thank or complain about the services received (Al-Dmour et al. 2020; Elia et al. 2020; Suarez-Lledo and Alvarez-Galvez 2021). Negative comments on social media can quickly spread, leading people to question the quality of the service. It is difficult to verify the authenticity of such comments, but people tend to believe them, and even if they have doubts, they assume that there must be some truth to it. This difficulty in verifying information is the biggest problem with social media. Endurance Items has capitalized on people's fears of abandoning traditional medical appointments due to depersonalization. However, it is important to remember that several communication tools have been incorporated to help people overcome their resistance to change, as seen in the widespread use of mobile phones. This resistance is usually lower in younger people compared to adults and the elderly.

Although the number of participants in the study was limited, PLS-SEM allowed for the analysis of data. Due to the pandemic, patients in healthcare facilities were not available, and therefore, the participants were citizens. Future research should focus on evaluating the acceptance of different modes of telemedicine provision, such as video call, chatbot, synchronous chat, telephone, and other methods. It is essential to differentiate between the intention to use these technologies and evaluate their effectiveness in patients with specific diseases, such as diabetes and hypertension, as well as in patients from urban and rural areas. Additionally, it is necessary to assess the perception of the cost of telemedicine services. For example, should patients pay the same amount for virtual and face-to-face medical appointments? Finally, future research should explore which health professionals are most needed to offer telemedicine services and whether patients are interested in blended services, that is, partial and face-to-face appointments alternately.

Conclusion

In developing countries, telemedicine services have been used to provide medical care to patients with other diseases that need to be monitored. These patients often lack access to medical facilities and receive remote care through telemedicine. However, to plan for medical services in the post-pandemic period, it is necessary to understand the potential users of telemedicine services, their preferences, and specific requirements for medical care. Telemedicine services are not suitable for all patients, and thus, it is necessary to prioritize the types of patients who can benefit the most from this service. Gradually, health services in developing countries are implementing telemedicine services to improve healthcare access for patients.

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