



GAMBARAN *FAKTOR USER DIMENSION* PENGGUNA *TELEMEDICINE* PADA MASYARAKAT PASCA PANDEMI COVID-19 DI JAKARTA

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ABSTRAK

Pelayanan kesehatan *telemedicine* merupakan layanan kesehatan dimana pasien dapat berkonsultasi secara online dengan dokter. Memanfaatkan penggunaan aplikasi *telemedicine* menjadi salah satu pilihan yang dapat digunakan untuk layanan kesehatan tanpa harus berkunjung ke pelayanan kesehatan, ditengah kondisi wabah pandemi COVID-19 yang terjadi saat ini. Tujuan penelitian ini adalah untuk mengetahui gambaran dimensi faktor pengguna dalam menggunakan teknologi *telemedicine* pasca masa pandemi di Jakarta. Penelitian ini merupakan penelitian *crosssectional* deskriptif dengan menggunakan pendekatan kuantitatif. Penelitian ini dengan menggunakan sampel sebanyak 136 responden yang pernah menggunakan *telemedicine*. Teknik sampling yang digunakan adalah purposive sampling. Hasil penelitian menemukan sebanyak 93.4% merasa percaya (*trust*) menggunakan *telemedicine*, 94.1% merasakan fasilitas terpenuhi untuk menggunakan *telemedicine*, 89% mendapatkan dukungan sosial. Namun sebanyak 58.8% mengalami ansietas menggunakan *telemedicine*, 84,6% responden tidak *resistance to use (RU)* *telemedicine*, dan 55.1% responden masih merasakan beresiko dalam menggunakan *telemedicine*. Kesimpulan penelitian ini adalah fasilitas layanan kesehatan perlu mengembangkan produk *telemedicine* dan berinovasi untuk mengembangkan digitalisasi kesehatan di masa yang akan datang untuk meningkatkan niat masyarakat memeriksakan kesehatannya dengan jarak jauh tanpa harus ke fasilitas layanan kesehatan ditengah pandemic COVID-19 yang masih ada.

Kata kunci: covid-19; kesehatan; pandemi; *telemedicine*

PUBLIC'S USER DIMENSION FACTORS USING TELEMEDICINE DURING COVID-19 PANDEMIC IN JAKARTA CITY

ABSTRACT

Telemedicine is medical services that allow people to consult with doctors via online. During the COVID-19 pandemic, telemedicine application is a solution for health services without visiting a health facility. The purpose of this study is to analyze the user dimension factors for using telemedicine during COVID-19 pandemic in Jakarta. This study is a descriptive cross-sectional study using a quantitative approach. This study surveyed 136 people who had used telemedicine with purposive sampling method. According to the study's results, 93.4% of participants felt trust (T) to use telemedicine, 94.1% thought that the facilities condition (FC) was fulfilled to use telemedicine, 62.5% reported not resistance to use (RU) telemedicine, and 89% received social influence (SI) to use telemedicine. However, 58.8% of respondents reported feeling technology anxiety (TA) when using telemedicine and 55.1% reported perceive risk (PR) when using telemedicine. The conclusion of this study is that health service facilities must provide telemedicine solutions and innovate to build digital health services in order to improve people's intentions to check their health remotely without go to hospital during COVID-19 pandemic situation.

Keywords: covid-19; health; pandemic; *telemedicine*

INTRODUCTION

Telemedicine is the delivery of health care services, where distance is an important factor, by all health care professionals using information and communication technologies for the exchange of valid information for the diagnosis, treatment and prevention of disease and injury, research and evaluation, and for continuing education of service providers health, all in the interest of advancing individual and community health (Ryu, 2012). Utilizing the use of telemedicine applications is an option that can be used for health services without having to visit a health service, amid the current conditions of the COVID-19 pandemic outbreak. The innovation of using *telemedicine* is an option and a challenge for hospitals to develop these health services in the community.

Various countries have applied the use of *telemedicine*, one of which is epilepsy services for pediatric patients at the De Petriarria J.P Garraham Hospital in Argentina, which has provided health services via telemedicine for pediatric patients at the hospital. The patient's parents stated that they were satisfied using the service because their children who were seeking treatment could easily obtain medicine, and it helped them to minimize the burden of travel costs. The use of *telemedicine* gives satisfaction to the telemedicine health services that have been used (Fortini et al., 2020). In addition, several studies have found that the use of *telemedicine* has limitations in patient privacy and confidentiality, and is limited in conducting direct examinations (Barney et al., 2020). The use of *telemedicine* is also accepted by users due to the cost factor because it is considered more efficient in terms of time and travel costs to get to health facilities (Vidmar et al., 2019).

In addition, patients who use *telemedicine* feel that they feel unreliable because doctors cannot check their health conditions directly because communication can only be done remotely (Tantarto et al., 2020). However, it is in contrast with the research that have been found on individual motivation and cognitive social factors in telemedicine users in China, it was found that when they have good self-efficacy and confidence in using telemedicine, they also have confidence in using telemedicine (Wu et al., 2021). The Indonesian Ministry of Health in mid-2021 has collaborated with 11 private telemedicine platforms in Indonesia so that patients with independent isolation criteria with COVID-19 can access health facilities as a sign of visiting the hospital directly, to make it easier to obtain medicine and consult a doctor for free. *Telemedicine platforms* that have collaborated with the Ministry of Health include Alodokter, GetWell, Good Doctor and GrabHealth, Halodoc, KlikDokter, and KlinikGo, Link Sehat, Milvik Dokter, ProSehat, SehatQ, and YesDok. This is of course one of the changes towards digitizing Health in Indonesia.

Changes in conventional face-to-face services to virtual services make people feel new experiences about health services, both satisfactory and unsatisfactory. One of the changes that users can feel right away is the ease of accessing various health information and services (Xu et al., 2015). The impact of the Covid-19 pandemic has caused patients to experience consumer-friendly health services, namely services that are fast and easy to access, so that health service organizations that have not used telemedicine technology may lose their customers (Huddleston, 2020). The development of *telemedicine* was originally developed to bring health services closer to populations who live in remote places or who have difficulty accessing health facilities. Utilizing the use of *telemedicine* applications is an option that can be used for health services without having to visit a health service, amid the current conditions of the COVID-19 pandemic outbreak. The innovation of using *telemedicine* is an option and a challenge for hospitals to develop these health services in the community. Therefore, it is necessary to analyse the

frequency description of the user dimension in utilizing telemedicine applications in the community in Jakarta city.

METHOD

This research is a descriptive research with purposive sampling technique. The number of samples in this study were 136 respondents who had used *telemedicine* applications to utilize health services in Jakarta city. This research did not physically harm the respondents and fulfilled ethical principles in the research process.

RESULT

Table 1.
Characteristics of Respondents (n=136)

Characteristics of Respondents	f	%
Age		
17-25 years old	44	32.4
26-35 years old	76	55.9
36-45 years old	10	7.4
46-55 years old	6	4.4
Gender		
Male	32	23.5
Female	104	76.5
Education		
Junior High School	1	0.7
Senior High School	25	18.4
Diploma	26	19.1
Bachelor	47	34.5
Magister	32	23.5
Profession	5	3.7
Work Experience		
Not yet working	17	12.5
<5 years	65	47.8
5-10 years	36	26.5
>10 years	18	13.2
In the past year, how many times did you visit the hospital?		
Never	36	26.5
1 - 3 times	61	44.9
4 - 5 times	10	7.4
>6 times	29	21.3
Reasons for using <i>telemedicine</i>		
Shorten waiting time	46	33.8
Avoid the COVID-19 virus	32	23.5
Cheap price	6	4.4
Advice from family	3	2.2
Personal desire and curiosity to use	47	34.6
COVID-19 independent isolation period	2	1.5

Table 1 shows an overview of the characteristics of respondents in using telemedicine where it can be seen that 55.9% of the respondents were mostly aged 26-35 years, 76.5% were the majority women, 76.5% had a bachelor's degree, 34.5% the majority had worked with less than 5 years of experience, 44.9% the majority had been to the hospital 1-3 times in last one year. Respondents stated that 34.9% wanted to use *telehealth* because they were curious about using it, 25.7% because they wanted to shorten waiting times, 24.8% wanted to avoid being exposed to the COVID-19 virus so they used *telemedicine*, 5.5% used *telehealth* because it was cheap, 2.8% because family advice.

Table 2.

Overview of User Dimensions of Post-COVID-19 Pandemic Telemedicine Users (n=136)		
User Dimension	f	%
Social Influence SI		
Supportive	121	89.0
Not supportive	15	11.0
Facilizing Condition		
Fulfilled	128	94.1
Not fulfilled	8	5.9
Technology Anxiety		
Normal (no worries)	56	58.8
Experiencing anxiety	80	41.2
Trust		
High	127	93.4
Low	9	6.6
Resistance to use		
Not Resistance	85	62.5
Resistance	51	37.5
Perceived Risk		
Low risk	61	44.9
High risk	75	55.1

Based on table 2, the description of the respondents in using the telehealth application was seen from the user dimension. There were 89% of respondents in the good Social Influence (SI) category, 58.8% did not experience technology anxiety (TA), there were 94.1% in the facilitating condition (FC) category that fulfilled, 55.1% of respondents stated that there was a high risk of using telemedicine, 62.5% did not experience resistance to use (RU), and the majority of respondents were 93.4% experienced trust (T) in using telemedicine applications for their health.

DISCUSSION

Social Influence

Support is a motivating factor for a person to experience a change in attitude towards something. The social support factor is one of the factors that is modified in the Technology Acceptance Model (TAM) Theory by adding social factors that have been developed, where social factors are factors that influence a person's intention to use a technology (Ayesha et al., 2020). In one study in Bangladesh, parents used the mHealth application for health services and social support to influence parents' intention to use the mHealth application. Bangladesh is a country where socio-economic and local family culture have an influence on family decision-making, especially regarding decisions related to health. The results of this study found that the factor of social support is one of the factors that most influences the community in using applications on the telehealth platform. Support factors that come from the environment such as family, co-

workers are one of the factors that influence a person to use applications such as telehealth for one's health (Hoque & Sorwar, 2017)

Facilitating Condition

The available facilities are one of the factors that influence people's use of telehealth applications to receive health services. In this study, the availability of facilities is the most influential factor for users to utilize health services using telehealth applications. However, the current obstacle is the limited facilities for patients to check their conditions at home, such as checking blood pressure, checking blood glucose without the assistance of health workers or doing self-examination independently. In addition, the obstacle encountered is when people who use the telehealth application do not have a webcam on the device used, so that it complicates direct face-to-face communication with health workers when conducting health consultations (Payán et al., 2022)

The availability of facilities to be able to use telehealth is one of the important things in increasing user intention to use the application. The availability of these facilities and infrastructure is a challenge in the development of telehealth in the future. Infrastructure factors and the availability of technology are needed in telemedicine to support the smooth use of these applications so as to support the satisfaction of telemedicine users (Riyanto, 2021).

Technology Anxiety

We found that respondents had a lot of anxiety about using technology. Anxiety in the use of technology has an important role in the continued use of telehealth services and user trust (Meng et al., 2020). Technology anxiety is thought to have a negative perception of using a health-based application, especially for users who have an older age range and do not look at the functional use of technology (Tsai et al., 2020). User concerns can be in the form of fear of personal data theft and information security even in subscribing to payments on cellphones in terms of the economic benefits of using applications (Turangan et al., 2022).

Despite contrasting with our findings, the results of the study put forward by McCall state that telehealth can reduce anxiety and depression (McCall et al., 2021). It is possible that this technology has no effect on user comfort and social benefits for individuals (Turangan et al., 2022). So it is important that technology anxiety can be investigated further to experience direct benefits in promoting the use of telehealth.

Trust

The results of our study suggest that respondents have a high sense of trust in telehealth. Increased trust also has an impact on increasing satisfaction. The results of the study stated that the use of telehealth increases user satisfaction, especially during a pandemic because it is the main access to health that is safe and avoids infection with covid (Imlach et al., 2020). Their satisfaction is shaped by the level of trust in the factors of health workers and factors from the patients themselves such as comfort, time used, meetings if using videos, and others (Orange et al., 2021).

High trust is known to be the key to consumers' desire to use telemedicine directly (Fitri Kinasih Husnul Khotimah et al., 2022). Considerations in believing in the use of telehealth if there is ease of use of technology by users so that it can influence the user's intention to use telehealth (Shim et al., 2021). Apart from that, after the pandemic, there is also a need for attention between trust and ethics in how to treat patients. Because the prevalence of telehealth after the COVID-19 pandemic has also increased and the consequences of the need for providers and

recipients of health services must be aware of the ethics related to the use of health-based applications (Ben-Jacob & Glazerman, 2021).

Resistance to Use

During the Covid-19 pandemic, the role of telemedicine was urgently needed, because since the implementation of the protocol for preventing the transmission of the Covid-19 virus, one of which was an appeal to carry out *physical distancing*, all activities that could cause crowds were very limited, especially in health services. Telemedicine is an innovative approach in providing health services either remotely or online and can be used as a means of providing health information that aims to make people ready to prevent and control the spread of Covid-19 (Lubis, 2020). The infrastructure factor that is carried out in providing optimal telemedicine services is that the patient's address is checked, to check the nearest satellite so that the patient is satisfied with the telemedicine service and can communicate clearly with the service provider. Service providers use *video conferencing* technology (Lin, Crutchfield, Zurawski dan Stevens, 2018).

Apart from that, telemedicine is also considered capable of reducing the number of non-communicable diseases, because non-communicable diseases are acquired from genetic factors alone but can also be due to people's lifestyles. Currently, digital health applications can help people adopt a healthy lifestyle. Another benefit that people can enjoy with telemedicine services is that doctors can monitor their health remotely. This type of care can reduce costs, potentially allowing older adults to live longer. in their own homes, and helping clinicians to more easily tailor care according to patient preferences and service availability. This is what makes patients prefer to continue using telemedicine services (Azis, Burhanuddin dan Santoso, 2020).

Perceived Risk

The use of telemedicine has several risks in its application, risks that often occur due to the difficulties experienced by the community in accessing telemedicine with a computerized system, (Purbaningsih & hariyanti, 2020) whereas according to (fadhila & afriani, 2019), explains that problems related to services namely difficulties in using technology due to lack of instructions, and lack of information obtained by the community. The implementation of telemedicine services has had a changing impact on the implementation of health services, such as the public being able to carry out consultations anytime and anywhere. (Istifada & Laagu, 2017).

In addition, a limited physical examination is also a complaint that is often felt by the public, to overcome this problem doctors must conduct in-depth interviews in order to obtain the information they need to make clinical recommendations or establish a patient's diagnosis, the physical examination itself consists of inspection, percussion, palpation, auscultation and other special physical examination. Physical examination certainly requires the patient to be face to face with the doctor. In online consultations, this cannot be done so it is difficult to establish a diagnosis. Another thing that is often encountered is the limitations of visual media. In several incidents where patients send pictures of the complaints they are experiencing (Latifi dkk., 2021), as an example of an elderly patient who has lesions on his skin, it will be necessary to take pictures that are appropriate both from a certain angle and lighting, this often causes a higher sense of concern for the security of the data they provide, so the doctors often find it difficult to get the information needed, let alone having medical discussions that are sensitive in nature, patients will feel more comfortable having face-to-face conversations, in order to reduce the risks they feel. (Cubanski, 2020).

CONCLUSION

The user dimension in the use of technology is something that needs to be considered in the use of technology such as telemedicine. Health facilities need to look at user perceptions so that health services can innovate health services and develop these applications both in terms of content and security, so that people can have their health checked optimally even if they do remote consultations. By developing this telemedicine service, it is hoped that the community can experience its benefits to improve health during the COVID-19 pandemic

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