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# Indonesian Perspectives about Telemedicine: Strength of Social Support, Access, and Internet Use Telehealth Usability Amidst COVID-19

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**Abstract** Indonesia faced significant challenges in managing the COVID-19 outbreak. The nation's extensive population and geographic distribution posed significant challenges to implementing conventional healthcare delivery approaches during periods of lockdown and restricted mobility. Telemedicine has emerged as a feasible approach to deliver healthcare services with reduced reliance on face-to-face contact. This study aims to determine the relationship between Knowledge, Attitude, Length of Using the Internet, Accessibility and Social Support of Telemedicine users with skills in using Telemedicine applications in Indonesia's Primary healthcare during the COVID-19 pandemic. This research uses quantitative research with a cross-sectional research design. Data was obtained by observation using a Telehealth Usability Questionnaire (TUQ). The research samples are people who use telemedicine applications in the primary healthcare area using multiple linear regression methods to evaluate telemedicine skills. The results showed a significant association between the length of internet use, accessibility, social support and skills in telemedicine applications during the COVID-19 pandemic.

The right advice on the strategy of employing telemedicine is to achieve health services uniformly throughout the country's population, enhance service quality, particularly in distant locations, reduce expenses compared to conventional ways, and improve health status.

**Keywords** Skills, Social support, Access, Internet Use, Telemedicine, COVID-19 Pandemic

## 1. Introduction

One of the efforts to prevent the spread of Covid-19 is using the internet. The internet is a technology that has become a necessity and lifestyle of people worldwide for the last few decades, including in Indonesia. The internet has changed our lifestyle, people's habits, economy and culture. All aspects of life are available online, such as communication and health services. According to a survey conducted by APJII (Association of Indonesian Internet Service Providers) during the 2019-2020 survey period,

with the availability of various applications and features, Internet users continue to grow significantly, with Internet users in Indonesia reaching 73.7% of the total population [1].

Telehealth services are one of the media used health services during a pandemic. Telemedicine uses electronic information and advanced telecommunications technology to support health care, such as teleclinical care, patient health records, patient and professional health-related education, public health, and health management. During the current pandemic, telemedicine provides patients with increased access to healthcare and hygiene, reduces the time it takes patients to visit a doctor, lowers financial costs, and reduces the risk of potential exposure to the COVID-19 virus. Through this type of telemedicine, people can access medical services anywhere and anytime [2].

Telemedicine/telehealth serves as a means or platform for communication between doctors and patients. Current example of telemedicine growing rapidly in Indonesia is the ability to chat directly with doctors through the application. With this feature, users can freely discuss with doctors anytime, anywhere [3].

Telemedicine services in Indonesia have a long history, namely two priorities designed by the Ministry of Health in 2012: teleradiology and telecardiography services. In addition, the Ministry of Health officially launched the TEMENIN application to facilitate telemedicine between health service providers. The legal basis for providing telemedicine services between health facilities is regulated in Minister of Health Regulation No. 20 of 2019. Meanwhile, to underline the strengthening of telemedicine implementation in this pandemic year, the Medical Council has issued Regulation No. 74 of 2020 concerning clinical authority and clinical practice of telemedicine in Indonesia during the coronavirus disease 2019 (COVID-19) pandemic [4]. There exists a body of research and historical documentation on the topic of telemedicine in Indonesia [3, 4].

In terms of the use of telemedicine in Indonesia, although it is still in the development process and there is no specific legal certainty to regulate the use of telemedicine services in the community, in its operations, the implementation of telemedicine application services continues, even in Indonesia. The use of one of the telehealth platforms increased rapidly during the COVID-19 pandemic. In 2020, telemedicine services in Indonesia were utilized by over 20 million users, marking a tenfold increase in usage [5].

The Samarinda City Health Office has the latest program, namely the doctor-on-call program. This program offers fast health services specifically to serve the elderly, infants, toddlers, pregnant and childbirth mothers, postpartum and patients in an emergency with clinical conditions requiring immediate medical action to save lives and prevent disability [6]. The on call program includes Palaran primary healthcare, Sido Mulyo primary healthcare, Segiri primary healthcare, Lempake primary healthcare,

Temindung primary healthcare, Sambutan primary healthcare, Baqa primary healthcare, Wonorejo primary healthcare, Trauma Center primary healthcare and Samarinda City primary healthcare.

The use of telemedicine is influenced by the skills of the user or patient in health services. Several factors are related to using skills: knowledge, attitudes, duration of internet use, accessibility and social support from users. Six factors can affect the use of telemedicine [7].

Knowledge is known as a result of observing certain objects obtained through sensing. Sensing occurs through the human senses, namely sight, hearing, smell, taste and touch [8].

Attitude is the feeling/response of a person to something in the form of a positive or negative attitude. Human attitudes are the main predictors of daily behavior (actions), although there are other factors, namely the environment and one's beliefs [9].

Internet (interconnection-networking) is a collection/network of computers worldwide. In general, it is a global system of all interconnected computer networks using the Internet Protocol Suite (TCP/IP) standard to serve all users worldwide. In accessing the internet, there is an ideal time limit that can affect the use of telemedicine [10].

Accessibility is a level of convenience for a person to reach a specific location, and this accessibility is closely related to the distance of the location of an area to other areas, especially the distance from the location to the centers of public services. Apart from being related to location distance, accessibility is also related to time and cost [11, 12].

Social support can be obtained from family, friends, friends, teachers, spouses, or community members. Social support is an action taken by others to individuals in the form of care, attention, comfort, appreciation and material and non-material assistance. Social support refers to actions taken by other people to individuals who receive help or support. However, it also refers to feelings or perceptions that attention, support, care, and comfort are available when needed, which is called a form of perceived support [13].

## 2. Methodology

The type of research used in this research is quantitative research with a cross sectional design. The variables in this study were knowledge, attitudes, length of time using the internet, accessibility and social support with skills using telemedicine applications at Samarinda primary healthcare. The population in this study is people aged 17 - 45 years who have used telemedicine applications. Calculate the sample using the Lemeshow formula with a sample of 118 respondents. The sampling technique used in this study is non-probability sampling with the type of accidental sampling if the person who happened to be met is suitable

to be used as a data source with inclusion and exclusion criteria.

**Inclusion criteria in this study:** Have used one or more telemedicine application services during the COVID-19 pandemic, are at least 17 years old, domiciled in the Samarinda area and are willing to be a respondent. While the exclusion criteria are not willing to be a respondent. The research was conducted in April 2022. The instrument used in this study as the primary data source was a questionnaire in the form of a paper. The contributors prepared the questionnaire after a comprehensive literature review. The questionnaire used for this survey consists of several variables.

## 2.1. Measure

Before conducting the survey, the questionnaire was validated, and the reliability (Cronbach's) of the results was measured for each variable:

- 1) Demographic variables are personal information of the participants (name, age, gender, education, and type of application).
- 2) The skill variable in using telemedicine is a person's ability to use web-based telemedicine applications/Wa/remote applications aimed at health services, a questionnaire using a Likert scale consisting of 15 questions adapted from the Telehealth Usability Questionnaire (TUQ)[14], for the rating scale (Strongly Disagree = 0, Disagree = 1, Agree = 2, Strongly Agree = 3) The measurement results are categorized into 3, namely: skilled, moderately skilled, less skilled.
- 3) Knowledge variable is the result of someone knowing about the telemedicine platform, Questionnaire using the Guttman Scale which contains 10 questions with the answer "Yes" given a value of "1" and "No" given a value of "0". The measurement results are categorized using the cutoff point method, Criteria assessment into 3, namely: Good Knowledge, Enough Knowledge, Lack of Knowledge. The reliability coefficient of this scale is 0.795
- 4) The attitude variable is a person's feeling/response to something that results in skills using telemedicine in the form of positive or negative attitudes using a Likert scale questionnaire consisting of 10 questions

for a rating scale (Strongly Disagree = 0, Disagree = 1, Agree = 2, Strongly Agree = 3) The measurement results are categorized into 3, namely: good, enough, less. The reliability coefficient of this scale is 0.968

- 5) Social support variables are everything from the user's social environment in using telemedicine, and the questionnaire uses a Likert scale consisting of 10 questions, for the rating scale (Strongly Disagree = 0, Disagree = 1, Agree = 2, Strongly Agree = 3) Measurement results are categorized into 3, namely: support, lack of support, do not support. The reliability coefficient of this scale is 0.95
  - 6) The access questionnaire variable is the ease of reaching a health service and the absence of obstacles that prevent the service process. The questionnaire uses the Guttman Scale which contains 10 questions with the answer "Yes" given a value of "1" and "No" given a value of "0", with the formula: answers divided by the number of respondents multiplied by 100%, with the results measuring "unreachable" and "affordable". The reliability coefficient of this scale is 0.923
  - 7) The old questionnaire variable using the internet is the time the patient spends a day in accessing the internet. The questionnaire uses a Likert scale consisting of ten questions adapted from Nguyen et.,al [15], for the rating scale (<1 hour = 0, 1-3 hours = 1, 3-6 hours = 2, 6-7 hours = 3) the results of measuring the length of internet use are categorized into four: normal, mild, moderate, severe.
- The application of ethics during data collection was carried out with research permission and informed consent. Processing was done by univariate, bivariate and multivariate analysis. Univariate analysis obtained the number and percentage of respondents based on all the variables studied. Spearman rank analysis was used to measure the strengthening of associations and directions between ordinal variables. Then, multivariate linear regression analysis was used to adjust for significant factors.

## 3. Result

### 3.1. Univariate Test

**Table 1.** Characteristics of Respondents

		SKILLS					
		Unskilled		Less skilled		Skilled	
		n	%	n	%	n	%
Age	17 years - 25 years	8	23.5%	5	14.7%	21	61.8%
	26 years - 35 years	8	13.3%	22	36.7%	30	50.0%
	36 years - 45 years	2	8.3%	6	25.0%	16	66.7%
Gender	Man	11	16.7%	18	27.3%	37	56.1%
	Woman	7	13.5%	15	28.8%	30	57.7%
Education	Elementary	1	16.7%	3	50.0%	2	33.3%
	Junior High School	1	12.5%	1	12.5%	6	75.0%
	High school	10	16.9%	16	27.1%	33	55.9%
	Vocational	2	8.0%	8	32.0%	15	60.0%
Occupation	Bachelor	4	20.0%	5	25.0%	11	55.0%
	Student	2	11.8%	4	23.5%	11	64.7%
	Working	13	16.7%	22	28.2%	43	55.1%
	not work	3	14.3%	6	28.6%	12	57.1%
Application	Pension	0	0.0%	1	50.0%	1	50.0%
	Alodokter	1	6.3%	4	25.0%	11	68.8%
	Halodoc	1	4.3%	5	21.7%	17	73.9%
	Gojek (Gomed)	1	25.0%	1	25.0%	2	50.0%
	Grab (Grabhealth)	1	25.0%	1	25.0%	2	50.0%
	Click Doctor	1	25.0%	1	25.0%	2	50.0%
	Good Doctor	1	25.0%	1	25.0%	2	50.0%
	Doctor On Call	1	8.3%	2	16.7%	9	75.0%
	MyBidan	2	14.3%	7	50.0%	5	35.7%
WhatsApp	9	24.3%	11	29.7%	17	45.9%	

From Table 1 above, it shows the percentage of respondents in the age group of 17-25 years; there are four unskilled people (11.8%), five less skilled people (14.7%), and 25 skilled people (73.5%). In the 26-35 years age group, there are six unskilled people (10.0%), 19 less skilled people (31.7%), and 35 skilled people (58.3%). In the 36-45 years age group, there are two unskilled people (8.3%), five less skilled people (20.8%), and 17 skilled people (70.8%).

In terms of gender, it can be concluded that the percentage of male sex is eight unskilled (12.1%), 17 unskilled (25.8%) and 41 skilled (62.1%). In female gender, there are four unskilled people (7.7%), 12 less skilled people (23.1%), and 36 skilled people (69.2%).

In education, it can be concluded that the percentage of primary school education consists of 1 unskilled person (16.7%), three less skilled people (50.0%), and two skilled (33.3%). In junior high school education there is 1 less skilled person (12.5%) and 7 skilled people (87.5%). In high school education there are 6 unskilled people (10.2%), 13 less skilled people (22.0%), and 40 skilled people (67.8%). In Vocational education there are 2 unskilled people (8.0%), 7 unskilled people (28.0%), and 16 skilled people (64.0%). In undergraduate education there are 3

unskilled people (15.0%), 5 less skilled people (25.0%), and 12 skilled people (60.0%).

On the job, it can be concluded that the presentation of student work includes one unskilled person (5.9%), four less skilled (23.5%), and 12 skilled (70.6%). At work there are ten unskilled people (12.8%), 19 less skilled people (24.4%), and 49 skilled people (62.8%). In non-working jobs, one person is unskilled (4.8%), five people are less skilled (23.8%), and 15 people are skilled (71.4%). In retirement work there is one less skilled person (50.0%), and one skilled person (50.0%).

In the type of telemedicine application, it can be concluded that the presentation of Alodokter application users is one unskilled person (6.3%), four less skilled people (25.0%) and 11 skilled people (68.8%). Halodoc application users there are five less skilled people (22.7%) and 17 skilled people (77.3%). Two users of the Doctor On Call application are less skilled (18.2%) and nine skilled people (81.8%). There are two users of the Chat Bidanku application who are unskilled (14.3%), seven less skilled people (50.0%) and five skilled people (35.7%). Among whatsapp application users, there are nine unskilled people (16.4%), 11 less skilled people (20.0%) and 35 skilled people (63.6%).

**Table 2.** Distribution factors according to telemedicine skill

		Skills					
		Unskilled		Less skilled		Skilled	
		n	%	n	%	n	%
Knowledge	Good	3	25.0%	5	41.7%	4	33.3%
	Middle	3	21.4%	6	42.9%	5	35.7%
	low	6	6.5%	18	19.6%	68	73.9%
Attitude	Low	3	25.0%	5	41.7%	4	33.3%
	Middle	3	21.4%	6	42.9%	5	35.7%
	Good	6	6.5%	18	19.6%	68	73.9%
Internet use	Normal	4	26.7%	4	26.7%	7	46.7%
	Light	1	14.3%	2	28.6%	4	57.1%
	Currently	1	11.1%	5	55.6%	3	33.3%
	Heavy	6	6.9%	18	20.7%	63	72.4%
Accessibility	Low Accessibility	6	18.8%	11	34.4%	15	46.9%
	High Accessibility	6	7.0%	18	20.9%	62	72.1%
Support	Not Support	6	31.6%	2	10.5%	11	57.9%
	Less Support	5	23.8%	4	19.0%	12	57.1%
	Support	1	1.3%	23	29.5%	54	69.2%

From Table 2 above, it can be concluded that the presentation of skills to knowledge is good. Three people are unskilled (25.0%), five people are less skilled (41.7%), and four people are skilled (33.3%). In Insufficient knowledge, three people are not skilled, (21.4%) six people are less skilled (42.9%), and five people are skilled (35.7%). In the lack of knowledge six people are unskilled, (6.5%) 18 people are less skilled (19.6%), and 68 people are skilled (73.9%).

In the presentation of skills to bad attitudes three people are unskilled, (25.0%) 5 people are less skilled (41.7%), and four people are skilled (33.3%). In the attitude of less three people are not skilled, (21.4%), six people are less skilled (42.9%), and five people are skilled (35.7%). In good knowledge six people are not skilled, (6.5%) 18 people are less skilled (19.6%), and 68 people are skilled (73.9%).

In the presentation of skills to the length of time using the normal internet, there are four unskilled people (26.7%), four less skilled people (26.7%) and seven skilled people (46.7%). In the light category of internet use, there is one person who is not skilled (14.3%), two people who are less skilled (28.6%), and four people who are skilled (57.1%). During the time using the internet in the medium category, there was one unskilled person (11.1%), 5 less skilled people (55.6%), and 3 skilled people (33.3%). In the period of heavy internet use, 6 people were unskilled, (6.9%) 18 people were less skilled (20.7%), and 63 were skilled people (72.4%).

In the presentation of skills to low accessibility 6 people

are unskilled, (18.8%) 11 people are less skilled (34.4%), and 15 people are skilled (46.9%). In high accessibility 6 people are unskilled, (7.0%) 18 people are less skilled (20.9%), and 62 people are skilled (72.1%).

In the presentation of skills to unresponsive social support, there are 6 unskilled people, (31.6%) 2 less skilled people (10.5%), and 11 skilled people (57.9%). In the less supportive social support, 5 people are not skilled, (23.8%) 4 people are less skilled (19.0%), and 12 people are skilled (57.1%). In social support that supports there are 1 unskilled person, (1.3%) 23 people who are less skilled (29.5%), and 54 skilled people (69.2%).

Based on Table 3, the high level of length of time using the internet is included in the medium category as many as 37 people (31.4%), Light as many as 36 people (30.5%), Heavy as many as 28 people (23.7%), and Normal as many as 17 people (14.4%).

**Table 3.** Time Use Internet

Internet Use	Frequency (N)	Percentage (%)
Normal	17	14.4%
Light	36	30.5%
Currently	37	31.4%
Heavy	28	23.7%
<b>Total</b>	<b>118</b>	<b>100.0</b>

Based on Table 4, it can be seen that the length of time using telemedicine is 1-6 months as many as 68

respondents (57.8%) and 9 respondents (7.8%) using telemedicine.

**Table 4.** Time Using Telemedicine

time using telemedicine	Frequency (N)	Percentage (%)
1-6 months	68	57.6%
12 months and above	9	7.6%
7-12 months	15	12.7%
Less than 1 month	26	22.0%
<b>Total</b>	<b>118</b>	<b>100.0</b>

Based on Table 5, it can be seen from access to using the internet that the most frequently used access is Social Media as many as 30 respondents (25.4%) and the least non-local events are 1 respondent (8%).

**Table 5.** Access Using the Internet

Access using the internet	Frequency (N)	Percentage (%)
local events	3	2.5%
Non-local events	1	8%
Food material	11	9.3%
Playing games	2	1.7%
Local business	3	2.5%
Check the news	16	13.6%
Movies or TV	3	2.5%
Social media	30	25.4%
General information	28	23.7%
Health information	4	3.4%
Online banking	17	14.4%
<b>Total</b>	<b>118</b>	<b>100.0</b>

**Table 6.** Spearman rank correlation based on telemedicine skill

Variable	p Value	R value
Skills	0.000	0.250
Knowledge	0.000	0.350
Attitude	0.000	0.350
Internet Use	0.000	0.350
Accessibility	0.007	0.245
Social Support	0.039	0.190

Based on Table 6, it can be concluded that the variables significantly related are knowledge, attitudes, length of time using the internet, and accessibility. From the results of the Spearman Rank coefficients, knowledge, attitudes, and duration of using internet for the use of telemedicine applications obtained a p-value of 0.000 (p-value <0.05) so that it rejects H0, which statistically means that the relationship between knowledge and skills

using telemedicine applications has moderate relationship strength. The value of the correlation coefficient (r) obtained is 0.350 which has a moderate correlation with the direction of a positive relationship between knowledge, attitude, and duration of using the internet with skills using telemedicine applications. The direction of the positive relationship in question is if there is an increase in knowledge,

In the variable accessibility to the use of telemedicine applications, the results obtained P value of 0.007 (p value <0.05) thus rejecting H0, which statistically means that the relationship between knowledge and skills in using telemedicine applications has a moderate relationship strength. The value of the correlation coefficient (r) obtained is 0.245 which has a moderate correlation with the direction of a positive relationship between accessibility and skills using telemedicine applications. The direction of the positive relationship in question is that if there is an increase in accessibility, the tendency for skill levels will increase.

Meanwhile, on the social support variable for the use of telemedicine applications, the results obtained P value of 0.039 (p-value <0.05) thus rejecting H0, which statistically means that the relationship between knowledge and skills in using telemedicine applications has a moderate relationship strength. The value of the correlation coefficient (r) obtained is 0.190 which weakens the direction of a positive relationship between social support and skills using telemedicine applications. The direction of the positive relationship in question is that if there is an increase in social support, the tendency for skill levels will increase.

**3.2. Multivariate Test**

Linear regression analysis was used to determine the effect of the dependent variable on the independent variable, namely to determine the effect of length of time using the internet (IU), accessibility (ACS), and social support (SOCS) on telemedicine Skill applications (Y). Multiple regression analysis equations are as follows:

$$\text{Telemedicine Skill} = 0.592 + 0.340 \text{ IU} + 0.306 \text{ ACS} + 0.207 \text{ SOCS.}$$

Based on the results in Table 7, the coefficient of determination (R square) is 0.218, which means that the influence of the variable length of time using the internet, accessibility and social support on the skill variable using telemedicine applications is 21.8%. The knowledge and attitude variables show that these variables have no effect. Constant value (a) of 0.592 which is a constant value or the state when the skill variable using telemedicine applications has not been influenced by other variables, namely length of time using the internet (IU), accessibility (ACS), and social support (SOCS). The skill variable using telemedicine applications does not change if the independent variable does not exist.

**Table 7.** Multivariate logistic regression stratified by telemedicine skill

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	.592	.354		1,672	.097
Internet Use (IU)	.340	.086	.329	3.972	.000
Accessibility (ACS)	.306	.127	.203	2.421	.017
Social Support (SOCS)	.207	.074	.234	2,789	.006
R Square	0.218				

a. Dependent Variable: SKILLS

The IU regression coefficient of 0.340 can be said that the longer internet use will increase the skills of using telemedicine applications by 34.0%. The ACS regression coefficient of 0.306 can be said that the higher the accessibility, the higher the skills in using telemedicine applications which will be by 30.6%. The SOCS regression coefficient of 0.207 can be said that the higher the social support, the higher the skills in telemedicine applications which is by 20.7%.

#### 4. Discussion

The results of this study based on Table 6, found that the effect of long using the internet, accessibility and social support had a significant relationship with skills using the internet. High knowledge tends to have appropriate health practices, and someone who has good knowledge related to healthy behavior has a tendency to behave well too. This states that to improve telemedicine skills, it is necessary to increase knowledge about health [16].

Attitude is a closed response that cannot be seen directly and is a factor in behavior. In this case, it can be interpreted that clients/patients who want to get telemedicine services have a positive attitude towards the use of telemedicine and teleconsultation applications [17].

Accessibility is a measure of comfort or convenience regarding how locations or land uses interact with each other and the "easy" or "difficult" location being reached through the transportation network system. Apart from being related to location distance, accessibility is also related to time and cost [11].

Internet (interconnection-networking) is a collection/network of computers that exist throughout the world. The Internet in general is a global system of interconnected computer networks using the Internet Protocol Suite (TCP/IP) standard to serve all users in the world [10]. This is the same as the research conducted by [18] who said that the role of the internet in using the internet increased people's ability to access telemedicine application services. Some people noted that there was a decrease in the availability of clinical rooms for

face-to-face visits during the COVID-19 pandemic, and people supported the use of the internet to conduct virtual consultations on telemedicine. In addition it is easier for people who are far from the clinic location, to use the internet in virtual consultations with health workers [13].

Social support is assistance or support that comes from other people who have good social relations with the individual receiving the assistance. This form of support can be in the form of words, behavior, or material that can make individuals who receive assistance feel loved, , cared for and valued (19). This study is in line with the research of Samantha and Almalik that the environment that most plays a role in influencing respondents to use telemedicine comes from friends/relatives. When compared from the side of health workers, the majority of respondents assessed that health workers were still less supportive of suggesting the use of telemedicine services because the health agencies had not maximized telemedicine socialization because they were still prioritizing direct health services with one of the considerations that the available telemedicine services were still in the development stage [18].

The results of this study indicate that there is a relationship between each variable, namely knowledge, attitude, accessibility, duration of using the internet (duration of internet access) and social support (social support) with the skills of the user using the application. There is telemedicine at the Samarinda Public Primary Health Care during the COVID-19 pandemic.

The results of this study also show that in general, the independent variables, namely knowledge, attitude, accessibility, duration of using the internet (duration of internet access) and social support affect the skills of users using the internet and telemedicine applications.

However, if viewed separately (partial), the knowledge and attitude variables have no significant effect on user skills. This is in line with Alhadi's research that there is no significant difference in knowledge, attitudes, and skill scores between doctors who work in public, private, or both types of hospitals [19]. Nevertheless, these results contradict the results of Elhadi's research which found that there was a very significant relationship between knowledge and attitude towards the use of telehealth during the COVID-19 pandemic, clients behave positively with 2.19 times chance of clients using telehealth [20, 21].

The results on the independent variables, namely accessibility, duration of internet access (duration of internet access) and social support, when viewed separately (partial), showed a significant effect on skills in using telemedicine.

This study also shows that the dominant influencing variables are accessibility and social support. This is in accordance with research conducted by A. Sulistiyono and T. Budiyantri, who examined the relationship between the use of telemedicine services during the COVID-19 pandemic on the island of Java, namely accessibility and the surrounding environment, showing that there is a

significant relationship between accessibility and the surrounding environment with the use of services telemedicine during the COVID-19 pandemic on the island of Java [3]. Meanwhile, the results of Anderson's research show that the success of telemedicine is also influenced by software, high-speed internet, adequate video conferencing, digital examination equipment that facilitates virtual patient visits, and patient access to software [22, 23].

Nonetheless, technology adoption depends on understanding the concept by the users, the skills required, and the appropriate environment. Adequate knowledge is also needed to encourage the widespread use of telemedicine services from any health service by the community. Currently highlight that knowledge, attitudes, length of time using the internet, accessibility, and good social support are positively correlated with telemedicine applications.

## 5. Conclusions

Based on the results of the study, it was found that several factors affect skills in using telemedicine applications, namely internal factors, and external factors. The internal factors are knowledge and attitudes. External factors are long time to use the internet, accessibility, and social support. In the results of the bivariate test, it was found that the variables of knowledge, attitude, duration of using the internet, accessibility and social support with skills using telemedicine applications had a significant relationship. The results of multiple linear regression found that the knowledge and attitude variables did not meet the criteria, so these variables had no effect on skills using telemedicine applications. While on the old variable using the internet.

## 6. Suggestions

Based on the conclusion, the suggestion is that the duration of using the internet, accessibility and social support are essential in skills using telemedicine applications because if everyone has an adequate smartphone and is more active in using the internet, the community can use telemedicine applications and is supported by family and friends. In other words, telemedicine applications could be easily used by the public. Furthermore, the appropriate advice on the strategy of using telemedicine is to achieve health services evenly throughout the country's population, improve service quality, especially for remote areas and save costs compared to conventional methods and improve health status.

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