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Research

Analysis of Using Telemedicine Application for Pregnant Women During COVID-19 Pandemic Based on ISO 9241-11

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ABSTRACT

Background: The COVID-19 pandemic has affected the performance of several sectors, one of which is the quality of maternal and child health services. One of the factors contributing to the decline in the quality of maternal and child health services is limited access during the COVID-19 pandemic. Telemedicine is here as one of the answers to overcome the problem of limited access to health services during the COVID-19 pandemic. This study aims to analyze the use of telemedicine applications by pregnant women during the COVID-19 pandemic using the ISO 9241-11 framework.
Subjects and Method: This research method is an observational study with a descriptive approach to analyze usability in three measurement aspects namely effectiveness, efficiency, and satisfaction. The number of samples used was 42 pregnant women who had used telemedicine applications that had been determined during the COVID-19 period with a sampling technique using random sampling. The instrument used is an adaptation of the Standardized Usability Questionnaire (SUQ) which will be analyzed using the Structural Equation Modeling-Partial Least Square (SEM-PLS) technique to determine the usability score of the application.
Results: Based on the results of the Structural Equation Model-Partial Least Square (SEM-PLS) analysis, the ISO 9241-11 model has a goodness-of-fit model with an R-square value of 0.760 and a Q-square value of 0.577 with a Goodness of Fit (GoF) of 0.780. The effectiveness variable has a significant effect on the usability variable of the Teman Bumil application at a significance level of 5% with a statistical T value of 1,955. There is not enough evidence for the efficiency and satisfaction variables to say they have a significant effect on the usability of the Teman Bumil application at a 5% significance level with T-statistic values of 0.866 and 1.452. The usability score for the Friends Pregnant application is 44.45.
Conclusion: The usability score obtained by the Teman Bumil application is 44.45, which means that Sahabat Bumil application has not been accepted by users as a system product that can help effectively, efficiently and satisfactorily.

Keywords: telemedicine, pregnant women, COVID-19, ISO 9241-11, usability.

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BACKGROUND

The phenomenon of the spread of the COVID-19 virus in all parts of the world has been declared by the World Health Organization (WHO) to become a global pandemic since mid-March 2020. Indonesia ranks first as the country with the highest mortality in Southeast Asia (ABVC, 2021). The COVID-19 pandemic has had a significant impact on several development sectors, one of which is the health service sector, especially maternal and child health. Based on data from the Indonesian Midwives Association, it was reported that there was a decrease in ANC and contraception services during the pandemic period (Nurjasmi, 2020). One of the efforts made by the Indonesian government is to support the implementation of the use of telemedicine amid the COVID-19 pandemic situation through Permenkes Number HK 01.07/MENKES/4829/2021.

Telemedicine is the process of delivering health care services by all health professionals where distance is a critical factor that uses information and communication technology to exchange valid information to establish diagnosis, treatment and prevention of disease, research and evaluation for continuing education of health service providers for the advancement of individual health as well as community (WHO, 2010). The use of telemedicine during the COVID-19 pandemic is considered very important. This is in line with a study conducted by Fryer et al. (2020) regarding the implementation of obstetric services through telemedicine during the COVID-19 pandemic, which is important to ensure safe and effective care and services. The development of telemedicine in Indonesia is increasing every year because it is supported by advances in information and telecommunication systems (Aprillia, 2019). However, several aspects of the telemedicine system need improvement and evaluation in order to process a better health service system (Wiweko et al., 2021). Most of telemedicine activities in Indonesia are not properly evaluated and documented (Indria et al., 2020). Indonesia has many services that have implemented the telemedicine concept both through websites and applications. One of the applications engaged in the field of maternal and child health services is the Friends Pregnant application. The Friend Bumil application is a maternal and child health service application that is shaded by PT. Global Urban Essential (GSE). This application was released in 2017 and has reached more than 1 million users as of March 2020. Based on previous studies, it was stated that the appearance of the Friends Bumil application in the current version is no longer suitable for trends and there are flows that are no longer needed (Kuswandi et al., 2021).

This study aimed to analyze the use of telemedicine applications as a medium for consulting pregnant women during the COVID-19 pandemic on the friends of pregnant applications using the ISO 9241-11 framework.

SUBJECTS AND METHOD

1. Study Design

This research is an observational study design using a descriptive approach to analyze the usability of the Teman Bumil application using the ISO 9241-11 framework. This research was conducted online in November 2022.

2. Population and Sample

The population in this study were all pregnant women who had used telemedicine applications during the COVID-19 pandemic. The sample size in this study was 42 samples with a sampling technique that was purposive sampling.

3. Study Variable

The variables in this study are the frequency of use, the dominant factor of use, the level of effectiveness, efficiency, and satisfaction of pregnant women in using the Friends Pregnant application during the COVID-19 pandemic.

4. Operational Definition of Variables

Frequency of use is the level of use of the Teman Bumil application during COVID-19 by pregnant women as measured by several indicators, namely not often (<5 times a month), often (5-15 times a month), very often (>15 times a month) a month).

The dominant factor of use is the driving factor for pregnant women to decide to use the Friends Pregnant application as measured by the mother's choice of factors that encourage the use of the application, namely: perceived fear, quality of information, trust, and the environment.

Effectiveness is the extent to which the system in the Teman Bumil application is appropriate in completing the task as measured by a rating scale starting from 1 for the strongly disagree category to 9 for the strongly agree category. Effectiveness has 5 indicators namely accuracy of information (F1), accuracy of display (F2), accuracy of use (F3), accuracy of terminology (F4), and accuracy of work stages (F5).

Efficiency is how much resources are used by users when using the Friends Pregnant application (time, human effort, costs, material resources) which is measured through a rating scale starting from number 1 for the category that strongly disagrees to 9 for the category that strongly agrees. Efficiency has 5 indicators namely system speed (E1), repair ability speed (E2), work speed (E3), work phase speed (E4), and learning speed (E5).

Satisfaction is the extent to which users are free from discomfort and a positive response when operating the Friend Bumil application system as measured by a rating scale starting from number 1 for the strongly disagree category to 9 for the strongly agree category. Satisfaction has 5 indicators namely feature satisfaction (S1), support facility satisfaction (S2), usage satisfaction (S3), repair handling satisfaction (S4), interface satisfaction (S5).

Usability is the extent to which the Teman Bumil application system can be operated easily in achieving the goals of the user as measured by a rating scale starting from number 1 for the category that strongly disagrees to 9 for the category that strongly agrees. Usability has 3 indicators namely effectiveness (U1), efficiency (U2), and satisfaction (U3).

5. Study Instrument

This research was conducted using an instrument in the form of a questionnaire which was distributed online to pregnant women who had used the Friends Pregnant application during the COVID-19 pandemic period. Data management techniques used are editing, coding, data entry, cleaning and tabulating.

6. Data Analysis

The data analysis method used in this study is multivariate analysis with the Structural Model Equation-Partial Least Square (SEM-PLS) design. Structural Equation Modeling (SEM) is a multivariate analysis technique that aims to determine the relationship between indicator variables and latent variables, and between latent variables that require indicators because these indicators cannot be measured directly. Partial Least Square (PLS) is a soft modeling approach in SEM for data that does not assume data distribution and a minimum number of observations (Hair et al. 2017).

7. Research Ethics

Ethics in this study include informed consent, anonymity, confidentiality. A research ethics permit approval letter was obtained from the Health Research Ethics Commi-

ttee, Faculty of Medicine, Airlangga University, Surabaya, Indonesia, No.259/EC/KEPK/FKUA/2022, on December 12, 2022.

RESULTS

1. Characteristics of Sample

The subject users of the Pregnant Friends application in Table 1 are in the age range of 20-42 years with an average age of 27 years. The majority of the Friends of Pregnancy application users in this study were in the age range of 27-32 years with gestational age in the third trimester. The Friends Pregnant application is currently available on the Android and iOS operating systems. The majority of the Friends of Pregnant application users in this study used the Android operating system with a total of 28 subjects. The frequency of use in the subject of the Friends Pregnant application is in the range of 1-30 times of use in a month with an average of 12 times of use per month. Based on table 1, the frequency of the Teman Bumil application users is included in the not frequent category. The use of the Teman Bumil application during the COVID-19 pandemic was influenced by several factors which can be seen in Table 1, including perceived fear, information quality, user trust, and the environment. The majority of the Friends of Pregnancy application users are influenced by the good quality of information provided by the Friends Pregnant application.

2. Descriptive Statistical Analysis

Based on Table 2, it can be concluded that the most subjects gave a score of 8 for 16 of the 18 indicators on 4 variables. The percentage of subjects who scored the mode value divided by the total number of subjects is in the range of at least 33% and a maximum of 57% for each indicator, which means that 33% of the subjects gave the E1 indicator a score of 8 and 57% of the subjects gave the F5 indicator a score of 8. Table 2 also presents the average value of the effectiveness variable of 7.89 with an SD of 0.82, efficiency of 7.78 with an SD of 1.07, satisfaction of 7.88 with an SD of 0.89, and usability of 7.81 with an SD of 0.91.

3. Multivariate Analysis

a. Evaluation of Measurement Models (Outer Model)

1) Convergent Validity

In general, the assessment of convergent validity can be measured by determining the Average Variance Extracted (AVE) value and the loading factor where the minimum AVE value must be more than 0.5. This means that when the AVE value is more than 0.5, the average construct explains more than 50% of the variance in each indicator. In Table 3, the AVE value is greater than 0.5 for each variable. Meanwhile, the loading factor value is expected to be more than 0.6. The results of the analysis in Table 3 show that the loading factor value is greater than 0.6. This means that each indicator has been able to reflect each variable. The results of the analysis for the AVE value and loading factor in Table 5.2 show that the measuring tool built meets the convergent validity criteria.

2) Discriminant Validity

One way to measure discriminant validity is to determine the cross-loading factor value of the indicator variable. The cross-loading factor value is expected to be greater than all the loading factor values of the indicator variables against other constructs. In Table 4, the cross loading factor values that meet the criteria are presented, for example, the cross loading factor value on the F1 indicator for the effectiveness variable is greater than the cross loading factor value for the efficiency and satisfaction variables.

3) Reliability

The reliability value of the measurement model can be seen from the composite reliability value. The value of composite reliability is expected to be greater than 0.798. In

Table 5, the composite reliability value is greater than 0.798, which means that the construct has a fairly high internal consistency. Meanwhile, the value of Cronbach's alpha is the coefficient used to evaluate how well the indicator measures the variable. Table 5 shows that the Cronbach's alpha value has met the minimum value of 0.7, which means that the indicator has consistent reliability in measuring variables. The results of the analysis for composite reliability and cronbach's alpha values in Table 5 have fulfilled the reliability criteria.

b. Structural model evaluation (inner model)

Structural model evaluation can be done by determining the R-Square value where the R-Square value is expected to be in the range 0 to 1, the higher the value, the higher the prediction accuracy value of the model with the criteria of 0.75 high, 0.5 medium, and 0. 25 low. In Table 6, the R-Square value of 0.76 is presented, which means that there is about 76% variation in the usability variable which can be explained by effectiveness, efficiency, and satisfaction. The Q-Square value obtained through the blindfolding process produces a value of 0.577 which means that if the value of Q^2 > 0 indicates that the model in this study has been well constructed. In addition, to see the validation value of all dependent and independent variables, a Goodness of Fit (GoF) test is needed to validate the combined inner and outer models. The evaluation criteria for the GoF test are said to be low if GoF > 0.1, moderate if GoF > 0.25, and high if GoF > 0.36. The GoF value in this study was obtained at 0.780 which can be categorized as high which means that the model has a high ability to explain observational data so that as a whole it can be said that the model is in accordance with the data.

In Table 7, the path coefficient value is presented where this value has a standard with a value range of -1 to +1. A path coefficient value close to +1 indicates a strong positive relationship, while a path coefficient value close to -1 indicates a strong negative relationship. Table 7 shows that the three path coefficient values of each variable relationship are positive, meaning that the effectiveness, efficiency, and satisfaction factors are directly proportional to usability where the greater the value of effectiveness, efficiency, and satisfaction of an application, the greater the usability value.

Evaluation of the next structural model can be analyzed through bootstrapping. Testing the hypothesis in this study is a one-tailed hypothesis where this study wants to know the research hypothesis leads to positive or negative influences. Then the value of the T-statistic must be greater than the value of the T-table (1.66) and the p values shown are <0.05 as a condition for the hypothesis to be accepted. The bootstrapping results are shown in Table 7 where the T-statistic for the effectiveness variable on usability is known to be 1.955 > 1.66 and the p value is 0.041 <0.05, which means that there is a significant positive effect on usability in the use of the Friends Bumil application. While the T-statistic value on the efficiency variable on usability is known to be 0.866 < 1.66 and the p value is 0.386 > 0.05, which means that there is not enough evidence to say that efficiency has a significant influence on the usability of the Teman Bumil application. The usability satisfaction variable has a T-Statistics value of 1.452 < 1.66 and p values 0.147 > 0.05, which means that there is not enough evidence to say that satisfaction has a significant effect on the usability of the Teman Bumil application.

c. Score of Usability SEM-PLS

In the Friends Pregnant application, the usability score is used as an indicator that shows the acceptance of the Friends Pregnant application by users as a product that

helps pregnant women get information about pregnancy effectively, efficiently and satisfactorily. The usability score of the Teman Bumil application is measured on a scale of 0 to 100. The usability score for the Teman Bumil application is calculated based on the model having a value of 44.45. Based on the interpretation of the SUS score by Bangor et al. (2008), which is shown in Figure 1, the usability score of the Teman Bumil application is in the "Not Acceptable" acceptability range with an "F" grade scale and an "Poor" adjective rating. This shows that the Teman Bumil application has not been accepted by users as a system product that can assist users in completing their tasks effectively, efficiently and satisfactorily. Based on the Net Promoter Score (NPS) according to Sauro (2018), which is shown in Figure 2, the usability score of the Teman Bumil application is in the "Detractor" position, which means that users have not received satisfaction so that the possibility of users recommending the use of the system to others is still small.

Tabel 1. Study Subject Characteristics

Characteristics	Category	Frequency (n)	Percentage (%)
Maternal Age	20-26 years	17	40.47
	27-32 years	22	52.38
	33-38 years	2	04.76
	39-42 years	1	02.38
Gestational Age	Trimester 1	3	07.14
	Trimester 2	12	28.57
	Trimester 3	27	64.28
Operating system	iOS	14	33.33
	Android	28	66.66
Frequency of Use	Seldom (<5 times/month)	26	61.90
	Often (5-15 times/month)	9	21.42
	Very often (>15 times/month)	7	16.66
Usage Factor	Perceived Fear	3	07.14
	Information quality	28	66.66
	User trust	7	16.66
	Environment (relatives and family)	4	09.52

Tabel 2. Descriptive Statistics

Variable	Indicator	Mean	SD	Median	Mode	%
Effectivity	Information Accuracy (F1)	7.76	0.86	8	8	45
	Display accuracy (F2)	8.28	0.66	8	8	48
	Usage accuracy (F3)	7.64	0.86	8	8	45
	Terminological Accuracy (F4)	7.85	0.91	8	8	52
	Accuracy of Work Stages (F5)	7.92	0.82	8	8	57
Average of Effectiveness		7.89				
Efficiency	System Speed (E1)	7.52	1.40	8	7	33
	Ability Speed (E2)	7.50	1.18	8	7	36
	Working Speed (E3)	7.90	0.92	8	8	48
	Working Stage Speed (E4)	7.83	0.89	8	8	50
	Learning Speed (E5)	8.16	0.94	8	8	45
Average of Efficiency		7.78				
Satisfaction	Feature Satisfaction (S1)	8.04	0.75	8	8	57
	Satisfaction of Supporting Facilities (S2)	7.83	0.99	8	8	45

Variable	Indicator	Mean	SD	Median	Mode	%
	Usage Satisfaction (S3)	8.00	0.84	8	8	50
	Repair Handling Satisfaction (S4)	7.45	1.09	8	8	36
	Front View Satisfaction (S5)	8.07	0.76	8	8	48
Average of Satisfaction		7.88				
Usability	Effectiveness (U1)	7.83	0.97	8	8	44
	Efficiency (U2)	7.66	0.80	8	8	46
	Satisfaction (U3)	7.95	0.95	8	8	44
Average of Usability		7.81				

Table 3. Loading Factor and AVE values

Variable	Indicator	*Loading Factor*	AVE
Effectivity	F1 (Information Accuracy)	0.871	0.684
	F2 (Face Display Accuracy)	0.636	
	F3 (Use Accuracy)	0.851	
	F4 (Terminology Accuracy)	0.887	
	F5 (Work Stage Accuracy)	0.864	
Efficiency	E1 (System Speed)	0.754	0.661
	E2 (Repair Ability)	0.740	
	E3 (System Running Speed)	0.840	
	E4 (Working Staged Speed)	0.885	
	E5 (Learning Speed)	0.837	
Satisfaction	S1 (Feature Satisfaction)	0.828	0.694
	S2(Supporting Facilities Satisfaction)	0.913	
	S3 (Usage Satisfaction)	0.919	
	S4 (Repair Handling Satisfaction)	0.699	
	S5 (Face Display Satisfaction)	0.785	
Usability	U1 (Efficiency)	0.879	0.801
	U2 (Effectiveness)	0.915	
	U3 (Satisfaction)	0.890	

Table 4. Cross-Loading Factor Values

Indicator	Effectivity	Efficiency	Satisfaction	Usability
F1 (Information Accuracy)	0.871	0.713	0.706	0.769
F2 (Face Display Accuracy)	0.636	0.562	0.589	0.502
F3 (Use Accuracy)	0.851	0.704	0.599	0.616
F4 (Terminology Accuracy)	0.887	0.770	0.743	0.758
F5 (Work Stage Accuracy)	0.864	0.828	0.755	0.754
E1 (System Speed)	0.614	0.754	0.537	0.527
E2 (Repair Ability)	0.523	0.740	0.485	0.548
E3 (System Running Speed)	0.795	0.840	0.742	0.683
E4 (Working Staged Speed)	0.780	0.885	0.749	0.750
E5 (Learning Speed)	0.780	0.837	0.852	0.767
S1 (Feature Satisfaction)	0.753	0.755	0.828	0.657
S2 (Supporting Facilities Satisfaction)	0.726	0.706	0.914	0.755
S3 (Usage Satisfaction)	0.774	0.824	0.919	0.821
S4 (Repair Handling Satisfaction)	0.521	0.577	0.699	0.525
S5 (Face Display Satisfaction)	0.633	0.698	0.785	0.633
U1 (Efficiency)	0.695	0.689	0.701	0.879
U2 (Effectivity)	0.799	0.771	0.754	0.915
U3 (Satisfaction)	0.741	0.734	0.757	0.890

Table 5. Value of Composite Reliability dan Croncbach's Alpha

Variable	Composite Reliability	Cronbach's Alpha
Effectivity	0.901	0.881
Efficiency	0.888	0.872
Satisfaction	0.908	0.887
Usability	0.878	0.875

Table 6. Value of *R-Square* dan *Q-Square*

Dependent Variable	R-Square	Q-Square	GoF
Usability	0.760	0.577	0.780

Table 7. Results of Structural Model Evaluation

Path	Path Coefficient	T-Statistics	p
Effectivity → Usability	0.391	1.955	0.041
Efficiency → Usability	0.178	0.866	0.386
Satisfaction → Usability	0.349	1.452	0.147

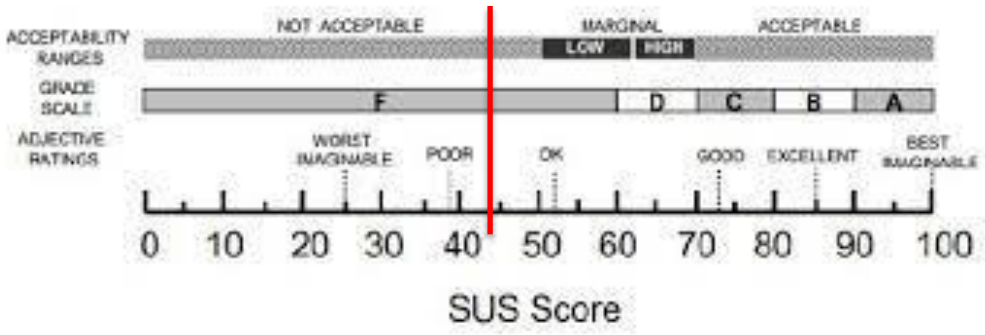

Figure 1. Interpretation of Usability Score According to Bangor

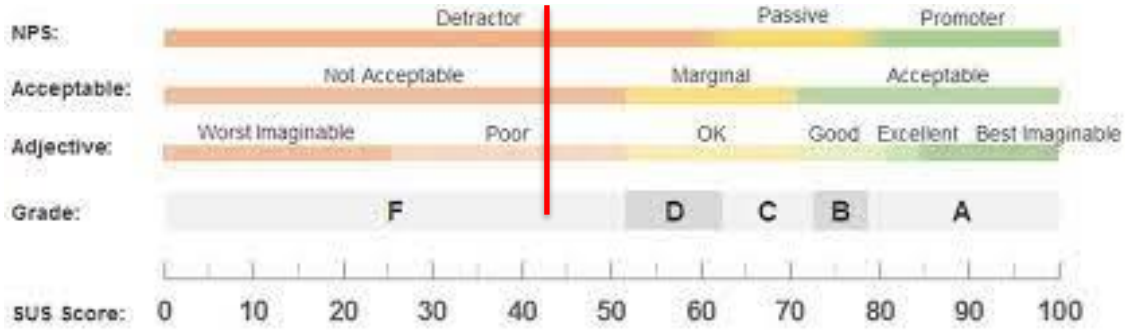

Figure 2. Interpretation of Usability Score According to Sauro

DISCUSSION

1. Frequency Level of Use of the Teman Bumil Applications by Pregnant Women during the COVID-19 Pandemic

The use of telemedicine applications in Indonesia is an initiative to maximize the application of information and communication technology in the delivery of health services which intends to minimize gaps and inequalities (Siboro et al., 2021). The COVID-19 pandemic made the government aware of

the need for the community to use telemedicine as an alternative to health services to reduce the transmission rate of the virus in health facilities. Therefore, the Minister of Health and the Director General of Health Services officially issued Permenkes Number HK 01.07/MENKES/4829/2021 as form of implementation support in the use of telemedicine during the COVID-19 pandemic.

According to research by Djuana Siboro et al. (2021) stated that there was an increase in the use of telemedicine services during the COVID-19 pandemic where 55.8% of subjects were included in the frequent category of using telemedicine services during the COVID-19 pandemic, this percentage was higher when compared to subjects who were in the rare category. . This is different from this study which stated that there were 21.5% of subjects who were in the frequent category when using the Friends Pregnant application service during the COVID-19 pandemic, where this percentage was lower when compared to subjects who were in the infrequent category, namely 61.9%. The differences that occur in this study can be caused by several factors, namely the selection of the telemedicine platform where the platform used in this study is only the Teman Bumil application, while in the study by Siboro et al. (2021) are Halodoc, Alodokter, Klikdokter, Mobile JKN, Sehatpedia, consulting doctors at hospitals and puskesmas. The choice of this telemedicine platform can be one of the reasons for differences in usage levels because the features provided on each telemedicine platform differ according to the needs of the subject. This is in line with Delone and McLean's theory which states that one of the factors that influence users' decisions to use online services is the quality of information that is relevant to what is needed by users (Yulaikah and Artanti, 2022). Besides that, the subjects in the study conducted by Siboro et al. (2021) used the general public which is different from this study which used pregnant women. This affects the duration of application use because pregnant women tend to only use the Friends Pregnant application when they are pregnant to meet their limited information and service needs regarding pregnancy, while the telemedicine application used in Siboro et al.'s research. (2021) can be used by the general public at any time according to their daily needs.

Another factor that could be the reason for the low use of the Teman Bumil application during the COVID-19 pandemic is the preference of users in choosing a platform that supports their information needs about pregnancy based on the quality of the services provided. Some respondents claimed to use other applications besides Pregnant Friends, namely Asianparent: Pregnancy+Baby, Pregnancy+, and Hallobumil.

2. Driving Factors in the Use of the Teman Bumil Application by Pregnant Women during the COVID-19 Pandemic

This study aims to describe the driving factors in the use of the Teman Bumil application during the COVID-19 pandemic. The results showed that 66.6% of subjects decided to use the Friends Pregnant application during the COVID-19 pandemic because of the quality of information provided by the Friends Pregnant application. This makes the quality of information the most important factor in deciding to use the Friends Pregnant application during the Covid-19 pandemic when compared to perceived fear, user trust, and the environment.

This is in line with research by Hatta & Salman (2016) which states that the main factors behind decisions in using applications are high quality and reliability of information where the higher the quality of the information provided will have an impact on better usage decisions and high satisfaction.

This is also in line with Delone & McLean's theory regarding the IS model in the use of technology where this theory says that one of the most important factors in making decisions to use technology is the quality of information. The quality of the information in question is an image or knowledge received by the user based on the relevance of the information, the accuracy of the source, and the timeliness (Yulaikah and Artanti, 2022).

3. Levels of Effectiveness, Efficiency, and Satisfaction in Using the Teman Bumil Application by Pregnant Women during the COVID-19 Pandemic Based on the Usability Score

Usability is an important aspect of using the application. This study aims to analyze the level of effectiveness, efficiency, and satisfaction in using the Friends Bumil application during the COVID-19 pandemic by determining a usability score. The usability score indicates whether the Teman Bumil application has been accepted by users as a product that allows pregnant women to use it effectively, efficiently and satisfactorily to support their information needs regarding pregnancy during the COVID-19 pandemic. The results of this study show that the usability score of the Teman Bumil application after being calculated based on the model has a value of 44.45. This score indicates that the Teman Bumil application has not been accepted by users as a system product that can assist users in completing their tasks effectively, efficiently and satisfactorily.

The features in the Friends Bumil application are designed according to the activities of users so that the perceived usefulness of each feature also depends on the type of activity carried out by users. This can affect the usability assessment of the Friends Pregnant application. Differences in usability scores can also be seen from the devices used. Based on the model, it was found that the usability score of the Friends of the Pregnant application users who used the Android operating system was 45.09, where this score was greater than those using the iOS operating system, which was 43.13. Besides that, the subjective assessment by the user also affects the usability score of the Friends Pregnant application. Based on the data, it was found that the highest indicator score was on the effectiveness variable. It was equal to 7.89, which indicated that the system of the Teman Bumil application had high accuracy in completing tasks, while the lowest indicator score was on the efficiency variable, which was equal to 7.78, which meant that the Friends of the Bumil application users were still issuing resources. resources (time, effort, cost, and material resources) that are quite high in achieving certain goals when using the Friends of Pregnant Applications. The indicator score on the lowest efficiency variable lies in the speed indicator of the system's ability to repair. This explains that the system of the Friends Pregnant application is still unable to fix errors when used quickly.

The distribution of subjects from the Friends of Pregnancy application users is dominated by the age group of 27-32 years (old adults). Age can affect the assessment of the usability score of the Friends Pregnant application. This is in line with research by Clarke et al. (2020) stating that sociodemographic characteristics, such as age can affect a user's ability to use e-Health applications in which not all older adults have devices connected to the internet to access e-Health applications or have the necessary skills to use. Therefore, this causes an increase in gaps in the use of digital technology. In general, older people are less aware of the importance of technology. Lack of awareness and ignorance regarding the implementation of this technology can be a barrier when using it (Awan et al., 2021).

Based on the results of data analysis and discussion regarding the use of telemedicine applications, in this case Teman Bumil application by pregnant women during the COVID-19 pandemic using the ISO 9241-11 framework. It is expected to be able to develop applications in an optimal system to increase effectiveness, efficiency, and user satisfaction so that the level of acceptance of applications by the public can increase. Based on the ISO 9241-11 model that has been carried out in this study, the focus of system development that needs to be considered is the duration of the system when repairing errors (errors) when operating applications.

AUTHOR CONTRIBUTION

In this research, Muhammad Ardian and Nurani Zulfa collaborated to create a conceptual framework and research methodology. Nurani Zulfa collects data. Nurani Zulfa and Samsriyaningsih Handayani collaborated to analyze the data.

FUNDING AND SPONSORSHIP

The study was self-funded.

CONFLICT OF INTERESTS

There is no conflict of interest in this study.

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