

Risk and trust using mHealth application

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Abstract

Since the COVID-19 pandemic, the increase in active users of the mHealth application as a doctor's teleconsultation transaction, drug purchases, and other test services, especially the COVID-19 test service on a drive-thru basis, has increased significantly. The trend of health app user behavior indicates the importance of health. To reveal this phenomenon, the approach used is descriptive-quantitative with SEM-PLS analysis method using SmartPLS software. This finding is to make an important contribution for stakeholders that the main consideration factors for consumers intending to use mHealth application are risk and trust. The consequences for high risk are not proportional to the trust in the application, but when the trust as a mediator can lead to a positive attitude from consumers on the risk that will be accepted as a concrete action to use it. In the end, consumers' strong trust reflects their behavior towards their intention to use the mHealth application.

Keywords: COVID-19; mHealth application; intention to use; risk; trust.

JEL Classification : D91, D910

Article history: Submission date: Apr 7, 2021 Revised date: Jul 7, 2021 Accepted date: Sep 21, 2021

INTRODUCTION

Startup companies engaged in the health sector, namely Halodoc application, Alodokter, Go Dok, Medika App, and Gue Sehat, will continue to be the first solution in solving public health problems. One of the applications a startup launched on April 8, 2016. At its positive start, 16,000 doctors are members of the mHealth application database. A total of 600 doctors have already applied and been active. The doctors on the mHealth application database consist of a wide range of medical specialists, from emergencies to aesthetics. Users can also determine for themselves which doctor they will contact (Rizal, 2019).

The COVID-19 pandemic continues to worry the global population. Until now, there has been no sign of the coronavirus end. Expectations to experts, doctors, health workers, government officials, certain countries, or the World Health Organization is not

the only way. The coronavirus that causes COVID-19 is invisible and unknown and can be anywhere in its massive spread. This reason should make the public aware that the COVID-19 epidemic is a shared responsibility (Fadli, 2020). During the COVID-19 pandemic, teleconsultation transactions with doctors through the mHealth application platform increased by 6 times. An increase of 300% also occurred in drug purchase transactions through the application. Then the number of active mHealth application users reached 20 million per month. This is all due to the existence of a COVID-19 test service, facilitating a drive-thru basis (Kominfo.co.id, 2020).

The importance of health is a valuable asset and must be safeguarded. One way to maintain health is to take advantage of the use of mHealth applications or sites. However, it is not easy to build consumer confidence in order to intend to use healthcare applications. The importance of conducting a study on intentions has been carried out by previous research (Endro & Achmad, 2015; Hamdan et al., 2020; Idris & Kasmoo, 2017; Imaningsih, 2019; Riskhi et al., 2018), and many other researchers. While the factors that influence intention such as perceived benefits (Lim et al., 2016; Tanadi et al., 2015), perceived convenience (Athapaththu & Kulathunga, 2018; Rekarti & Hertina, 2014; Silva et al., 2019), and various other factors. Davis (1989) found the Technology Acceptance Model (TAM), which is used to analyze the factors influencing the acceptance of an information system.

The TAM research model is widely adopted by studies that examine the challenges of attitudes and behavior using mHealth (Shemesh & Barnoy, 2020) in their study that consumers own high self-confidence when using the mHealth application and are not worried about the consequences received about the confidentiality from their health records. Important information regarding the use of mHealth is the technical functionality of the application, ease of use and feature design, and data management by consumers (Anderson et al., 2016). Therefore, (Anderson et al., 2016) it is hoped that health companies implementing an online intervention are an effective way to reach consumers to improve welfare.

Previous research has examined many factors that influence behavioral intentions such as social influence (Hoque & Sorwar, 2017; Quaosar et al., 2018), health awareness, (To et al., 2019), issues of trust (Astini, 2020), perceived benefits (Rekarti & Hertina, 2014), perceived ease and use (Wu & Chen, 2017), perceptions of risk and trust (Mosunmola et al., 2019), trust (Bhandari & Rodgers, 2018), and many other factors. In addition, previous research has examined important factors and become the main consideration of consumers regarding the intention to use mHealth application, namely: perceived ease and use and the content of the website (Athapaththu & Kulathunga, 2018), the experience of using (Anderson et al., 2016), trust, perceived risk, perceived ease and use (Bartelt & Moqbel, 2016), risk perception (Hamdan et al., 2020; Sang & Cheng, 2020), perceived usefulness, perceived ease of use (Ali Saare et al., 2019; Alloghani et al., 2015), perceived risk and negative e-WOM (Wakhida & Sanaji, 2020), perceived ease and use, attitudes (Hussein et al., 2017; Shemesh & Barnoy, 2020; Tasmil, 2014), false reviews and risk perception (Wingate, 2019).

Referring to the research model developed by Davis & Venkatesh and several previous studies, the researcher proposes trust and risk as forming factors for behavioral intentions using the mHealth application. Trust is closely related to the perceived benefits

and ease of achieving behavioral intentions and actual use. While risk is an external factor that can reduce the negative consequences received. Block et al., (2017) need a health application that is useful and convenient to use, with little perceived risk is accompanied by a high level of trust in the company. Sang & Cheng, (2020) consumers' anxiety about the risk of contracting a disease is positively related to the intention to seek service information from community-based providers, while the risk of these service providers reduces the consequences received.

On the basis of the discussion that has been described, the important factors that will be examined are risk perception, trust, and intention to use. The reasons for using these factors are important as findings to reveal the current pandemic phenomenon. Especially the research model (Bartelt & Moqbel, 2016; Hoque & Sorwar, 2017; Quaasar et al., 2018) as a basis for reference in developing this research model which has a close relationship to the behavior of using and utilizing technology (mHealth application) during the pandemic in fulfilling their wants and needs. The pandemic phenomenon causes digital disruption, where the risk that consumers feel when faced with concerns in consuming products or services related to the information received is less relevant and credible, or the truth of the information cannot be validated. This raises doubts and a lack of consumer confidence in the mHealth application offered. In addition, when it is found and published by consumers who are positive for COVID-19, it indirectly affects consumers' intentions to use the health application. This consideration becomes important for researchers to discuss how to shape consumer intentions in using the mHealth application by reducing the consequences received and increasing consumer confidence in the application. Thus, based on the phenomena and research gaps that have been discussed, research formulations can be built including: a) risk affects the intention to use the mHealth application; b) risk affects the trust of the mHealth application; c) trust affects the intention to use the mHealth application; and d) mediation of trust between risk and intention to use of the mHealth application.

Based on the results of research background discussion, literature reviews can be carried out from various relevant theories and research results as a reference in building a conceptual framework, namely: intention to use, risk, and trust.

Intention to use. The theory of planned behavior (TPB) (Ajzen, 2020; Ajzen, 2011) has been developed by many previous studies in predicting behavior change, including the behavior of using technology. Anderson et al., (2016) intend to use the website because of the quality, relevance and actual information that can lead to trust in using it. Behavioral intention developed by Ajzen has been adapted by Davis on the Technology Acceptance Model (TAM). TAM adaptation in this research model uses subjective norm, image, banks initiative, internet banking self-efficacy, internet usage efficacy, trust, perceived risk, trialability, and government support factors (Marakarkandy et al., 2017). Then TAM was modified by (Bartelt & Moqbel, 2016) by adding trust and risk factors to become Trust and Risk Integrated with TAM (TRiTAM).

TAM and TRiTAM were adopted and developed. This study has a strong relationship to the object being studied, namely the intention to use mHealth application. Several factors that influence consumer intentions to behave using mHealth application as: risk perception, trust (Block et al., 2017; Wakhida & Sanaji, 2020), perceived convenience and usability (Athapaththu & Kulathunga, 2018; Wakhida & Sanaji, 2020).

The intention to behave is built by the aspect of the possibility of buying, planning to use, and will buy back (Sang & Cheng, 2020). In contrast to (Shemesh & Barnoy, 2020) explaining the dimensions that shape attitudes and intentions to use the website are: perceived ease and usefulness. As well as (Wu & Ke, 2015) found that the factors that influence behavioral intention are personal innovation attitudes, individual enjoyment, perceived convenience, perceived usefulness, perceived risk, trust, and attitudes.

Risk. Schiffman & Kanuk, (2015) states that risk perception constructs include: 1) psychological risk; 2) financial risk; 3) performance risk; 4) physical risk; and 5) social risks. Like the research model (Anderson et al., 2016) using these dimensions in shaping risk perceptions, including: 1) psychological risk is the emotional feeling that consumers feel when using the website; 2) financial risk is the financial consequence received when transacting with the website; 3) performance risk; 4) physical risk, the risk when the website does not function as expected; 5) time risk; and 6) social risks, unfavorable perceptions from the social environment when using the application.

The risk perceived by consumers affects behavioral intentions (Wakhida & Sanaji, 2020) because the consequences received are less than the performance of the products used. Factors that reduce the perceived risk toward increase consumer confidence when using the website, as performance risk, psychological risk, financial risk, time risk, social risk, and physical risk, and of course this will influence the intention to use the application (Erdil, 2015). Research states that when consumers get comfortable with certain products, it reflects the perceived risk that is proportional to what is expected. The results of the study (Agag & El-Masry, 2017; Kamalul Ariffin et al., 2018; Pappas, 2016) show that risk perception has a significant negative effect on trust. From a review of previous research, it is suspected that risk has a negative and significant effect on trust, and directly affects intention to use.

Trust. Believing that various sources of perceived information can be important recommendations that lead consumers to behave in a certain way (Schiffman & Kanuk, 2015). Just as (Block et al., 2017) explained that consumer trust in a website is reflected in the popularity of the website itself, the better the website the more it adds to consumers' trust. Consumer trust in the intention of using a website is caused by perceptions of technology orientation built by perceptions of ease and use and content of the website, while the perception of social orientation is shaped by aspects of social trade construction (Athapaththu & Kulathunga, 2018).

Consumers will believe that when they get the benefits of using a website that will increase the tendency to behave (Block et al., 2017). Building online trust by understanding its relationship in online shopping behavior is an important topic for e-commerce entrepreneurs (Sullivan & Kim, 2018). Pappas, (2016) reveals aspects to build a sense of consumer trust, including trustworthiness, dependability, high integrity, and competence and knowledge. Research (Tasmil, 2014) trust has a positive effect on the intention to use a website. Consumer trust is formed because there is little perceived risk that leads to the act of making transactions online (To et al., 2019). In addition, (Hamdan & Yuliantini, 2021; Lim et al., 2016; Lin & Chuang, 2018) found a positive and significant influence among trust and intention to use online applications. Based on the previous discussion, it is suspected that trust has a positive and significant effect on the intention to use and mediate risk.

METHOD

This research uses descriptive and quantitative approaches. The description of the phenomenon is measured using a quantitative approach (Cooper & Schindler, 2014) by measuring behavior, think or attitudes, in response to questions related to how much, how often, when, or who. The study population is consumers who know and have not used the mHealth application in West Jakarta, where the type of research is a nonprobability sampling that cannot be described with certainty. Therefore, the researcher uses the assumptions of (Hair et al., 2013) for SEM-PLS data processing requires at least 10 times the independent outer model or inner model variable or uses a sample size 10 times the amount of formative or reflective indicators. constructors. On this basis, a minimum of 80 samples and a maximum of 210 samples will be used. Determination of the sample using the purposive sampling technique, based on its ability to explain certain themes, concepts, or phenomena (Robinson, 2014). The criteria for respondents are those who know but have never used the mHealth application. Primary data collection uses google form and the researcher makes a control statement to get a research sample that is feasible and following the sample criteria. Based on the characteristics, assumptions, virtues, and limitations of the SEM structural modeling approach, the selection of an approach using PLS-SEM is based on (Hair et al., 2014; Hair et al., 2012): a) The use of PLS-SEM has been widely used in strategic management research; b) PLS-SEM can be used to describe variants of the main target constructs; c) The study sample is relatively small and will still attain high level of statistical power; d) The model has relatively large indicators that can handle complex models with many structural model relationships.

RESULTS AND DISCUSSION

Results

This research model is about "Risk and Trust using the mHealth application". Analysis of the research model data using SEM-PLS, where the assumptions used are relevant references to obtain an empirical research model. SEM-PLS data analysis used 2 stages of evaluation (Hair et al., 2014), namely: 1) evaluation of the Outer Model; and 2) evaluation of the inner model after the model specification is carried out.

Evaluation Result of the Outer Model. Evaluation of the outer model aims to ensure the validity and reliability of the model are at the good test criteria level. Sarstedt et al., (2020) evaluated the measurement model based on convergent validity, discriminant validity, and internal consistency reliability. To ensure that the model is at the level of the good test criteria, it will be described and explained in its understanding using assumptions as of the main reference in its decision-making criteria. Based on the results of the evaluation of the measurement model (see Table 1), it can be explained in its understanding according to the assessment criteria as a basis for reference in making decisions to get the model to be at the level of good test criteria and to produce an empirical model.

Convergent Validity. Convergent validity has principle that gauges of construct must be highly correlated (Ghozali & Latan, 2015). To evaluate the convergent validity of

a construct with reflective indicators, it is evaluated through the outer loading of each item, the loading factor value ($FL > 0.7$), and the Average Variance Extracted ($AVE \geq 0.5$) assessment, meaning that a construct can explain 50% or more of the item variance (Sarstedt et al., 2020; Wong, 2013). On this basis, all the items of the risk construct ($Rsk_1 = 0.83$, $Rsk_2 = 0.75$, $Rsk_2 = 0.80$, $Rsk_3 = 0.74$, $Rsk_4 = 0.84$, and $Rsk_5 = 0.77 > 0.70$), trust ($Trs_1 = 0.93$, $Trs_2 = 0.94$, $Trs_3 = 0.91$, and $Trs_4 = 0.90 > 0.70$), and the intention to use ($Ints_1 = 0.93$, $Ints_2 = 0.96$, $Ints_3 = 0.94$, and $Ints = 0.93 > 0.70$). This means that the items built on the research model have met the convergent validity or the model is at the level of good test criteria (see Figure 1 & Table 1), because it is able to reflect items accurately and has a high correlation with the construct.

Discriminant Validity. Discriminant validity aims whether the reflective indicator is a good measure of the construct, meaning that each indicator must be highly correlated with the construct, while the gauges of different constructs must not be highly correlated (Ghozali & Latan, 2015). Discriminant validity was evaluated using the values of Cross Loadings, Fornell-Larcker Criterion, and Heterotrait-Monotrait (HTMT) (Henseler et al., 2015). Cross Loadings are assessed based on construct correlation with measuring items greater than other constructs (> 0.7) (Ghozali & Latan, 2015). On this basis, the Cross Loadings model built is at the level of good test criteria (see Tabel 1), because it has a high correlation to its construct compared to other constructs or items of all constructs (risk, trust, and intention to use > 0.70).

The Fornell-Larcker Criterion compares of square root AVE value of each construct with the correlation among other constructs (Henseler et al., 2015). The value of the square root AVE of each construct is greater than the correlation value between constructs and other constructs, the model has good discriminant validity (Wong, 2013). On this basis, the model built is at the level of good test criteria (see Table 1), because the square root value of the construct AVE (risk = 0.62), (trust = 0.85), and (intention to use = 0.88) is greater than the value of the correlation between the construct and other constructs.

Table 1
Evaluation Results of Outer Model

Constructs	Corresponding Items	CV		ICR		Cross Loadings			Fornell-Larcker			HTMT		
		FL	AVE	CA	CR	Rsk	Trs	Ints	Rsk	Trs	Ints	Rsk	Trs	
Risk: Adapted from (Bartelt & Moqbel, 2016; Sang & Cheng, 2020)	Rsk_1 Don't worry about the uncertainty of personal information when using the mHealth application Rsk_2 Don't worry about the performance of the mHealth application Rsk_3 Don't worry about the results of consultation when using the mHealth application don't match expectations Rsk_4 Don't worry about high doctor consultation fees when using the	0.83	0.62	0.88	0.91	0.83	0.52	0.41	0.79					
		0.75				0.75	0.42	0.29						
		0.80				0.80	0.35	0.28						
		0.74				0.74	0.51	0.44						

Constructs	Corresponding Items	CV		ICR		Cross Loadings			Fornell-Larcker			HTMT	
		FL	AVE	CA	CR	Rsk	Trs	Ints	Rsk	Trs	Ints	Rsk	Trs
	mHealth application												
	Rsk_5 Don't worry when using the improper mHealth application hospital appointment time	0.84				0.84	0.49	0.42					
	Rsk_6 Don't worry about the products offered that have a negative impact on health	0.77				0.77	0.48	0.38					
Trust:	Trs_1 The mHealth application can be trusted	0.93	0.85	0.94	0.96	0.53	0.93	0.73	0.59	0.92		0.64	
Adapted from (Bartelt & Moqbel, 2016; Quaosar et al., 2018)	Trs_2 The mHealth application is reliable	0.94				0.54	0.94	0.81					
	Trs_3 The mHealth application has high integrity	0.91				0.63	0.91	0.76					
	Trs_4 The mHealth application has extensive and competent information	0.90				0.48	0.90	0.78					
Intention to Use:	Ints_1 Intend to use the mHealth application	0.93	0.88	0.95	0.97	0.49	0.81	0.93	0.48	0.84	0.94	0.51	0.88
Adapted from (Hoque & Sorwar, 2017; To et al., 2019)	Ints_2 Trying to use the mHealth application	0.96				0.46	0.83	0.96					
	Ints_3 Willingness to use the mHealth application	0.94				0.45	0.79	0.94					
	Ints_4 Planning to use the mHealth application in the near future	0.93				0.41	0.71	0.93					

Source: Results of SmartPLS (2021)

Note: Convergent Validity (CV: Factor Loading_FL; Average Variance Extracted_AVE), Internal Consistency Reliability (ICR: Cronbach's Alpha_CA; Composite Reliability_CR), Rsk (Risk), Trs (Trust), Ints (Intention to Use)

Heterotrait-Monotrait (HTMT) value evaluation is the recommended alternative method for assessing discriminant validity. HTMT values <0.9 ensure discriminant validity among the two reflective constructs (Henseler et al., 2015). On this basis, the model built meets discriminant validity (see Table 1), because the value of HTMT is reflected between the constructs (risk with trust = 0.64 <0.85), and (risk with intention to use = 0.51 <0.85). Meanwhile (trust with intention to use = 0.88 >0.85) means that the model has not met the discriminant validity.

Internal Consistency Reliability. Internal consistency reliability describes the ability of indicators to measure latent constructs (Memon et al., 2017). The reliability of the indicator aims to judge whether the indicator as a measurement of latent variables is reliable or not, the value of composite reliability (CR = 0.60 - 0.70) can be accepted in explanatory research (Sarstedt et al., 2017), and (CR = 0.70 - 0.95) represents a very good level of reliability (Henseler et al., 2015). The value of Cronbach's Alpha is expected (CA >0.70) (Ghozali & Latan, 2015). On this basis, the model built has very good reliability,

because the risk reliability value (CA = 0.88, CR = 0.91), trust (CA = 0.94, CR = 0.96), and intention to use (CA = 0.95, CR = 0.97) were above 0.70 (see Table 1).

Evaluation Result of the Inner Model. After evaluating the outer model and producing the model at the level of good test criteria, proceed to the structural model evaluation stage with the initial step of checking for collinearity between constructs as the ability to predict the model (Sarstedt et al., 2020). The next step is to measure the predictive ability of the model using the R^2 , Q^2 , f^2 , and path coefficients (Sarstedt et al., 2020).

Variance Inflation Factor (VIF). VIF aims to determine where two or more construct with high correlation causes the predictive ability of the model is not good (Sekaran & Bougie, 2016). VIF value <5 , means there is no correlation between constructs (Sarstedt et al., 2020). On this basis, it means that the model is at the level of good test criteria because there is no correlation between constructs (risk and trust = 1.00 <5 , risk and intention to use = 1.55 <5 , and trust and intention to use = 1.55 <5) (see Figure 1). This means that the model built has a good predictive ability.

The coefficient of determination (R^2). This evaluation is used to assess how much exogenous constructs explain endogenous constructs. R^2 values are expected to be 0 - 1, if the value of R^2 (0.75 = strong), (0.50 = moderate), and 0.25 = weak) (Sarstedt et al., 2020). On this basis, the confidence construct model has weak predictive ability ($R^2 = 0.35$), while the intention to use construct model has moderate predictive ability ($R^2 = 0.70$) (see Figure 1). That is, the ability to risk explaining trust is still weak because in addition to risk there are many other variables affecting trust. The same with the intention to use there are many other variables besides risk and trust that influence it.

Cross-validated Redundancy (Q^2). Cross-validated redundancy (Q^2) or Q-square test was used to assess the predictive relevance of the research model. The value of $Q^2 >0$ means that the model has predictive relevance that is accurate for a particular construct. Meanwhile, the value of $Q^2 <0$ indicates that the model lacks predictive relevance. Value (Q^2) was obtained through the Blindfolding procedure (Sarstedt et al., 2020). On this basis, the Q^2 value of the construct (trust = 0.29 >0) is obtained, and the construct (intention to use = 0.59 >0) means that the model built has relevant predictions (the model is acceptable for development in further research models) (see Figure 1).

Path Coefficients. The evaluation of the structural model aims to determine the influence strength of the path coefficient and the level of significance of the model. The path efficiency value is between -1 to +1, the approaching to +1 the relationship of the two constructs is stronger and vice versa (Sarstedt et al., 2020). The significance value between constructs, if the inaccuracy limit is used ($\alpha = 5\%$), then the value (p-value <0.05) the declared a significant influence, and vice versa (Ghozali & Latan, 2015). On this basis, the interpretation based on the results of the path coefficient in Figure 1 is: 1) The path coefficient of the influence of risk on trust ($\beta = 0.59$, $\rho = 0.00 <0.05$), meaning that H1 is not accepted, because it is not in accordance with the model statement built (H1: risk has a significant negative effect on trust); 2) The path coefficient of the direct effect of risk on intention to use ($\beta = -0.02$, $\rho = 0.87 >0.05$), meaning that H2 is not accepted, because it is not in accordance with the model statement built (H2: risk has a significant negative effect on intention use); 3) The path coefficient of influence of trust on intention to use ($\beta = 0.85$, $\rho = 0.00 <0.05$), meaning that H3 is accepted, because it is in accordance with the

model statement built (H3: trust has a significant positive effect on intention to use); dan 4) The path coefficient of indirect influence between risk on intention to use through trust ($\beta = 0.51$, $\rho = 0.00 > 0.05$), means that H4 is accepted, because it is in accordance with the model statement built (H4: trust mediation has a significant positive effect between risk and intention to use).

Effect Size (f^2). In addition to assessing the level relationship and significance of model, it is also important to assess the magnitude of the influence between constructs using the f-square (Wong, 2013). The value of $f^2 < 0.02$ was considered to have no effect, while the value of f^2 ($0.02 = \text{small}$), ($0.15 = \text{moderate}$), and ($0.35 = \text{strong}$) (Sarstedt et al., 2020). On this basis, the value of the f^2 (see Figure 1) construct was obtained (risk and trust = $0.55 > 0.35$) means that it has a strong relationship, the construct (trust and intention to use = $1.56 > 0.35$) means it has a strong relationship. Whereas the value of f^2 construct (risk and intention to use = $0.00 < 0.02$) means it has no relationship.

Discussion

The results analysis of measurement and structural evaluation models in the built model produces an empirical model of the relationship among risk, trust, and intention to use the mHealth application. The results of the model built provide an understanding in every explanation of the effect of each construct. The effect of each construct according to the research hypothesis model, includes: 1) risk has a negative and significant effect on trust; 2) negative and significant direct risk effect on intention to use; 3) trust has a positive and significant effect on intention to use; and 4) trust mediation positively and significantly influences risk with intention to use.

The findings of this research model are that risk has a positive and significant effect on trust, where this finding is contrary to the assumptions and conjectures built in the model. However, several previous studies found the same model (Block et al., 2017; Wakhida & Sanaji, 2020) that risk had a positive and significant effect on trust. In addition, findings by (Wakhida & Sanaji, 2020) that perceived risk is very difficult to form consumer trust because trust is part of belief and determination, (Sang & Cheng, 2020) plus consumers have never felt and had experiences that led to a lack of taste. believe in the health situation. Consumers who will use the mHealth application will have a high perception of risk with their distrust of the consequences that will be received, such as worried about high consulting fees, worried about the uncertainty of personal information, worried about applications that do not match performance, worried about inappropriate consultation results expectations, worried about inappropriate hospital appointments, and worried about negative health impacts. Perceived risk is defined as the consequences that consumers receive, both positive and negative impacts and of course have other alternatives to make major considerations in using the application or other health sites.

Furthermore, the research model that was built resulted in differences with the provisional assumption of the model, and that risk had a negative but not significant effect on intention to use. That is, the pandemic conditions that result in the importance of health information provide the possibility of risks that consumers will receive when using the mHealth application even though the negative risks that will be received are very

high, such as physical risks, privacy risks, performance risks, financial risks, psychological risks, and time risk, but they can still be controlled and become an alternative for certain considerations. Sang & Cheng, (2020) stated that when consumers feel the importance of information about their health insurance, they will act consciously or unconsciously to find and use health sites that they think can provide positive benefits for themselves. The results of the study (Bartelt & Moqbel, 2016; Block et al., 2017) stated that risk had a negative but not significant effect on intention to use. Risk can also be said as a positive or negative impact on something that has been decided which in the end will accept the consequences whether the risk has a negative or positive impact according to what is felt.

The results of the next research model can be accepted because trust has a positive and significant effect on intention to use. This means that consumer confidence when knowing information about health is important and relevant will lead to a positive attitude and consciously take real action in the future to use mHealth application or health sites. The emergence of consumer trust in a health site or application is influenced by aspects of being trustworthy, reliable, having high integrity, and competence. These results are supported by the research model developed (Bartelt & Moqbel, 2016; To et al., 2019; Wakhida & Sanaji, 2020) that there is a positive and significant effect between trust and intention to use. Anderson et al., (2016) having a high level of trust in health sites and having reliable information (Shemesh & Barnoy, 2020; Zeng et al., 2015), having high integrity, and having competent information are something that is considered essential for survival, so they immediately decided to seek out the information and then use it. Consumers will believe that when getting the benefits of using a health site, that will increase the tendency to behave (Block et al., 2017). Trust is defined as the sincerity and willingness of consumers to use the mHealth application or websites regarding the information offered.

Mediation of trust positively and significantly affects risk with intention to use. The model of the findings of this study is supported by (Bartelt & Moqbel, 2016; Hoque & Sorwar, 2017) that trust can be an important mediator that has a positive and significant effect on intention to use health sites. That is, the role of trust as a mediator is able to reduce the perceived risk and influence the intention to use. High consumer confidence in health sites because they have relevant information will reduce negative perceptions or positive impacts on their lives, so consumers consciously intend to use the application or health site. is an important factor that eliminates negative perceptions of certain products (Bartelt & Moqbel, 2016; Hussein et al., 2017), thereby creating a strong belief in using the health site (Quaosar et al., 2018). The role of trust is very important in reducing the perception of risk and ultimately leads to aspects of the intention to use the mHealth application or site, trying to use it, willingness to use it, and future planning to use it. Intention to use is defined as a consumer's strong predisposition to use a mHealth application.

CONCLUSION

This research model is about the relationship among risk, trust, and intention to use the mHealth application. The results of the research model that have been developed provide an understanding in the explanation and produce an empirical model. The first

result shows that the risk has a positive and significant effect on trust in mHealth application, it can be interpreted those high concerns about the acceptance of technology and information on a mHealth application, although providing other benefits and conveniences, are not sufficient to form a positive and consumer confidence in the health site or application. The results of the second model show that the risk has a negative, but not significant, effect on the intention to use a mHealth application, which means that the reduced risk that will be received is the consequence of receiving and using a health application or site for drug transactions or consultations (Doctor services) have not been able to reflect consumers' intention to use them. The results of the third research model show that trust has a positive and significant effect on the intention to use the mHealth application, it can be interpreted that sincerity and trust are important things to realize the strong desire to use mHealth application, because to ensure a better survival. The result of the fourth research model is that the mediation of trust has a positive and significant effect between risk and the intention to use mHealth application, it can be interpreted that a strong sense of trust is able to eliminate negative perceptions of a health site or application which in the end consciously intends to use the application.

The managerial contribution offered is important in building consumer confidence to eliminate concerns about high consultation fees, uncertainty of personal information, application performance not meeting expectations, consulting results not meeting expectations, inappropriate hospital appointment times, and worrying that it will have a negative impact on health. This is of course in order to be able to face the current era of digital disruption for stakeholders in making effective and appropriate marketing strategy decisions to achieve competitive advantage and business sustainability in the future. The essence of every activity or behavior is trust when consumers believe that when consuming actual information and various products or services will cause an intention to use mHealth application. While the contributions offered for further research can build and develop the same model, because the resulting model has predictors that are relevant and feasible to be developed in further research. Referring to the model developed by (Bartelt & Moqbel, 2016; Hoque & Sorwar, 2017; Quaosar et al., 2018), this model can be used in various technology-based companies or organizations (e-commerce), such as fintech, online stores, health sites or apps, and other sites. In addition, this model produces a small and weak effect on the relationship between variables, so it is important for further research to add exogenous variables such as: perceived ease of use and perceived benefits, technology anxiety, reputation, effort expectancy, and social influence.

Acknowledgements

The researchers would like to thank the Universitas Mercu Buana Research Center, Jakarta, Indonesia as the institution that funds the research implementation for the 2020/2021 period, No. 02-5/241/B-SPK/II/2021. So that this research can be completed and published as expected.

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