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THE IMPACT OF OBJECT-BASED ATTITUDE TOWARDS BEHAVIOR BELIEF AND BEHAVIOR ATTITUDE ON THE USE OF HALODOC APPLICATION

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ABSTRACT

This research aims to investigate factors affecting people's intention to use the Halodoc application. The sample in this research was gathered with a purposive sampling method with inclusion criteria of people using the Halodoc application with a minimum age of 18. Data was gathered using a questionnaire that was spread online using Google Form. The questionnaire consists of 32 questions using Likert Scale 1-5. There are 101 respondents participating in this study. Data were then statistically analyzed using the PLS-SEM method with SmartPLS 4.0.9.1 application. The result of this research states that user satisfaction as the component of object-based attitude significantly affects perceived usefulness and perceived ease as the component of behavior belief. Perceived usefulness and perceived ease of use also affect behavior attitude significantly. This research also states that perceived ease of use can directly affect intention to use significantly without going through mediating variables. But, perceived usefulness does not significantly affect the intention to use through a direct path without using a mediating variable (behavior attitude).

1. INTRODUCTION

At the end of 2019, the novel virus corona (SARS-COV 2) was detected in the citizens of Wuhan, China, and by March 2020, the World Health Organization had declared this condition as the COVID-19 pandemic that then spread all over the world (Alhasan et al., 2022). This caused human activities to be minimal, and almost all daily activities and transactions were done remotely, which is just as true in the healthcare industry (Vidal-Alaball et al., 2020). The use of healthcare applications has become a new trend, where almost 60% of all smartphone users have downloaded at least one health application on their phone (Messner et al., 2019).

In Indonesia alone, various of health applications have also been vastly developed. The availability of digital-based healthcare applications can benefit developing countries, such as Indonesia. As we know, Indonesia has over 13.000 islands. The size of the country itself and the number of islands causes the distribution of professional medical personnel on each island uneven. The WHO has recommended that 1 doctor should ideally help 1.000 people. However, in Indonesia, 1 doctor has to be responsible for 3.333 people. Based on that data, it can be concluded that Indonesia still lacks professional medical personnel to serve the community ideally. One survey also mentioned that Indonesia has the lowest doctor ratio in Southeast Asia (Octavius & Antonio, 2021). With this innovation to use digitally based healthcare apps, people will get an easier access to healthcare services.

A survey on the Daily Social in October 2019 has shown that Halodoc is one of the best online healthcare applications in the country based on user ratings. Halodoc has amassed 18 million users and has been working with over 4.000 healthcare providers, whether hospitals or pharmacies and over 20.000 doctors have joined the platform (Ayu et al., 2022). In this study, the effect of object-based attitude (user satisfaction) towards behavior belief (perceived usefulness, perceived ease of use) and behavior attitude also intention to use will be analyzed.

2. LITERATURE REVIEW

The Technology Acceptance Model (TAM) was originally derived from the concept proposed by Ajzen and Fishbein in 1980, known as the Theory of Reasoned Action (TRA). This theory describes how users' beliefs and attitudes relate to their intention to engage in a particular behavior. Several studies have discussed the topic of user satisfaction by developing a model that utilizes the basic concepts of TAM

but explicitly modifies it to differentiate between object-based beliefs and object-based attitudes from behavioral beliefs and behavioral attitudes. This model explains how object-based attitude towards a system influences behavior belief and behavior attitude formation.

In their literature, DeLone and McLean (1992) considered user satisfaction as an individual's attitude towards an information system, where user satisfaction is viewed as an object-based attitude. User satisfaction can be measured through an individual's belief in a system. Ajzen and Fishbein, in their theory, also stated that patient satisfaction is considered an object-based attitude that influences an individual's intention or behavior, mediated by beliefs and attitudes (Ho et al., 2019; Wixom & Todd, 2005). An individual's belief in the reliability of a system also influences their attitude towards the system, ultimately forming behavioral beliefs regarding the use of the system. System behavior beliefs (perceived ease of use, perceived usefulness) directly influence the attitude towards use (Wixom & Todd, 2005). Ajzen and Fishbein, in their theory, explain how external variables affect an individual's beliefs about outcomes and are related to engaging in a behavior, which then forms an attitude towards behavior. The formed attitude influences the intention or willingness to engage in a specific behavior (Wixom & Todd, 2005).

A. User Satisfaction

User satisfaction is often considered a critical factor in determining an information system's success (Alzahrani et al., 2019). Previous studies have used user satisfaction as an external variable that is considered part of the object-based attitude component, which has been found to influence behavior attitude and user intention to use, mediated by the behavior belief component using perceived usefulness and perceived ease of use variables (Ho et al., 2019; Wixom & Todd, 2005).

H1: User satisfaction influences perceived usefulness.

H2: User satisfaction influences perceived ease of use.

B. Perceived Usefulness

Perceived usefulness can be defined as an individual's belief (behavior belief) in the ability of new technology to enhance their job performance and how the information provided by an information system is useful (Ho et al., 2019; Salloum et al., 2019). Several studies have reported that perceived usefulness influences the formation of an individual's attitude when they have experienced the benefits of using an application (Ayu et al., 2022; Ho et al., 2019; Mailizar et al., 2021; Salloum et al., 2019; Usman et al., 2022). In addition to influencing attitude formation, previous research has also shown that perceived usefulness has an impact on an individual's intention to use a technology (Alhamad et al., 2021; Ayu et al., 2022; Boon-Itt, 2019; Chen & Aklikokou, 2020; Salloum et al., 2019).

H3: Perceived usefulness influences behavior attitude.

H6: Perceived usefulness influences intention to use.

C. Perceived Ease Of Use

Perceived ease of use is the level of confidence or belief (behavior belief) an individual has in the system's usability without requiring significant effort (Shrestha & Vassileva, 2019). This variable is considered important for users of the Halodoc application, as users often rely on it for medical reasons, including emergencies or critical conditions. Several studies have reported that perceived ease of use influences behavior attitude (Ayu et al., 2022; Ho et al., 2019; Mailizar et al., 2021; Salloum et al., 2019; Usman et al., 2022) . Additionally, perceived ease of use also influences an individual's desire or intention to use an information system (Alhamad et al., 2021; Chen & Aklikokou, 2020). But, on the other article, study said that perceived ease of use doesn't affect people intention to use an information system (Ayu et al., 2022; Salloum et al., 2019).

H4: Perceived ease of use influences behavior attitude.

H7: Perceived ease of use influences intention to use.

D. Behavior Attitude

Behavior attitude provides insight into the feelings or responses (positive or negative) experienced by consumers, as well as their evaluation or assessment of a technological information system. Generally, the more positive an individual perceives a behavior, the stronger their desire or intention to engage in that behavior. Several studies have reported a relationship between behavior attitude and intention to use (Ayu et al., 2022; Ho et al., 2019; Mailizar et al., 2021; Salloum et al., 2019; Usman et al., 2022).

H5: Behavior attitude influences intention to use.

Based on the above hypothesis description, along with existing theories and previous research, the researcher developed a research model that will be proposed (Figure 1). The model was constructed using the Technology Acceptance Model (TAM) as the foundational theory and modified to include the external variable of user satisfaction. Additionally, the model separated the components of object-based attitude, behavior belief, and behavior attitude. This model draws inspiration from a previous model developed by Wixom and Todd, which combined user satisfaction with the TAM model. In this model, user satisfaction acts as the object-based attitude, perceived usefulness and perceived ease of use serve as behavior beliefs, behavior attitude and intention to use are included. However, the researchers made modifications in this study by incorporating multiple components and dimensions within the user satisfaction variable.

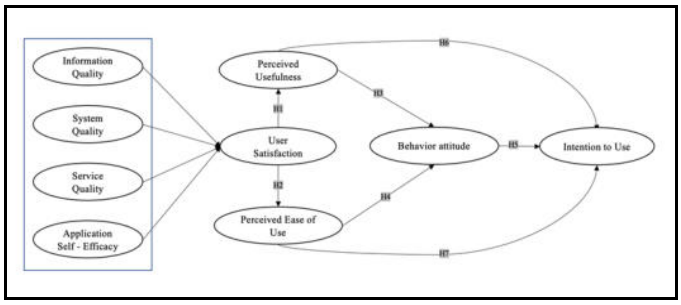

Figure 1. Study Model

3. METHOD

For this study, we employed a cross-sectional method. We evaluated the correlation between the independent variable of user satisfaction and the dependent variables intention to use by having some mediating variable such as perceived usefulness, perceived ease of use, and behavior attitude. The researchers used primary data sources collected through an online questionnaire distributed via Google Forms. The sampling method used was purposive sampling with inclusion criteria people who are using Halodoc application with minimal age 18 years old. The sample size calculate by using G-Power technique. Data collected were statistically analyzed using the partial least squares-structural equation modeling (PLS-SEM) method, utilizing the SmartPLS application. The PLS-SEM method can analyze the relationships between variables in a complex research model.

4. RESULT AND SISCUSSION

All 101 individuals participating in this study were users of the Halodoc application aged 18 and above. Our respondents varied between males (34.7%) and females (65.3%) aged 18 to above 50 years old. Most of our respondents finished their bachelor's degree (65.3%), with only one participant graduating from primary school (1%). The majority of our respondents are private employees (33.7%), entrepreneurs (17.8%), and homemakers (11.9%).

A. Outer Model

Figure 2. Outer Model

Outer model or known as measurement model (figure 2) used to analyze the validity and reliability of each indicator. The validity of each indicator can be tested using validity tests, which will yield the Average Variance Extracted (AVE) and Heterotrait-Monotrait Ratio of the Correlation (HTMT) values. An indicator can be considered valid if the AVE value is 0.50 or higher, while the HTMT value should be below 0.90 for discriminant validity (Hair et al., 2019). The analysis results show the AVE values (Table 1) for all variables ranging from 0.647 to 0.812 (requirement: > 0.50 and the HTMT values (Table 2) range from 0.777 to 0.874 (requirement: < 0.90) which means all the indicator are valid.

Table 1. Discriminant Validity

Variable	AVE
User Satisfaction	0.647
Perceived Usefulness	0.730
Perceived Ease of Use	0.812
Behavior Attitude	0.736
Intention to Use	0.782

Table 2. HTMT Testing Result

	US	PU	PEOU	BA	IU
US		0.856	0.854	0.777	0.795
PU				0.874	0.804
PEOU				0.821	0.857
BA					
IU				0.873	

The analysis in table 3 shows that the outer loading values of all indicators range from 0.717 to 0.923 (requirement: > 0.708); the composite reliability values of all indicators range from 0.914 to 0.952 (requirement: 0.70 - 0.90); and the Cronbach's Alpha values range from 0.907 to 0.950. Therefore, it can be concluded that all the indicators used in the questionnaire are reliable (Hair et al., 2019).

Table 3. Reliability Test

Variable	Composite Reliability (>0.70)	Cronbach's Alpha (>0.70)
User satisfaction	0.952	0.950
Perceived usefulness	0.914	0.907
Perceived ease of use	0.942	0.942
Behavior attitude	0.914	0.910
Intention to use	0.932	0.930

B. Inner Model

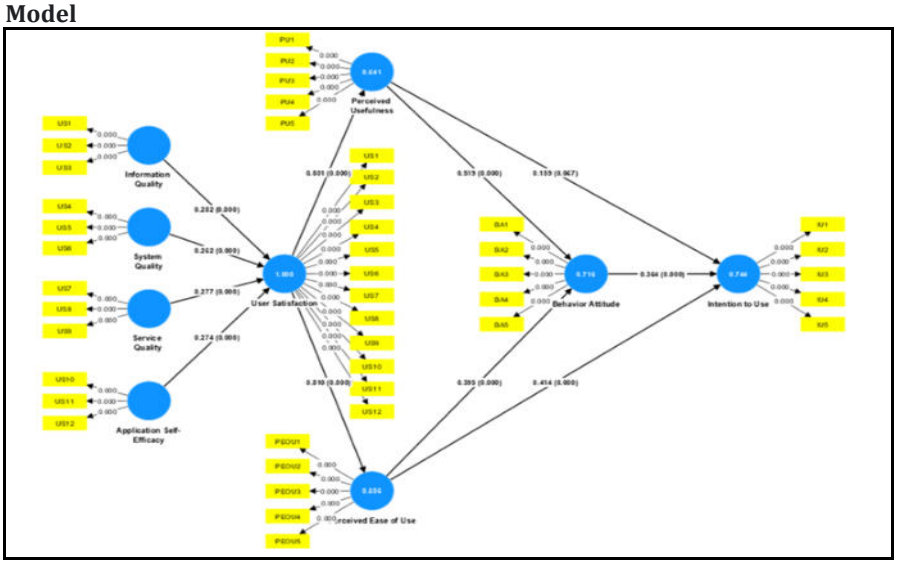

Figure 3. Inner Model

The results of the data analysis to obtain VIF values in this study can be seen in Table 4. Looking at the table below, the VIF values for all paths in this research model range from 1.000 to 3.517. Since all VIF values are below the threshold, it can be concluded that there is no issue of collinearity in this study. Additionally, the R^2 square results shown by the model are as follows: The perceived usefulness variable can explain 63.7% of its independent variables, the perceived ease of use variable can explain 65.3% of its independent variables, the behavior attitude variable can explain 71% of its independent variables, and the intention to use variable can explain 73.6% of its independent variables. This suggests that the other four variables can explain user satisfaction.

Table 4. Variance Inflation Factor (VIF)

	US	PU	PEOU	BA	IU
US		1.000	1.000		
PU				2.006	2.952
PEOU				2.006	2.556
BA					3.517
IU					

C. Hypothesis Testing

The values of the t-value should be > 1.645, and the p-value should be < 0.05 to be considered significant. If the p-value is smaller than 0.05 and the t-value is larger than 1.645, it can be concluded that the hypothesis is accepted or supported. On the other hand, if the p-value is greater than 0.05 and the t-value is smaller than 1.645, the hypothesis is rejected or not supported (Hair et al., 2022). The results of the hypothesis testing in this study can be seen in

Table 5. Hypothesis Testing

	Hypothesis	Standardized Coefficient	p-values	t-values	Conclusion
H1	User satisfaction influenced perceived usefulness	0.801	0.000	17.183	Supported the hypothesis
H2	User satisfaction influenced perceived ease of use	0.810	0.000	13.720	Supported the hypothesis
H3	Perceived usefulness influenced behavior attitude	0.519	0.000	7.030	Supported the hypothesis
H4	Perceived ease of use influenced behavior and attitude	0.395	0.000	4.929	Supported the hypothesis

H5	Behavior attitude influenced the intention to use	0.364	0.000	3.668	Supported the hypothesis
H6	Perceived usefulness influenced the intention to use	0.159	0.067	1.834	Did not support the hypothesis
H7	Perceived ease of use influenced the intention to use	0.414	0.000	4.380	Supported the hypothesis

DISCUSSION

This study shows that user satisfaction positively and significantly influences perceived usefulness and perceived ease of use. This finding is consistent with previous research that has reported user satisfaction's impact on both variables (Ho et al., 2019; Wixom & Todd, 2005). Previous studies have reported that various factors can influence user satisfaction with digital health applications, such as information quality, system quality, service quality, and self-efficacy (Alzahrani et al., 2019; Ariyanto et al., 2020; Baherimoghadam et al., 2021; Ho et al., 2019; Prifti, 2022). Therefore, these components were used as dimensions in this study.

The results of this study also demonstrate that perceived usefulness has a positive and significant influence on behavior attitude. This finding aligns with several previous studies that have reported the impact of perceived usefulness on shaping individuals' attitudes once they have experienced the benefits of using an application (Ayu et al., 2022; K. F. Ho et al., 2019; Mailizar et al., 2021; Salloum et al., 2019; Usman et al., 2022). In addition to influencing attitude formation, previous research has shown that perceived usefulness also affects an individual's intention to use a technology (Alhamad et al., 2021; Ayu et al., 2022; Boon-Itt, 2019; Chen & Aklikokou, 2020; Salloum et al., 2019). However, the findings of this study do not align with previous research, as the results indicate that perceived usefulness does not significantly influence intention to use. The literature suggests that perceived usefulness is an important indicator in determining individuals' attitudes and their desire or intention to use a health application (Suki & Suki, 2011). Nevertheless, the results of this study differ, possibly due to the perception that although the application is useful, some individuals still believe that remote consultations yield less accurate results because doctors and patients cannot meet face-to-face. Furthermore, other factors contributing to this disparity include some patients feeling more comfortable with in-person consultations and the limitations in cases where severe conditions require a doctor's direct physical examination (Kludacz-Alessandri et al., 2021).

In this study, the results indicate that perceived ease of use positively and significantly influences behavior attitude. These findings align with previous studies conducted by (Ayu et al., 2022; Ho et al., 2019; Mailizar et al., 2021; Salloum et al., 2019). Additionally, it was found that perceived ease of use also has a positive and significant influence on intention to use, which is consistent with previous studies reporting that perceived ease of use not only affects behavior attitude but also influences an individual's desire or intention to use an information system (Alhamad et al., 2021; Chen & Aklikokou, 2020). These findings contradict the results of the studies conducted by Ayu et al (2022) and Salloum et al (2019).

The results of this study also indicate that behavior attitude has a positive and significant influence on intention to use. This is consistent with several previous studies that reported the relationship between behavior attitude and intention to use (Ayu et al., 2022; Ho et al., 2019; Mailizar et al., 2021; Salloum et al., 2019; Usman et al., 2022). Behavior attitude refers to the feelings or responses (positive or negative) perceived by consumers and the assessment or evaluation of an information technology system. Previous studies have found that the more an individual has a positive attitude toward a behavior, the stronger their desire or intention to engage in that behavior.

The conclusion from the statistical analysis reveals that every Halodoc application user who feels satisfied (object-based attitude) with the application can significantly create or influence perceived usefulness and perceived ease of use (behavior belief). Similarly, high levels of perceived usefulness and ease of use (behavior belief) perceived by users of the Halodoc application can also enhance and shape behavior attitude and intention to use (behavior attitude) among the users of the Halodoc application. Although based on the p-value, perceived usefulness does not significantly affect someone's desire or intention to use the Halodoc application, perceived ease of use does significantly increase someone's desire or intention to use the Halodoc application. Based on the research findings, user satisfaction, perceived usefulness, and perceived ease of use play an important role and should be taken into account by the managers of the Halodoc application to enhance the behavior attitude and intention to use among its users. The research findings also conclude that the theory proposed by Wixom & Todd (2005) is supported in this study, as it can be concluded that object-based attitude significantly influences the

formation of behavior beliefs within an individual, which ultimately significantly influences behavior attitude in the context of using the Halodoc application.

The analysis indicates that user satisfaction is the most important variable, but its performance is still poor, requiring a review to enhance the intention to use among Halodoc users. On the other hand, perceived ease of use is considered a moderately important variable with good performance. Perceived usefulness, however, is deemed less important in this study, with its performance still lacking. As for the behavior attitude variable, it is considered less important but with good performance.

5. CONCLUSION

This research is done to explore factors that affect the intention to use while using the Halodoc application. Based on the test that was done, it was shown that six hypotheses that were supported are as follows: (1) user satisfaction was proven to affect perceived usefulness, (2) user satisfaction was proven to affect perceived ease of use, (3) perceived usefulness was proven to affect behavior attitude, (4) perceived ease of use was proven to affect behavior attitude, (5) behavior attitude was proven to affect intention to use, and (6) perceived ease of use was proven to affect intention to use. Meanwhile, perceived usefulness was not proven to affect intention to use. This study has several limitations, including its small sample size, different demographic statuses, and the focus of this research only on Halodoc application. Further studies may consider including more samples with better uniformity and opening the study to another app-based health platform. Other variables may also be studied to evaluate their impact on behavior, attitude, and intention.

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