THE IMPACT OF E-SERVICE QUALITY ON USER SATISFACTION OF ONLINE HEALTH SERVICE WITH TRUST AS A MEDIATOR

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ABSTRACT

The research focuses on the impact of e-service quality on customer satisfaction of Halodoc with the mediation of trust. There are 6 variables – namely, user interface, responsiveness, need fulfillment, security, and customer service – which will be examined whether they have a direct effect on satisfaction and trust as mediation on customer satisfaction. This research involved respondents aged 17-50 years in Jakarta, Bogor, Depok, Tangerang, Bekasi. Data was collected online using Google Forms. The data were processed using SMART PLS to solve the 11 hypotheses of this study. The results of this study indicate that trust, user interface, and responsiveness do not have a direct effect on satisfaction. Meanwhile, need fulfillment and customer service have a direct influence on satisfaction. Trust as a mediator influences the effect of security on satisfaction, and customer service on satisfaction. Meanwhile, the user interface variables, responsiveness, and need fulfillment through trust mediation do not affect satisfaction.

Keywords: *E-Service Quality, Trust, Satisfaction, User Interface, Customer Service*

1. INTRODUCTION

In the digital era, technological developments are swift. By just using a cellphone connected to an internet service, people can do anything to fulfill their needs. Based on data recorded by datareportal (Kemp, 2022), internet users in Indonesia reached 204.7 million users in January 2022. This shows that 73% of the entire population in Indonesia already uses the internet in their daily lives. The development of internet use in Indonesia has led to growth in the digital industry, one of which is in the health services sector. Even though it is relatively new in Indonesia, based on data from Statista on October 9, 2020 (Databoks, 2020), Indonesia is in the

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top three countries in terms of the most use of health service applications, namely 57%, below China at 65% and India at 63%.

One of the health service applications in Indonesia is Halodoc. Halodoc will be the object of this research. Founded in 2016 in Jakarta by founder Jonatan Sudharta, Halodoc is an original Indonesian technology company that develops in the field of health teleconsultation. For the last three years, Halodoc has become the choice of Indonesian people to get online health services. Especially during the Covid-19 pandemic which limits mobility and makes it very difficult to go to the hospital. Based on data from the Top Brand Index in the field of online health applications, there is a decrease in the Halodoc application of 1.2% from the first phase of 2021 to 2022. In the first phase of 2021 the Halodoc percentage was 64.6% then in the first phase of 2022 it decreased to 63.4% (Top Brand Index with Complete Categories, 2022).

As an online health service provider, Halodoc certainly needs to prioritize the quality of its services so that it has a positive impact on customer trust in using the Halodoc application it also has a positive impact on customer satisfaction. According to research by Gummerus et al., (2004), there are four important components in online services, namely the quality of the user interface, responsiveness, need fulfillment, and security. These four components will ultimately have an impact on customer trust. Furthermore, Gummerus et al., (2004) examined whether trust could become a mediator to customer satisfaction. Other research by Kim & Lennon (2013) indicates that website quality – which consists of website design, fulfillment/reliability, customer service, security, privacy and reputation – has a positive impact on online retailers in reducing perceived risks and eliciting positive emotions which ultimately lead to purchasing intentions from customers. Another research by Gummerus et al., (2004) found that trust is the strongest predictor of customer satisfaction and mediates the effect of service quality.

Need fulfillment, security, and responsiveness are predictors of trust and satisfaction. Meanwhile, the user interface does not have a significant impact on trust, satisfaction, and loyalty. The customer service variable has a positive influence on reducing buyer risk and has a neutral impact on customers making purchases (Kim & Lennon, 2013).

In this research, the author is interested in understanding the influence of user interface, responsiveness, need fulfillment, and security on customer trust and, and trust on customer satisfaction. Besides, the author also added one service quality variable from the research by Kim & Lennon, (2013), namely customer service. If previous research only examined online health services from various websites, this research will focus on Halodoc as a research object. If in Gummerus et al., (2004) and Kim & Lennon (2013) research, 93% of respondents were women, the current research will aim at a broader research subject, namely women and men aged 17-50 years who have used the Halodoc application service.

2. LITERATURE REVIEW

E-service Quality

Some studies indicate that e-service quality has a significant influence on consumer satisfaction (Bohórquez et al., 2024; Mamakou et al., 2024) and repurchase intentions (Blut et al., 2015). In addition, research by Gounaris et al., (2010) found that e-service quality also has a positive impact on purchase intentions, word of mouth, and site revisits. E-service quality is divided into two different scales, namely, E-S-Qual or e-service quality scale and E-Recs-Qual or e-service quality recovery scale (Mamakou et al., 2024). E-S-Qual consists of security, reliability, fulfillment, efficiency, and individual attention. Meanwhile, E-Recs-Qual consists of responsiveness, compensation, and contact (Parasuraman et al., 2005). Based on the research results of Parasuraman et al., (2005), it was found that privacy plays an important role in customer evaluations related to websites. According to Blut, (2016) to measure e-service quality there are four dimensions, namely website design, customer service, security, and fulfillment. Website design focuses on all elements related to the consumer experience when using a website such as information quality, website aesthetics, purchasing process, website convenience, product selection, price offers, and system availability (Blut, 2016). Customer service refers to the level of service and how the company handles returns or its return policy during and after sales (Blut, 2016). Based on research conducted by Blut, (2016) security refers to security when consumers make payments using credit cards and consumer privacy information data. Fulfillment refers to activities that ensure customers receive appropriate orders, including delivery time, order accuracy, and delivery conditions (Blut, 2016).

User Interface

The user interface is one of the most important things in a computer system. The user interface is a part of a computer system where users will interact with it to complete a job or task. According to Cardinali (1994), the user interface which allows a connection between the user and the computer has an important role in the effectiveness when a system is functioning. User interfaces generally consist of information displayed to users that allows them to manipulate information effectively to achieve greater productivity. This relationship allows end users to access and make full use of the information on the system.

Cardinali (1994) also concluded that a poorly designed user interface will confuse consumers in learning the system, as well as misunderstandings about what the system does or what consumers should do. Dissatisfaction will affect consumer productivity. Someone dissatisfied will lack motivation so productivity decreases. Motivation and positive consumer attitudes will greatly influence productivity. A system that is easy to use is important because a system that is easy to learn will speed up consumer activities and avoid mistakes.

Responsiveness

Responsiveness represents the service provider's ability to respond quickly to customer desires and requests, as well as assist customers if problems occur (Zeithaml et al., 2000). Responsiveness refers to quick responses to customer requests, speed in resolving customer problems, and prompt service (Yang et al., 2004). Responsiveness can be achieved through customer responsiveness, employee responsiveness, service responsiveness, and competitive responsiveness (Krush et al., 2015; Salvador et al., 2014; Qin & Prybutok, 2009; Theoharakis et al., 2009). Customer responsiveness is defined as the ability of a retail company to act on changing market patterns and how the company responds to changes in customer expectations. Employee responsiveness is the readiness of employees to respond quickly to requests and needs made by customers (Phiri & Mcwabe, 2013; Qin & Prybutok, 2009). Competitive responsiveness can be explained by the ability of a retail company to respond quickly and proactively by developing awareness of competitors' actions. (Salvador et al., 2014; Jayachandran & Varadarajan, 2006).

Need Fulfillment

Gummerus et al., (2004) argue that need fulfillment tends to influence trust because it reflects the service provider's ability to understand customers' basic needs and desires. Based on his research, it was found that need fulfillment is a strong component of trust and satisfaction. When a customer feels that they are part of the company's target group and at the same time the company succeeds in meeting their needs, customer satisfaction will increase. This emphasizes the significance of customer orientation and implementing segmentation in finding customers and maintaining relationships between companies and customers. Companies that can pinpoint and target customers who have needs that can be met by the services provided by the company, the greater the likelihood that customers will remain loyal. Since trust is grounded on the overall quality of the site, managing all qualities is critical to customer loyalty.

Security

Security is a form of security that customers want to feel when they want to shop or access something. In their research, Yang et al., (2004) found that both customers who make purchases on the Internet and non-Internet buyers appear to be concerned about the risks associated with online purchases, especially those related to securing credit card transactions and the privacy of sensitive information. The credit card number provided by the customer when making a transaction may be encoded and translated by irresponsible individuals. Because of this, many customers choose to disguise their identity or remain anonymous and keep their information private. However, a website can track a user's personal information with "cookies," a text file placed on the user's hard drive. Customers are concerned about websites that do not

provide clear statements about their privacy and security issues. To overcome the losses faced by customers, internet vendors need to be very responsible for transaction activities and customer personal information data. Security includes risks related to online transactions, safeguarding personal information, and security in completing online transactions (Yang et al., 2004). Security is a form of maintaining customer security from violations of their privacy, and at the same time, security influences customer trust and satisfaction. If a company wants to maintain and maintain the trust of its customers, then the company must keep its promise to maintain the privacy of its customers. Because security is related to trust, violating norms in maintaining customer privacy can be a threat to the company. Ensuring security is important for customers. Companies need to be careful in collecting customer personal data. Collecting unnecessary data can make customers uncomfortable and afraid (Gummerus et al., 2004).

Customer Service

Customer service can be described as responsive and useful assistance that can help consumers promptly (Wolfinbarger & Gilly, 2003). In the results of their research, it is found that customer service on a retail website has a significant negative effect on perceived risk (Kim & Lennon, 2013). The meaning of this is that consumers often use customer service when an error occurs, they find inadequate information on the website, or when the goods they have ordered have not been delivered according to the time stated. After using customer service that can help resolve problems and is responsive, consumers can assess whether the risk of shopping on the website they are using is small or not large. This proves that good customer service will reduce the risks felt by consumers (Kim & Lennon, 2013).

Customer service does not have a significant effect on customer feelings (emotion). This is because, even though customer service can reduce perceived risk, at the same time the service provided does not make consumers feel happy or enthusiastic. Because a feeling (emotion) is difficult to remember accurately, consumers often rely on remembering the event. For example, if a consumer finds it difficult when using a website, he will contact customer service, but if not, he will not contact him. Thus, consumer evaluations of customer service do not produce a significant emotional response because only negative emotions will arise when they want to contact customer service. The customer's feelings generated from the customer service experience may not be the same as the feelings generated by the customer from the overall online shopping experience on the website (Kim & Lennon, 2013).

Trust

Trust is the willingness to be vulnerable to the actions of another party based on the expectation that the other will carry out actions that are important to the trustor, regardless of the ability to monitor or control the other party (Mayer et al., 1995). Trust and trustworthiness

in e-commerce are two sides of the same thing and are interrelated. In establishing trust, keep in mind that e-commerce focuses on trust just as much as studying management and marketing. A manager and marketer discuss how competence, consistency, openness, ability, benevolence, integrity, reliability, reputation, and fairness, among other factors, need to be demonstrated clearly in a business to bring customers to the company. According to Gambetta (2000), to base trust, it is better to avoid quality deviations than to offer high quality. Building trust is crucial in online medical service (Jiao et al., 2023).

Trust is considered an important thing in building relationships such as the relationship between customers and companies. In research by Gummerus et al., (2004), trust was found to be the most important factor in customer satisfaction, and it mediates the effects of online quality. The evaluation process is based on customer experiences, so it cannot be controlled without considering all aspects of service quality. Trust reflects the customer's overall assessment starting from the company's capabilities, good ethics, and integrity (Gummerus et al., 2004). The growth of trust depends on the characteristics of the service provider, customers also use different cues in forming their trust perceptions (Gummerus et al., 2004).

Satisfaction

Davis & Heineke (1997) define customer satisfaction in service operations through an approach in two general ways, the first is satisfaction as a function of disconfirmation and the second is satisfaction as a function of perception. High consumer satisfaction results if the performance provided by the company is greater than or equal to the level of service desired by customers, that is, service performance is better or equal to what customers desire. Customer satisfaction occurs when a company's performance is less than the customer's desired service level but greater than or equal to the predicted service level, that is, the service performs as well as or better than predicted but below the desired service level. Customer dissatisfaction occurs when performance falls short of both the customer's desired and predicted service levels, i.e. the service performs worse than the customer desired or expected.

Research by Iglesias and Guillén (2004) states that customer satisfaction is a complete overall evaluation consisting of the accumulation of customer experiences when purchasing goods or services which reflects the comparison between sacrifices and perceived rewards or gifts. The customer sacrifices experienced are a form of total costs felt by consumers during the purchasing process. The perception of quality desired by customers is a reward that customers will feel when they determine the level of satisfaction (satisfaction) they desire. Satisfaction has been defined as a cumulative assessment, such as a customer's perceived attitude based on his or her past experiences (Gummerus et al., 2004). Multiple studies have confirmed the influence of e-service quality on customer satisfaction (Khan et al., 2023; Bohórquez et al., 2024;

Mamakou et al., 2024). Customer satisfaction is important because it can be a barometer of company performance in the past, present, and future (Anderson et al., 1994). Customer satisfaction is interconnected with various emotional and cognitive statements that affect future customer behavior toward the company (Gummerus et al., 2004).

Hypothesis Development

Customer trust in online services also relies on user interface, responsiveness, need fulfillment, security, and customer service. Research indicates that need fulfillment, responsiveness, security, and the technical functionality of a website significantly affect customer trust (Gummerus et al., 2004). Since customer service is a component of website quality (Kim & Lennon, 2013; Blut, 2016), it also influences customer trust.

Trust plays a critical role in enhancing customer satisfaction in online services. Studies show that trust positively impacts customer satisfaction, leading to increased loyalty and repurchase intention (Ramadania, 2021). Consumer trust is a key factor that significantly affects customer satisfaction in online shopping (Lengkong, 2023). Research has found that trust has a positive and significant impact on satisfaction in online stores (Akhondi & Kafashpor, 2016). Additionally, e-trust positively influences e-satisfaction, which in turn affects repurchase intention (Apidana, 2023).

H1: Trust has a direct influence on satisfaction.

Satisfaction in online services depends on various factors, including user interface, responsiveness, need fulfillment, security, and customer service. These factors collectively define e-service quality. Research shows that the user interface (UI) plays a crucial role in enhancing user satisfaction and the efficiency of using online applications (Junaedi, 2023). Additionally, customer service, website design, and security perception significantly influence online customer satisfaction (Deyalage & Kulathunga, 2019). Furthermore, convenience, website functionality, and customer service are key dimensions that impact customer satisfaction in online shopping (Perera & Sachitra, 2019).

H2: User interface has a direct influence on satisfaction.

H3: Responsiveness has a direct influence on satisfaction.

H4: Need Fulfillment has a direct influence on satisfaction.

H5: Security has a direct influence on satisfaction.

H6: Customer Service has a direct influence on satisfaction.

Inferring from the relationships above, we also test the influence of the e-service quality dimensions on customer satisfaction mediated by trust.

H7: User interface has an influence on satisfaction with trust as a mediator.

H8: Responsiveness has an influence on satisfaction with trust as a mediator.

H9: Need Fulfillment has an influence on satisfaction with trust as a mediator.

H10: Security has an influence on satisfaction with trust as a mediator.

H11: Customer Service has an influence on satisfaction with trust as a mediator.
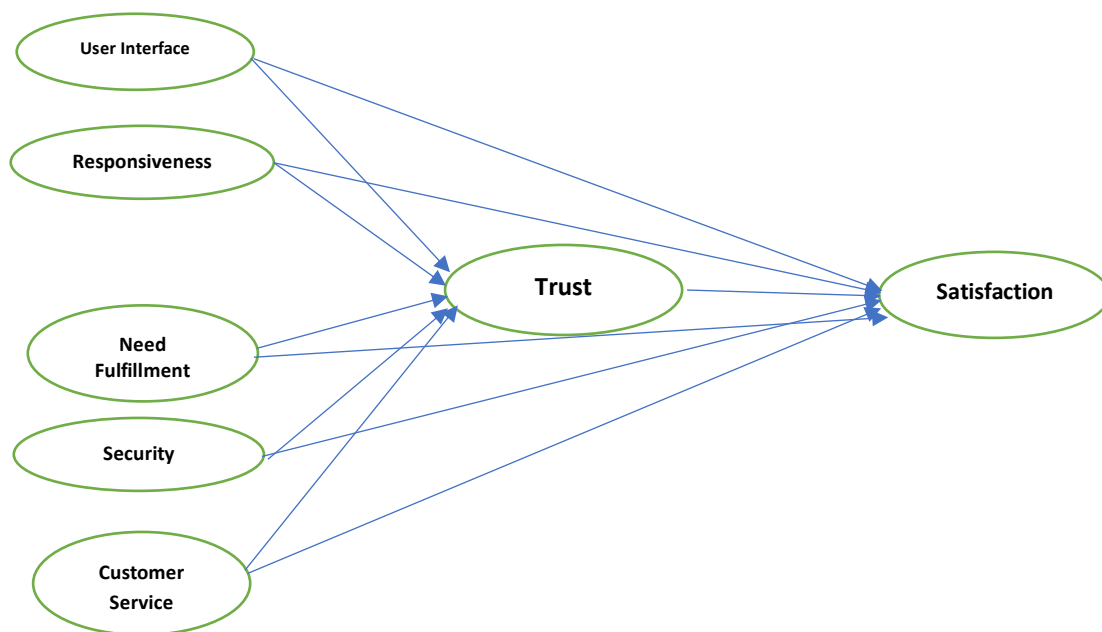
Figure 1. Research Model

3. RESEARCH METHOD

The distribution of questionnaires was carried out through online surveys using a Google Form, which uses a Likert scale. The Likert scale is a scale that, when used, can measure a person's perceptions, attitudes, and opinions (Bahrun et al., 2017). The following are details of the Likert scale that will be used for this research, namely 1 = Strongly Disagree; 2 = Disagree; 3 = Somewhat Disagree; 4 = Somewhat Agree; 5 = Agree; 6 = Strongly Agree. Some 23 indicators from previous studies were adopted for the current study (see Table 1).

Purposive sampling technique was used in this research, in which the sample was determined based on certain considerations, namely respondents who had used the Halodoc application. The population that will be used in this research is residents who live in Jakarta,

Bogor, Depok, Tangerang, Bekasi (Jabodetabek). Researchers will take a sample of 212 respondents.

Table.1 Research Indicators

Variable	Indicators	Source
User Interface	UI1. The Company displays information on the application in a suitable accurate amount	(Gummerus et al., 2004)
	UI2. The company has designed a user-friendly application that is reliable for its customers	(Gummerus et al., 2004)
	UI3. The company's ability to create well-designed application interfaces allows for efficient and time-saving user experiences	(Kim & Lennon, 2013)
Responsiveness	R1. Responsiveness refers to a company's ability to listen to and respond to customer's feedback.	(Gummerus et al., 2004)
	R2. Responsiveness is implemented as the company's swift action in addressing customer feedback in a timely manner.	(Gummerus et al., 2004)
	R3. Customers perceive the company's service response time to be quick.	(Lee & Lin, 2005)
	R4. Customers trust that the company is always willing to help them.	(Lee & Lin, 2005)
Need Fulfillment	NF1. The company can fulfill the requirements of its customers.	(Gummerus et al., 2004)
	NF2. The company can provide what its customers desire.	(Kim & Lennon, 2013)
	NF3. The company can deliver goods/products on time as promised.	(Kim & Lennon, 2013)
Security	SE1. Consumers feel secure because they believe the company will not collect any information about them.	(Gummerus et al., 2004)
	SE2. Consumers have trust that the company will protect their privacy.	(Kim & Lennon, 2013)
	SE3. Consumers feel secure in carrying out any kind of transaction with the company.	(Kim & Lennon, 2013)
Customer Service	CS1. The company is well-equipped and prepared to fulfill customer needs.	(Kim & Lennon, 2013)
	CS2. The company can answer customer inquiries quickly.	(Kim & Lennon, 2013)
	CS3. The company provides online customer service to assist customers.	(Rita et al., 2019)
	CS4. The company provides a phone number for customers to call.	(Rita et al.,2019)
Trust	T1. Consumers have confidence that the applications they use are trustworthy	(Gummerus et al., 2004)
	T2. Consumers feel that the company is trustworthy.	(Lee & Lin, 2005)
	T3. The company proactively builds trust with its customers.	(Lee & Lin, 2005)
Satisfaction	SA1. Customers expressed satisfaction with the application developed by the company.	(Lee & Lin, 2005)
	SA2. The company can deliver customer satisfaction.	(Rita et al., 2019)
	SA3. The company is able can consistently meet the needs of its customers.	(Rita et al., 2019)

Sample collection was conducted in the community that meet the following research requirements:

1. Domiciled in the Jakarta, Bogor, Depok, Tangerang or Bekasi area

2. Male or female aged 17-50 years

3. Have used the Halodoc service application

Halodoc is a health service application that has spread to more than 50 cities based in Jakarta. Because of this, researchers chose a population that lives in Jabodetabek. People with an age range of 17-50 years can be categorized as part of the productive age (Kemkes, 2023). At the productive age, the average Indonesian uses the internet. Because of this, the author chose an age range of 17-50 years in sampling.

Data analysis is a combination of three activities, the first is data collection through planning, and the second is after the data has been obtained from the field, the data will be structured systematically. The final activity is to conclude the research results according to what has been researched. In this research, the authors use SMART PLS software for data analysis.

4. RESULTS AND DISCUSSION

Analysis of Pretest Research Instruments

Validity Test

The pretest validity test in this study, conducted using SPSS software, yielded a Pearson's R critical value of 0,361 based on the sample size of 30 participants, which is shown in Table 2 (Anggraini et al., 2022)

Reliability Test

The pretest reliabilty test in this study, conducted using SPSS software based on the sample size of 30 participants. Calculating using Cronbach's Alpha formula are acceptable for reliability score greater than 0,6 (Anggraini et al., 2022). The pretest in this study yielded results above 0,6 for all variables: user interface (0.725), responsiveness (0.719), need fulfillment (0.765), security (0.720), customer service (0.743), trust (0.702), and satisfaction (0.750). Therefore, all variables can be considered reliable.

Respondent's Profile

Research respondents were divided into several groups. Of the total 212 respondents, there were 71.99% of respondents or 153 respondents aged 15-24 years and 28.01% or 47 respondents aged 25-50 years. A total of 41.5% or 88 respondents were men, and 58.5%, or 124 respondents were women. To meet the respondent criteria for this study, there are screening questions regarding the use of the Halodoc application. 94.3% or 200 respondents used the

Halodoc application and the remaining 5.7% or 12 respondents did not use the Halodoc application. The domicile of the respondents in this research was mostly Tangerang at 42.5%, followed by Jakarta at 40.6%, Depok at 7.1%, Bekasi at 6.1 % and the last was Bogor at 3.8%.

Table 2. SPSS Validity Test Results (*Pretest*, n=30)

VARIABLE	INDICATOR CODE	PEARSON CORELATION	SIGNIFICANCE VALUE	VALIDITY
User Interface	UI1	0.765	0.000	Valid
	UI2	0.849	0.000	Valid
	UI3	0.812	0.000	Valid
Responsiveness	R1	0.769	0.000	Valid
	R2	0.894	0.000	Valid
	R3	0705	0.000	Valid
	R4	0.648	0.000	Valid
Need Fulfillment	NF1	0.875	0.000	Valid
	NF2	0.846	0.000	Valid
	NF3	0.759	0.000	Valid
Security	SE1	0.867	0.000	Valid
	SE2	0.755	0.000	Valid
	SE3	0.775	0.000	Valid
Customer Service	CS1	0.784	0.000	Valid
	CS2	0.902	0.000	Valid
	CS3	0.727	0.000	Valid
	CS4	0.658	0.000	Valid
Trust	T1	0.742	0.000	Valid
	T2	0.833	0.000	Valid
	T3	0.806	0.000	Valid
Satisfaction	SA1	0.781	0.000	Valid
	SA2	0.852	0.000	Valid
	SA3	0.822	0.000	Valid

Figure 2 shows the convergent validity of all the research indicators. Each indicator has a value of more than 0.7, therefore no indicators are deleted because they all meet the criteria.

Average Variance Extracted (AVE)

The Average Variance Extracted can be affirmed valid if the value of each variable is greater than 0.5 (Hair et al., 2010). In this study, AVE values were obtained for the user interface variables (0.719), responsiveness (0.741), need fulfillment (0.831), security (0.830), customer service (0.790), trust (0.860), satisfaction (0.832), then all research variables This AVE test is affirmed valid.
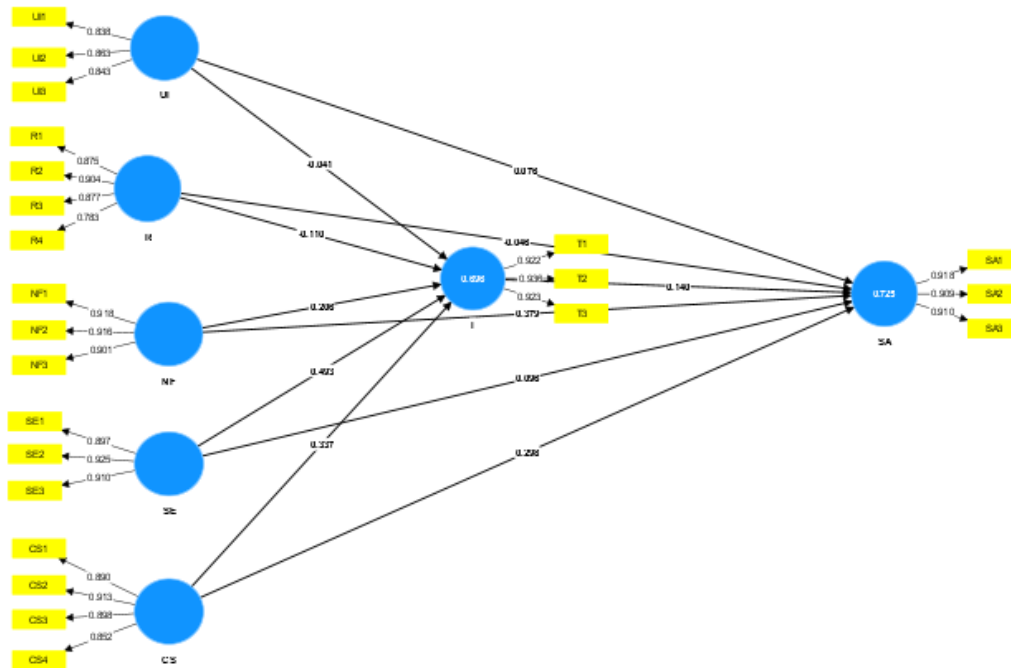
Convergent Validity

Figure 2. Loading Factor

Discriminant Validity

Discriminant Validity or discriminant validity consists of two, namely the Fornell Lacker Criterion and the value seen in the Cross Loading table. The value in the Fornell Lacker Criterion table is said to be valid if each variable in this study has a value that is greater than the value of other variables of the same level. In Table 3, the Fornell lacker criterion test is valid because each variable in this study has a greater value when compared to the value of other variables of the same level.

Table 3. Fornell Lacker Criterion

	Customer Service	Need Fulfillment	Respon-siveness	Satis-faction	Security	Trust	User Interface
CS	**0,889**						
NF	0,745	**0,912**					
R	0,825	0,800	**0,861**				
SA	0,773	0,798	0,727	**0,912**			
SE	0,751	0,819	0,780	0,757	**0,911**		
T	0,739	0,744	0,688	0,733	0,801	**0,927**	
UI	0,740	0,689	0,701	0,674	0,677	0,606	**0,848**

Table 4. Cross Loading

	CS	NF	R	SA	SE	T	UI
CS1	**0,890**	0,684	0,789	0,726	0,706	0,707	0,645
CS2	**0,913**	0,638	0,703	0,687	0,659	0,669	0,623
CS3	**0,898**	0,708	0,745	0,704	0,665	0,619	0,701
CS4	**0,852**	0,615	0,690	0,627	0,634	0,626	0,663
NF1	0,658	**0,918**	0,742	0,724	0,710	0,650	0,632
NF2	0,716	**0,916**	0,737	0,741	0,769	0,675	0,607
NF3	0,663	**0,901**	0,709	0,718	0,761	0,710	0,645
R1	0,721	0,648	**0,875**	0,608	0,672	0,608	0,638
R2	0,745	0,704	**0,904**	0,625	0,720	0,634	0,605
R3	0,706	0,771	**0,877**	0,673	0,688	0,607	0,610
R4	0,669	0,624	**0,783**	0,595	0,603	0,515	0,564
SA1	0,743	0,694	0,688	**0,918**	0,639	0,659	0,617
SA2	0,670	0,711	0,618	**0,909**	0,680	0,651	0,600
SA3	0,702	0,777	0,681	**0,910**	0,748	0,693	0,627
SE1	0,642	0,721	0,682	0,626	**0,897**	0,681	0,666
SE2	0,650	0,754	0,685	0,680	**0,925**	0,785	0,570
SE3	0,755	0,762	0,763	0,756	**0,910**	0,718	0,620
T1	0,661	0,739	0,642	0,667	0,769	**0,922**	0,512
T2	0,701	0,692	0,665	0,660	0,741	**0,936**	0,586
T3	0,693	0,639	0,607	0,710	0,717	**0,923**	0,589
UI1	0,612	0,598	0,610	0,572	0,571	0,501	**0,838**
UI2	0,648	0,627	0,605	0,592	0,561	0,523	**0,863**
UI3	0,621	0,526	0,571	0,551	0,591	0,518	**0,843**

In Table 4, the value of each indicator is greater than the other indicators seen in parallel. Thus, the value in the cross-loading table is valid.

Reliability Test

The reliability test used Cronbachs's Alpha and Composite Reliabilty which can be said to be reliable if it produces a value of more than 0.7. Reliability tests for Cronbach's Alpha and Composite Reliability show results user interface (0.805 and 0.806), responsiveness (0.883 and 0.887), need fulfillment (0.898 and 0.899), security (0.897 and 0.901), customer service (0.911 and 0.913), trust (0.918 and 0.918), satisfaction (0.899 and 0.900). It can be concluded that this

research variable is reliable because each variable has a value of more than 0.7 in the Cronbach's Alpha and Composite Reliability tests.

Multicollinearity Test

The Multicollinearity Test is used to produce unbiased parameter levels by looking at the inner VIF (Variance Inflation Factor) value. According to (Hair et al., 2010), the ideal VIF value is below 5. If the resulting VIF value is more than 5, it could indicate that there is multicollinearity with the data used and results in a biased interpretation of the parameters, so that the conclusions will be less precise. In table 5, the values for each VIF are all less than 5, so it can be concluded that there is no multicollinearity and is indicated as good.

Table 5. Multicollinearity Test Results

	VIF
CS – SA	4,287
CS – T	3,914
NF – SA	4,087
NF – T	3,947
R – SA	4,374
R – T	4,334
SE – SA	4,502
SE – T	3,703
T – SA	3,292
UI – SA	2,499
UI – T	2,493

Inner Model

R-Square

According to Sugiyono (2015), the R Square test is carried out by researchers to determine the size of the exogenous on the endogenous. If the coefficient of determination is closer to 1, it can be concluded that the variable is good. From the R square test results which can be seen from Table 6, the Trust value can be obtained indicating that mediation can be influenced by user interface, responsiveness, need fulfillment, security, customer service by 69.6%. This value comes from multiplying R Square by 100%. Meanwhile, the satisfaction variable is influenced by user interface, responsiveness, need fulfillment, security, customer service by 72.5%. Just like the trust value, 72.5% is obtained from the R square satisfaction value multiplied by 100%.

Table 6. R-Square Test Results

	R-Square	R-Square Adjusted
Satisfaction	0,725	0,723
Trust	0,696	0,695

F-Square

The value of F-square is used to measure the predictive strength of an exogenous variable on an endogenous variable in a structural model. As a reference, according to Hair et al. (2019), F-square values of 0.02, 0.15, and 0.35 represent small, medium, and large effects, respectively from the exogenous latent variable.

Table 7. F Square Test Results

	CS	NF	R	SA	SE	T	UI
CS				0,076		0,095	
NF				0,127		0,035	
R				0,002		0,009	
SA							
SE				0,007		2,16	
T				0,022			
UI				0,008		0,002	

Based on the results in Table 7, there is no influence of customer service on satisfaction; responsiveness on satisfaction; security on satisfaction; user interface on satisfaction; responsiveness on trust; and user interface on trust. The influences which falls into medium effect are the influence of: need fulfilment on satisfaction; trust on satisfaction; customer service on trust; and need fulfilment on trust. Lastly, there is a large effect in the influence of security on trust.

Model Fit

Standardized Root Mean Square Residual or usually abbreviated as SRMR is used in testing model fit and has the aim of finding out the difference in correlation between observations and the model which implies a correlation matrix. According to Hu & Bentler (1998), an SRMR correlation value of less than 0.1 indicates that the test results are indicated to be good. In addition to SRMR, the Normed Fit Index (NFI) is used to show the measure of incremental fit on one coefficient. According to Lohmoller (1989) NIF values that were close to 1 could be concluded to be suitable and good. The following are the results of the model fit test in the research conducted.

Table 8. Model Fit Test

	Saturated Model	Estimated Model
SRMR	0,049	0,049
d_ULS	0,654	0,654
d_G	0,775	0,775
Chi-square	4,281.374	4,281.374
NFI	0,815	0,815

Table 9. Hypothesis Tests

Hipotesis	Exogenous	Mediation	Endogenous	t - value	p - value	Conclusion
1	*Trust*		*Satisfaction*	1,561	0,119	Rejected
2	*User Interface*		*Satisfaction*	0,921	0,357	Rejected
3	*Responsiveness*		*Satisfaction*	0,579	0,563	Rejected
4	*Need Fulfillment*		*Satisfaction*	3,236	0,001	Accepted
5	*Security*		*Satisfaction*	0,132	0,725	Rejected
6	*Customer Service*		*Satisfaction*	3,055	0,002	Accepted
7	*User Interface*	*Trust*	*Satisfaction*	0,393	0,694	Rejected
8	*Responsiveness*	*Trust*	*Satisfaction*	0,912	0,362	Rejected
9	*Need Fulfillment*	*Trust*	*Satisfaction*	1,625	0,104	Rejected
10	*Security*	*Trust*	*Satisfaction*	5,239	0,000	Accepted
11	*Customer Service*	*Trust*	*Satisfaction*	2,569	0,010	Accepted

Table 9 shows the t-value and p-value for each hypothesis in this research, 7 hypotheses were rejected, and 4 hypotheses were accepted.

Discussions

The first hypothesis, namely that trust has a direct effect on satisfaction, is rejected. This can be interpreted that trust does not have a direct influence on satisfaction with Halodoc. The results of this hypothesis are different from the results of research conducted by Gummerus et al., (2004), where their research stated that trust was the strongest predictor of satisfaction. This research was conducted in 2023 when the pandemic had subsided so the use of Halodoc was not as effective as during the pandemic. Researchers concluded that this was one of the reasons why the hypothesis of trust influencing satisfaction was rejected. This result is supported by the study of Ashiq and Hussain (2024) which indicates that e-trust does not influence satisfaction in online shopping.

The second hypothesis, namely that the user interface has a direct effect on satisfaction is rejected. This can be interpreted that Halodoc consumers do not feel that the interface of Halodoc application has a direct influence on their satisfaction after using the Halodoc health service application. According to Cardinali (1994), the user interface which allows a connection between the user and the computer has an important role in the effectiveness when a system is functioning. The results of this research support the results of research conducted by Gummerus

et al., (2004) who also said that the user interface does not have a significant impact on satisfaction. Based on data from respondent profiles, there are 28.01% aged 25-50 years. Deminishing ability to use digital technology may creates a feeling of difficulty in using applications. An application design that makes it easier for users of various ages is needed. By displaying simple features, the Halodoc application can be used by all customers of different ages. The data collection using a sample aged 17-50 years, which has quite a large gap and ability to use different technology, causes the hypothesis that user interface has a direct effect on satisfaction to be rejected. From the results of this research, it can be used as an evaluation and input for Halodoc in managing the appearance of the application that will be used to make it easier for all consumers when using Halodoc.

The third hypothesis, namely that responsiveness has a direct effect on satisfaction, is rejected. This can be interpreted as saying that Halodoc's response speed in responding to its consumers does not have a direct influence on satisfaction. The results of this research are different from research conducted by Lee & Lin (2005) which indicates that responsiveness influences satisfaction. Responsiveness itself represents a service provider's ability to respond promptly to customer desires and requests, as well as offering assistance when problems arise (Zeithaml et al., 2000). While the pandemic ended in 2023, and public health has improved, mobility restrictions have lifted, allowing people to travel without fear of COVID-19. Consequently, individuals now prefer in-person medical consultations at hospitals or clinics over health applications like Halodoc, as direct interaction with doctors offers more effective communication and flexibility in asking questions compared to time-constrained online consultations. These post-pandemic conditions may contribute to the rejection of the hypothesis that responsiveness directly impacts satisfaction. The research findings can inform Halodoc's strategies to enhance service speed and thereby increase customer satisfaction.

The fourth hypothesis, namely that need fulfillment has a direct effect on satisfaction, is accepted. It can be concluded that need fulfillment has a direct effect on satisfaction. The results of this research support the results of research conducted by Gummerus et al., (2004) which indicates that need fulfillment is a strong predictor of satisfaction. When consumers feel that they are part of the company's target group of Halodoc, and at the same time the company succeeds in meeting their needs, customer satisfaction will increase Gummerus et al., (2004).

The fifth hypothesis, that security has a direct effect on satisfaction, is rejected. It can be concluded that the security felt by Halodoc consumers does not influence satisfaction. The results of this research are different from the results of research conducted by Gummerus et al., (2004) which stated that security influences satisfaction. Security is a form of effort or systems in maintaining customer security from violations of their privacy (Yang et al., 2004). As a digital-based health service application, Halodoc needs to ensure that each customer's data is

well protected so that there are no privacy violations. Not only data, but all forms of documents such as doctor consultations with patients must not be leaked. Halodoc must maintain robust digital security to ensure customer safety and satisfaction. Following the 2023 COVID-19 pandemic, many people prefer in-person hospital or clinic visits for treatment and consultations. They perceive these settings as safer due to the absence of digital records that could potentially be compromised. In contrast, Halodoc's digital platform generates written and audio records of doctor consultations, which, if not adequately protected, could lead to data breaches. This may contributes to the rejection of the hypothesis that security directly impacts satisfaction. The research findings underscore the need for Halodoc to prioritize and enhance consumer security and privacy to foster greater trust and satisfaction among its users.

The sixth hypothesis which states that customer service has a direct effect on satisfaction is accepted. It can be concluded that the customer service experienced by Halodoc consumers has a direct influence on satisfaction. The results of this research are different from research conducted by Rita et al., (2019) where customer service does not have a direct influence on satisfaction.

The seventh hypothesis, namely that the user interface influences satisfaction with trust as mediation, is rejected. It can be concluded that the user interface does not affect trust as a mediator for Halodoc consumers. The interface of the Halodoc application used by consumers does not influence satisfaction with trust as a mediator. The result of this research strengthens the findings of Gummerus et al., (2004) which proved that the interface of the Halodoc application design (user interface) does not have a significant influence on satisfaction with trust as a mediator. As an online health service provider, Halodoc not only competes with other similar applications but also with various hospitals. When the COVID-19 pandemic occurred, hospitals in Indonesia started to create similar applications that were useful for their patients to consult online. Halodoc, which was created earlier, is expected to provide a better user interface compared to its other competitors.

The eighth hypothesis that responsiveness influences satisfaction trust as mediation is rejected. It was concluded that the speed of Halodoc's response felt by consumers did not affect satisfaction with trust as mediation. The result of this study is different from the research conducted by Gummerus et al., (2004) which stated that responsiveness influences trust. Based on the results of this research, responsiveness does not influence satisfaction with trust as a mediator. Customers using Halodoc expect faster service compared to traditional hospital or clinic visits. Additionally, Halodoc is a preferred choice for treating external ailments like skin rashes, red eyes, and insect bites. As a service application, Halodoc should provide rapid responses to customer needs.

The ninth hypothesis, namely that need fulfillment influences satisfaction with trust as mediation, is rejected. It was concluded that need fulfillment did not affect satisfaction with trust as a mediator for Halodoc consumers. The result of this study is different from the result of research conducted by Gummerus et al., (2004) which stated that need fulfillment is a strong predictor of trust. Need fulfillment reflects the service provider's ability to understand customers' fundamental needs and desires (Gummerus et al., 2004). Halodoc offers a range of services including doctor consultations, medical inquiries, and prescription medication delivery. The COVID-19 pandemic compelled people to use Halodoc due to restrictions on hospital and clinic visits. Post-pandemic, individuals had the option of online or in-person care. Consequently, the hypothesis that need fulfillment influences satisfaction, mediated by trust, was rejected. Research findings indicate that consumers do not perceive Halodoc as understanding their needs, impacting the need fulfillment variable and ultimately nullifying its influence on satisfaction and trust.

The tenth hypothesis that security influences trust as mediation is accepted. It was concluded that security influences trust as a mediator for Halodoc consumers. The results of this research support the results of research conducted by Gummerus et al., (2004) which states that security also influences trust as a mediator. The sense of security felt by consumers when using Halodoc influences satisfaction with trust as a mediator.

The eleventh hypothesis, namely that customer service influences trust as a mediator, is accepted. It was concluded that the customer service felt by consumers has an influence on satisfaction with trust as a mediator. For Halodoc, the customer service felt by the customers is effective in influencing satisfaction as it raises customer trust.

5. CONCLUSION

This research wants to find out the influence of user interface, responsiveness, need fulfillment, security, and customer service on trust as a mediator on satisfaction as well as the direct influence of trust, user interface, responsiveness, need fulfillment, security, and customer service on satisfaction. There were 11 hypotheses tested in this research. Among them, 4 hypotheses are accepted, and 7 hypotheses are rejected. The variables of trust, user interface, responsiveness, and security do not have a direct influence on Halodoc customer satisfaction. On the other hand, the need fulfillment and customer service variables have a direct influence on Halodoc customer satisfaction. In mediation through the trust variable, the user interface, responsiveness, and need fulfillment variables do not influence satisfaction. Meanwhile, security and customer service variables influence satisfaction with trust as mediation.

Through this research, there are several things that companies can develop for the mobile medical application, Halodoc. In this research, it was found that need fulfillment has a direct effect on satisfaction. The results of this research support the results of research conducted by Gummerus et al., (2004) which indicates that need fulfillment is a strong predictor of satisfaction. This research can provide insights to companies to understand that fulfilling customer needs leads to customer satisfaction. Companies can enhance their performance by understanding their customers' needs. Conducting surveys to the customers can help identify these needs. The results of these surveys can be used to develop the Halodoc application with the features customers require. In this research, customer service directly influences trust, acting as a mediator. Companies can enhance e-service quality by improving customer service to provide faster service to their customers. To assist customers experiencing difficulties with the application, the company can implement a chat feature with customer service representatives. Additionally, providing an auto-answer feature for frequently asked questions can expedite customer support. Customers using the application are required to enter personal data, which serves as identification. This research indicates that Security has an influence on satisfaction with trust as a mediator. Companies can enhance e-service quality in the Halodoc application, particularly regarding the secure storage of customer personal data and payment information. Halodoc provides drug purchasing and delivery services. To mitigate data breaches from credit card payments, offering cash on delivery options can alleviate customer concerns about data leaks.

Through this research, there are several things that can be developed in future research. In the research conducted, the author only collected data in the Jakarta, Bogor, Depok, Tangerang, Bekasi (Jabodetabek) areas. Because Halodoc has spread to approximately 50 Indonesian cities, in future research the population can be expanded by collecting data in different and wider areas so that the results of the research are more diverse. In this study, the authors determined a sample aged 17-50 years, namely the age that is classified as productive. In future research, it is hoped that age determination will not be too far apart like generations Z and Y, so that the research results will be more significant. In this study, researchers focused on the health service sector. It is hoped that future research can use objects in different sectors to understand the relationship between e-service quality and satisfaction more broadly. E-service quality is divided into two different scales, namely, E-S-Qual or e-service quality scale and E-Recs-Qual or e-service quality recovery scale. E-S-Qual consists of security, reliability, fulfillment, efficiency, and individual attention. Meanwhile, E-Recs-Qual consists of responsiveness, compensation, and contact (Parasuraman et al., 2005). Because this research only uses the variables user interface, responsiveness, need fulfillment, security, customer

service, it is hoped that in future research we can add e-service quality variables that will be studied, such as efficiency, individual attention, compensation and contact.

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