THE INFLUENCE OF E-SERVICE QUALITY ON CONTINUANCE INTENTION MEDIATED BY CUSTOMER TRUST AND CUSTOMER SATISFACTION IN THE USAGE OF MOBILE HEALTH APPLICATION

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Abstract
This study aims to analyze the effect of e-service quality on continuance intention which is mediated by customer trust and customer satisfaction on mobile health applications user. Methods of data collection techniques using non- probability sampling with the purposive sampling method. Data were collected from 280 respondents with the criteria of mobile health application users in Indonesia. Questionnaires were distributed via Google form and consisted of 28 statements which were answered based on five Likert scales. The analytical method used in this study is Structural Equation Model (SEM). The results showed that e-service quality has a positive effect on continuance intention, e- service quality has a positive effect on customer trust, customer trust has a positive effect on continuance intention, and e-service quality has a positive effect on continuance intention mediated by customer trust partially. In addition, customer trust has a positive effect on customer satisfaction. However, electronic service quality does not have a positive effect on customer satisfaction, customer satisfaction also does not have a positive effect on continuance intentions, and customer satisfaction does not have a mediating effect between electronic service quality on continuance intentions. This research is used as evaluation material for mobile health applications to improve e-service quality to shape customer trust and customer satisfaction and gain user continuance intention for using mobile health application.

Keywords
continuance intention; customer satisfaction; customer trust; e-service quality.

Introduction
Background
Based on data from the Digital 2023 Global Overview Report, the number of internet users has reached 5.18 billion people worldwide, equivalent to 64.6 percent of the total global population. This is in line with the increasing use of mobile services. The latest data shows that as of April 2023, more than two-thirds of the world's total population, namely 5.48 billion individuals, are now using mobile phones. This development has driven the increase in digital adoption and activities (Kemp, 2023). It has also captured the attention of healthcare providers who are developing and distributing mobile-based health services known as mobile health (mHealth). The term mHealth implies the use

of mobile technology, specifically smartphones, to deliver health information services (Khalil et al., 2020).

The presence of mHealth applications played a significant role during the emergence of the COVID-19 pandemic in 2020. The pandemic posed a major challenge to the world, requiring effective strategies to address its disaster impacts, including managing prevention strategies, building sustainable social relationships, and propelling the economic sector (Samsuri, 2022). Various restrictions, social distancing policies, and lockdowns were implemented by many countries. In response to these limitations, the Minister of Health encouraged the public to utilize online health services before visiting healthcare facilities (Fagherazzi et al., 2020; Indayani, 2022).

This has become a business idea and a significant opportunity for healthcare service providers to expand their businesses (Indayani et al., 2022). According to the Katadata Insight Center 2022 survey, there are various health applications used by the Indonesian population, including Halodoc, Telemedicine RS/Klinik, Alodokter, and KlikDokter. The variety of mHealth applications has led people to shift and prefer using these digital platforms to consult with doctors online, giving rise to new consumer behaviors (Putri et al., 2021).
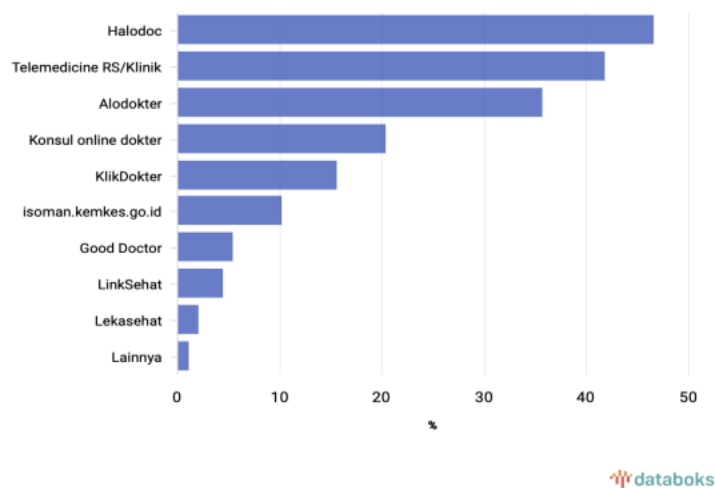

Figure 1: Most Widely Used Health Application in Indonesia
Source: Katadata, 2022

Although mHealth had already been established before the pandemic, in reality, this platform had not been widely distributed and adopted (Fagherazzi et al., 2020). According to a survey conducted by Accenture in 2021, the usage of mobile health applications in the US had declined by 18% compared to the peak usage during the early stages of the COVID-19 pandemic. As seen in Figure 2, it was found that in Indonesia, there was a gradual decrease in the usage of health applications like Halodoc and Alodokter in February 2023 compared to the previous month. More than 30% of mHealth applications were found to be uninstalled within a month after being downloaded, which had a significant impact on companies and led to potential losses (Khalil et al., 2020).

Figure 2 "Graph depicting the decrease in traffic visits to the Halodoc and
Alodokter.com applications."
Source : similarweb.com (2023)

This decline indicates that, despite the COVID-19 pandemic driving the adoption of health technology and increasing public awareness of the importance of health, sustaining the intention to use mHealth applications (continuance intention) requires ongoing strategies and efforts from service providers. Continuance intention itself is defined as users' intention to continue using a mobile health application after initial usage (Zhang et al., 2018). Some studies have found that one effort to enhance the intention to reuse health applications is influenced by service quality factors. This is because good service quality can increase user satisfaction, thus encouraging users to continue using the service in the future. This aligns with a survey conducted by Deloitte in collaboration with the Center of Healthcare Policy and Reform Studies (Chapters) Indonesia, which found that around 15.6% of users were dissatisfied with digital health applications due to the quality of service provided (Deloitte, 2019). Furthermore, service quality also greatly impacts user trust (customer trust). In online health consultations that involve virtual communication, patient trust becomes a determining factor in the decision-making process (Yulaikah, 2022). The 2019 Deloitte survey found that as many as 61.2% of respondents had not used digital health applications due to a lack of trust. The majority believed that direct consultations with doctors and face-to-face interactions were still more reliable (Deloitte, 2019). This underscores the importance for service providers to carefully consider the quality of the services they provide.

Based on the background described above, this study attempts to integrate the conceptual framework from these previous studies related to e-service quality, customer satisfaction, customer trust, and continuance intention. Therefore, further analysis is conducted to examine the influence of mHealth e-service quality on continuance intention, mediated by customer satisfaction and customer trust, among users of mHealth applications in Indonesia.

Problem formulation

mHealth applications that experienced increased usage during the early stages of the pandemic are being abandoned due to the decline in COVID-19 cases and the recovery of social life. Therefore, continuous strategies and efforts are needed for service providers to enhance continuance intention among users (Khalil et al., 2020). Based on this description, the problem formulation in this study is 'Does e-service quality have an influence on continuance intention, mediated by customer trust and customer satisfaction, in the usage of mobile health applications?

The Purpose of Study

The purpose of this study is to analyze the influence of e-service quality on continuance intention, mediated by customer trust and customer satisfaction, in the usage of mobile health applications.

Research Benefit

Practical

This research is expected to be beneficial for practitioners, especially within the service management division of healthcare application providers, in enhancing service quality. By understanding the factors influencing the usage of mobile health applications, service providers can improve user experience and retain existing users. This study can also assist in the development and enhancement of future mobile health applications by considering the factors affecting continuance intention.

Theoretical

This research is intended to serve as a guideline for future research endeavors. It can serve as a specific reference, particularly in the context of e-service quality, continuance intention, customer trust, and customer satisfaction in the usage of mobile health applications in the healthcare field. Additionally, it is hoped that this research can make a valuable contribution to the field of service management, especially in the marketing concentration within the service industry.

Literature View

E-Service Quality

Parasuraman et al. (2005) in (Liu, Huang, & Li, 2019) define e-service quality as a tool or instrument to measure customer satisfaction levels of an internet-based service, encompassing the purchasing and delivery of products or services. According to Pearson (in Marina, 2020), e-service quality is defined as a service provided with the goal of meeting customer expectations without relying on direct human interaction.

E-service quality refers to services offered through information and communication technology. One such service developed in the healthcare field is the Mobile Health or mHealth application (AlBalushi et al., 2020). Types of mHealth services include health research using portable wireless devices for data collection, mHealth utilization by healthcare professionals for medical education and record storage, leveraging mHealth for patient appointments, reminders, and treatments, and applying mHealth to the general population to promote health behavior change and emergency care.

According to Kaium et al. (2020), mHealth service quality is defined by the extent to which users evaluate mHealth services and support provided by the service provider. The topic of electronic service quality (e-service quality) has been a primary focus of

marketing research due to its correlation with factors like cost, customer satisfaction, retention, and loyalty (Magdalena & Jaolis, 2018).

SERVQUAL has the same five dimensions (i.e., tangibles, reliability, responsiveness, assurance, and empathy) (Kim et al., 2019). Tangibles are relevant to physical facilities, equipment, and personnel appearance. Reliability is the ability to deliver promised services consistently and accurately. Responsiveness is the ability to assist customers and provide prompt service. Assurance encompasses the knowledge, courtesy, and employees' ability to build trust and confidence. Empathy is about the individual care and attention that a service company provides to its customers (Kim et al., 2019)."

The reference for modifying the dimensions of service quality in the mHealth application is drawn from research conducted by Akter et al. (2013) and Stoyanov et al. (2015), which is specifically focused on digital health services. The dimensions of service quality proposed by Kim (2019) include:

- Content quality
    - Content quality refers to the quality of the content provided by the service provider (Kim et al., 2019). According to Oppong (2021), content quality is the value and utility of the information provided by a service.
- Engagement
    - Engagement is the ability to enhance user involvement with a service.
- Privacy
    - Privacy is the ability to protect user privacy.
- Reliability
    - The ability to deliver promised services consistently and accurately.
- Usability
    - Usability refers to the ease provided by a service.

Customer Satisfaction

Customer satisfaction refers to customers' evaluation of products or services provided, meeting their needs and expected outcomes (Fared et al., 2021). In the context of digital-based services, customer satisfaction can be specifically defined as a psychological state achieved when users feel content and no longer seek alternatives beyond the current platform they are using.

User satisfaction can be achieved when the performance provided by the service provider meets or even exceeds user expectations (Fida et al., 2020; Yan, Filieri, Raguseo, et al., 2021a). One of the services offered in health applications is online consultation with doctors to receive treatment for ailments without having to visit a hospital. Creating satisfaction can help build loyalty, minimize customer churn, and enhance customer retention.

Patient satisfaction constitutes customers' perceptions of the quality of service provided. Favorable customer perceptions of service quality will have a positive relationship with overall customer satisfaction and, in turn, enhance their intention to perform behaviors such as repeat purchase and recommending the service to others (Wu et al., 2016).

Customer trust

Trust is defined as an individual's willingness to accept treatment from another party as expected, regardless of the ability to monitor or control the trusted party (Abidin et al., 2022). In research on mHealth application services, trust is considered crucial in predicting reuse intentions (Meng et al., 2022). Furthermore, Fox's research (2018)

revealed that trust can help alleviate concerns about individual privacy and enhance user adoption intentions. In mHealth applications, doctors serve as primary medical service providers. The trust relationship between patients and doctors is essential to achieving common goals, one of which is the successful treatment of the patient's condition (Octavius & Antonio, 2021). According to Wu (2016), patient trust is defined as the belief that doctors will act in the patient's best interests and provide appropriate medical treatment and care."

Continuance Intention

Continuance intention is defined as the behavior of users or customers when utilizing information and communication technology services (Cho et al., 2016). Continual usage can be driven by user satisfaction with the service being used (W. T. Wang et al., 2019). Long-term sustainability and success of an application can be achieved if users persist in using the service. Hence, efforts to retain customers become crucial. In the context of healthcare services, including mHealth applications, continuance intention benefits not only the service providers but also holds importance for the recipients of the service, positively influencing individual health and quality of life. One key factor is user satisfaction with the application, involving satisfaction with the application's features and functions, ease of use, and quality of service provided (Yan, Filieri, Raguseo, et al., 2021b).

Conceptual Framework

In order to get users's continuance intention on the mHealth application, it is important for service providers to improve e-service quality (Li et al., 2022). A high service quality will create trust and satisfaction for customers so that customers are more likely to keep using the application and not switch to another service provider (Kim et al., 2019)
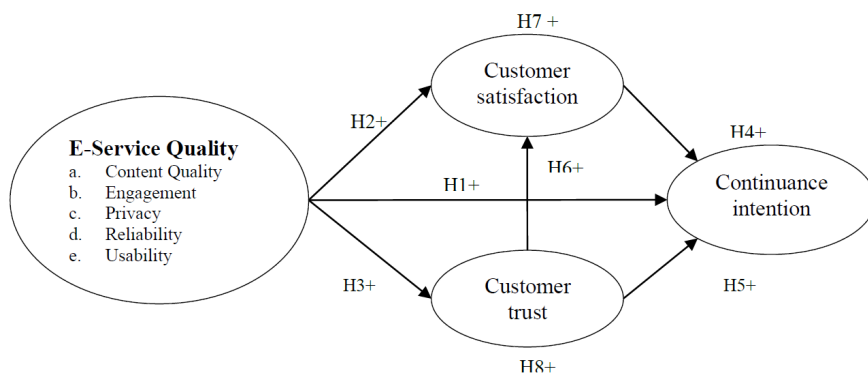

Figure 3 Conceptual Framework
Source: (Kim et al., 2019 ; Chang et al., 2013)

Hypothesis Development

The decision to choose healthcare services is influenced by service quality in the context of Indonesian health insurance services (Abidin et al., 2022). In the healthcare context, a study on the quality of mHealth application services among Korean students, stating that there is a positive and significant influence of e-service quality dimensions on continuance intention (Kim et al., 2019. Thus, the following hypothesis can be established:

H1.e-service quality has a positive effect on continuance intention.

E-Service Quality entails meeting consumers' needs and desires and accurately delivering them to align with their online expectations. This aligns with a study that found that E-Service quality significantly influences E-satisfaction in e-commerce services (Magdalena, 2018). The study shows that better electronic service quality increases consumer satisfaction in using electronic services. Thus, the following hypothesis can be established:

H2: e-service quality has a positive effect on customer satisfaction.

Trust is important in terms of conducting online transactions.Trust is necessary, especially for online transactions (Kumar et al., 2018). The positive influence of service quality on customer trust is supported by various studies (Rita et al., 2019; Wahyoedi et al., 2021). In the context of healthcare, it was also found that there is a positive relationship between service quality and patient trust (Elizar et al., 2020). Thus, the following hypothesis can be established:

H3: e-service quality has a positive effect on customer trust.

Based on research, satisfaction is a predictor of continuance usage in various digital technologies such as online food delivery services, mobile payment, and online shopping (Yan, Filieri, & Gorton, 2021). Another study found that trust affects the intention to reuse online health services via smartphones (Kaium et al., 2020). Thus, the following hypothesis can be established:

H4: customer satisfaction has a positive effect on continuance intention.

Previous study states that trust positively influences the intention to continue using online payment platforms in China (Shao et al., 2019). Other studies also indicate that trust is a significant predictor of continuance intention to use mHealth services (Meng et al., 2022; Octavius & Antonio, 2021). A study in Indonesia found that continuance intention is positively and significantly influenced by initial trust in health service applications. Thus, the following hypothesis can be established:

H5: customer trust has a positive effect on continuance intention.

Trust is a crucial factor for service industries to maintain customer satisfaction (Chang et al., 2013). If trust norms align with the quality of the offered product or service, customers will be satisfied (Aditya et al., 2021). Several studies have also shown that the level of trust positively affects satisfaction. (Muharam et al., 2021; Nasution et al., 2022). Thus, the following hypothesis can be established:

H6: customer trust has a positive effect on customer satisfaction.

Achieving high customer satisfaction is the primary goal of a service provider. Several studies have investigated the mediating role of customer satisfaction in the relationship between service quality and continuance intention (Akter et al., 2013; Kim et al., 2019; Razak et al., 2021). High service quality positively affects customer satisfaction, which in turn enhances users' intention to continue using the service (Kim et al., 2019). Thus, the following hypothesis can be established:

H7: customer satisfaction mediates the relationship between e-service quality and continuance intention.

A high service quality leads to higher customer trust in a specific service company or brand. Based on research it was found that customer trust has a mediating effect between service quality and repurchase intention (Kadarusman, 2019). In the context of online services, trust mediates the influence of service quality on customers' intention to reuse online food delivery platforms (Wang et al., 2019). In addition, it was found that perceived trust mediates the relationship between e- service quality and reuse

intentions in health applications (Li et al., 2022). Thus, the following hypothesis can be established:

H8: customer trust mediates the relationship between e-service quality and continuance intention.

Methodology

Research Design

This study refers to Kim's (2019) research as the main reference journal that analyzes the influence of e-service quality dimensions on continuance intention mediated by Customer Satisfaction in mHealth application users. It is supplemented by research from Chang (2013) and Shao (2019) as supporting journals. The study uses hypothesis testing aiming to examine the influence on the independent variable, mHealth e-service quality, on the dependent variable, continuance intention, with mediation variables, customer trust, and customer satisfaction. The research design employed is quantitative with a causal approach. A causal approach explores the cause-and-effect relationship between two variables (Sekaran & Bougie, 2017). The unit of analysis in this study is mobile health application users in Indonesia. Cross-sectional data collection is utilized, where data is obtained within a predetermined time frame and period.

Variables and Measurement

This study investigates four variables, including dependent, independent, and intervening variables. Independent variables are those not influenced by other variables but can affect other variables either positively or negatively (Hardani et al., 2020). The independent variable in this study is e-service quality. On the other hand, dependent variables are influenced by other variables (Hardani et al., 2020). In this study, the dependent variable is continuance intention. Intervening variables are those hypothesized to influence the relationship between independent and dependent variables (Sekaran & Bougie, 2017). The intervening variables in this study are customer trust and customer satisfaction. The scale type used in this study is the interval scale, and the Likert scale is employed. Measurements are conducted using statements formulated into a questionnaire, with statements assessed using a five- point Likert scale (1 meaning "Strongly Disagree"; 2 meaning "Disagree"; 3 indicating "Neutral"; 4 representing "Agree"; and 5 indicating "Strongly Agree").

E-Service Quality

The mediating variables in this study are customer trust and customer satisfaction (Chang et al., 2013). Customer trust is defined as patients' perceptions of trust in the reliability and integrity of medical services.

Continuance Intention

The dependent variable in this study is continuance intention, defined as user/customer behavior when using information and communication technology services (Oppong et al., 2018).

Customer Trust

The mediating variables in this study are customer trust and customer satisfaction (Chang et al., 2013). Customer trust is defined as patients' perceptions of trust in the reliability and integrity of medical services.

Customer Satisfaction

The mediating variable of customer satisfaction is defined as the feeling of pleasure or disappointment that arises after comparing the performance or results of a service with one's expectations (Wu et al., 2016).

Data Collection Method

Data collection involves the use of primary and secondary data search techniques. Primary data refers to data collected directly by the researcher (Sugiyono, 2015). In this study, questionnaires are used as the data collection method by distributing them via Google Forms to acquire samples without geographical restrictions. The questionnaire includes respondent information and questions about the influence of e-service quality on continuance intention mediated by customer trust and customer satisfaction in mobile health application usage. The study also employs secondary data sourced from literature theories and previous research that supports this study. The data collection period for respondents spans from December 2022 to January 2023.

Data Testing Method

In this study, a questionnaire is utilized to collect data containing statements representing the variables under investigation. Prior to data collection, testing should be conducted to assess the quality of the questionnaire instrument. Validity and reliability tests are methods used to evaluate the instrument's quality.

Validity Testing

Validity testing is performed to assess the accuracy of the data results provided by the researcher compared to actual data from the research subjects (Hardani et al., 2020). Validity testing in this study employs factor analysis with the assistance of SPSS 25 software.

Realibility Testing

Testing is conducted on the measurement tool to demonstrate the consistency and accuracy of the instrument used in this study. Reliability testing can be assessed using the Chronbach's Alpha coefficient. If the Chronbach's Alpha value > 0.60, the research data is considered reliable.

Data Analysis Method
Descriptive Method

Descriptive statistical methods are used in this study to analyze the data. Descriptive statistics such as frequency, mean, and standard deviation are employed to provide descriptive information about a set of data (Sekaran & Bougie, 2017). The collected data is then analyzed using SPSS version 25.

Goodness of Fit Model Testing

Prior to hypothesis testing, it's essential to examine the model fit using several measurements according to Hair et al. (2019), including:

Absolute Fit Measure, used to measure overall model fit. The criteria include Sig. Probability and Root Mean Square Error of Approximation (RMSEA).

Incremental Fit Measure is utilized to compare the proposed model with other models. The criteria involve examining the Normed Fit Index (NFI), Turker-Lewis Index (TLI), Relative Fit Index (RFI), Comparative Fit Index (CFI), and Incremental Fit Index (IFI). Parsimoniousx Fit Measure, is an adjustment to fit measurements, enabling comparisons between models with differing coefficients. The criteria involve looking at the Minimum Discrepancy Function by Degrees of Freedom divided (CMIN/DF) value.

Below is the image and table displaying the results of the Goodness of Fit Model test:
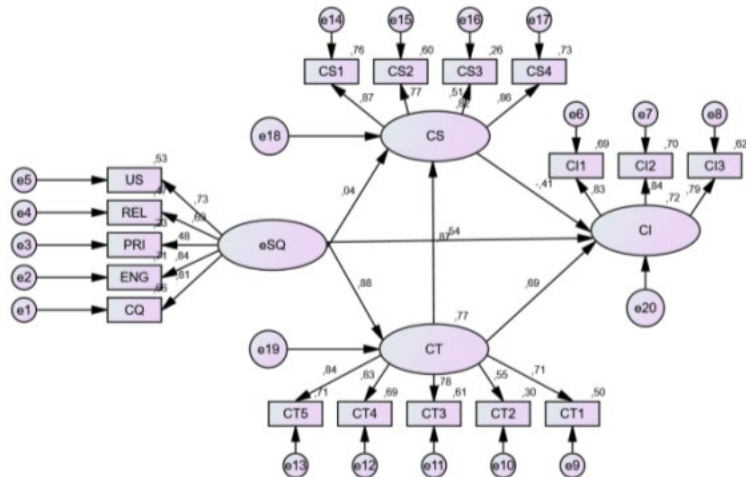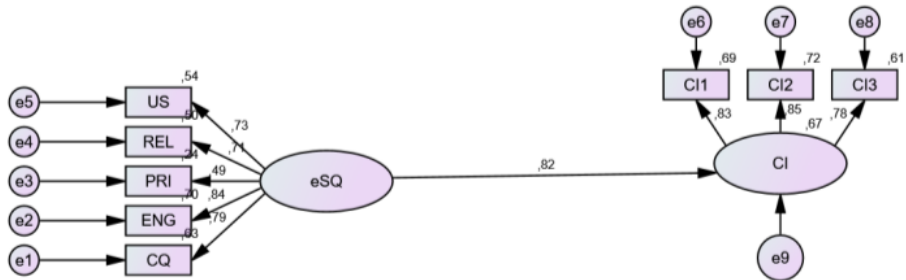
Figure 4: Model 1 Output (Hypotheses 1-6)

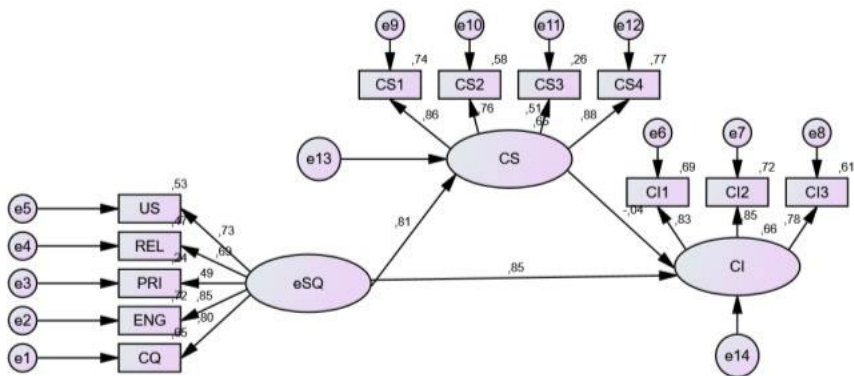Figure 5: Model 2 Output (Hypotheses 7 & 8 Condition 1)

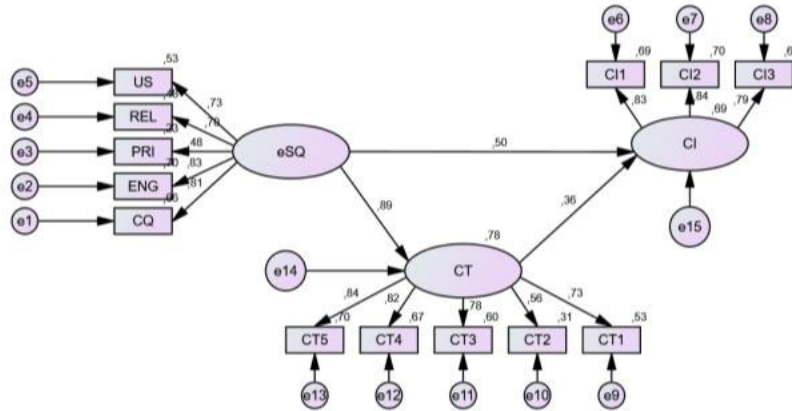Figure 6: Model 3 Output (Hypothesis 7 Condition 2)

Figure 7: Model 4 (Hypothesis 8 Condition 2)

Table 1
The result of Goodness of Fit Model I

Type of Measurement	Index	Cut-off	Value	Conclusion
Absolute Fit Measure	p-value	≥ 0,05	0,000	Poor Fit
	RMSEA	≤ 0,10	0,079	Goodness of Fit
Incremental Fit Measure	NFI	> 0,90 or close to 1	0,902	Goodness of Fit
	TLI	> 0,90 or close to 1	0,911	Goodness of Fit
	CFI	> 0,90 or close to 1	0,934	Goodness of Fit
	IFI	> 0,90 or close to 1	0,935	Goodness of Fit
	RFI	> 0,90 or close to 1	0,867	Marginal Fit
Parsimonious Fit Measure	CMIN/DF	Lower limit 1, upper limit 5	2,734	Goodness of Fit

Source: The data processing results were obtained using AMOS 21.

From the above model fit test results, the RMSEA, NFI, TLI, CFI, IFI, and CMIN/DF indices indicate a good fit, while the RFI index suggests a marginal fit as it approaches the cutoff value, and the probability index still indicates a poor fit. However, overall, the model is deemed suitable (goodness of fit), allowing us to proceed to the next testing phase, which is hypothesis testing.

Hypothesis Testing
Direct effect testing of data and hypotheses in this study is conducted using Structural Equation Model (SEM) through the statistical software AMOS (Analysis of Moment Structures). This test is performed to determine whether each independent variable significantly influences the dependent variable, if the other variables remain constant. The decision-making basis for hypothesis testing is as follows:
- If the p-value > α 0.05, Ho (null hypothesis) is accepted, meaning that there is no significant influence between the two variables.
- If the p-value ≤ α 0.05, Ho is rejected, indicating a significant influence between the two variables.

Results And Discussion
Descriptive Statistics

Descriptive statistical analysis is conducted to provide a detailed explanation and conclusion about the obtained responses from respondents regarding the variables of e-service quality, customer trust, customer satisfaction, and continuance intention. This is achieved by examining the mean and standard deviation values, as presented in the table below:

Table 2
Descriptive Statistics for E-Service Quality

No	Question Lists	Mean	Standard Deviation
	Content Quality		
1	This health application provides accurate information	3.971	0.671
2	This health application provides services according to users' needs	4.204	0.620
3	This health application provides complete and clear information	4.064	0.705
	Mean (content quality)	**4.080**	
	Engagement		
4	This health application provides services tailored to my needs	4.239	0.664
5	I find the features in this health application beneficial for me	4.300	0.647
6	This health application provides useful notifications	3.704	0.909
	Mean (Engagement)	**4.081**	
	Privacy		
7	This health application protects my personal data well	3.832	0.8
8	This health application does not share my personal data with others	3.861	0.907
	Mean (Privacy)	**3.847**	
	Reability		
9	This health application is always available when needed	4.221	0.714
10	I can easily access this health application whenever I want	4.457	0.649
11	I immediately receive services after accessing the application	4.071	0.782
12	I don't have to wait long to receive services	3.961	0.826
	Mean (Reability)	**4.178**	
	Usability		
13	The health application has an attractive and simple design and appearance	4.143	0.704
14	This health application is easy to use	4.329	0.655
15	I don't need a long time to input data into the application	4.114	0.744
16	This health application has interesting features and content	4.064	0.710
	Mean (Usability)	**4.163**	
	Mean E-Service Quality Value	**4.096**	

Source: Data processing results using SPSS 25

Based on the table above, a mean value of 4.044 was obtained for the 5 indicators, indicating that, on average, respondents feel that the mHealth application has been able to instill trust in users.

Table 3
Descriptive Statistics for Customer Satisfaction

No	Question List	Mean	Standard Deviation
1	I am pleased with all the services provided through this application.	4.075	0.775
2	I am confident that using this health application is the right decision.	3.814	0.876
3	I am very satisfied with all the services provided by this health application.	2.975	1.187
4	I will recommend the medical services of this application to others.	3.925	0.779
	Mean Customer Satisfaction Value	**3.697**	

Source: Data processing results using SPSS 25

Based on the table above, a mean value of 3.697 was obtained for the 4 indicators. This indicates that, on average, respondents are fairly satisfied with the use of the mHealth application.

Table 4

No	Question List	Mean	Standard Deviation
1	I will continue to use the services in this application.	4.096	0.709
2	I will choose to use the health application as my first option over going directly to a hospital.	4.218	0.627
3	I will recommend this mobile health application to my relatives.	4.118	0.721
	Mean *Continuance Intention* Value	**4.144**	

Source: Data processing results using SPSS 25

Based on the table above, a mean value of 4.144 was obtained for the 3 indicators, indicating that, on average, respondents have an intention to reuse the mHealth application.

Hypothesis Testing
Hypothesis testing in this study is conducted using statistical methods through Structural Equation Model (SEM) analysis. There are eight hypotheses tested in this study. The tolerance error limit used is 5% ($\alpha = 0.05$), with the decision-making basis as follows:
  o   If the P-Value ≤ 0.05, then Ho is rejected, and Ha is supported.
  o   If the P-Value > 0.05, then Ho is supported, and Ha is rejected.
Based on the test decisions, it can be concluded that if a hypothesis has a P-Value ≤ 0.05, it means there is a significant influence between variables, and the hypothesis is supported. On the other hand, if a hypothesis has a P-Value > 0.05, it means there is no significant relationship, and the hypothesis is not supported.

Table 5 Hypothesis Testing Results 1-6

	Hyphothesis	Estimate	p-value	Results
H1:	E-service quality has a positive effect on continuance intention.	0,538	0,000	H1 supported
H2:	E-service quality has a positive effect on customer satisfaction.	0,043	0,723	H2 not supported
H3:	E-service quality has a positive effect on customer trust.	0,880	0,000	H3 supported
H4:	Customer satisfaction has a positive effect on continuance intention.	-0,415	0,014	H4 not supported
H5:	Customer trust has a positive effect on continuance intention.	0,695	0,003	H5 supported
H6:	Customer trust has a positive effect on customer satisfaction.	0,867	0,000	H6 supported

Source: Results of data processing using AMOS 21 Following are the hypotheses tested in this study.

Hypothesis One
The first hypothesis tests the influence of e-service quality on continuance intention with the following hypothesis statements (H1):
- Ho1: E-service quality does not have a positive effect on continuance intention.
- Ha1: E-service quality has a positive effect on continuance intention.

Based on the results of the hypothesis test in Table 18, the first hypothesis obtained an estimate value of 0.538, which means that the higher the e-service quality, the higher the continuance intention of mHealth application users. The ρ-value is 0.000 (≤ 0.05), indicating that Ho is not supported, and Ha is supported, thus concluding that there is a significant positive influence of e- service quality on continuance intention.

Hypothesis Two
The second hypothesis tests the influence of e-service quality on customer satisfaction with the following hypothesis statements (H2):
- Ho2: E-service quality does not have a positive effect on customer satisfaction.
- Ha2: E-service quality has a positive effect on customer satisfaction.

Based on the results of the hypothesis test in Table 18, the second hypothesis obtained an estimate value of 0.043. The ρ-value is 0.723 (> 0.05), indicating that Ho is supported, and Ha is not supported, thus concluding that there is no influence of e-service quality on customer satisfaction.

Hypothesis Three
The third hypothesis tests the influence of e-service quality on customer trust with the following hypothesis statements (H3):
- Ho3: E-service quality does not have a positive effect on customer trust.
- Ha3: E-service quality has a positive effect on customer trust.

Based on the results of the hypothesis test in Table 18, the third hypothesis obtained an estimate value of 0.880, which means that the higher the e-service quality, the higher the customer trust. The ρ-value is 0.000 (≤ 0.05), indicating that Ho is not supported,

and Ha is supported, thus concluding that there is a significant positive influence of e-service quality on customer trust.

Hypothesis Four

The fourth hypothesis tests the influence of customer satisfaction on continuance intention with the following hypothesis statements (H4):

- o Ho4: There is no positive influence of customer satisfaction on continuance intention.
- o Ha4: There is a positive influence of customer satisfaction on continuance intention.

Based on the results of the hypothesis test in Table 18, the fourth hypothesis obtained an estimate value of -0.415, with a ρ-value of 0.014 ($\leq$ 0.05), indicating that Ho is supported, and Ha is not supported, thus concluding that there is no influence of customer satisfaction on continuance intention.

Hypothesis Five

The fifth hypothesis tests the influence of customer trust on continuance intention with the following hypothesis statements (H5):

- o Ho5: There is no positive influence of customer trust on continuance intention.
- o Ha5: There is a positive influence of customer trust on continuance intention.

Based on the results of the hypothesis test in Table 18, the fifth hypothesis obtained an estimate value of 0.695, which means that the higher the customer trust, the higher the continuance intention. The ρ-value is 0.003 ($\leq$ 0.05), indicating that Ho is not supported, and Ha is supported, thus concluding that there is a significant positive influence of customer trust on continuance intention.

Hypothesis Six

The sixth hypothesis tests the influence of customer trust on customer satisfaction with the following hypothesis statements (H6):

- o Ho6: There is no positive influence of customer trust on customer satisfaction.
- o Ha6: There is a positive influence of customer trust on customer satisfaction.

Based on the results of the hypothesis test in Table 18, the sixth hypothesis obtained an estimate value of 0.867 ($\leq$ 0.05), indicating that the higher the customer trust, the higher the customer satisfaction. The ρ-value is 0.000 ($\leq$ 0.05), indicating that Ho is not supported, and Ha is supported, thus concluding that there is a significant positive influence of customer trust on customer satisfaction.

Testing Customer Satisfaction as a Mediating Variable

The seventh hypothesis examines the role of customer satisfaction in mediating the relationship between e-service quality and continuance intention. The model is divided into two for comparison. The first model shows the direct influence of e-service quality on continuance intention, while the second model includes the variable customer satisfaction mediating the influence of e-service quality on continuance intention.

Figure 8 Model 1: Direct Influence of E-Service Quality on Continuance Intention
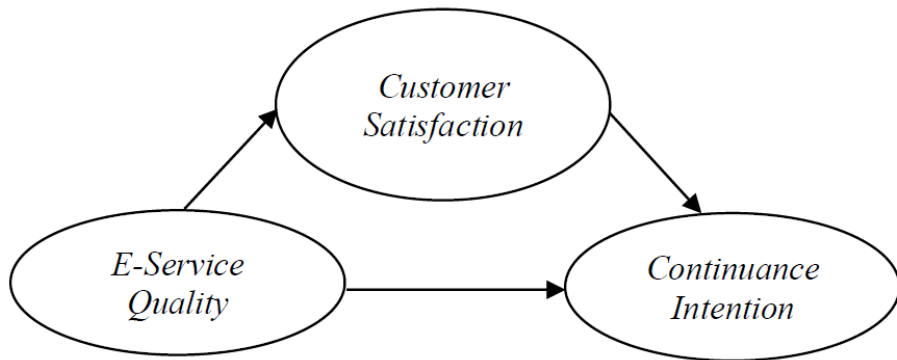
Figure 9 Model 2: Role of Customer Satisfaction in Mediating the Influence of E-Service Quality on Continuance Intention

According to Baron and Kenny (1986), the customer satisfaction variable acts as a mediating variable if it meets several conditions. These conditions are: (a) there must be a significant influence between e-service quality and customer satisfaction, (b) there must be a significant influence of customer satisfaction on continuance intention, (c) if the direct influence of e-service quality on continuance intention becomes nonsignificant when the mediating variable is added (model 2), it is considered full mediation; however, if it remains significant but the significance value decreases, it is considered partial mediation. The results of the hypotheses can be seen in the following table:

Table 6 Results of Hypothesis 7 Testing

Model	Estimate	p-value	Conclusions
Model 1			
There is an influence of e-service quality on continuance intention.	0,816	0,000	There is a positive and significant influence.
Model 2			
There is an influence of e-service quality on customer satisfaction.	0,805	0,000	Condition a is met (significant).
There is an influence of customer satisfaction on continuance intention.	-0,040	0,698	Condition b is not met (not significant and negative estimate value).
There is an influence of e-service quality on continuance intention.	0,847	0,000	Condition c is met (significant).

From table 6, it can be observed that in the model without mediation (model 1), there is a significant influence between e-service quality and continuance intention (p-value = 0.000 < 0.05). Meanwhile, in the model with the added mediating variable (model 2), condition a is fulfilled, meaning there is a significant influence between e-service quality and customer satisfaction (p-value = 0.000 < 0.05). However, condition b is not met, as there is no significant influence between customer satisfaction and continuance intention (p-value = 0.698 > 0.05). Despite this, condition c is fulfilled, indicating a significant influence of e-service quality on continuance intention (p-value = 0.000 < 0.05). So it can be concluded that customer satisfaction does not have a mediating role

in influencing e-service quality on continuance intention or hypothesis seven is not supported.

Testing Mediating Variable of Customer Trust

Hypothesis 8 tests the role of customer trust in mediating the relationship between e-service quality and continuance intention. Thus, the model is divided into two parts for comparison. The first model shows the direct influence of e-service quality on continuance intention, while the second model includes the mediating variable of customer trust in the relationship between e- service quality and continuance intention.

Figure 10 Model 1: Direct Influence of E-Service Quality on Continuance Intention
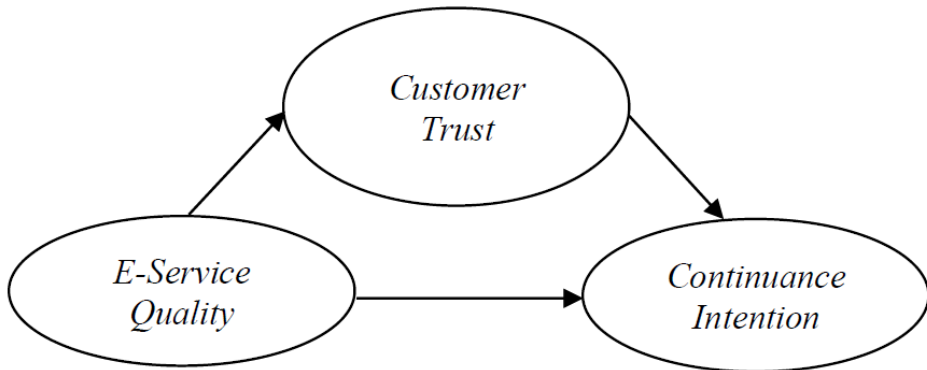

Figure 11 Model 2: Role of Customer Trust in Mediating the Influence of E-Service Quality on Continuance Intention

According to Baron and Kenny (1986), the customer trust variable acts as a mediating variable if it meets several conditions. These conditions are: (a) there must be a significant influence between e-service quality and customer trust, (b) there must be a significant influence of customer trust on continuance intention, (c) if the direct influence of e-service quality on continuance intention becomes nonsignificant when the mediating variable is added (model 2), it is considered full mediation; however, if it remains significant but the significance value decreases, it is considered partial mediation. The results of the hypotheses can be seen in the following table.

From table 7, it can be observed that in the model without mediation (model 1), there is a significant influence between e-service quality and continuance intention (p-value = 0.000 < 0.05). Meanwhile, in the model with the added mediating variable (model 2), condition a is fulfilled, meaning there is a significant influence between e-service quality and customer trust (p-value = 0.000 < 0.05). Condition b is also met, which means that there is a significant influence between customer trust on continuance intention (p-value = 0.010 <0.05). Then the estimated value of the direct effect of e-service quality on continuance intention in model 2 has decreased when compared to

model 1 (0.495 < 0.816) so it can be concluded that customer trust has a partial mediating role in influencing e- service quality on continuance intention is supported or hypothesis 8 is supported.

Table 7 Results of Hypothesis 8 Testing

Model	Estimate	p-value	Conclusions
Model 1			
There is an influence of e-service quality on continuance intention.	0,816	0,000	There is a positive and significant influence.
Model 2			
There is an influence of e-service quality on customer trust.	0,885	0,000	Condition a is met (significant).
There is an influence of customer satisfaction on continuance intention.	0,362	0,010	Condition b is not met (not significant and negative estimate value).
There is an influence of e-service quality on continuance intention.	0,495	0,000	Condition c is met (significant).

Discussion of Research Results

This can guide service providers to carefully consider the quality of service provided. If the quality of service does not meet user expectations, users are more likely to switch to mobile health applications that better fulfill their needs and trust (Yulaikah, 2022).

Hypothesis 1

The first hypothesis tests the positive influence of e-service quality on continuance intention. The results of this study indicate that e-service quality positively affects continuance intention. This finding is consistent with the study conducted by Li et al. (2022), which found a positive influence of service quality on users' intention to adopt health application usage.

Hypothesis 2

The second hypothesis tests the positive influence of e-service quality on customer satisfaction. The results of this study indicate that e-service quality does not have a positive influence on customer satisfaction. This result contradicts findings from studies conducted by Aditya et al. (2021), Magdalena & Jaolis (2018), and Tantarto et al. (2020). However, it is in line with the research by Kusumo & Vidyanata (2022), which found that service quality does not have a positive influence on customer satisfaction. It is known that health consultation services with doctors provided through the mHealth application are carried out online. This is different from consultations that are generally carried out face-to-face. The difference in this form of service can affect user judgment. In addition, in the mHealth application, each customer will get treatment from a different doctor, so the customer's opinion on the level of service quality can also be different.

Hypothesis 3

The third hypothesis tests the positive influence of e-service quality on customer trust. The results of this study indicate that e-service quality has a positive influence on customer trust. This means that higher e-service quality provided by the mHealth application will increase customer trust in the application. This finding is consistent

with the research conducted by Elizar et al. (2020), which stated that high service quality increases customer trust.

Hypothesis 4

The fourth hypothesis tests the influence of customer satisfaction on continuance intention. The results of this study indicate that customer satisfaction does not have a positive influence on continuance intention. This result contradicts findings from studies conducted by Hsu & Lin (2020), Kaium et al. (2020), and Wang et al. (2019). However, this result is in line with the research by Kusumo & Vidyanata (2022), which found that customer satisfaction does not have a positive influence on repurchase intention. It is known that customer satisfaction or dissatisfaction with a product affects consumer behavior in subsequent purchases (Rusdi, 2012).

Hypothesis 5

The fifth hypothesis tests the positive influence of customer trust on continuance intention. The results of this study indicate that customer trust influences continuance intention. This means that higher customer trust will increase continuance intention toward the mHealth application. This result is supported by several studies which show that trust can affect customer continuance intention (Fox & Connolly, 2018; Meng et al., 2022; Shao et al., 2019).

Hypothesis 6

The sixth hypothesis tests the positive influence of customer trust on customer satisfaction. The results of this study indicate that customer trust has a positive influence on customer satisfaction. Previous studies have shown a positive influence of customer trust on customer satisfaction (Muharam et al., 2021). Earlier research also supports these findings, indicating that customer trust has a positive and significant influence on satisfaction (Nasution et al., 2022). This demonstrates that higher trust offered to customers affects their pleasure and satisfaction (Nasution et al., 2022).

Hypothesis 7

The seventh hypothesis tests whether customer satisfaction mediates the relationship between e-service quality and continuance intention. The results of this study indicate that customer satisfaction does not mediate the relationship between e-service quality and continuance intention. This is consistent with the study by Kusumo & Vidyanata (2022), which states that providing high-quality service to customers does not result in high satisfaction but leads to repurchase intention because customers prioritize service quality over satisfaction.

Hypothesis 8

The eighth hypothesis tests whether customer trust mediates the relationship between e- service quality and continuance intention. The results of this study show that customer trust partially mediates the relationship between e-service quality and continuance intention. This finding aligns with the research by Li et al. (2022), which found that users' perception of trust plays a significant mediating role in the relationship between e-service quality and continuance intention to use mHealth services. Good service quality can increase trust, leading to users' intention to reuse mHealth services.

Conclusions

Based on the research findings and discussions obtained in the previous chapters, it can be concluded that out of the eight hypotheses in this study, five hypotheses are supported, and two hypotheses are not supported. E-Service quality has a positive

influence on customer trust. E- Service quality has a positive influence on continuance intention. Customer trust has a positive influence on continuance intention. Customer trust partially mediates the relationship between E- Service quality and continuance intention. Customer trust has a positive influence on customer satisfaction. E-Service quality does not have a positive influence on customer satisfaction. Customer satisfaction does not have a positive influence on continuance intention. Furthermore, customer satisfaction does not mediate the relationship between E-Service quality and continuance intention.

Implications

The results of this research are expected to have implications for managers of mHealth application service providers to consider factors that can enhance users' intention to reuse the application. Thus, these managerial implications can provide benefits to various stakeholders as follows:

- o Managers of mHealth application service providers need to enhance service quality by fostering a strong attachment to the application, helping users stay connected.
- o Service providers should focus on building trust so that users can rely on the application for their healthcare needs. Strategies could include enhancing the professional skills and communication attitudes of healthcare providers to build a trusting patient-provider relationship.
- o Managers need to improve user satisfaction by enhancing and refining the services provided through the application.
- o Managers should work towards increasing users' intention to reuse the application, possibly through enhancing user experience and service quality.

Limitations and recommendations

Limitations

This study is limited to users of healthcare applications in Indonesia, which restricts the generalization of the findings. Thus, further additions or improvements to the sample are necessary.

This study only employs four variables: e-service quality, customer trust, customer satisfaction, and continuance intention.

Recommendations

Subsequent research could focus more specifically on particular healthcare application services, such as monitoring health, medication purchasing, and other health-related services, for a more nuanced understanding.

Future studies could consider adding or modifying other variables that may influence users' continuance intention, such as perceived usefulness, perceived ease of use, monetary cost, health anxiety, and technology anxiety (Khalil et al., 2020; Meng et al., 2022).

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