

The Effect of Service Quality on Customer Loyalty with Customer Satisfaction as a Mediation Variable at Permata Farma Pharmacy

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Abstract. *This study aims to describe and analyze the effect of service quality on customer loyalty through customer satisfaction as a mediating variable at Permata Farma Pharmacy. This study is an explanatory research using non-probability sampling, yielding 105 customer samples from Permata Farma Pharmacy. Data were collected using a questionnaire distributed to and completed by respondents who met the criteria. Data analysis in this study employed Structural Equation Modeling (SEM) with Partial Least Squares (PLS). The results indicate that service quality has a significant positive effect on customer loyalty; customer satisfaction has a significant positive effect on customer loyalty; and service quality has a significant positive effect on customer loyalty through customer satisfaction as a mediating variable. In terms of theoretical implications, this study strengthens the causal model linking service quality, customer satisfaction, and customer loyalty by confirming the role of customer satisfaction as a mediating variable, while also extending the generalizability of the model to the context of retail pharmacies in Indonesia. From a managerial perspective, these findings imply that Permata Farma Pharmacy needs to prioritize improving service quality particularly staff competence, the quality of interpersonal relationships, and the comfort of the pharmacy environment as a key strategy for building customer satisfaction, which in turn will foster sustainable customer loyalty.*

Keywords: *Customer Loyalty; Customer Satisfaction; Pharmacy; Service Quality.*

1. Introduction

The topic of customer loyalty remains an interesting topic to study in the context of management research, in an era of increasingly competitive business competition. In the pharmaceutical and healthcare sectors, customer loyalty in particular is one of the strategic factors that determine the sustainability of a company. Loyalty has great strategic value for a company, because the existence of loyal customers can be the foundation of long-term business stability. This is evidenced by the numerous research results conducted by several previous researchers, who examined this topic in relation to different variables in various business sectors such as (Izogo & Ogba, 2015; Cao et al., 2021; Khatoon et al., 2020; Sholikhah & Hadita, 2023; Slack & Singh, 2020; Wang & Tao, 2019).

Customer loyalty is a consumer's commitment and devotion to continually purchase and use a brand's products or services, based on satisfaction, trust, and emotional bonds. Customer loyalty itself can be influenced by various factors, including brand image, price, location, product availability, trust, customer satisfaction, and the quality of service provided by pharmacists and pharmacy staff. In this context, service quality is believed to be a crucial factor in fostering customer loyalty. Research conducted by Slack & Singh (2020) stated that service quality has an influence on customer loyalty. However, research conducted by Purba et al., (2023) showed different results, indicating that service quality had no significant effect on customer loyalty. This was because not all aspects of service quality provided by service providers were able to foster customer loyalty. These research results support previous research by Şahin et al., (2019) which produced similar findings, that service quality does not have a significant influence on customer loyalty. Furthermore, Pradnyadewi & Giantari, (2022) found that service quality mediated by customer satisfaction had no significant effect on customer loyalty. The inconsistency of the research results was also demonstrated by researchers. Jiang et al., (2016) Service quality negatively impacts customer loyalty. This suggests that higher service quality leads to lower customer loyalty, and vice versa. The differences in results found in previous studies by the aforementioned researchers indicate a research gap in the relationship between service quality and customer loyalty. To bridge this research gap, customer satisfaction is proposed as a mediating variable in the relationship between service quality and customer loyalty. Customer satisfaction is a person's feeling of pleasure, contentment, or disappointment that arises after comparing the perceived performance (results) of a product or service with their expectations.

Pharmacies serve not only as drug providers but also as healthcare institutions that must be able to provide the best experience for their customers. In an era of increasingly competitive business, particularly in the pharmaceutical and healthcare sectors, customer loyalty is one of the strategic factors determining a company's sustainability. The pharmaceutical industry is a business sector that plays a strategic role in the national healthcare system, while also becoming an arena of increasingly fierce competition as the number of pharmacies in Indonesia continues to grow. According to data from the Ministry of Health of the Republic of Indonesia, the number of pharmacies in Indonesia continues to experience significant growth from year to year, so customers now have a multitude of choices in meeting their drug and healthcare product needs. In such a highly competitive environment, retaining existing customers is far more economically valuable than continuously seeking new ones, considering that the cost of acquiring new customers is estimated to be five to seven times higher than the cost of retaining existing customers. Customer loyalty in this context is an invaluable business asset, as loyal customers not only make consistent repeat purchases but also tend to voluntarily recommend the pharmacy to their family, relatives, and colleagues, are willing to pay higher prices than competitors, and are relatively unaffected by offers or promotions from other pharmacies. All of these behaviors directly contribute to revenue growth and the long-term sustainability of the pharmacy business. This phenomenon is particularly relevant in the pharmaceutical business, where drug purchasing decisions are often influenced by trust and previous experience. Satisfied customers tend to make one pharmacy their primary choice and not switch to a competitor even when many alternatives are available. In Jambi, the intense level of competition in the pharmaceutical business is reflected in the number of pharmacies that showed significant growth from 2020 to 2024, as shown in Graph 1.1 below:

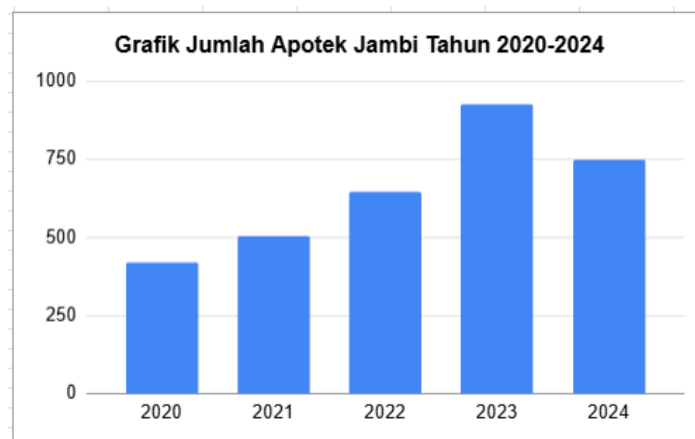


Figure Graph of the Number of Pharmacies in Jambi 2020-2024

The graph above shows a significant year-over-year upward trend, starting with around 420 pharmacies in 2020, increasing to 500 in 2021, 650 in 2022, and peaking at around 900 in 2023. However, the number of pharmacies in Jambi is expected to decline to around 750 in 2024. This decline can be explained by increasingly fierce business competition resulting from the emergence of many new, large-scale, nationally networked pharmacies, such as Kimia Farma and K-24, which offer more comprehensive service offerings, including online services, digital ordering, and home delivery. This situation has caused some small or traditional pharmacies to be unable to compete, leading to closures or mergers, ultimately resulting in a decline in the overall number of pharmacies in 2024. This phenomenon of increasingly fierce competition in pharmacies is still being felt today, and its impact is still being felt, among others, by Permata Farma Pharmacy.

2. Research Methods

This research falls into the causal research category, which aims to determine the causal relationship or influence between two or more variables. Therefore, this research focuses on examining the influence of rewards and punishments on employee performance, with job satisfaction as a mediating variable. In terms of its analytical approach, this study uses a quantitative method. Quantitative research is a research approach that produces data in numerical form and is analyzed using statistical techniques as a tool to process the data obtained, as explained by (Sekaran & Bougie, 2016). This research is explanatory research, which is a type of research that aims to explain causal relationships (cause and effect) between variables through hypothesis testing ((Sekaran & Bougie, 2016). This research not only describes the phenomenon, but also attempts to answer why and how one variable influences another variable.

3. Results and Discussion

3.1. Data analysis

The data analysis in this study used Structural Equation Modeling (SEM) as a measurement indication method. The SEM analysis used was Partial Least Squares (PLS) using the calculation process with SmartPLS software version 3.0. The PLS-SEM analysis is divided into two parts: the outer model (measurement model) and the inner model (structural model), which are explained as follows.

a. Measurement Model Analysis (Outer Model)

Measurement models are used to test the validity and reliability of a model applied to research variables. Analysis is used to first determine whether a model is suitable for use and to measure each variable. Outer model evaluation consists of:

b. Convergent Validity

Convergent validity is a form of testing within the measurement model (outer model) in SEM-PLS, which aims to assess the extent to which indicators within a construct are truly correlated with each other and capable of representing the same latent variable. The results of the convergent validity test are presented in the following table.

Table Convergent Validity Test Results

<i>Construct</i>	<i>Items</i>	<i>Loadings</i>	<i>Information</i>
Quality of Service (X)	KL1	0.981	Valid
	KL2	0.976	Valid
	KL3	0.982	Valid
	KL4	0.970	Valid
	KL5	0.971	Valid
	KL6	0.975	Valid
	KL7	0.968	Valid
	KL8	0.983	Valid
	KL9	0.971	Valid
	KL10	0.979	Valid
	KL11	0.981	Valid
	KL12	0.981	Valid
	KL13	0.968	Valid

<i>Construct</i>	<i>Items</i>	<i>Loadings</i>	<i>Information</i>
	KL14	0.973	Valid
	KL15	0.973	Valid
	KL16	0.972	Valid
	KL17	0.979	Valid
	KL18	0.969	Valid
	KL19	0.977	Valid
Customer Loyalty (Y)	LP1	0.978	Valid
	LP2	0.984	Valid
	LP3	0.981	Valid
	LP4	0.977	Valid
	LP5	0.978	Valid
	LP6	0.981	Valid
	LP7	0.973	Valid
	LP8	0.978	Valid
	LP9	0.971	Valid
	LP10	0.978	Valid

<i>Construct</i>	<i>Items</i>	<i>Loadings</i>	<i>Information</i>
Customer Satisfaction (Z)	KP1	0.987	Valid
	KP2	0.986	Valid
	KP3	0.989	Valid
	KP4	0.985	Valid
	KP5	0.985	Valid
	KP6	0.987	Valid
	KP7	0.980	Valid
	KP8	0.976	Valid
	KP9	0.989	Valid
	KP10	0.987	Valid
	KP11	0.990	Valid
	KP12	0.980	Valid
	KP13	0.981	Valid
	KP14	0.982	Valid
	KP15	0.989	Valid
	KP16	0.989	Valid

<i>Construct</i>	<i>Items</i>	<i>Loadings</i>	<i>Information</i>
	KP17	0.982	Valid
	KP18	0.978	Valid
	KP19	0.984	Valid
	KP20	0.987	Valid
	KP21	0.987	Valid

Source: Processed Primary Data, 2026

Based on the results of the convergent validity test through the outer loading value, all indicators used in this study showed very high loading values and met the validity requirements. In the Service Quality construct (X) consisting of 19 indicators, the outer loading value ranged from 0.968 to 0.983, with the highest value in the KL8 indicator of 0.983 and the lowest value in the KL7 and KL13 indicators of 0.968. In the Customer Loyalty construct (Y) consisting of 10 indicators, the outer loading value ranged from 0.971 to 0.984, with the highest value in the LP2 indicator of 0.984 and the lowest value in the LP9 indicator of 0.971. Meanwhile, in the Customer Satisfaction construct (Z) consisting of 21 indicators, the outer loading value ranged from 0.976 to 0.990, with the highest value in the KP11 indicator of 0.990 and the lowest value in the KP8 indicator of 0.976. Overall, all indicators of the three constructs were declared valid because they had outer loading values above the required threshold, namely 0.70, so that all indicators were suitable for use to measure the constructs concerned in this study.

c. Average Variance Extracted (AVE)

Average Variance Extracted (AVE) is a measure in SEM-PLS used to assess convergent validity at the construct level. AVE indicates how much of the average indicator variance can be explained by a latent construct. The results of the AVE test are presented in Table 4.9 as follows.

Table Average Variance Extracted (AVE) Test Results

Variables	Average Variance Extracted (AVE)
Customer satisfaction	0.970
Quality of Service	0.951
Customer Loyalty	0.956

Source: Processed Primary Data, 2026

Based on the results of the convergent validity test through the Average Variance Extracted (AVE) value, all variables in this study showed that the AVE value met the required validity requirements, namely more than 0.5. The Customer Satisfaction variable had the highest AVE value of 0.970, followed by the Customer Loyalty variable of 0.956, and the Service Quality variable with an AVE value of 0.951. Overall, all variables in this study met the validity test.

d. Reliability Test

In SEM-PLS, reliability refers to the level of internal consistency of indicators in measuring a latent construct. This means that reliability indicates the extent to which indicators within a variable provide stable and consistent results in representing the same concept. Reliability testing can be determined by examining the Cronbach's Alpha and Composite Reliability (CR) values. A reliable variable is one with a Cronbach's Alpha and Composite Reliability value greater than 0.70. The following table presents the reliability test results.

Table Reliability Test Results

Variables	Cronbach's Alpha	Composite Reliability
Customer satisfaction	0.998	0.999

Quality of Service	0.997	0.997
Customer Loyalty	0.995	0.995

Source: Processed Primary Data, 2026

Based on the results of the reliability test using Cronbach's Alpha and Composite Reliability, all variables in the study met the reliability test. In the Cronbach's Alpha value, the Service Quality variable obtained the highest value of 0.998, followed by the Customer Loyalty variable at 0.997, and the Customer Satisfaction variable at 0.995. Meanwhile, in the Composite Reliability value, the Service Quality variable again obtained the highest value of 0.999, while the Customer Loyalty and Customer Satisfaction variables each obtained values of 0.997 and 0.995, respectively. Overall, all variables in this study have Cronbach's Alpha and Composite Reliability values greater than 0.70, so all measurement instruments used in this study are declared reliable.

e. Multicollinearity test

A multicollinearity test is needed to determine whether the variables are free from multicollinearity (ibid., 2015). The criteria for this test are based on the Variance Inflation Factors (VIF) value. If the correlation factors (VIF) value is <5 , it can be concluded that the variables are free from multicollinearity. The results of the multicollinearity test are presented in the following table.

Table Multicollinearity Test Results

Variables	VIF
Customer Satisfaction -> Customer Loyalty	4,859
Service Quality -> Customer Satisfaction	1,000
Service Quality -> Customer Loyalty	4,859

Source: Processed Primary Data, 2026

Based on the results of the multicollinearity test using the Variance Inflation Factor (VIF) value, all relationships between variables in this study showed values that were within acceptable limits. The relationship between Customer Satisfaction and Customer Loyalty and

Service Quality and Customer Loyalty each obtained a VIF value of 4.859, while the relationship between Service Quality and Customer Satisfaction obtained a VIF value of 1.000. All VIF values were less than 5, so it can be concluded that there is no multicollinearity problem in this research model.

3.2. Structural Model Analysis (Inner Model)

a. Coefficient of Determination

The R^2 value indicates the proportion of variation in the dependent variable that can be explained by the constructs in the model.

Table Reliability Test Results

Dependent Variable	R^2	Information
Customer satisfaction	0.794	Strong
Customer Loyalty	0.811	Strong

Source: Processed Primary Data, 2026

Based on the results of the R-Square test, both dependent variables in this study showed a high coefficient of determination. The Customer Satisfaction variable obtained an R^2 value of 0.794, which means that 79.4 percent of the variance in Customer Satisfaction can be explained by the Service Quality variable, while the remaining 20.6 percent is explained by other variables outside this research model. Meanwhile, the Customer Loyalty variable obtained an R^2 value of 0.811, which means that 81.1 percent of the variance in Customer Loyalty can be explained by the Service Quality and Customer Satisfaction variables, while the remaining 18.9 percent is explained by other variables outside the model. Overall, both R^2 values are classified as strong, which indicates that this research model has good predictive ability in explaining the variance in the dependent variables studied.

b. Q-square Predictive Relevance Test

The Q2 test has criteria that can be said to have a good goodness of fit value when the Q2 value > 0 so that it has a predicate of predictive relevance. If the value of Q2 < 0 then it has an insufficient value.

Table Q-Square Predictive Relevance Test Results

Variables	Q ² (=1-SSE/SSO)
Customer satisfaction	0.764
Customer Loyalty	0.766

Source: Processed Primary Data, 2026

Based on the results of the Q-Square test used to measure the predictive relevance of the research model, both variables in this study showed adequate values. The Customer Satisfaction variable obtained a Q² value of 0.764, while the Customer Loyalty variable obtained a Q² value of 0.766. All Q² values are far above the zero value which is the minimum threshold required, so it can be concluded that this research model has good predictive relevance for the two dependent variables studied, and the exogenous variables in the model are able to predict the endogenous variables accurately.

c. Effect size test

This test is necessary to determine the magnitude of the influence of one variable on another using the effect size, or f-square. The criteria for this test are an f-square value of 0.02 (small), 0.15 (medium), and 0.35 (large). The results of the effect size test are presented in the following table.

Table Effect size test results

Variables	f-Square	Information
Customer Satisfaction -> Customer Loyalty	0.390	Big
Service Quality -> Customer Satisfaction	3,859	Big
Service Quality -> Customer Loyalty	0.116	Big

Source: Processed Primary Data, 2026

Based on the results of the effect size test, all relationships between variables in this study showed a relatively large effect size, with the following details:

1. The relationship between Service Quality and Customer Satisfaction obtained the highest f-square value of 3.859, which indicates that Service Quality contributes a very dominant effect on Customer Satisfaction.
2. The relationship between Customer Satisfaction and Customer Loyalty obtained an f-square value of 0.390, which shows that Customer Satisfaction has a large contribution effect on Customer Loyalty.
3. The relationship between Service Quality and Customer Loyalty obtained an f-square value of 0.116, which shows that Service Quality still contributes a significant effect on Customer Loyalty even though the value is relatively smaller compared to other relationships.

d. Normal Fit Index Test

This test can be performed by examining the NFI value in the model fit. The criteria for this test are that if the value is >0.1 , the research model is considered good. The results of the Normal Fit Index test are presented in the following table.

Table Normal Fit Index Test Results

	<i>Saturated Model</i>	<i>Estimated Model</i>	Information
NFI	0.835	0.835	Marginal Fit

Source: Processed Primary Data, 2026

Based on the results of the model fit test through the Normed Fit Index (NFI) value, this research model obtained a value of 0.835 for both the saturated model and the estimated model. Referring to the applicable criteria, a model is said to be a good fit if it has an NFI value ≥ 0.90 , while it is said to be a marginal fit if the NFI value is in the range of $0.80 \leq \text{NFI} \leq 0.90$. Because the NFI value obtained of 0.835 is within that range, this research model is classified as a marginal fit category. The similarity of the NFI values between the saturated model and the estimated model indicates that the estimated model has represented the data consistently.

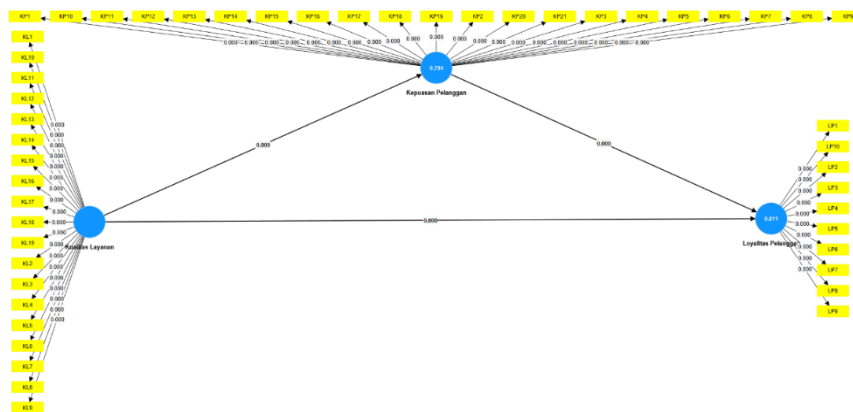


Figure Inner Model Results

e. The Influence of Service Quality on Customer Loyalty at Permata Farma Pharmacy

The results of the first hypothesis test prove that service quality has a significant positive effect on customer loyalty. This is indicated by the original sample coefficient value of 0.326 with a p-value of 0.000 (<0.05). Thus, the first hypothesis in this study is statistically accepted. This finding indicates that the better the quality of service provided by a pharmacy, the higher the level of customer loyalty to the pharmacy. Customers not only assess pharmacies based on the availability of drugs alone, but also from the overall service experience they feel, including the quality of communication between pharmacy staff regarding drugs and patient health conditions, information and assistance provided by staff regarding the selection of non-prescription drugs, the quality of interpersonal relationships between patients and pharmacy staff, the technical competence and professionalism of pharmacy staff, the atmosphere and physical condition of the pharmacy environment and the contribution of pharmacy services to improving patient health outcomes (Carter et al., 2022).

These findings indicate that if a pharmacy is able to provide a consistent and quality service experience, customers will tend to make repeat purchases, be less likely to switch to a competitor (switching resistance), and be willing to recommend the pharmacy to others (positive word of mouth). In other words, service quality is one of the strategic factors that pharmacy management can control to build a long-term competitive advantage, considering that customer loyalty is closely related to the sustainability of the pharmacy business amidst the increasingly fierce competition in the pharmaceutical retail industry.

In the pharmacy context, dimensions such as empathy, reliability, and personal interaction have a significant impact on customer loyalty. Personal interaction, for example, is considered a crucial element in increasing customer perceived value (Darawong, 2025). High perceived value for pharmacy services, such as competitive pricing and tangible benefits, strengthens the relationship between service quality and customer loyalty (Diwayanti et al., 2025).

A study by Shie et al. (2022) found that service quality has a significant positive effect on patient loyalty. This is in line with a study by Carter et al. (2022) which stated that service quality has a positive effect on pharmacy customer loyalty. This study's results align with research by Yuliani et al. (2025) which proved that service quality has a positive and significant effect on pharmacy customer loyalty. This study showed that the better the service quality provided, the higher customer loyalty to the pharmacy. This indicates that fast, responsive, reliable service and a sense of security can encourage customers to make repeat purchases and continue using pharmacy services.

f. The Influence of Service Quality on Customer Satisfaction at Permata Farma Pharmacy

The results of the second hypothesis test indicate that service quality has a significant positive effect on customer satisfaction. This is indicated by the original sample coefficient value of 0.891 with a p-value of 0.000 (<0.05). Thus, the second hypothesis in this study is statistically accepted. This finding indicates that the better the service quality provided by the pharmacy, the higher the level of satisfaction felt by customers. According to Alanazi et al., (2023), customer satisfaction in the context of healthcare services is defined as the extent to which customers feel satisfied with the services they receive from healthcare providers, and is an important indicator in assessing the quality of services provided. This finding indicates that service quality is not merely a complement to pharmacy operations, but rather the main determinant of whether customers will feel comfortable and satisfied shopping at the pharmacy or not.

Personal interactions between pharmacy staff and customers, such as good communication and attentiveness, are crucial in building customer satisfaction (Jakobsen et al., 2023). Studies show that high service quality directly increases customer satisfaction. Timely medication delivery and a comfortable pharmacy environment contribute significantly to customer satisfaction (Gulet et al., 2023). The results of this study are in line with research by Georgiev et al., (2025) and Kharaba et al., (2026) which stated that service quality has a significant positive effect on pharmacy customer satisfaction.

Research by Budianto et al. (2022) and Suleiman & Albarq (2024) demonstrates that service quality has a positive and significant impact on pharmacy customer satisfaction. The study demonstrated that various dimensions of service quality—pharmacist attitude, education on medication use, speed of service, and pharmacy location—have a significant positive impact on customer satisfaction. These results indicate that the better the service quality provided by the pharmacy, the higher the level of customer satisfaction. Thus, these research findings reinforce the importance of service quality as a critical factor in creating customer satisfaction in pharmaceutical services.

g. The Influence of Customer Satisfaction on Customer Loyalty at Permata Farma Pharmacy

The results of the third hypothesis test indicate that customer satisfaction has a significant positive effect on customer loyalty. This is indicated by the original sample coefficient value of 0.598 with a p-value of 0.000 (<0.05). Thus, the third hypothesis in this study is statistically accepted. This finding indicates that the higher the level of satisfaction felt by customers, the greater their tendency to become loyal customers to the pharmacy. Satisfied customers tend to have a positive attitude towards the pharmacy, so they not only make repeat purchases but also recommend the pharmacy to others and are reluctant to switch to another pharmacy even if offered more competitive prices by competitors (Abbasi et al, 2023) This indicates that customer satisfaction serves as an emotional and psychological foundation that drives the formation of customer commitment, where satisfied customers will be more trusting, feel valued, and ultimately build long-term bonds with the pharmacy.

Customer satisfaction directly influences customer loyalty. Studies show that high satisfaction with pharmacy services, such as personal interactions, store policies, and product availability, contributes to customer loyalty with a strong correlation coefficient ((Gül et al., 2023). Customer satisfaction is a crucial element that significantly influences customer loyalty in pharmacies. By improving service quality, building trust, and creating positive customer experiences, pharmacies can retain loyal customers and increase their competitiveness in the market (Pribadi et al., 2021).

Research by Jasin et al. (2023) demonstrates that customer satisfaction is a key determinant of customer loyalty. These findings reinforce the notion that customer loyalty is influenced not only by direct service quality but also by the satisfaction customers experience after receiving the service. In the pharmacy context, customers who are satisfied with the quality of service, the pharmacist's attention, and their experience during the service are more likely to return, continue using the same pharmacy, and recommend it to others. Therefore, improving customer satisfaction is an important strategy for creating long-term customer loyalty.

This is in line with the research findings of Gunawan et al. (2025), which showed that customer satisfaction has a positive and significant effect on pharmacy customer loyalty. Customers who are satisfied with the service are more likely to make repeat purchases, continue using the pharmacy, and recommend it to others. Therefore, customer satisfaction is a crucial factor in building customer loyalty, so pharmacy managers need to continuously improve service quality and customer experience to maintain loyalty.

h. The Mediating Role of Customer Satisfaction in the Relationship between Service Quality and Customer Loyalty at Permata Farma Pharmacy

The results of the fourth hypothesis test indicate that service quality has a significant positive effect on customer loyalty through customer satisfaction as a mediating variable. This is indicated by the original sample coefficient value of 0.533 with a p-value of 0.000 (<0.05). Thus, the fourth hypothesis in this study is statistically accepted. This finding indicates that service quality not only has a direct impact on customer loyalty, but also works indirectly by first increasing customer satisfaction. This indicates that customer satisfaction acts as a connecting mechanism (mediator) that strengthens the influence of service quality on loyalty, where customers who receive quality service will feel satisfied first, and this satisfaction then encourages the formation of loyalty. Thus, pharmacy efforts to improve service quality will have a more optimal impact on customer loyalty if accompanied by a strategy that also pays attention to and consistently improves customer satisfaction, so that both aspects need to be managed simultaneously by pharmacy management.

Pasya's (2024) research results show that service quality significantly influences patient satisfaction and loyalty, patient satisfaction significantly influences loyalty, and service quality significantly influences loyalty, mediated by patient satisfaction. Customer satisfaction has been shown to act as a significant mediator between service quality and customer loyalty in the pharmaceutical service environment. Adelia & Purnama's (2025) test results show that customer satisfaction is proven to be a significant mediator between service quality and customer loyalty. These findings confirm that service quality not only has a direct impact on loyalty but also indirectly increases loyalty through increasing customer satisfaction first.

Customer satisfaction mediates the relationship between service quality and customer loyalty. High-quality service in pharmacies increases satisfaction, which in turn strengthens customer loyalty (Decha et al., 2020; Chandra et al., 2020). Customer satisfaction resulting from good service quality also contributes to customer loyalty. Satisfied customers are more likely to return and recommend the service to others (Handayani, 2021).

Studies show that high service quality can directly increase customer loyalty, especially if customers are satisfied with the service provided (Darawong, 2025). Customer loyalty is often indirectly influenced through customer satisfaction. This means that service quality first increases customer satisfaction, which then contributes to customer loyalty (Supriyanto et al., 2021).

A study by Hidayat et al. (2024) showed that customer satisfaction can be a mediating variable between the indirect influence of service quality on customer loyalty. This finding confirms that although service quality has a direct influence on loyalty, its influence will be stronger when mediated by customer satisfaction, because customer satisfaction is the connecting bridge that transforms service quality perceptions into loyalty commitments. Ismail et al.

(2021) showed that customer satisfaction plays a mediating role in the relationship between service quality and customer loyalty, where service quality has a positive influence on customer satisfaction, which in turn has a positive influence on customer loyalty.

4. Conclusion

Based on the results of the data analysis and discussion that have been described, the following conclusions can be drawn:

1. Service quality has a significant positive effect on customer loyalty. These findings indicate that the better the quality of service a pharmacy provides, the higher the level of customer loyalty. Customers judge pharmacies not only by the availability of medications, but also by the overall service experience.
2. Service quality has a significant positive effect on customer satisfaction. These findings indicate that service quality is not merely a complement to pharmacy operations, but rather the primary determinant of whether customers will feel comfortable and satisfied shopping at the pharmacy or not.
3. Customer satisfaction has a significant positive effect on customer loyalty. These findings indicate that customer satisfaction acts as an emotional and psychological foundation that drives the formation of customer commitment, where satisfied customers will be more trusting, feel valued, and ultimately build long-term bonds with the pharmacy.
4. Service quality has a significant positive effect on customer loyalty through customer satisfaction as a mediating variable. These findings indicate that service quality not only has a direct impact on customer loyalty, but also works indirectly by increasing customer satisfaction first.

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