Research Article

Measuring Customer Loyalty Through Service Quality and Customer Satisfaction at Wirun Pharmacy in Purworejo Regency

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Abstract. This study aims to analyze the extent to which service quality and customer satisfaction influence consumer loyalty at Wirun Pharmacy, Purworejo Regency. The research adopts a quantitative explanatory approach, employing multiple linear regression, t-test, F-test, and coefficient of determination analysis as its analytical techniques. The sample of 104 respondents was determined using the Lemeshow formula to ensure representativeness. The findings of the study demonstrate that both service quality and customer satisfaction exert a positive and significant influence on customer loyalty. Among these two factors, customer satisfaction emerges as the most dominant variable shaping loyalty, highlighting its central role in determining whether consumers remain committed to continuing their transactions with the pharmacy. These results suggest that ensuring customer satisfaction is not only an outcome but also a strategic tool to foster long-term loyalty. Furthermore, the research underscores the necessity for pharmacy service providers to maintain high standards of service quality, while simultaneously focusing on customer-oriented strategies that prioritize satisfaction. Continuous improvement in aspects such as responsiveness, reliability, assurance, and empathy becomes essential to enhance consumer experiences. Practical implications of the findings provide valuable insights for pharmacy managers in designing service innovations, implementing customer-centered policies, and strengthening retention strategies in a competitive healthcare service environment. Overall, this study contributes to the understanding of how service-related factors interact to create sustainable consumer loyalty, offering guidance for both academic research and managerial practices in the field of pharmacy services. The study also highlights the relevance of customer relationship management, innovation, and effective communication as critical elements to sustain competitive advantage in the dynamic pharmaceutical industry.

Keywords: Loyalty; Satisfaction; Service; Pharmacy; Purworejo

1. INTRODUCTION

In this era of globalization and rapid technological development, pharmacies serve as healthcare providers offering medicines and pharmaceutical services to the public. According to Minister of Health Regulation No. 73 of 2016, a pharmacy is a place where pharmacists, pharmaceutical technicians, or pharmacist assistants practice.

In the face of increasingly fierce competition, one important step is to strengthen customer loyalty. Griffin (2012:16) states that customer loyalty is the tendency of consumers to choose one brand over another. To achieve this, responsive pharmacy managers typically develop various programs to identify and retain loyal customers, such as offering free memberships, special family service packages, discounts on certain types of purchases, and even free health screenings, such as blood sugar or cholesterol checks.

Globally, the World Health Assembly, as part of the policymaking body of the World Health Organization (WHO), has highlighted the importance of quality healthcare services since 2002 (Demissie et al., 2022). Providing high-quality healthcare services is a crucial element of any healthcare system. Inappropriate services can result in unsafe, ineffective, and even low-quality therapy (Pratondo et al., 2024).

Patient satisfaction can be achieved when the service delivery process by the provider aligns with patient expectations. These expectations are influenced by several factors, such as personal needs, previous experiences, recommendations from others, and advertising. Therefore, patient expectations, which underlie evaluations, can vary between two similar business organizations.

The role of pharmacies in providing quality healthcare services to the community demonstrates the importance of this research. Wirun Pharmacy can develop more effective strategies to improve service quality and customer satisfaction by identifying factors that impact customer loyalty. This will, in turn, increase customer loyalty and encourage the growth and sustainability of the pharmacy business in Purworejo Regency.

This research offers innovation by focusing on Wirun Pharmacy in Purworejo Regency, a region that has not been studied in depth before. The variables used are service quality and customer satisfaction, combined in a single model to measure customer loyalty. This method is expected to provide new perspectives for pharmacy management on how to improve service and customer satisfaction. Meanwhile, the aim of this study is to explore the influence of service quality and customer satisfaction on customer loyalty at Wirun Pharmacy, Purworejo Regency.

2. THEORETICAL STUDY

a. Quality of Service

One of the main factors influencing customer loyalty is service quality. According to Patel (2024), service quality encompasses a combination of consistent service performance, transparent communication, and sustainability in business operations. Patel also highlighted that customers are increasingly paying attention to the sustainability and ethical dimensions of service, making these aspects crucial in assessing service quality.

Manengal (2021), referring to previous studies, stated that service quality is dynamic and closely related to products, services, human resources, processes, and the environment. It must meet or even exceed customer expectations. Dzikra (2020) added that service quality is a strategic system that involves all elements of an organization, from management to employees, to ensure optimal customer needs are met. In his research, Manengal (2021) used service quality indicators covering products, services, human resources, processes, and the environment.

Based on the theoretical review and previous research findings, the following hypothesis can be proposed:

H1: The quality of service at Wirun Pharmacy has a partial positive influence on customer loyalty.

b. Customer satisfaction

According to Hidayati et al. (2021:80), customer satisfaction is the result of comparing customer perceptions of a product or service with their expectations. If product performance meets or exceeds customer expectations, they will be satisfied; conversely, if performance falls short of expectations, customers will be disappointed. Meanwhile, Mowen and Minor, as cited in Bahrudin and Zuhro's (2015) research, stated that customer satisfaction is the overall attitude displayed by customers after using a product or service.

To increase customer satisfaction, companies must design marketing strategies that attract consumer interest in the products offered. If a product is able to satisfy them, customers tend to continue choosing the same brand and reduce their interest in purchasing products from other brands (Aryani and Rosinta, in Nalendra, 2018).

Research conducted by Bahrudin and Zuhro (2015) revealed that, based on hypothesis testing, customer satisfaction and service quality have a positive and significant influence on customer loyalty. These results are consistent with the findings of Nalendra's (2018) research, which also concluded that customer satisfaction has a positive and significant impact on increasing customer loyalty.

H2: Partially, there is a positive influence between customer satisfaction and customer loyalty at Wirun Pharmacy.

c. Customer loyalty

Kotler and Keller (in Zusrony, 2021: 95) define loyalty as a very strong commitment from customers to continue purchasing or supporting favorite products or services in the future, despite various situational factors and marketing efforts that can influence the customer's decision to switch. This explanation aligns with Griffin's (2005: 22) statement, which states that loyalty can be categorized into four types based on the combination of attachment level and purchase frequency: no loyalty, low loyalty, latent loyalty, and high loyalty. Meanwhile, Widodo and Fitria (2023) revealed that improving service quality can have an effect on customer satisfaction, which ultimately has a positive impact on increasing loyalty, particularly in the pharmacy industry. Previous research by Palitati (2007) also showed a positive and significant correlation between customers' perceived value and their loyalty.

H3: Simultaneously and significantly, there is a positive influence between service quality and customer satisfaction on customer loyalty at Wirun Pharmacy.
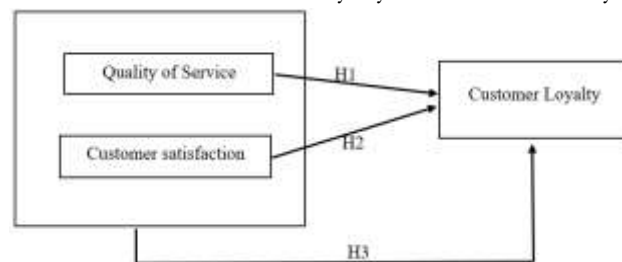
Source: data processed by researchers

FIGURE 1. RESEARCH FRAMEWORK

To measure customer loyalty, service quality and customer satisfaction with purchasing decisions, the indicators used are as follows:

TABLE 1. RESEARCH INDICATORS

Variables	Conceptual Definition	Indicator	Reference
Customer loyalty (Y)	Consumers' tendencies after using a product are to make repeat purchases, buy in large quantities, recommend, and maintain the product.	Make regular purchases	Griffin (2005)
		Demonstrates in immunity to the pull off the competition	Kotler dan Keller (2006)
		Add transaction amount	Palitati (2007)
Quality of service (X1)	The actions taken by a company are something that is not physically visible, but can be felt by customers.	*Empathy*	Zeithaml et al.,(2009:92)
		Responsivenes	
		Tangibles	
		Assurances	
		reliability	
Customer satisfaction (X2)	The satisfaction or dissatisfaction felt, as well as each customer's evaluation of the	Reliability	Tjiptono dan Chandra dalam Arianty (2015)
		Responsiveness	

performance results or various benefits obtained from the product, is carried out by comparing the conditions received with the ideal conditions expected according to needs, specifications and expectations.	Belief	
	Empathy	
	Tangible	

Source: Data processed by researchers

3. RESEARCH METHODS

This research is classified as explanatory research. According to Sugiyono (2017), descriptive research is an approach used to describe the location of each variable studied, while explaining the relationship or interaction between these variables. The purpose of this study is to evaluate customer loyalty by considering service quality and customer satisfaction levels. The population used in this study includes all customers of Wirun Pharmacy in Purworejo Regency, where the number is not known with certainty or is considered infinite. The researcher used the Lemeshow formula to determine the sample size, and 96 respondents were selected as the research sample. The data analysis methods applied included multiple correlation analysis, multiple regression, coefficient of determination, and conducting T-tests and F-tests, which were processed using the IBM SPSS version 26 statistical tool to calculate all of these analyses.

Table 2. Respondent Profile

	__Amount__	__Percentage__
__Gender:__ Man Woman	43 61	41,3% 58,7%
__Age__ < 20 years 20-30 years 31-40 years > 40 years	7 59 21 7	6,7% 56,7% 20,2% 16,3%
__Frequency of Visits to Wirun Pharmacy__ 1-2 times every month 3-5 times every month >5 times every month	74 24 6	71,2% 23,1% 5,8%

Source: primary data, 2025

4. RESULTS AND DISCUSSION

Validity Test

Validity testing was conducted on all questionnaire items with a sample size of 102 respondents and a significance level of $\alpha = 0.05$, so the rtable value used was 0.192. Based on the test results, all instrument items had a calculated r value greater than rtable (0.192). Thus, all statements in the questionnaire were declared valid and could be used for testing in the next stage.

Reliability Test

Reliability testing is a statistical method used to measure the accuracy and consistency of data in a study. A statement is considered reliable or valid if the Cronbach's Alpha coefficient is > 0,6.

Table 3. Reliability Test

Variables	Cronbach's Alpha
Quality of service	0.880
Customer satisfaction	0.835
Customer loyalty	0.817

Source: data processed by researchers

Based on the results obtained, it is shown that this research instrument is consistent because the Cronbach's Alpha value for all variables is >0,6. The calculation results indicate strong reliability, making the instrument suitable for use as a measuring tool in research.

Multiple Correlation Analysis

Multiple correlation analysis is carried out to determine the extent of the relationship between a number of independent variables and dependent variables simultaneously or concurrently.

Table 4. Multiple Correlation Results

Correlations

		TotalY	TotalX1	TotalX2
Pearson Correlation	TotalY	1.000	.460	.787
	TotalX1	.460	1.000	.446
	TotalX2	.787	.446	1.000
Sig. (1-tailed)	TotalY		.000	.000
	TotalX1	.000		.000
	TotalX2	.000	.000	
N	TotalY	104	104	104
	TotalX1	104	104	104
	TotalX2	104	104	104

Source: data processed from SPSS

Based on the analysis results using SPSS, it is known that the correlation value between the service quality variable (X1) and customer loyalty (Y) is 0,460. Referring to the correlation coefficient interpretation guidelines, this figure is in the range of 0,40-0,599, which indicates that the relationship between the two variables is in the moderate category. A positive correlation indicates that an increase in service quality will be followed by an increase in customer loyalty. Meanwhile, the relationship between the customer satisfaction variable (X2) and customer loyalty produces a coefficient of 0,787. Based on the interpretation guidelines, this value is included in the interval of 0,60-0,799, so it can be said that the relationship between the two variables is strong. This unidirectional correlation indicates that if customer satisfaction increases, then customer loyalty will also increase.

Multiple Linear Regression Analysis

Multiple linear regression is a statistical analysis technique used when more than one independent variable influences a dependent variable. This analysis aims to determine the extent and direction of each independent variable's influence on the dependent variable (Ghozali, 2018). The results of data processing using SPSS are presented below.

Table 5. Multiple Linear Regression Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.643	1.227		2.968	.004
	TotalX1	.088	.043	.137	2.040	.044
	TotalX2	.701	.065	.725	10.784	.000

a. Dependent Variable: TotalY

Source: data processed from SPSS

Based on the data in Table 5, the coefficient values for each variable are as follows:

Y = 3.643 + 0.088 X1 + 0.701 X2

Based on the results of the regression equation above, the following can be explained:

The constant value of 3.643 indicates that when the service quality (X1) and customer satisfaction (X2) variables are zero, customer loyalty (Y) will remain at 3.643. This means that customer loyalty has a base value of 3.643, which is unaffected by these two variables.

The regression coefficient for service quality (X1) is 0,088, indicating that every one-unit increase in service quality leads to a 0,088 increase in customer loyalty, assuming customer satisfaction remains unchanged. Meanwhile, the regression coefficient for customer satisfaction (X2) is 0,701, indicating that a one-unit increase in customer satisfaction leads to a 0,701 increase in customer loyalty, assuming service quality remains constant.

Of these two variables, customer satisfaction has a more significant influence on customer loyalty than service quality. This confirms that customer satisfaction is a key factor influencing loyalty at Wirun Pharmacy, although service quality also contributes significantly.

Coefficient of Determination Test

Table 6. Coefficient of Determination

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.796[a]	.634	.626	1.423	.634	87.377	2	101	.000

a. Predictors: (Constant), TotalX2, TotalX1

Source: data processed from SPSS

Based on Table 6, the Adjusted coefficient of determination obtained is 0,626. This indicates that the variables of Service Quality, Customer Satisfaction, and Customer Loyalty contribute 0,634 or 63,4% to the formation of customer loyalty. Meanwhile, the remaining 0,374 or 37,4% is influenced by other factors outside this research model, such as product price, promotional activities, customer trust level in the pharmacy, pharmacy reputation or image, location and ease of access, and overall consumer experience.

T- Test

Table7. T-Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.643	1.227		2.968	.004
	TotalX1	.088	.043	.137	2.040	.044
	TotalX2	.701	.065	.725	10.784	.000

a. Dependent Variable: TotalY

Source: data processed from SPSS

Referring to Table 7, the t-test results indicate that both independent variables, namely service quality (total X1) and customer satisfaction (total X2), have a significant influence on customer loyalty (total Y). For the service quality variable (total X1), the t-value was recorded at 2,040 with a significance level of 0,044. Because this significance value is less than 0,05, it can be concluded that service quality plays a significant role in influencing customer loyalty (total Y). Meanwhile, for the customer satisfaction variable (total X2), the t-value was 10,784 with a significance level of 0,000.

This very low significance level further confirms the fact that customer satisfaction significantly influences customer loyalty (total Y). Furthermore, the constant value of 3,643 indicates that if both independent variables were zero, customer loyalty levels would remain unchanged. Overall, the findings from this t-test demonstrate that both service quality and customer satisfaction contribute significantly to increasing customer loyalty at Wirun Pharmacy. However, the influence of customer satisfaction appears to be more dominant, as reflected in the t value which is much larger compared to the service quality variable.

F-Test

The F test is used to test the influence of independent variables simultaneously on the dependent variable.

Table 8. F-Test

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	354.103	2	177.051	87.377	.000[b]
	Residual	204.657	101	2.026		
	Total	558.760	103			

a. Dependent Variable: TotalY

b. Predictors: (Constant), TotalX2, TotalX1

Source: data processed from SPSS

Based on the F-test results in the ANOVA table, the F-value obtained was 87,377 with a significance level of 0,000. Because this significance value is well below 0,05, it can be concluded that the regression model in this study simultaneously significantly explains the influence of service quality (total X1) and customer satisfaction (total X2) on customer loyalty (total Y).

In other words, these two independent variables simultaneously have a significant influence on changes in customer loyalty levels. This finding indicates that service quality and customer satisfaction collectively play a significant role in increasing customer loyalty at Wirun Pharmacy.

The Influence of Service Quality on Customer Loyalty

The results of this study show that service quality has a positive influence on customer loyalty. This means that the better the quality of service provided by Wirun Pharmacy, the higher the customer loyalty to the pharmacy. Conversely, a decline in service quality has the potential to lead to a decrease in customer loyalty. This finding underscores the crucial role of service in building long-term relationships between pharmacies and their customers.

In this study, service quality was measured using five main dimensions: tangibles, reliability, responsiveness, assurance, and empathy. Of these five aspects, assurance and responsiveness were the most prominent factors perceived by customers. Pharmacists and staff who provide prompt, informative, and trustworthy service provide a sense of security and comfort, which encourages customers to continue choosing this pharmacy.

This study's findings are consistent with the theory proposed by Tjiptono (2007), which states that quality service strengthens a business's reputation, builds good relationships with customers, and increases their loyalty. Furthermore, these results align with research by Ernani (2018), which found that service quality is a key factor influencing customer loyalty. Thus, if customers are satisfied with the services provided, they tend to remain loyal and will not easily switch to another service provider.

The Influence of Customer Satisfaction on Customer Loyalty

The research findings indicate that customer satisfaction has a positive impact on customer loyalty at Wirun Pharmacy. In other words, the higher the level of satisfaction experienced by customers, the greater their likelihood of remaining loyal, making repeat purchases, and recommending the pharmacy to others. Conversely, if customers are dissatisfied, their likelihood of switching to another pharmacy increases.

In this study, customer satisfaction levels were identified through several indicators, such as reliability, empathy, trust, responsiveness, and the physical aspects of the service provided. These results underscore that customer satisfaction is a vital factor in building long-term relationships and increasing loyalty. Satisfied customers tend to experience higher levels of trust and comfort, thus strengthening their bond with the pharmacy.

These findings align with previous studies conducted by Bahrudin and Zuhro (2015), Nalendra (2018), Chandra and Novia (2019), Nisa et al. (2013), and Chen and Japrianto (2014), all of which concluded that customer satisfaction plays a significant role in fostering loyalty.

5. CONCLUSION AND SUGGESTIONS

Based on the analysis, it can be concluded that service quality and customer satisfaction have a significant positive influence on customer loyalty at Wirun Pharmacy in Purworejo Regency. Of these two variables, customer satisfaction has a greater contribution than service quality, indicating that satisfaction is a key factor in encouraging customer loyalty. Nevertheless, service quality remains a crucial element in maintaining long-term relationships with customers.

This study is limited in terms of the number and scope of respondents, involving only 104 respondents from one region, Purworejo Regency. This may limit the generalizability of the results to other regions with different cultural, social, or economic characteristics. Therefore, further research is recommended using a larger and more diverse sample, encompassing various regions and demographic backgrounds, to strengthen the external validity of the findings.

Furthermore, this study only focused on two independent variables: service quality and customer satisfaction. However, customer loyalty can also be influenced by other factors, such as price, promotion, brand perception, and user experience. Future research is recommended to include these additional variables to provide a more comprehensive picture of the formation of customer loyalty.

Furthermore, to describe the relationship between variables in more depth, future research should consider applying more complex analysis methods, such as path analysis or structural equation modeling (SEM), so that indirect relationships or mediation/moderation effects can be analyzed more accurately.

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