

The Effect of Drug Availability and the Quality of Pharmaceutical Services on Patient Satisfaction at Bulan Mulya Primary Clinic (Inpatient), Perawang

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Drug availability and the quality of pharmaceutical services are important factors influencing patient satisfaction in healthcare facilities. This study aimed to analyze the effect of drug availability and pharmaceutical service quality on patient satisfaction at Bulan Mulya Perawang Primary Clinic (Inpatient). This research employed a quantitative method with a cross-sectional design. Data were collected using structured questionnaires distributed to 50 patients who had received pharmaceutical services at the clinic. The data were analyzed using validity and reliability tests, classical assumption tests, and multiple linear regression analysis with SPSS. The results showed that all research instruments were valid and reliable. Classical assumption tests indicated that the data were normally distributed and free from multicollinearity and heteroscedasticity. Multiple linear regression analysis revealed that drug availability and pharmaceutical service quality had a positive and significant effect on patient satisfaction, both partially and simultaneously. The correlation coefficient indicated a moderately strong relationship between the independent variables and patient satisfaction ($R = 0.664$). The coefficient of determination (R^2) was 0.425, indicating that 42.5% of patient satisfaction was influenced by drug availability and pharmaceutical service quality, while the remaining 57.5% was affected by other factors not examined in this study. These findings highlight the importance of ensuring adequate drug availability and improving pharmaceutical service quality to enhance patient satisfaction.

Keywords: Drug Availability; Pharmaceutical Service Quality; Patient Satisfaction

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1. Introduction

A pharmacy is a pharmaceutical service facility where pharmaceutical practice is carried out by a pharmacist. Pharmaceutical services are direct and responsible services provided to patients related to pharmaceutical preparations, with the aim of achieving optimal therapeutic outcomes and improving patients' quality of life (Ministry of Health Regulation/Permenkes, 2016). The right to obtain healthcare services for every Indonesian citizen is guaranteed by the Constitution, and hospitals are the primary healthcare institutions in achieving this goal. The rapid growth of hospitals has directly increased competition in the provision of healthcare services to the community. Therefore, hospital management is required to deliver optimal services in order to remain competitive (Sujarweni, 2014).

Based on World Health Organization (WHO) guidelines, the availability of essential medicines that are safe, effective, and of good quality for all people must be ensured. Effective drug inventory planning is crucial for strengthening health systems and achieving universal health coverage. Drug availability is measured by the percentage of availability of essential medicines and vaccines at primary healthcare facilities, monitored through 20 essential medicine and vaccine items. WHO has established a standard that the availability of generic and essential medicines in healthcare facilities should reach 100%. WHO has also supported the

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Indonesian Ministry of Health in issuing new technical guidelines on Drug Requirement Planning (RKO) to ensure the availability of essential medicines. These guidelines aim to improve the availability, distribution, accessibility, and quality of drug management in Indonesia.

Basically, patient satisfaction or dissatisfaction with a product or service will influence subsequent behavioral patterns. This is reflected in patients' behavior after receiving services. If patients are satisfied, they are more likely to reuse the same services and recommend them to others. Conversely, dissatisfied patients tend to seek information about alternative healthcare providers offering similar services.

Previous studies (Nurmiwiyati et al.) have shown that drug availability has a significant effect on outpatient satisfaction, and the quality of pharmaceutical services significantly affects outpatient satisfaction. Drug availability also significantly influences outpatient patient loyalty, while pharmaceutical service quality does not have a significant effect on patient loyalty. Furthermore, patient satisfaction has a significant impact on outpatient patient loyalty.

According to the Regulation of the Indonesian Ministry of Health No. 9 of 2017 concerning pharmacies, pharmaceutical services are provided by pharmaceutical personnel consisting of pharmacists and pharmaceutical technical staff. Pharmaceutical services include prescription services, pharmaceutical preparations, medical devices, and consumable medical supplies. Under the same regulation, pharmacies may cooperate with the Social Security Agency for Health (BPJS). The role of pharmacies in the National Health Insurance (JKN) program includes providing medicines for the Chronic Disease Management Program (PRB), which are supplied to PRB participants for a maximum of 30 days per prescription (BPJS, 2014). In this context, drug availability plays a crucial role in supporting the achievement of optimal public health outcomes.

Drug availability at Bulan Mulya Primary Clinic (Inpatient), Perawang, is a vital factor in supporting the success of healthcare services, including pharmacy services. The availability of medicines at Bulan Mulya Primary Clinic is the responsibility of the pharmacist, who is directly accountable to patients regarding medication management, including ensuring adequate stock. This responsibility is essential for achieving optimal therapeutic outcomes, improving patients' quality of life, and enhancing patient satisfaction.

The Pharmaceutical Service Standards at Bulan Mulya Primary Clinic were developed as guidelines for pharmacists in performing their professional duties, to protect the public from unprofessional services, and to safeguard the pharmacy profession in pharmaceutical practice. The development of the pharmacy is strongly influenced by the management of resources and service quality at Bulan Mulya Pharmacy, Perawang. Therefore, pharmaceutical service standards are essential in operating a pharmacy. Without adherence to these standards, optimal public health outcomes cannot be achieved.

According to Hartini (2010), pharmaceutical services represent the direct service and professional responsibility of pharmacists in pharmaceutical practice to improve the quality of life of patients and the community. Barata (2011) defines satisfaction as a feeling of pleasure that arises when an individual receives services that meet or exceed expectations. Consumer satisfaction essentially reflects the degree of conformity between expectations and the actual services received. Services are considered satisfactory when they fulfill consumer needs and expectations; when expectations align with reality, patients tend to respond positively and feel satisfied.

2. Methods

Research Design

According to Sugiyono (2016), this study employed a quantitative research approach. Quantitative research is a type of research that is specific and systematic. In this study, the researcher sought to determine whether there is an effect between the independent variables, namely Drug Availability (X1) and Pharmaceutical Service Quality (X2), on the dependent variable, Patient Satisfaction (Y).

Population and Sample

Population and sample are two interrelated concepts that are often misunderstood. According to Sugiyono (2016), a population is the total number of research objects. It can also be defined as the entire set of units or individuals whose characteristics are to be studied. These units may include people, objects, institutions, organizations, and others. The population in this study consisted of all customers of Bulan Mulya Primary Clinic (Inpatient), Perawang, who had received healthcare services or conducted transactions at least three times. The exact number of the population was unknown.

Research Sample

In this method, the sample is expected to meet criteria that truly represent the objectives of the study. This technique can be interpreted as a sampling process that begins with determining the sample size, followed by selecting samples based on specific purposes, provided that the selected samples do not deviate from the established characteristics (Sugiyono, 2015). The sample criteria in this study were as follows:

1. Patients aged 17 years and above.
2. Patients who had received healthcare services at least three times, with no upper age limit, verified through the SIMKLINIK application.

According to Sugiyono (2016), an appropriate sample size for research ranges from 45 to 50 respondents. Furthermore, for studies involving multivariate analysis (correlation or regression), the minimum sample size should be 15 times the number of variables studied. Therefore, this study used 50 respondents as the research sample.

Data Sources and Data Collection Techniques

Generally, quantitative data are obtained through surveys by distributing questionnaires as research instruments. The data sources and collection techniques in this study are described as follows:

Data Sources

According to Sugiyono (2016), the data used in this study were quantitative data, which involve categorization or grouping in the form of structured questions or numerical values. The variables examined in this study were Drug Availability (X1), Pharmaceutical Service Quality (X2), and Patient Satisfaction (Y). A variable is defined as an attribute, characteristic, or value of an individual, object, or activity that varies and is determined by the researcher for analysis and conclusion.

Data Collection Techniques

According to Sugiyono (2016), this study employed a questionnaire method. This technique involves collecting data by distributing a set of written statements to respondents to be answered. The questionnaire used in this study was a closed-ended questionnaire. The questionnaires were distributed both online via WhatsApp and directly to customers.

The measurement scale used in this study was a five-point Likert scale, with the following response options:

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SS : Strongly Agree

S : Agree

N : Neutral

TS : Disagree

STS : Strongly Disagree

Data Analysis Method

Instrument Quality Testing

1. Validity Test
2. Reliability Test

Classical Assumption Tests

1. Normality Test
2. Multicollinearity Test
3. Heteroscedasticity Test

Multiple Linear Regression Analysis

Ghozali (2016) explains that regression analysis is a method used to measure the strength of the relationship between two or more variables and to indicate the direction of the relationship between the dependent variable and independent variables. This study applied multiple linear regression analysis to examine the effect of the independent variables on the dependent variable.

Data Analysis and Hypothesis Testing

According to Ghozali (2016), the selection of data analysis methods must be aligned with the variables studied and the research design. In this study, SPSS Statistics software was used to test hypotheses and confirm the research model and theoretical framework. Hypothesis testing in this study consisted of:

1. Partial Test (t-test)
2. Simultaneous Test (F-test)
3. Correlation Analysis (R)
4. Coefficient of Determination Test (R^2)

3. Results and Discussion

Analysis of Research Data and Hypothesis Testing

Based on the data that have been collected, respondents' answers were tabulated and subsequently analyzed to determine the effect of Drug Availability and Pharmaceutical Service Quality on Patient Satisfaction at Bulan Mulya Primary Clinic (Inpatient), Perawang. The results of the tests conducted in this study are presented as follows:

Research Instrument Testing

Validity Test

The validity test of the research instrument was conducted to determine whether the instrument used in this study was appropriate and capable of measuring the variables accurately. The sample used in this test consisted of 50 respondents.

1. Validity Test of Drug Availability Variable (X1)

The validity test for the Drug Availability (X1) variable was carried out by comparing the calculated correlation coefficient (r-count) with the critical value (r-table). If the value of r-count is greater than r-table

and the significance value is less than 0.05, then the questionnaire item is considered valid and suitable for use in this study.

Table 1. Validity Test of Drug Availability Variable (X1)

Variable X1	Pearson Correlation	Sig	Remark
X1.1	0.839	0.001	Valid
X1.2	0.930	0.001	Valid
X1.3	0.836	0.001	Valid

Source: Primary Data, 2023

Based on Table 4.4, the validity test results for the Drug Availability variable show significance values < 0.05, indicating that all questionnaire items for this variable are valid.

2. Validity Test of Pharmaceutical Service Quality Variable (X2)

Table 2. Validity Test of Pharmaceutical Service Quality Variable (X2)

Variable X2	Pearson Correlation	Sig	Remark
X2.1	0.721	0.001	Valid
X2.2	0.638	0.001	Valid
X2.3	0.662	0.001	Valid
X2.4	0.531	0.001	Valid
X2.5	0.632	0.001	Valid
X2.6	0.625	0.001	Valid
X2.7	0.530	0.001	Valid
X2.8	0.608	0.001	Valid
X2.9	0.731	0.001	Valid
X2.10	0.725	0.001	Valid
X2.11	0.584	0.001	Valid
X2.12	0.497	0.001	Valid
X2.13	0.635	0.001	Valid
X2.14	0.557	0.001	Valid
X2.15	0.587	0.001	Valid
X2.16	0.630	0.001	Valid
X2.17	0.620	0.001	Valid
X2.18	0.569	0.001	Valid
X2.19	0.585	0.001	Valid
X2.20	0.610	0.001	Valid
X2.21	0.649	0.001	Valid
X2.22	0.630	0.001	Valid
X2.23	0.677	0.001	Valid
X2.24	0.663	0.001	Valid
X2.25	0.618	0.001	Valid

Source: Primary Data, 2023

Based on Table 2, all questionnaire items for the Pharmaceutical Service Quality variable have significance values < 0.05, indicating that all items are valid.

3. Validity Test of Patient Satisfaction Variable (Y)

Table 3. Validity Test of Patient Satisfaction Variable (Y)

Variable Y	Pearson Correlation	Sig	Remark
Y.1	0.953	0.05	Valid

Variable Y	Pearson Correlation	Sig	Remark
Y.2	0.949	0.05	Valid
Y.3	0.963	0.05	Valid
Y.4	0.972	0.05	Valid
Y.5	0.969	0.05	Valid
Y.6	0.908	0.05	Valid
Y.7	0.965	0.05	Valid

Source: Primary Data, 2023 (Appendix 2)

Based on Table 3, all questionnaire items for Patient Satisfaction have significance values < 0.05 , indicating that all items are valid.

Reliability Test

Reliability testing was conducted using the Cronbach's Alpha method. An instrument is considered reliable if Cronbach's Alpha > 0.60 (Ghozali, 2013).

Table 4. Reliability Test of X1, X2, and Y

Variable	Cronbach's Alpha	Minimum Standard	Remark
Drug Availability (X1)	0.837	0.60	Reliable
Pharmaceutical Service Quality (X2)	0.929	0.60	Reliable
Patient Satisfaction (Y)	0.983	0.60	Reliable

Source: Primary Data, 2023 (Appendix 3)

Based on Table 4, all variables have Cronbach's Alpha values greater than 0.60, indicating that all instruments are reliable.

Normality Test

The normality test aims to determine whether the residuals in the regression model are normally distributed (Ghozali, 2016). This test was conducted using the One-Sample Kolmogorov-Smirnov Test.

Table 5. Normality Test

	Unstandardized Residual
N	50
Normal Parameters ^{ab}	
Mean	.0000000
Std. Deviation	3.91578131
Most Extreme Differences	
Absolute	.115
Positive	.093
Negative	-.115
Test Statistic	.115
Asymp. Sig. (2-tailed) ^c	.096
Monte Carlo Sig. (2-tailed) ^d	.092
99% Confidence Interval	
Lower Bound	.084
Upper Bound	.099

Based on Table 5., the Asymp. Sig. (2-tailed) value is greater than 0.05, indicating that the residuals are normally distributed.

Multicollinearity Test

Multicollinearity was tested by examining the Tolerance and Variance Inflation Factor (VIF) values.

Table 6. Multicollinearity Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics Tolerance
	B	Std. Error	Beta			
1 (Constant)	7.807	3.820		2.044	.047	
Drug Availability (X1)	.836	.321	.361	2.603	.012	.619
Pharmaceutical Service Quality (X2)	.112	.041	.378	2.730	.009	.619

Dependent Variable: Patient Satisfaction (Y)

Source: Primary Data Processed, 2023 (Appendix 4)

The results show that all independent variables have Tolerance values > 0.10 and VIF values < 10, indicating that no multicollinearity exists in the regression model.

Heteroscedasticity Test

The heteroscedasticity test was conducted using the Glejser test.

Table 7. Heteroscedasticity Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	7.807	3.820		2.044	7.807
Drug Availability (X1)	.836	.321	.361	2.603	.836
Pharmaceutical Service Quality (X2)	.112	.041	.378	2.730	.112

The significance values for all independent variables are greater than 0.05, indicating that no heteroscedasticity occurs in the regression model.

Multiple Linear Regression Analysis

Table 8. Multiple Linear Regression Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	7.807	3.820		2.044	7.807
Drug Availability (X1)	.836	.321	.361	2.603	.836
Pharmaceutical Service Quality (X2)	.112	.041	.378	2.730	.112

The regression equation obtained is:

$$Y = 7.807 + 0.836X_1 + 0.112X_2 + e$$

This indicates that:

Drug availability positively affects patient satisfaction. Pharmaceutical service quality also has a positive effect on patient satisfaction.

Hypothesis Testing
Partial Test (t-test)

Table 10. t-test Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	7.807	3.820		2.044	7.807
Drug Availability (X1)	.836	.321	.361	2.603	.836
Pharmaceutical Service Quality (X2)	.112	.041	.378	2.730	.112

The results indicate that:

H1 is accepted: Drug availability has a significant positive effect on patient satisfaction.

H2 is accepted: Pharmaceutical service quality has a significant positive effect on patient satisfaction.

Simultaneous Test (F-test)

Table 11. F-test Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	594.046	2	297.023	18.580	< .001 ^b
Residual	751.334	47	15.986		
Total	1345.380	49			

The F-test result shows Sig < 0.05, indicating that H3 is accepted, meaning drug availability and pharmaceutical service quality simultaneously affect patient satisfaction.

Correlation and Coefficient of Determination

Table 12. Correlation Coefficient Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.652 ^a	.425	.400	4.058

The correlation coefficient (R) of 0.664 indicates a moderate and meaningful positive relationship. The R Square value of 0.425 (42.5%) indicates that 42.5% of patient satisfaction is influenced by drug availability and pharmaceutical service quality, while the remaining 57.5% is influenced by other variables not examined in this study.

Discussion of Data Analysis

Based on the results of the study entitled “The Effect of Drug Availability and Pharmaceutical Service Quality on Patient Satisfaction” conducted at Bulan Mulya Primary Clinic (Inpatient), Perawang, involving 50 respondents, it can be explained that 54% (27 respondents) were aged 15–25 years, 42% (21 respondents) were aged 26–50 years, and 4% (2 respondents) were over 50 years old. This indicates that the majority of respondents were in the 15–25 age group. In terms of gender, 44% (22 respondents) were male and 56% (28 respondents) were female, showing that female respondents were more dominant than male respondents. Based on the frequency of visits, 28% (14 respondents) reported visiting the clinic very frequently.

Based on the validity test results for the variables of drug availability, pharmaceutical service quality, and patient satisfaction, the significance values were less than 0.05, indicating that all questionnaire items measuring patient satisfaction were valid. Furthermore, the reliability test results showed that all items from

each variable in this study were reliable, as evidenced by Cronbach's Alpha values greater than 0.60 for all variables.

The results of the classical assumption tests indicated that the normality test showed an Asymp. Sig. (2-tailed) value greater than 0.05, meaning that the residuals were normally distributed. The multicollinearity test showed that the independent variables had tolerance values greater than 0.10, with drug availability and pharmaceutical service quality each having a tolerance value of 0.619. In addition, the Variance Inflation Factor (VIF) values were 1.616 for both independent variables, which are below 10, indicating no multicollinearity among the independent variables in the regression model. The heteroscedasticity test showed significance values of 0.012 for drug availability and 0.009 for pharmaceutical service quality. Based on these results, it was concluded that the regression model did not exhibit heteroscedasticity.

The results of the multiple linear regression analysis showed that the constant value was 7.807, indicating that if drug availability and pharmaceutical service quality were assumed to be constant, patient satisfaction would be 7.807. The regression coefficient for drug availability was 0.836 with a positive parameter, indicating that every one-unit increase in drug availability would increase patient satisfaction by 0.836, assuming other variables remained constant. Meanwhile, the regression coefficient for pharmaceutical service quality was 0.112, also with a positive parameter, indicating that a one-unit increase in pharmaceutical service quality would increase patient satisfaction by 0.112, assuming other variables remained constant.

The partial t-test results showed that drug availability had a significance value of less than 0.05, indicating that drug availability partially had a significant effect on patient satisfaction; therefore, H1 was accepted. This finding is consistent with previous research conducted by Khasanah and Pertiwi (2010), which stated that drug availability has a significant partial effect on patient satisfaction. Furthermore, the t-test results for pharmaceutical service quality showed a significance value of less than 0.05, indicating that pharmaceutical service quality had a significant effect on patient satisfaction; therefore, H2 was accepted.

Based on the F-test results, a significance value of less than 0.05 (0.001) was obtained, indicating that drug availability and pharmaceutical service quality simultaneously had a positive and significant effect on patient satisfaction; therefore, H3 was accepted. These results are consistent with previous studies conducted by Yunus and Budianto (2014), which concluded that drug availability and pharmaceutical service quality significantly affect patient satisfaction.

Based on the correlation analysis, the correlation coefficient (R) was 0.664, indicating a moderately strong and positive correlation between drug availability and pharmaceutical service quality with patient satisfaction at Bulan Mulya Primary Clinic (Inpatient), Perawang. Furthermore, the coefficient of determination (R^2) was 0.425 (42.5%), indicating that 42.5% of patient satisfaction was influenced by drug availability and pharmaceutical service quality, while the remaining 57.5% was influenced by other variables not examined in this study.

4. Conclusion

Based on the results of the study entitled "The Effect of Drug Availability and Pharmaceutical Service Quality on Patient Satisfaction at Bulan Mulya Perawang Primary Clinic (Inpatient)" involving 50 respondents, the majority of respondents were aged 15–25 years and predominantly female. The validity and reliability tests confirmed that all research instruments were valid and reliable. The classical assumption tests indicated that the regression model met the requirements of normality, with no multicollinearity or heteroscedasticity detected. Multiple linear regression analysis showed that drug availability and pharmaceutical service quality had positive effects on patient satisfaction, with regression coefficients of

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0.836 and 0.112, respectively. The partial t-test results demonstrated that both drug availability and pharmaceutical service quality significantly influenced patient satisfaction, while the F-test confirmed a significant simultaneous effect of both variables. The correlation analysis revealed a moderately strong positive relationship ($R = 0.664$), and the coefficient of determination ($R^2 = 0.425$) indicated that 42.5% of patient satisfaction was explained by drug availability and pharmaceutical service quality, while the remaining variance was influenced by other factors not examined in this study. Based on the results of the study entitled "The Effect of Drug Availability and Pharmaceutical Service Quality on Patient Satisfaction at Bulan Mulya Perawang Primary Clinic (Inpatient)" involving 50 respondents, the majority of respondents were aged 15–25 years and predominantly female. The validity and reliability tests confirmed that all research instruments were valid and reliable. The classical assumption tests indicated that the regression model met the requirements of normality, with no multicollinearity or heteroscedasticity detected. Multiple linear regression analysis showed that drug availability and pharmaceutical service quality had positive effects on patient satisfaction, with regression coefficients of 0.836 and 0.112, respectively. The partial t-test results demonstrated that both drug availability and pharmaceutical service quality significantly influenced patient satisfaction, while the F-test confirmed a significant simultaneous effect of both variables. The correlation analysis revealed a moderately strong positive relationship ($R = 0.664$), and the coefficient of determination ($R^2 = 0.425$) indicated that 42.5% of patient satisfaction was explained by drug availability and pharmaceutical service quality, while the remaining variance was influenced by other factors not examined in this study..

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