THE INFLUENCE OF CUSTOMER SATISFACTION, TRUST, EFFECTIVE SYSTEM, AND CORPORATE REPUTATION ON PATIENT LOYALTY AT BATAM AUTHORITY AGENCY HOSPITAL

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Abstract

This study aims to analyze the factors influencing patient loyalty at RSBP Batam, focusing on customer satisfaction, trust, effective systems, and corporate reputation. Employing a quantitative research approach with a deductive-inductive framework, the study surveyed 300 respondents who visited RSBP Batam more than three times in 2023, selected using Slovin's formula with a 5% margin of error. Data were collected through a Likert-scale questionnaire and analyzed using classical assumption tests, multiple regression, and hypothesis testing. Results indicate that all independent variables—customer satisfaction, trust, effective systems, and corporate reputation—positively and significantly impact patient loyalty, both individually and collectively. The F-test reveals a combined influence with F = 148.026 and p < 0.05, while the adjusted R-square value of 0.525 shows that 52.5% of loyalty variation is explained by these variables. The study concludes that improving these factors enhances loyalty, with customer satisfaction and trust emerging as the most influential determinants. Recommendations include prioritizing improvements in weaker aspects of loyalty and exploring additional variables such as service quality, education level, and cost in future research. This study contributes to the literature on healthcare management by offering actionable insights to enhance patient loyalty in competitive healthcare environments.
Keywords: Customer Satisfaction, Trust, Effective System, Corporate Reputation, Loyalty

INTRODUCTION

Hospitals are essential healthcare facilities widely utilized by the Indonesian population. Clinics provide various healthcare services, including inpatient, outpatient, and emergency care. Based on data from the Batam Authority Agency and a survey conducted in 2023, intense competition exists among healthcare facilities, including clinics, hospitals, and community health centers. This research aims to analyze factors such as customer satisfaction, trust, effective systems, and corporate reputation that influence patient loyalty at RSBP Batam. Research Questions in this study is to identify and analyze specific aspects of the problem being studied, that is (1) Does patient loyalty at RSBP Batam depend on customer satisfaction? (2) Does patient loyalty at RSBP Batam depend on trust? (3) Does the effective system at RSBP Batam impact patient loyalty? (4) Does corporate reputation affect patient loyalty at RSBP Batam? And (5) How do these factors collectively influence patient loyalty at RSBP Batam?. Research Objectives in this study is to (1)To analyze the effect of customer satisfaction on patient loyalty (2) To analyze the effect of trust on patient loyalty (3) To identify the impact of an effective system on patient loyalty (4) To determine the effect of corporate reputation on patient loyalty and (5) To measure the combined impact of these factors on patient loyalty.

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METHODOLOGY

This study employed a quantitative research method using a deductive-inductive approach. It begins with a theoretical framework or expert insights and develops into problems and solutions validated by empirical data. Quantitative research, based on positivism philosophy, involves studying specific populations or samples, using research instruments, and analyzing data statistically to test hypotheses (Sugiyono, 2020).

The population consisted of 1.210 RSBP Batam patients who visited more than three times between January and December 2023. The sample size of 300 respondents was calculated using Slovin's formula with a 5% margin of error. Research Variables this study: (1) Independent Variables (X): Customer Satisfaction (X1), Trust (X2), Effective System (X3), Corporate Reputation (X4) (2) Dependent Variable (Y): Loyalty.

Research Instrument this research is a Likert scale questionnaire was used to measure attitudes, opinions, and perceptions, with responses scored from 1 (Strongly Disagree) to 5 (Strongly Agree) (Sugiyono, 2020). Instrument Testing this research is: (1) Validity Test: Ensures the questionnaire accurately measures the intended concept; valid if the correlation coefficient ('r') exceeds the critical value in the r-table, (2) Reliability Test: Assesses consistency over time using Cronbach's Alpha, with a reliability range of 0.50-0.60 (Ghozali, 2020).

Data Analysis Techniques this study: (1) Classical Assumption Tests: Normality Test: Ensures residuals are normally distributed, Multicollinearity Test: Examines correlations among independent variables using tolerance and VIF values. Multicollinearity exists if tolerance ≤ 0.10 or VIF ≥ 10 and Heteroscedasticity Test: Checks for unequal variances in residuals. Scatterplots are used to identify patterns.

Hypothesis Testing this studi (1) T-Test: Evaluates the significance of each independent variable's effect on the dependent variable, (2) F-Test: Assesses the simultaneous effect of independent variables on the dependent variable and (3) Determination Coefficient: Measures the proportion of variance in the dependent variable explained by independent variables. Values closer to 1 indicate better explanatory power.

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RESULT AND DISCUSSION

Result

Research Object Description RSBP Batam is a pioneer hospital in Batam City, established in 1971. Initially functioning as the Pertamina Polyclinic, it officially became a Type C hospital on August 11, 1983, and later upgraded to Type B on May 2, 2002. In December 2018, it transitioned from a corporate hospital to a government hospital under a different ministry. Respondent Data Description this research is the respondents' profiles were analyzed based on gender, education level, and the number of visits to RSBP Batam. This information was obtained from questionnaire responses.

Table 1. Respondent Data by Gender

No	Gender	Frequency
1	Male	115
2	Female	185
Total		**300**

Based on Table 1, out of 300 respondents, 115 were male, and 185 were female.

Table 2. Respondent Data by Education Level

No	Education Level	Frequency
1	Junior High	23
2	Senior High	133
3	Diploma/Degree	144
Total		**300**

As shown in Table 2, 23 respondents had junior high education, 133 had senior high education, and 144 held a diploma or degree, making the latter the largest group.

Instrument Testing Techniques this research is (1) Validity Test. The validity test ensures that an instrument measures what it is intended to measure. An item is valid if its correlation coefficient (r-value) exceeds the critical r-table value (0.095). The results are summarized in Tables 3-7 for all variables.

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Table 3. Validity Test Results for Customer Satisfaction (X1)

No	Item	r-value	r-table	Description
1	X1.1	0.707	0.095	Valid
2	X1.2	0.792	0.095	Valid

All tested items for each variable were valid as their r-values exceeded 0.095.

(2) Reliability Test. A Cronbach's Alpha value > 0.6 indicates that the instrument is reliable. Table 4 summarizes the reliability test results.

Table 4. Reliability Test Results

Variable	Items	Cronbach's Alpha	Threshold	Decision
Customer Satisfaction (X1)	6	0.840	0.6	Reliable
Trust (X2)	6	0.817	0.6	Reliable
Effective System (X3)	6	0.914	0.6	Reliable
Corporate Reputation (X4)	8	0.914	0.6	Reliable
Loyalty (Y)	8	0.912	0.6	Reliable

All variables demonstrated high reliability with Cronbach's Alpha values above 0.6.

Data Analysis Techniques Techniques this research is (1) Normality Test Using the P-Plot method, data distribution was confirmed as normal, as indicated by a bell-shaped histogram and points closely following the diagonal line in the P-Plot graph.
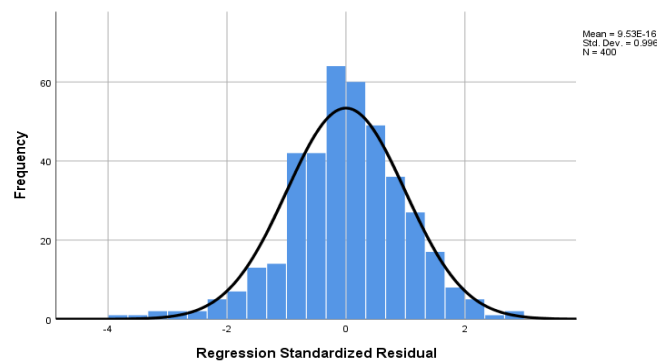

Figure1. Normality Histogram Graph.

(2) Multicollinearity Test. Multicollinearity was checked using Variance Inflation Factor (VIF). All variables had VIF values below 10, indicating no multicollinearity.

Table 5. Multicollinearity Test Results

Variable	Tolerance	VIF
Customer Satisfaction (X1)	0.620	1.612
Trust (X2)	0.691	1.038
Effective System (X3)	0.596	1.678

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Corporate Reputation (X4)	0.555	1.627

(3) Heteroscedasticity Test Using Glejser's method, no significant heteroscedasticity was detected, as all independent variables had significance values > 0.05.

Tabel 6. Heteroscedasticity Test

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	5,348	0,663		8,066	0,000
Customer Satisfaction	5,075	0,025	0,187	5,032	0,103
Trust	4,061	0,040	0,106	5,299	0,127
Effective System	4,522	0,039	0,035	6,555	0,129
Corporate Reputation	4,129	0,044	0,135	6,265	0,136

Table 6, the results of the Glejser test show that the probability value with significance > alpha value (0.05) indicates that the model does not experience heteroscedasticity. Based on the table above, it can be observed that Customer Satisfaction has a value of 0.103, Trust 0.127, Effective System 0.129, and Corporate Reputation 0.136. Therefore, it can be concluded that there is no indication of heteroscedasticity in the regression model.

Multiple linear regression is used to predict the influence of independent variables on the dependent variable and to prove whether there is a functional relationship between these variables. The regression equation can be derived from the SPSS output in the Coefficient table.

Table 7. Multiple Regression Analysis Test

Model		*Unstandardized*		*Standardized*
		Coefficients		*Coefficients*
		B	*Std. Error*	Beta
	(Constant)	3,741	1,056	
	Customer Satisfaction (X1)	0,316	0,039	0,353
	Trust (X2)	0,361	0,063	0,280
1	*Effective System* (X3)	0,318	0,073	0,226
	Corporate Reputation (X4)	0,325	0,069	0,114

Based on Table 7, the multiple linear regression equation is as follows:

$$Y = (3.741) + 0.316X1 + 0.361X2 + 0.318X3 + 0.325X4 + e$$

From the regression equation in Table 4.11, the following can be explained:

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a) The constant (α\alpha) has a value of 3.741. The positive sign indicates a direct relationship between the independent variables and the dependent variable. This means that if Customer Satisfaction (X1), Trust (X2), Effective System (X3), and Corporate Reputation (X4) increase by 1%, Loyalty (Y) will have a baseline value of 3.741.

b) The regression coefficient for Customer Satisfaction (X1) is 0.316. This indicates a positive effect: if Customer Satisfaction increases by 1%, Loyalty will increase by 0.316, assuming other independent variables remain constant. The positive sign signifies a direct relationship between the independent and dependent variables.

c) The regression coefficient for Trust (X2) is 0.361. This indicates a positive effect: if Trust increases by 1%, Loyalty will increase by 0.361, assuming other variables remain constant.

d) The regression coefficient for Effective System (X3) is 0.318. This indicates a positive effect: if Effective System increases by 1%, Loyalty will increase by 0.318, assuming other variables remain constant.

e) The regression coefficient for Corporate Reputation (X4) is 0.325. This indicates a positive effect: if Corporate Reputation increases by 1%, Loyalty will increase by 0.325, assuming other variables remain constant.

Hypothesis Testing this research is (1) T-Test: All independent variables (X1-X4) had t-values > t-table and significance < 0.05, indicating positive and significant impacts on Loyalty.

Table 8. T-Test Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3,741	1,056		3,542	0,000
Costumer Satisfaction	0,316	0,039	0,353	8,060	0,000
Trust	0,361	0,063	0,280	5,685	0,000
Effective System	0,318	0,073	0,226	5,068	0,000
Corporate Reputation	0,325	0,069	0,274	5,158	0,001

(2) F-Test: The combined effect of X1-X4 on Y was significant, with F = 148.026 > F-table = 2.61.

Table 9. F-Test Analysis

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	3979,083	4	1326,361	148,026	.000[b]
Residual	3548,294	296	8,960		

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Total	7527,377	299

In Table 9, based on the F-distribution with a probability of 0.05, the F-table value is 2.61. The F-test results indicate that F calculated = 148.026 > F table = 2.61 which signifies a positive effect with α = 5% (0.000 < 0.05), the result is statistically significant. Therefore, it can be concluded that H5 is accepted, meaning that Customer Satisfaction, Trust, Effective System, and Corporate Reputation collectively have a positive and significant impact on loyalty.

(3) R-Square: Adjusted R-Square = 0.525, indicating that 52.5% of Loyalty's variance is explained by X1-X4.

Table 10. Determination Coefficient Results (R-Test)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.727ᵃ	0,529	0,525	2,993

As shown in Table 10, the Adjusted R Square value is 0.525, indicating that variations in Customer Satisfaction, Trust, Effective System, and Corporate Reputation account for 52.5% of the changes in patient loyalty. In other words, the R Square value of 52.5% represents the variation in loyalty explained by factors other than Customer Satisfaction, Trust, Effective System, and Corporate Reputation, or by other variables not included in the model.

Discussion

(1) The Effect of Customer Satisfaction on Patient Loyalty. The test results show that Customer Satisfaction (X1) has a positive and significant effect on patient loyalty, with a coefficient value of 8,060 and a significance level of $p = 0.000 < 0.05$. This is supported by t calculated = 8.060 > t table = 2.688, indicating a strong relationship. This finding aligns with Ade Yusup (2023), who highlighted that customer satisfaction is crucial for building loyalty, as satisfied customers are more likely to remain loyal when their expectations are met or exceeded. (2) The Effect of Trust on Patient Loyalty. Trust (X2) positively and significantly affects patient loyalty, with a coefficient value of 5,685 and $p = 0.000 < 0$. The result is reinforced by t calculated = 5.685 > t table = 2.688. This finding is consistent with Yolanda Anastasia (2021), who emphasized that trust is a key factor in the healthcare industry to enhance patient loyalty, as building trust increases the likelihood of retaining loyal customers. (3) The Effect of Effective System on Patient Loyalty. The test shows that Effective System (X3) has a positive and significant effect on loyalty, with a coefficient value of 5,068 and $p = 0.000 < 0.05$ $p = 0.000 < 0.05$. T calculated = 5.068 > t table = 2.688 confirms a significant relationship. Effective systems and detailed SOPs help customers assess service

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effectiveness, thereby increasing loyalty. **(4)** The Effect of Corporate Reputation on Patient Loyalty. Corporate Reputation (X4) has a positive and significant partial effect on patient loyalty, with $F = 148.068$ and $p = 0.000 < 0$. This highlights the importance of corporate reputation in fostering patient loyalty. (5) Simultaneous Effects on Patient Loyalty. The F-test results indicate that Customer Satisfaction, Trust, Effective System, and Corporate Reputation collectively have a positive and significant effect on patient loyalty, with $F = 148.068 > F$ table$=2.61$ and $p = 0.000 < 0.05$. These variables together strongly contribute to patient loyalty at RSBP Batam.

CONCLUSION AND SUGGESTION

Conclusion

Based on the results of hypothesis testing and data analysis, the following conclusions can be drawn: (1) The hypothesis testing shows that Customer Satisfaction has a positive and significant effect on patient loyalty at RSBP Batam, with t calculated $= 8.060 > t$ table $= 2.688$ and a significance value of $p = 0.000 < 0.05$. (2) Trust has a positive and significant effect on patient loyalty at RSBP Batam, with t calculated $= 5.685 > t$ table $= 2.688$ and a significance value of $p = 0.000 < 0.05$ $p = 0.000$. (3) Effective System positively and significantly influences patient loyalty at RSBP Batam, with t calculated $= 5.068 > t$ table $= 2.688$ and $p = 0.000 < 0.05$. (4) The hypothesis testing indicates that Corporate Reputation has a significant effect on patient loyalty at RSBP Batam, with t calculated $= 1.396 > t$ table $= 2.688$ and $p = 0.151 > 0.05$. (5) The F-test results show F calculated $= 78.700 > F$ table $= 2.78$ and $p = 0.000 < 0.05$, indicating that Customer Satisfaction, Trust, Effective System, and Corporate Reputation collectively have a positive and significant effect on patient loyalty at RSBP Batam.

Suggestions

Based on the conclusions above, the following recommendations can be made: (1) Management should prioritize attention and improvement in the factors influencing patient loyalty at RSBP Batam, as these variables collectively impact loyalty. (2) The aspect of loyalty requires further enhancement, particularly regarding variables like commitment or goals, which were identified as weaker factors and need improvement. (3) This study aims to provide additional insights into patient loyalty and inspire further research among students to achieve more accurate results. (4) To enhance loyalty, future research should examine other factors that might influence loyalty, such as service quality, education level, facilities, and costs. These variables still require in-depth analysis and investigation in subsequent studies.

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