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The Effect of Service Quality, Healthcare Facilities, and Brand Image on Patient Satisfaction at Dr. Soeselo Slawi Regional General Hospital

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Abstract

This study analyzes the influence of service quality, healthcare facilities, and brand image on patient satisfaction at Dr. Soeselo Slawi Regional General Hospital. A quantitative method was used with primary data from questionnaires distributed to 100 respondents who were patients or users of the hospital's services. The analysis comprised validity and reliability tests, classical assumption tests, multiple linear regression, hypothesis tests (t-test and F-test), and the coefficient of determination. The results show that service quality ($t = 7.993$; sig. 0.000), healthcare facilities ($t = 5.811$; sig. 0.000), and brand image ($t = 4.709$; sig. 0.000) each have a positive and significant partial effect on patient satisfaction, with service quality having the largest standardized effect. Simultaneously, the three variables have a significant effect ($F = 35.446$; sig. 0.000), explaining 51.1% of the variance in patient satisfaction, while the remaining 48.9% is explained by other factors outside this study.

Keywords: *Service Quality; Healthcare Facilities; Brand Image; Patient Satisfaction*

I. INTRODUCTION

A hospital is a health service institution with a strategic role in providing health efforts for the community, including promotive, preventive, curative, and rehabilitative services (Rohman & Wahjono, 2022). The World Health Organization (2023) affirms that the right to health is the most fundamental human right. In the era of globalization, hospitals are no longer seen merely as non-profit social institutions but have become capital- and technology-intensive organizations operating in a competitive business environment (Kotler & Keller, 2022).

A pre-survey conducted from January to April 2026 among 20 respondents at Dr. Soeselo Slawi Regional General Hospital found that although the majority (80%) of patients were satisfied, 20% explicitly stated that they were dissatisfied with the hospital's service. Empirically, this is triggered by problems in service quality and healthcare facilities, such as suboptimal air conditioning, limited waiting chairs, an electronic registration system that often errors, delays by specialist doctors, and slow nurse response to patients' emergency calls. Such complaints also appear in digital reviews (Google Reviews), which may erode the hospital's brand image in the eyes of the public.

Patient visit data for 2020–2025 fluctuate: from 26,879 patients in 2020, visits fell to 21,977 in 2021, then rose to 32,453 in 2023 and remained relatively stable at around 32,000 in 2024–2025. A research gap is also found in previous studies; for example, service quality is significant in Trisnawati et al. (2023) but not significant in Kakame et al. (2021), and the same inconsistency holds for healthcare facilities and brand image. This inconsistency underlies the urgency of the present study, which aims to analyze the effect of service quality, healthcare facilities, and brand image on patient satisfaction at Dr. Soeselo Slawi Regional General Hospital, both partially and simultaneously.

A. Literature Review and Hypotheses

Patient satisfaction. Customer satisfaction is an emotional response of pleasure or disappointment that arises after consumers compare their initial expectations with the performance of the product or service received (Hamzah & Shamsudin, 2020). Satisfaction occurs when perceived performance meets or exceeds expectations, while dissatisfaction arises when performance falls below expectations (Hult et al., 2022). According to Hill and Brierley (2017), patient satisfaction is measured by the fulfillment of expectations, interest in revisiting, and willingness to recommend.

Service quality. Service quality is the comparison between customers' expectations before receiving a service and their perception of the performance received (Kotler & Keller, 2022). It was developed by Parasuraman et al. (1988) in the SERVQUAL concept and is measured through five dimensions: tangibles, reliability, responsiveness, assurance, and empathy.

Healthcare facilities. Healthcare facilities are all the means and infrastructure used to support the delivery of health services to the community, including medical equipment, buildings, service rooms, and other supporting facilities (Tambaip et al., 2023). According to Fadila and Katmini (2022), their indicators are the completeness, comfort, and suitability of facilities.

Brand image. Brand image is the perception, belief, and impression formed in consumers' minds about a brand as a result of experience, information, and interaction (Kotler & Keller, 2022). Its indicators are corporate image, user image, and product (service) image (Kotler & Keller, 2022).

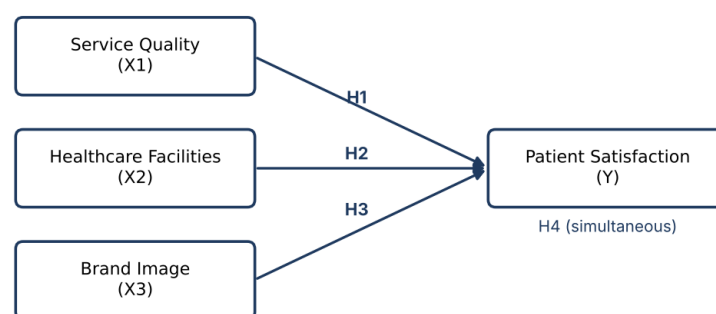


Fig. 1. Conceptual framework.

Hypotheses. H_1 : service quality has a positive and significant effect on patient satisfaction at Dr. Soeselo Slawi Regional General Hospital. H_2 : healthcare facilities have a positive and significant effect on patient satisfaction. H_3 : brand image has a positive and significant effect on patient satisfaction. H_4 : service quality, healthcare facilities, and brand image simultaneously affect patient satisfaction.

II. METHOD

This study uses a quantitative approach (Sugiyono, 2022). The population is all patients using health services at Dr. Soeselo Slawi Regional General Hospital, whose exact number is unknown because of fluctuating visits. Following Hair et al. (2019), the sample size for multivariate analysis was determined by multiplying the number of variables (4) by a multiplier of 25, giving a minimum sample of 100 respondents, chosen from patients of the emergency room, outpatient, inpatient, laboratory, radiology, pharmacy, ICU, HCU, hemodialysis, and medical rehabilitation units.

Data were collected through interviews and a questionnaire on a 1–5 Likert scale (strongly disagree to strongly agree). The ordinal data were transformed to an interval scale using the Method of Successive Interval (MSI; Ningsih & Dukalang, 2019). The instrument was tested for validity (Pearson product moment correlation; r -table 0.361 at $n = 30$) and reliability (Cronbach's alpha; reliable if $r_{11} > 0.60$). The analysis used classical assumption tests (normality, multicollinearity, heteroscedasticity), multiple linear regression, hypothesis tests (t -test and F -test), and the coefficient of determination (adjusted R^2).

TABLE I. VARIABLES AND INDICATORS

Variable	Indicators
Service quality (X1)	Tangibles, reliability, responsiveness, assurance, empathy
Healthcare facilities (X2)	Completeness, comfort, and suitability of facilities
Brand image (X3)	Corporate image, user image, product (service) image
Patient satisfaction (Y)	Fulfillment of expectations, interest in revisiting, willingness to recommend

Source: Parasuraman et al. (1988); Fadila & Katmini (2022); Kotler & Keller (2022); Hill & Brierley (2017).

III. RESULTS AND DISCUSSION

A. Respondent Characteristics

The questionnaire was distributed to 100 respondents, all of whom returned usable responses. By gender, 47% are male and 53% female. By age, most respondents are 17–25 years old (67%), followed by 26–35 years (25%), 36–40 years (5%), and over 40 years (3%) (Table II).

TABLE II. RESPONDENT CHARACTERISTICS

Characteristic	Category	%
Gender	Male	47
	Female	53
Age	17–25 years	67
	26–35 years	25
	36–40 years	5
	> 40 years	3

Source: primary data (2026).

B. Classical Assumption Tests

The one-sample Kolmogorov-Smirnov test gives an asymptotic significance (two-tailed) of 0.200, above 0.05, supported by the normal P-P plot and a bell-shaped histogram, so the residuals are normally distributed. In the multicollinearity test, all independent variables have tolerance values above 0.10 and VIF values below 10 (Table III), so the model is free of multicollinearity. The scatterplot shows residuals spread randomly above and below zero on the Y axis without a pattern, so the model shows no heteroscedasticity and is suitable for use.

TABLE III. MULTICOLLINEARITY TEST

Variable	Tolerance	VIF
Service quality (X1)	0.984	1.016
Healthcare facilities (X2)	0.991	1.010
Brand image (X3)	0.993	1.007

Source: SPSS output (processed by the authors, 2026).

C. Multiple Linear Regression and t-Test

Table IV presents the regression and partial test results. The regression equation is

$$\hat{Y} = 8.086 + 0.552X_1 + 0.395X_2 + 0.316X_3 + e \quad (1)$$

The constant of 8.086 means that if service quality, healthcare facilities, and brand image were zero, patient satisfaction would be 8.086. All regression coefficients are positive, so an increase in each independent variable increases patient satisfaction. Service quality has the largest standardized coefficient (Beta = 0.567), followed by healthcare facilities (0.410) and brand image (0.332).

TABLE IV. MULTIPLE REGRESSION AND PARTIAL TEST (T-TEST) RESULTS

Variable	B	Beta	t	Sig.
(Constant)	8.086	—	2.065	0.042
Service quality (X1)	0.552	0.567	7.993	0.000
Healthcare facilities (X2)	0.395	0.410	5.811	0.000
Brand image (X3)	0.316	0.332	4.709	0.000

Source: SPSS output (2026). Dependent variable: patient satisfaction.

Service quality ($t = 7.993 > 1.984$; Sig. = 0.000 < 0.05), healthcare facilities ($t = 5.811 > 1.984$; Sig. = 0.000), and brand image ($t = 4.709 > 1.984$; Sig. = 0.000) each have a positive and significant partial effect on patient satisfaction, so H_1 , H_2 , and H_3 are accepted.

D. Simultaneous Test and Coefficient of Determination

The F -test (Table V) gives $F = 35.446$, greater than the F -table value of 2.70, with Sig. = 0.000 < 0.05, so H_4 is accepted: service quality, healthcare facilities, and brand image simultaneously have a significant effect on patient satisfaction at the hospital.

TABLE V. F-TEST (ANOVA) RESULTS

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	1,986.808	3	662.269	35.446	0.000
Residual	1,793.632	96	18.684		
Total	3,780.440	99			

Source: SPSS output (2026). Dependent variable: patient satisfaction.

Table VI shows an adjusted R^2 of 0.511: the three variables together explain 51.1% of the variation in patient satisfaction, while the remaining 48.9% is explained by other factors outside the model.

TABLE VI. COEFFICIENT OF DETERMINATION

R	R ²	Adjusted R ²	Std. Error
0.725	0.526	0.511	4.32246

Source: SPSS output (2026).

E. Discussion

Service quality. Service quality has a positive and significant effect on patient satisfaction. Fast, accurate, friendly, and responsive service from medical and non-medical staff gives patients comfort and trust in the hospital. This strengthens the Expectation Confirmation Theory (Oliver, 1980) and is in line with Trisnawati et al. (2023) and Aladwan et al. (2021). It is also the strongest of the three effects (Beta = 0.567), consistent with the pre-survey complaints about specialist delays and slow nurse response.

Healthcare facilities. Adequate healthcare facilities give patients a sense of comfort and safety and raise trust in the hospital's capability. The result supports the servicescape concept (Bitner, 1992) and is in line with Amanda and Andarini (2023) and Zhao (2023). Its effect is consistent with the complaints in the pre-survey about air conditioning, waiting chairs, and the electronic registration system.

Brand image. A positive hospital image builds patients' trust in the quality of service provided and so increases satisfaction. This is in line with Raka Sukawati (2021) and Rawat and Taneja (2020). Its effect is the smallest of the three, but because negative digital reviews can erode the image, managing reputation remains important.

Simultaneous effect. Service quality, healthcare facilities, and brand image together significantly affect patient satisfaction, confirming that patients' post-service evaluation depends on a positive confirmation of all three elements in an integrated way.

Limitations. Most respondents (67%) are 17–25 years old, so the results may reflect younger patients more than the full patient population. The population size is unknown, the sample size follows a rule of thumb, and 48.9% of the variation in satisfaction remains unexplained, so the findings should be generalized with caution.

IV. CONCLUSIONS

Service quality, healthcare facilities, and brand image each have a positive and significant effect on patient satisfaction at Dr. Soeselo Slawi Regional General Hospital, and the three variables simultaneously have a positive and significant effect (adjusted $R^2 = 0.511$). The hospital is advised to improve the responsiveness and reliability of medical staff, optimize the maintenance of physical facilities (air conditioning, waiting chairs, and the electronic registration system), and proactively maintain its reputation through digital review management and transparency of service quality. Future research may add variables such as perceived value or patient trust and extend the object to hospitals with different characteristics.

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