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The influence of service quality factors, service facilities and brand image on patient satisfaction at royal prima Medan hospital

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Article Info

Abstract
Customer satisfaction is a significant element for a service user to create and retain customers successfully. This can be made if good service quality, health facilities, and brand image support a health service. This study aimed to determine and analyze how much influence quality, facilities, and brand image have on patient satisfaction—cross-sectional quantitative research approach, conducted at Royal Prima Medan Hospital, May 2023. The population of all outpatient and inpatient patients, determination of the number of samples Structural Equation Modeling (SEM), determined 100 models, nonprobability method -survive sampling. Data was tested for validity and reliability. Multiple linear regression data analysis, coefficient of determination (R2), F test (simultaneous testing), t-test (partial testing) at $\alpha = 0.05$. The results of the service quality variable, t-count (6.772) > t-table (1.66) probability value (0.009) < 0.05, service facility variable (t-count value > t-table (6.772) > t-table (1.66) and probability value (0.009) < 0.05, brand image variable t-count > t-table (6.921) > t-table (1.66) and probability value (0.002) < 0.05, so that the three variables have a significant relationship with patient satisfaction. The calculated F test obtained an F value of 88.121 with a probability of $0.012 \leq 0.05$. In conclusion, the results of partial and simultaneous tests, service quality variables, service facilities, and brand image have a positive and significant effect on patient satisfaction at Royal Prima Medan Hospital, with an Adjusted R square value of 0.845, meaning that 84.5% of the variation in the dependent variable on patient satisfaction at Royal Prima Hospital can be explained by variations in the independent variables of service quality, brand image, and facilities, the remaining 15.5% (100%-84.5%) is defined by other variables not examined in this study, such as price, distance, and others.

Introduction
Quality health services are health services that can satisfy every user of health services by the average level of satisfaction of the population and whose implementation is by established professional standards and codes of ethics (Setyawati, 2018) [12]; (Tanudjaya, 2014) [14]. Nowadays, people have begun to include new needs as basic service quality requirements. The increasing socio-economic conditions of society also affect the mindset of people who are increasingly critical of vital things, especially regarding health. Facilities are everything deliberately provided by service providers for use and enjoyment by consumers, aiming to provide a maximum level of satisfaction (Hasanah *et al*., 2020) [3]. Therefore, the health service sector is transforming toward customer orientation (Saputra *et al*., 2015) [11].
Hospitals are trying to build marketing strategies that increase service facilities to increase patient satisfaction (Harfika & Abdullah, 2017) [2]; (Mukti, 2018) [8]. The health service industry is about curing diseases and focuses on disease prevention and

prevention measures (Setyawati, 2018) [12]. Customer satisfaction is significant for a service user to successfully create and retain customers (Puspita *et al*., 2020) [10]. The joy felt by patients depends on their perceptions of expectations of the quality and service facilities provided by the hospital (Puspita *et al*., 2020) [10]; (Hasanah *et al*., 2020) [3]; (Harfika & Abdullah, 2017) [2]. Quality, facilities, and brand image are measurements of the level of service provided or delivered by customer expectations (Supriyanto & Soesanto, 2012) [13]. This study aimed to determine and analyze how much influence quality, facilities, and brand image have on patient satisfaction.

Research Methods
Research Results and Discussion

This quantitative, cross-sectional research approach was conducted at Royal Prima Medan Hospital, in May 2023. The population is all patients who use health services, both outpatient and inpatient, determining the number of samples using Structural Equation Modeling (SEM); 100 pieces were selected, with a non-probability method -purposive sampling with criteria patients who receive outpatient/inpatient treatment at Royal Prima Hospital, willing to be a respondent and can read and write and cooperative patient. The validity test is used to measure whether a questionnaire is valid or not, and the reliability test. Data analysis using multiple linear regression, coefficient of determination (R2), F test (simultaneous testing), t-test (partial testing) at α = 0.05.

Table 1: Analysis Multiple Linear Regression

Coefficients a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	5.786	2.789		2.702	.021
Service Quality	.621	.287	.345	4.201	.001
Facilities	.552	.301	.411	4.445	.000
Brand Image	.524	.324	.510	5.229	.005

Source: Research Results, 2023 (Data processed)

The meaning of the multiple linear regression equation above is the constant of 5,786 states that if the Brand Image of Service Quality and Facilities does not exist or is constant, the Patient Satisfaction of Royal Prima Hospital is 5,786 units. The Service Quality regression coefficient is 0.621 and is positive; this states that every 1 unit increase in Service Quality will increase Royal Prima Hospital Patient

Satisfaction. The Facility regression coefficient is 0.552 and has a positive value; each increase in Facility 1 unit will increase Patient Satisfaction at Royal Prima Hospital. The Brand Image regression coefficient is 0.524 and is positive, this states that every 1 unit increase in Brand Image will increase Royal Prima Hospital Patient Satisfaction.

Table 2: Test Coefficient of Determination

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.845a	.845	. 845	6.22

Source: Research Results, 2023 (Data processed)

The results of the Determination Coefficient Test obtained an Adjusted R square value of 0.845; this means that 84.5% of the variation in the dependent variable Royal Prima Hospital Patient Satisfaction can be explained by the variation in the

independent variables of Service Quality, Brand Image, and Facilities, the remaining 15.5% (100%-84.5%) is defined by other variables not examined in this study, such as price, distance, and others.

Table 3: Simultaneous Test (F Test)

Anova					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	2543.1	2	1356.1	88,121	.012b
Residual	2356.1	100	.723		
	2021.5	100			
Total	2416.2	100			

Source: Research Results, 2023 (Data processed)

The f table value is obtained from df1 = k-1 = 4-1 = 3, where k is: number of dependent and independent variables df2 = n-k = 100-3 = 97, where n is: the number of samples from row 97, column 3. F table, according to the F table, is 2.70. The table above shows that the calculated F value is 88.121 with a probability of 0.012; because the likelihood is less than

0.05, the regression model can be used to predict Patient Satisfaction. This can also be seen from the F-count (88.121) > F-table (2.70), then H4 is accepted, which means that the variables of Service Quality, Brand Image, and Facilities affect Patient Satisfaction at Royal Prima Hospital.

Table 4: Partial Test (t test)

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	5.2245	2.089		4.223	.019
Service Quality	.671	.086	.618	6.772	.009
Facilities	623	.071	.647	6.921	.002
Brand Image	.567	.062	.528	5.056	.006

Source: Research Results, 2023 (Data processed)

The t value is determined to be significant at 5% and the degree of freedom: df = n-k (df = number of samples and k = number of overall variables), namely df = 100-3 = 97. The t-count test is two-way, so the t-table used is t 5% or t 0.05 (97) = 1.66. From the t-test results above, it can be concluded that for the Service Quality variable, the t-count (6.772) > t-table (1.66) is obtained and the probability value (0.009) <0.05, then H1 is accepted, meaning that there is an effect of Service Quality on Patient Satisfaction. For the Facility variable, the t-count (6.921) > t-table (1.66) and the probability value (0.002) <0.05 are obtained, so H2 is accepted, meaning that there is an effect of Service Quality on Patient Satisfaction. Brand Image variable received t-count (5.056) > t-table (1.66) and probability value (0.006) <0.05, then H3 is accepted, which means that there is an effect of Brand Image on Patient Satisfaction.

Discussion
The Effect of Service Quality on Patient Satisfaction
The research results prove that there is an effect of Service Quality on Patient Satisfaction at Royal Prima Hospital. In line with the first hypothesis (H2). This can be seen from the partial test results (t-test) where the t-count value> t-table (6.772)> t-table (1.66) and the probability value (0.009) <0.05 so that the research results reject H0 accept Ha.
The results of this study are supported by Nurulla (2013) [9], which states that service quality and satisfaction are intervening variables that affect the realization of loyalty through gradual, directed, and continuous processes and mechanisms. Perceived service quality has a direct effect on patient satisfaction. Service quality perceived as good by patients is a determinant and condition in achieving patient satisfaction. Everything that results from the perceived value of quality by the patient will undoubtedly satisfy the patient (Nurullah Hidajahnningtyas, Andi Sularso, 2013) [9]. Ksatriyani (2019) [5] shows that the effect of service quality on customer satisfaction produces a positive coefficient (standardized coefficient) of 0.279 sign-value 0.001. The sign-value is 0.001 <0.05; it can be concluded that if the effect of service quality on customer satisfaction is proven to be significant, service quality on customer satisfaction is established in the study (Ksatriyani, 2019) [5].

The Effect of Facilities on Patient Satisfaction
The results of the partial test research (t-test) the t-count value> t-table (6.921)> t-table (1.66) and the probability value (0.002) <0.05 so that the research results reject H0 accept Ha. The results of this study are supported by Mongkaren (2013) [7], which shows that facilities and service quality simultaneously and partially have a significant effect on customer satisfaction. Adventist Hospital Manado provides facilities to the community to make it easier if they need health services. Likewise, good service quality certainly creates service user satisfaction. Advent Manado Hospital always tries to focus on customer satisfaction and be responsive to patients who come and provide health services by using skilled and professional personnel to meet patients' expectations (Mongkaren, 2013) [7].

The Effect of Brand Image on Patient Satisfaction
The results of the partial test research (t-test) where the t-count value> t-table (5.056)> t-table (1.66) and the probability value (0.006) <0.05, so the research results reject H0 and accept Ha. The results of this study are supported by Maghfiroh's research (2017) [6]; the variables studied have a significant and positive effect on patient satisfaction, namely brand image (sig 0.001 and B 0332), customer value (sig 0.000 and B 0592) and customer experience (sig 0.001 and B 0.322) (Maghfiroh, 2017) [6]. Supported by Aril (2023) [1], there is a positive and significant effect on service quality variables of z count 2.858> 1.96 and brand image of 6.576> 1.96 on patient re-interest through service satisfaction; there is a significant effect on service quality variables (p = 0.005) and brand image (p = 0.000) on patient satisfaction, there is a substantial effect of brand image on patient re-interest (p = 0.000). There is no significant effect on the variable patient satisfaction on patient return interest in this study (p=0.124). Service quality and hospital image (brand image) affect return interest through patient satisfaction at Sis Aldjufrie General Hospital, Palu City. So the hospital should maintain the quality of its services (Aril Ahri *et al.*, 2023) [1].

Conclusions
Based on the research and discussion described in the previous chapter, it can be concluded that the partial results show that service quality, facilities, and brand image partially have a positive and significant effect on Patient Satisfaction at Royal Prima Hospital. Simultaneous testing of results indicates that Brand Image, Service Quality, and Facilities positively and significantly affect Patient Satisfaction at Royal Prima Medan Hospital.

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