Analysis of the Effect of Service Quality on Patient Satisfaction At The Xyhospital Banda Aceh

Muhammad Ramadhan[1], Asmawati[2], Isthafan Najmi[3]

(Faculty of Economics, Abulyatama University, Indonesia)

Abstract
Background : Patient satisfaction is a level where the needs, desires and expectations of patients can be fulfilled which will result in repeat purchases or continued loyalty. Quality of service is an absolute must for a Words-of-Mouth business to run well. This study aims to analyze the effect of service quality (reability, responsiveness, assurance, empathy, tangibles) on patient satisfaction.
Materials and Methods: This type of research is a survey research with a cross sectional research design with a quantitative approach. The study was carried out at XY Hospital Banda Aceh, with a sample of 99 people using a random sampling method, namely the number of patients who visited XY Hospital in the last year calculated using the slovin formula. The research instrument has been tested for validity and reliability on 30 patients). Data analysis using Multiple Linear Regression.
Results: Characteristics of respondents showed that 55.6% were women, 26.3% were aged 40-49, 45.5% had high school education, 28.3% were other workers, 39.4% had income <1.800.000, 54 ,5% had visited XY Hospital< 3 times, 60.6% got XY Hospital information from friends or family. We found that the variables of reliability, responsiveness, assurance, empathy and tangibles had a positive and significant effect on patient satisfaction.
Conclusion: Good service quality can affect patient satisfaction, so patients will be loyal to use treatment services at XYHospital.
Keywords: Reability, responsiveness, assurance, empathy, tangibles, patient satisfaction

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I.   Introduction

World Health Organization (WHO) 2018, states that good health services provide effective, safe, and high-quality services to those who need them, supported by adequate resources. Health development efforts can be efficient and effective if the need for health resources can be met (human resources, facilities and financing).

Patient satisfaction is a person's feeling of pleasure or disappointment that comes from a comparison between perceptions or products that are felt and expected by the patient (Garcia et al, 2019). Meanwhile, according to Sudibyo (2014) customer satisfaction is one aspect that is influenced by service quality. Quality or service quality is the level of perfection of health services that satisfy customers provided in accordance with professional standards and ethics. One way to determine the quality or quality of service and patient satisfaction in hospitals is to use indicators of Minimum Service Standards (SPM) and patient satisfaction levels.

Quality of health services is an integrated intervention to patients or customers safely and according to professional standards by utilizing trained resources so that patient needs can be met and achieve optimal health status. The quality of professional nursing services refers to 5 dimensions of service quality, namely: *reliability, tangibles, assurance, responsiveness,* and *empathy* (Widjaja, Wijayanti&Tjitra, 2019).

Increasing the quality of service in hospitals cannot be separated from the role of hospital staff or employees. The results of reports and monitoring of the Management Information System (SIM) of the XY Hospital Banda Aceh in 2019, the number of visitors was 101,997 people, namely 90,666 visitor patients at the Poly and 11,331 inpatients. The average number of visits in a month is 8,500. Based on the author's observations and interviews with several customers who visited XY Hospital, 5 (five) of them said that XY Hospital already had a good spatial arrangement such as (politics, general information services, room directions, etc.) making it easier for visitors to access treatment and services. However, in terms of quantity, there are shortages such as wheelchairs, sleeping beds, and rooms.

Based on the observations of researchers, referral patients and patients who come directly through the ER. From the results of the report and monitoring of the Banda Aceh SIM XY Hospital in 2019 that patients have to wait 30 minutes – 2 hours to get a room, and the XY Hospital provides temporary beds while waiting for the room to be empty. So the researchers assumed that the service would be less effective and patients looked for other hospitals to get faster services. Therefore, the authors want to examine the effect of service

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quality (*reliability, responsiveness, assurance, empathy, tangibles*) on patient satisfaction. The aims of this research are as follows; 1) To analyze the effect of reliability on patient satisfaction; 2) To analyze the effect of responsiveness on patient satisfaction; 3) To analyze the effect of assurance on patient satisfaction; 4) To analyze the effect of empathy (empathy) on patient satisfaction; 5) To analyze the effect of tangibles (physical evidence) on patient satisfaction; 6) To analyze the effect of reliability, responsiveness, assurance, empathy, tangibles on patient satisfaction

II.   Materials And Methods

This research was conducted on visitors to the Banda Aceh XY Hospital service, this research was carried out from 2 - 20 August 2020

Study Design : This type of research is a survey research with a *cross sectional research design with* a quantitative approach. With a sample of 99 people, namely patients who visited XY Hospital were taken randomly **.** This research was conducted at XY Hospital Banda Aceh.

The data collection instrument in this study is the quality of service consisting of 16 question items and patient satisfaction consisting of 5 question items, in the form of a Likert scale, namely 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree.

The results of the research data collection instrument test showed that r^2 hitung(reability 0.842> 0.361), (responsiveness 0.618> 0.361), (assurance 0.601> 361), (empathy 0.618> 0.361), tangibles 0.601> 361) and cronbach alpha (0.966> 0.80). Data analysis used descriptive statistical test, chi-square test and Multiple Linear Regression.

. **Data Collection Process** : carried out through stages with the following steps; 1) Pre-Implementation Stage, namely the management of research permits. The process of collecting research data is assisted by enumerators. The research instrument is equipped with explanations, informed consent and guidelines for filling out; 2) The implementation stages of data collection are as follows, a) Data collection by filling out instruments by respondents is carried out simultaneously according to a mutually agreed time, b) An explanation of the implementation of research to respondents is carried out directly when meeting with respondents. Respondent's consent to participate in the study was stated by ticking the option in the instrument.

Analysis : Data analysis used descriptive statistical test, *chi-square test* and *Multiple Linear Regression* .

If the *p-value* (sig) > 0.05 then Ho is accepted, meaning that there is no significant effect between the independent variable and the dependent variable, otherwise if *the p-value* (siq) <0.05 then Ho is rejected, meaning that there is a significant effect between independent variable (reability, responsiveness, assurance, empathy, tangibles) and dependent variable (patient satisfaction).

Multivariate analysis was conducted to determine which independent variables showed the most dominant influence on the dependent variable. In this study, the multivariate test was carried out using multiple linear regression tests.

III.   Results

Univariate Analysis

Characteristics of Nurses in the Inpatient Room at the Meuraxa Hospital, Banda Aceh City.

Table 3.1 shows that, 55.6% of patients were female, 32.3% of patients were aged 29-39 years, 45.5% of patients had high school education, 28.3% of patients were in other occupations, 39.4% of patients with income level < 1,800,000, 54.5% of patients had visited XYHospital < 3 times, 60.6% of patients received information from friends and family regarding XYHospital.

Table 3.1
Characteristics of Visiting Respondents
XYHospital Banda Aceh (n=99)

No	Characteristics	Frequency	Percentage
1	Gender		
	man	44	44.4
	Woman	55	55.6
2	Age		
	< 17 years old	8	8.1
	18-28 years old	23	23.2
	29-39 years old	32	32.3
	40-49	26	26.3
	<50 years	10	10.1
3	Education		
	SENIOR HIGH SCHOOL	45	45.5
	Diploma	32	32.3
	S1	22	22.2

4	Respondent's Job		
	Student/Student	21	21.2
	Government employees	8	8.1
	Private employees	20	20.2
	Self-employed	22	22.2
	etc	28	28.3
5	Income Level		
	< 1,800,000	39	39.4
	1,800,000	26	26.3
	2,000,000	18	18.2
	4,000,000-5,000,000	14	14.1
	> 5,000,000	2	2.0
6	Number of Respondents Visit		
	< 3 times	54	54.5
	3-6 times	22	22.2
	3-7 > 6 times	23	23.2
7	Information obtained by respondents about XYHospital		
	Friends or family	60	60.6
	Recommended place to work	10	10.1
	Advertising (print media)	4	4.0
	Newspaper	3	3.0
	etc	22	22.2

Source: primary data, October 2020

Bivariate Analysis

Quality of Service at XYHospitalBanda Aceh .

Reability, responsiveness, assurance, empathy, tangibles patient satisfaction

XYHospital service providers who were quick to respond to problems in patient complaints, 44.4% of respondents agreed to the ability of XYHospital employees in provide excellent service to patients, 39.4% of respondents stated that XYHospital employees gave genuine attention to patient needs, and 44.4% of respondents stated that the completeness of facilities and infrastructure at XYHospital was adequate.

Table 3.2

Reability, Responsiveness, Assurance, Empathy, Tangibles and Patient Satisfaction

XYHospital Banda Aceh (n=99)

No		X1.1		X1.2		X1.3	
1	Reliability						
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
	TS	10	10.1	14	14.1	13	13.1
	N	31	31.3	37	37.4	29	29.3
	S	42	42.4	33	33.3	40	40.4
	SS	16	16.2	15	15.2	17	17.2
2	Responsivity	X1.1		X1.2		X1.3	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
	STS					1	1.0
	TS	11	11.1	10	10.1	7	7.1
	N	26	26.3	29	29.3	32	32.3
	S	46	46.5	44	44.4	48	48.5
	SS	16	16.2	16	16.2	11	11.1
3	Assurance	X1.1		X1.2		X1.3	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
	STS	1	1.0			1	1.0
	TS	14	14.1	13	13.1	12	12.1
	N	32	32.3	32	32.3	26	26.3
	S	40	40.4	39	39.4	44	44.4
	SS	12	12.1	15	15.2	16	16.2
4	Empathy	X1.1	X1.2	X1.3			
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
	STS	2	2.0	1	1.0		
	TS	9	9.1	14	14.1	10	10.1
	N	38	38.4	37	37.4	37	37.4
	S	35	35.4	38	38.4	39	39.4
	SS	15	15.2	9	9.1	13	13.1
5	Tangibles	X1.1		X1.2		X1.3	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
	STS	4	4.0	2	2.0	1	1.0
	TS	11	11.1	12	12.1	9	9.1
	N	30	30.3	32	32.3	39	39.4

	S	38	38.4	44	44.4	43	43.4
	SS	16	16.2	9	9.1	7	7.1

Source: primary data, October 2021

Multivariate Analysis
Classic assumption test
Normality test
The normality test in this study was carried out through graphical analysis generated through regression calculations with SPSS 22. From the graphic pattern image it can be concluded that the data used shows normal indications because the points spread around the diagonal line and their distribution follows the direction of the diagonal line (Figure 4.1). Thus the linear regression model in this case is feasible to use.

Figure 4.1. Normality Test Results
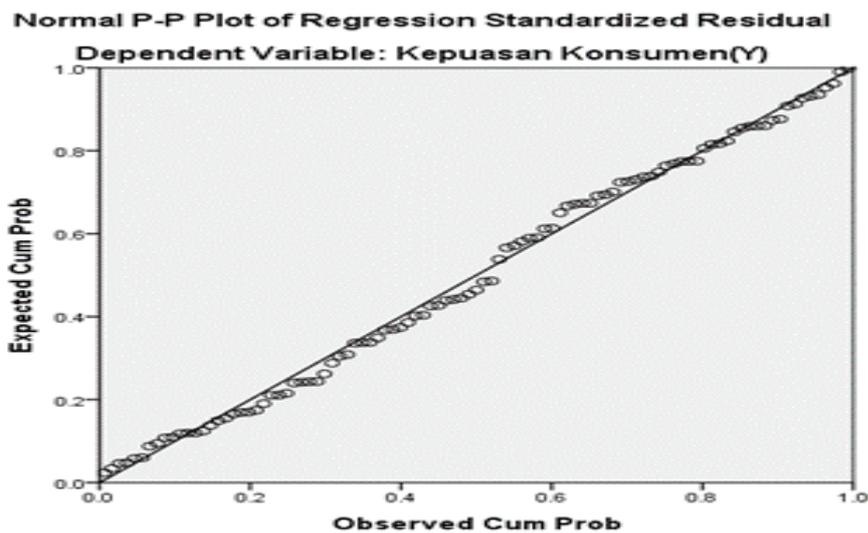
Source: Research Data Processing Results in 2020

Multicollinearity Test
The multicollinearity test aims to test whether the regression model found a correlation between the independent variables. If there is a correlation then there is a multicollinearity problem so that the regression model cannot be used. The results of the multicollinearity test in this study can be seen in Table 3.3

Table 3.3
Coeffecients Multi Multicollinearity Test

Model		Collinearity statistics	
		Tolerance	VIF
1	Constant		
	Reliability (X1)	.467	2.139
	Responsiveness (X2)	.385	2,598
	Guarantee (X3)	.369	2,709
	Empathy (X4)	.404	2,473
	Physical Evidence (X5)	.375	2,670

Source: Research Data Processing Results in 2020

Based on the results of data processing in Table 3.3, it shows that none of the independent variables (realibility, responsiveness, assurance, empathy, tangibles) has a tolerance value of less than 0.1, which means there is no correlation between independent variables. The calculation of the Variance Inflation Factor (VIF) value also shows that there is no single independent variable that has a VIF value greater than 5, so it can be concluded that in the regression model there is no multicollinearity problem.

Heteroscedasticity Test
The heroscedasticity test aims to test whether in a regression there is an inequality of variance from the residuals of one observation to another observation. If the residual variance from one observation to another observation remains, it is called homoscedasticity and if it is different it is called heteroscedasticity. A good regression model is that there is no heteroscedasticity.

To test heteroscedasticity in this study, the Glejser test was carried out as seen in table 3.4

Table 3.4
Heteroscedasticity Test Coefficientsa

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.845	.631		2,923	.004
Reliability (X1)	.011	.070	.023	.154	.878
Responsiveness (X2)	-.082	.079	-171	-1.029	.306
Guarantee (X3)	.027	.061	.073	.433	.666
Empathy (X4)	.017	.079	.034	.212	.833
Physical Evidence (X5)	-.003	.076	-.008	-.045	.964

Source: Research Data Processing Results in 2020

From table 3.4 the Glejser test results show that none of the independent variables statistically significant affects the value of the dependent variable, namely the absolute value of Ut (AbsUt). This can be seen from the probability of significance above the 0.05 confidence level. So statistically the regression model does not contain any heteroscedasticity.

Hypothesis test
Simultaneous Test (F Test)
Based on the results of the study, the effect of service quality (realibility, responsiveness, assurance, empathy, tangibles) on patient satisfaction in XYHospitalcan be seen in table 3.5.

Table 3.5
Simultaneous Test

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	818,094	5	163.619	42,258	.000b
Residual	360,088	93	3.872		
Total	1178,182	98			

Source: Research Data Processing Results in 2020

From table 3.5, the Fcount value is 42.258. By using a 95% confidence interval ($\alpha = 0.05$), the F distribution table obtained a value of 2.31 . Thus, Fcount 42.258 >Ftable 2.31 is H_0rejected and H_1accepted, meaning that service quality variables, namely reliability (X1), responsiveness (X2), assurance (X3), empathy (X4), tangibles (X5) have a significant influence on patient satisfaction XYHospital Banda Aceh.

In the partial test, it can be seen that the significance value of 0.000 is smaller than = 0.05, this means that the service quality variable has a high significant effect. Variables of service quality (realibility, responsiveness, assurance, empathy, tangibles) show a very real influence on patient satisfaction at XYHospital Banda Aceh, or the higher the quality of service provided, the higher the patient satisfaction.

Partial Test
Partial test of the effect of reliability, responsiveness, assurance, empathy, and tangibles variables can be seen in table 3.6. Obtained tcount value of each variable. The tcount value is then compared with the ttable value at the 95% confidence level or = 0.05 . The value of ttable on df 99 with = 0.05 is 1.66. The partial effect of the reliability variable (X1) is obtained with a tcount of 2.247, thus tcount>ttable, then it is H_0rejected and H_1accepted, which means that the reliability variable has a significant effect on patient satisfaction. This means that the better the ability of employees to provide satisfactory service to patients, it will increase patient satisfaction.

The results of this study are in line with the opinion of Wulandari&Agustini. (2015) that the reliability of delivering fundamental services depends on the ability of various element functions. These elements include people who carry out specific service tasks in the service chain and facilities that support service performance, as well as the physical environment in which services are provided.

Table 3.6
Partial Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2.850	1.143		2,493	.014		
Reliability (X1)	.286	.127	.188	2,247	.027	.467	2.139
Responsiveness (X2)	.328	.144	.211	2.285	.025	.385	2,598
Guarantee (X3)	.248	.111	.211	2.236	.028	.369	2,709
Empathy (X4)	.293	.143	.185	2.055	.043	.404	2,473
Physical Evidence (X5)	.283	.138	.192	2.050	.043	.375	2,670

Source: Research Data Processing Results in 2020

The partial effect of the responsiveness variable (X2) is obtained with a tcount of 2.285, thus tcount>ttable, then it is H_0 rejected and H_1 accepted, which means that the responsiveness variable has a significant effect on patient satisfaction. Thus, the better the actions given by employees to patients, it will increase patient satisfaction with XYHospital services. This is because the actions given by employees are things that can be felt and seen by the patient. Likewise, the better the employee's actions will support efforts to increase patient satisfaction with services.

The significant effect of the responsiveness variable on patient satisfaction is in accordance with what was stated by Irawan, Deny & Edwin (2013), responsiveness is the most dynamic dimension of service quality, customer expectations for service speed will almost certainly change with an upward trend from time to time.

The partial effect of the assurance variable (X3) is obtained with a tcount of 2.236, thus tcount>ttable, it is H_0 rejected and H_1 accepted, which means that the assurance variable has a significant effect on patient satisfaction. Thus, the better the guarantee of patient satisfaction in services, it will increase patient satisfaction with XYHospital services. This is because patients need a guarantee that their wishes or expectations can be fulfilled through the services they receive. Likewise, the better the service guarantee, the more patient satisfaction with XYHospital Banda Aceh services will be .

This study is in accordance with what was stated by Irawan (2013), that assurance is related to the company's ability and behavior of front-line staff in instilling confidence and confidence in customers.

The partial effect of the empathy variable (X4) is obtained with a tcount of 2.055, thus tcount>ttable, then it is H_0 rejected and H_1 accepted, which means that the empathy variable has a significant effect on patient satisfaction. Thus, the better the action felt by the patient in the service, it will increase patient satisfaction with XYHospital services. This is because the actions felt by the patient will affect his assessment of the services obtained and will affect his decision to make a return visit for shopping. Therefore, the better the employee's actions perceived by the patient, the more patient satisfaction with XYHospital Banda Aceh services will be.

The partial effect of the tangibles variable (X5) is obtained with a tcount of 2.050, thus tcount<ttable, then it is H_0 rejected and H_1 accepted, which means that the tangibles variable has a significant effect on patient satisfaction. This means that physical appearance is the main attraction to the patient.

IV. Discussion

Analysis of the Effect of Service Quality on Patient Satisfaction at XYHospital BandaAceh.

From the results of the study, it was found that the variables of reliability (X_1), responsiveness (X_2), assurance (X_3), empathy (X_4), physical evidence (X_5) had a joint effect on the patient satisfaction variable (Y). This is indicated by the significance value of F of 0.000 ($\alpha < 0.05$) so it H_0 is rejected, then the first hypothesis in this study can be accepted, namely the quality of service consisting of reliability (X_1), responsiveness (X_2), assurance (X_3), empathy (X_4) , physical evidence (X_5) has a significant effect on patient satisfaction.

Partially the dominant influence on patient satisfaction (Y) is the responsiveness variable (X_2). It is based on the highest regression coefficient that is 0.211 and the largest tcount value is 2.285 and a significance of 0.025 (sig <0.05).

Based on the highest regression coefficient that is 0.211 and the largest tcount value is 2.285 and a significance of 0.025 (sig <0.05) while the variable that has the smallest effect on consumer satisfaction (Y) is the reliability variable (X_1) with a regression coefficient of 0.188. The results of this study are in accordance with research conducted by Triantoro, Kurnia, &Suryoko (2015) regarding the dimensions of service quality that affect patient satisfaction, one of which is responsiveness. This is in accordance with research conducted by Pertiwi (2010) where the responsiveness variable has a dominant influence on patient satisfaction.

V. Conclusion

Based on the results of data analysis that has been carried out on all the data obtained, the following conclusions can be drawn:

There is an effect of reliability on patient satisfaction. Partially that there is a positive and significant effect between reliability on patient satisfaction. This means that the policy on reliability affects patient satisfaction at XYHospital Banda Aceh.

There is an effect of responsiveness on patient satisfaction. Partially that there is a positive and significant effect between responsiveness and patient satisfaction. This means that the policy on responsiveness affects patient satisfaction at XYHospital Banda Aceh.

There is an effect of assurance on patient satisfaction. Partially that there is a positive and significant effect between assurance on patient satisfaction. This means that the policy on assurance affects patient satisfaction at XYHospital Banda Aceh.

There is an effect of empathy on patient satisfaction. Partially that there is a positive and significant influence between empathy and patient satisfaction. This means that the policy on empathy affects patient satisfaction at XYHospital Banda Aceh.

There is a tangibles effect on patient satisfaction. Partially that there is a positive and significant influence between tangibles and patient satisfaction. This means that the policy on tangibles affects patient satisfaction at XYHospital Banda Aceh.

From the results of the multiple linear regression equation, it can be seen that the quality of service has a positive influence on patient satisfaction at XYHospital Banda Aceh.

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