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The Impact of Service Quality Dimensions on Patient Satisfaction and Loyalty Using The Modified Servqual Scala At Dr. Abdoer Rahem Situbondo Hospital

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Abstract

The focus of this study is on the influence of the quality of hospital inpatient health services according to the modified servqual scala dimension on patient satisfaction and loyalty. Satisfaction plays a role as a mediator of service quality in creating patient loyalty. With a sample of 400 inpatients participating in this study through a questionnaire survey with 15 questionnaires not returned / not answered completely. Samples were taken randomly from patients who received inpatient services with a purposive sampling method. Data were analyzed by path analysis using the SPSS program. The results of the study indicate that the quality of health services concerning the dimensions of trustworthness, communication, infrastructural quality, emphaty and responsiveness have a positive and significant effect on patient satisfaction in the inpatient installation of RSUD dr. Abdoer Rahem Situbondo with the dimension of responsiveness that has the greatest impact on satisfaction; The quality of health services regarding the dimensions of trustworthness, communication, emphaty, reliability and responsiveness through patient satisfaction have a positive and significant effect on patient loyalty in the inpatient installation of RSUD dr. Abdoer Rahem Situbondo but the personnel, healthscape, infrastructural quality does not have a significant effect. Patient satisfaction at the inpatient facility has a positive and significant effect on patient loyalty.

Keywords: Hospital, Servqual, Satisfaction, Loyalty

I. INTRODUCTION

Hospitals as public organizations in the field of health services, must have a competitive advantage, especially in the era of globalization which faces many challenges in carrying out basic tasks and functions such as increasing expectations of service quality, limited resources, potential conflicts, demands for technological development, many strict guidelines and rules. For this reason, hospitals continue to pay attention to the dynamics of customer needs, desires and preferences and try to fulfill them in ways that are more effective and efficient compared to their competitors.

Meanwhile, service quality has always been a major factor in measuring performance. Service quality is an overall evaluation of the customer on the service process provided by the service provider. In the health industry, the quality of results is the main determinant in assessing the perception of the quality of patient services. According to Zeithaml (1988), quality is perceived subjectively by consumers about the overall superiority of the product in referring to competitive offers. Likewise, perceived service quality is generally defined as consumers' assessments of, or impressions about, the overall superiority or superiority of an entity. A number of factors can influence

consumer quality assessments, including personal product experience, special needs, and consumption. High perceived quality will foster trust and motivate consumers to re-choose those services over competing products.

From a variety of service quality measurement models, the Servqual model seems to be adequate in hospitals, but non-Servqual developments need to be considered, therefore researchers wish to measure hospital service quality by adopting non-servqual quality dimension indicators such as the PAI, YP & Chary (2016) models., Padma et al. (2009), Swain & kar (2017) into the Servqual model (Parasuraman, Berry, Zeithmal, 1988).

In Situbondo, currently has 5 hospitals, namely 2 C class hospitals and 3 D class hospitals. Each competes according to its class. RSUD dr. Abdoer Rahem Situbondo is a hospital owned by the Government of Situbondo Regency which has class C capacity of 265 beds and has adequate human resources, especially the availability of 27 specialist doctors spread across various types of services. It is this type of service and HR that becomes the basis for competing to provide the best health services.

Based on the medical record report, the situation of the patient's visit at RSUD dr. Abdoer Rahem Situbondo from 2016 to 2018 experienced a downward trend of 10.4 %, in 2016 there were 107,587 patients, while in 2018 there were 96,675 people. On the other hand the level of satisfaction at the hospital tends to not be on target:

Table 1.1 Public Satisfaction Index for health services in RSUD dr. Abdoer Rahem Situbondo in 2018

Number	Work Unit	Target	Realization
1.	Emergency Departments	≥ 76,61	64,9
2.	Polyclinic	≥ 76,61	64,6
3.	Inpatient	≥ 76,61	55,5

(RSAR IKM Report for 2018)

Based on the above, it appears that there is a gap between the target index of satisfaction with realization, and the declining trend in patient visits could this be due to the declining quality of health services in hospitals which has an effect on satisfaction and can subsequently affect patient loyalty. Departing from the research gap and theory the study this takes the focus on "The Impact of Service Quality Dimensions on Patient Satisfaction and loyalty using the modified servqual scala at dr. Abdoer Rahem Situbondo hospital".

In this research, the author want to see: *First*, is there any influence on the quality of inpatient health services on patient satisfaction. *Second*, is there an influence on the quality of inpatient services on patient loyalty mediated by satisfaction, and *third*, is there an influence on patient satisfaction on inpatient loyalty.

The objectives of this research are: *First*, to analyze the effect of the quality of inpatient health services on patient satisfaction by using the modified servqual scala. *Second*, to analyze the effect of inpatient service quality on patient loyalty mediated by

satisfaction using the modified servqual, and *third*, to analyze the effect of patient satisfaction on inpatient loyalty.

According to Mardalis (2002: 48), a hypothesis is a temporary answer or conclusion drawn to answer the problem raised in the study. Trelease (1960), the hypothesis is also a temporary statement of an observable fact. According to Kerlinger (1973) the hypothesis is a conjectural statement of the relationship between two or more variables. From this description, it can be obtained a hypothesis (provisional estimates) based on previous opinions and studies, as follows:

- 1. HI: All dimensions of the modified SERVQUAL in the form of trustworthness (XI), Personnel (X2), Communication (X3), Healthscape (X4), infrastructural quality (X5), Emphaty (X6), Reliability (X7) and Responsiveness (X8) have a significant effect on inpatient satisfaction (Z) at RSUD dr. Abdoer Rahem Situbondo.
- 2. H2: All dimensions of the modified SERVQUAL in the form of Trustworthness (X1), Personnel (X2), Communication (X3), Healthscape (X4), infrastructural quality (X5), Emphaty (X6), Reliability (X7) and Responsiveness (X8) mediated by Satisfaction have a significant effect on the loyalty of inpatients (Y) in RSUD dr. Abdoer Rahem Situbondo.
- 3. H3: Patient satisfaction (Z) has a significant effect on Inpatient (Y) patient loyalty at RSUD dr. Abdoer Rahem Situbondo.

II. METHODOLOGY

The analysis technique that can be used to determine the relationship between these variables is path analysis with SPSS application. Eight dimensions of service quality include: Trustworthness, Personnel, Communication, Healthscape, infrastructural quality, Emphaty, Reliability and Responsiveness act as exogenous variables, while satisfaction as an endogenous variable and patient loyalty as a second endogenous variable.

The population in this study were all patients who were inpatients at RSUD dr. Abdoer Rahem Situbondo Regency. Therefore the total population in this study is not known with certainty. While the sample in this study was 400 inpatients from September to October 2019, with the patient undergoing treatment for at least 3 days, and in a conscious condition. A total of 385 (96.25 %) patients participated in this study.

In this research the five-point Likert scale is used to measure three categories of structures (quality of hospital services, patient satisfaction and patient loyalty). Researchers use eight dimensions of hospital service quality (Trustworthness, Personnel, Communication, Healthscape, infrastructural quality, Emphaty, Reliability and Responsiveness), as proposed by Parasuraman, Zeithaml, Berry (1988), Babakus and Mangold (1992), Bakar (2008), by adopting a model from Pai and Chary, (2016), Karr and Swain (2018) so that the servqual contain 22 indicators and servqual modified instrument increased from 22 to 39 indicators.

III. RESULTS AND DISCUSSION

The classic assumption test results in the path analysis include the Kolmogorov Smirnov normality test which has a normal distribution with the Asymp count results. Sig. (2-tailed) Unstandardized Residual is 0.131> of 0.05 so the regression is feasible to use. the results of multicollinearity test values of VIF (variance inflation factor) <10 shows that the regression model is free from multicollinearity symptoms.

A. Model and Equation Structure of Path Analysis.

1. Substructure Equation 1

Substructure equation 1 illustrates the effect of service quality (X1, X2, X3, X4, X5, X6,X7,X8) on satisfaction (\mathbb{Z}). The following path coefficient values are obtained:

P. L. C. T. Acti Coefficient For Substructure Equation 1							
Relationship		Koef.	T				2
from	to	beta	count	Sig.	F_{count}	Sig.	R^2
			it	O	it		
X _l (Trustworthness)		0,127	2,686	0,008			
X ₂ (personnel)	satisfaction (Z)	-0,11	-0,177	0,860			
X_3 (communication)		0,138	2.464	0,014	53,231	0,000	0,531
X ₄ (healthscape)		0,073	1,331	0,184			
X₅(infrastructural quality)		0,115	2,210	0,028			
X_6 (emphaty)		0,177	3,579	0,000			
X ₇ (reliability)		0,087	1,622	0,106			
X ₈ (responsiveness)		0,226	4,333	0,000			
(Donard Donale)							

Table 3.1. Path Coefficient For substructure Equation 1

(Research Results)

Based on Table 3 it can be seen that the value of Fcount = 53,231> Ftable = 2.237. This means that the variable Trustworthness, Personnel, Communication, Healthscape, infrastructural quality, Emphaty, Reliability and Responsiveness simultaneously affect the patient satisfaction variable by 53.1%, the remaining 46.9% or residual value e = 0.684 caused by other factors not examined. Furthermore, partial testing is done by comparing t arithmetic with *t* table = 1.966. In Table 3 it can be seen that the *t* count on the personnel variable (X2), healthscape (X4) and the reliability variable (X7) is less than the table. This means that the path coefficient of the personnel variable (X2), healthscape (X4) and the reliability variable (X7) does not significantly influence satisfaction. So that the obtained sub-structure equation 1 with Servqual modified:

 $Z = 0.127 X_1 Z + 0.138 X_3 Z + 0.115 X_5 Z + 0.177 X_6 Z + 0.226 X_8 Z + 0.684 e_1$.

2. Substructure Equation 2

Substructure equation 2 illustrates the effect of service quality (X1, X2, X3, X4, X5,X6,X7,X8) and satisfaction (Z) on Loyalty (Y). The following path coefficient values are obtained:

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Table 3.2. Path Coefficient For Sub-Structure Ec	iuation 2	۷.

Relationship		Koef.	T				
From	To	beta	count	Sig.	F count	Sig.	\mathbb{R}^2
			it		it		
X_1 (Trustworthness)	satisfaction	0.086	2.099	0.037			
X_2 (personnel)	(Z)	0.028	0.548	0.584			
X ₃ (communication)		0.079	1.629	0.104	79,818	0,000	0,657
X ₄ (healthscape)		0.043	0.908	0.365			
X₅(infrastructural quality)		-0.033	-0.727	0.467			
X_6 (emphaty)		0.080	1.855	0.064			
X ₇ (reliability)		0.099	2.160	0.031			
X ₈ (responsiveness)		0.088	1.934	0.054			
Z (satisfaction)		0,501	11,335	0,000			

(Research Results)

Based on Table 4 it can be seen that the calculated F value = 79,818 > F table = 2.237. This means that the variable Trustworthness, Personnel, Communication, Healthscape, infrastructural quality, Emphaty, Reliability and Responsiveness simultaneously affect the patient loyalty variable by 65.7% while the remaining 34.3% or residual value e = 0.574 is caused by other factors not examined. Furthermore, partial testing is done by comparing t arithmetic with t table = 1.966. In Table 4 it can be seen that t arithmetic on personnel variables (X2), communication (X3), healthscpae (X4), infrastructural quality(X5), emphaty (X6), responsiveness (X8) is less than t table. This means that the personnel path coefficient (X2), communication (X3), healthscpae (X4), infrastructural quality(X5), emphaty (X6), responsiveness (X8) does not significantly influence Loyalty. So that the obtained sub-structure equation 2:

 $Y = 0.086 X_1 Y + 0.099 X_7 Y + 0.501 ZY + 0.574 e_2$.

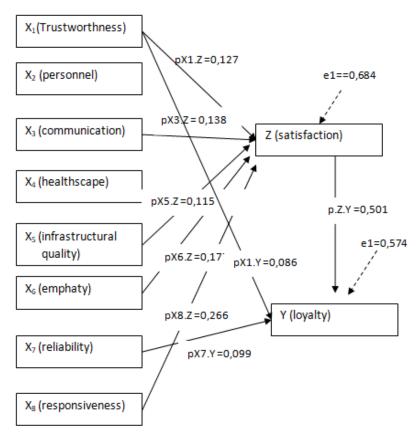


Figure 1. Path Coefficient Values Path Analysis Structures 1 and 2

Table 3.3. Summary of decomposition of the path coefficient, direct and indirect effects and the effect of total dimensions of Servqual (service quality) hospitalization; Trustworthness (X_1) , Personnel (X_2) , Communication (X_3) , Healthscape (X_4) , infrastructural quality (X_5) , Emphaty (X_6) , Reliability (X_7) and Responsiveness (X_8) , satisfaction (Z) to loyalty (Y).

	P	ath coefficient		
Influence of Variables			Total	Conclusion
, 32130210	direct	Indirect trhough Z	=	
X_1 to Z	0.127	-	0.127	Signifikan
X_2 to Z	-0.011	-	-0.011	Not signifikan
X_3 o Z	0.138	-	0.138	Signifikan
X_4 to Z	0.073		0.073	Not signifikan
X_5 to Z	0.115		0.115	Signifikan
X_6 to Z	0.177	-	0.177	Signifikan
X_7 to Z	0.087	-	0.087	Not signifikan
X_8 to Z	0.226	-	0.226	Signifikan

X_l to Y	0.086	(0,127 x 0,501)= 0.064	0.150	Signifikan
X_2 to Y	0.028	(~0,011 x 0,501)= ~0.006	0.022	Not signifikan
X_3 o Y	0.079	$(0.138 \times 0.501) = 0.069$	0.148	Signifikan
X_4 to Y	0.043	$(0.073 \times 0.501) = 0.037$	0.080	Not signifikan
X_5 to Y	-0.033	$(0.115 \times 0.501) = 0.058$	0.025	Not signifikan
X_6 to Y	0.080	$(0.177 \times 0.501) = 0.089$	0.169	Signifikan
X_7 to Y	0.099	$(0.087 \times 0.501) = 0.044$	0.143	Signifikan
X_8 to Y	0.088	(0.226 x 0,501) = 0.113	0.201	Signifikan
Z to Y	0.501	-	0,501	Signifikan

(Research Results)

B. Discussion of Research Result

In this discussion an in-depth analysis related to the influence of the quality of inpatient health services on satisfaction and loyalty, as follows:

1. Effect of Service Quality on Satisfaction

In the research hypothesis (HI) it was stated that all dimensions of service quality in the form of trustworthness (XI), Personnel (X2), Communication (X3), Healthscape (X4), infrastructural quality (X5), Emphaty (X6), Reliability (X7) and Responsiveness (X8) have a significant effect on inpatient satisfaction. This is in line with the results of the analysis of researchers that the quality of inpatient health services through the dimensions trustworthness, Communication, infrastructural quality, Emphaty and Responsiveness significantly influence patient satisfaction and the most dominant influence is responsiveness. This means that three indicator dimension (the personnel, healthscape and reliability) has no effect on patient satisfaction. The results of this study are slightly different from the study by Meesala (2016) who found only the dimensions of reliability and responsiveness) affect patient satisfaction, and Andaleeb (2001) who found that tangible, responsiveness and assurance affect patient satisfaction and the tangible dimension has the greatest impact on satisfaction patients, as well as Sadeh (2017) that the tangible dimension / physical evidence has the strongest influence on patient satisfaction.

The dimension of responsiveness that has the greatest impact on patient satisfaction may be caused by patients with sick and weak conditions who are eager to get well or be served immediately so that responsiveness is the most important thing, because it involves the speed of healing the disease and even the safety of his life. The faster the response of specialists in visiting the more satisfied patients, where the maximum limit is at 14.00 Western Indonesian Time. Visitation means the doctor checks the patient's condition accompanied by a nurse and provides clinical instructions such as laboratory and radiological tests to confirm the patient's diagnosis and prescribe medication. At this stage the doctor will immediately explain the

patient's related illness. Therefore Responsiveness / responsiveness is the most dominant dimension of service quality affecting patient satisfaction.

2. Effect of Service Quality Mediated by Satisfaction on Loyalty

The hypothesis which says that all dimensions of service quality has a significant effect on loyalty in the inpatient services of RSUD dr. Abdoer Rahem Situbondo has not been proven true. But only two (2) dimensions of service quality directly have a positive and significant effect on patient loyalty, namely trustworth and reliability. Indirect testing obtained that dimensions of trustworthness, Communication, Emphaty, Reliability and Responsiveness affect loyalty through patient satisfaction and the other hand the personnel, healthscape, infrastructural quality dimensions does not affect loyalty through patient satisfaction.

This agrees with Zhang et al (2018) the dimensions of responsiveness and reliability (soft aspeck) quality mediated by empathy have an effect on loyalty, Bloemer and Wezels (1999) the empathy dimension has a positive effect on loyalty through gethok tular communication / from mouth mouths and repurchases. Meesala, Paul J. (2016), the dimensions of reliability, responsiveness mediated by satisfaction affect patient loyalty. But the researchers' findings differ from the results of Sadeh's (2017) study where the Tangible quality dimension has the most significant effect on loyalty, especially on positive indicators of word of mouth, and the desire to reuse.

3. Effect of Patient Satisfaction on Loyalty

Hypothesis testing has shown that patient satisfaction in the inpatient service unit of RSUD dr. Abdoer Rahem Situbondo has a positive effect of 50.1% on loyalty. This means that every 1 time increase in inpatient satisfaction will lead to loyalty of 0.50 times. or the level of satisfaction influence on loyalty according to Sarwono (1998) is a strong influence. The results of this study contradict the opinions and research results of Kessler and Mylod (2009) that there is a significant relationship between satisfaction and loyalty, but the effect of satisfaction on loyalty is relatively small in accordance with the results of the study. While Puspitasari and Idris (2016) who found that satisfaction affected the level of patient loyalty, Hidajahningtyas et al. (2013); patient satisfaction has a significant effect on patient loyalty, Amin and Nazarudin (2013) patient satisfaction has a significant influence on repurchase behavior.

The positive influence of patient satisfaction on loyalty needs to be the concern of the hospital side to continue to improve the quality of inpatient services by meeting patient expectations so as to cause satisfaction. Patients with satisfying experiences will return to the hospital when they are sick, this is what according to Oliver (1999) is called loyal patients, namely customers who have a strong commitment to buy again or subscribe to certain products or services in the future despite the influence situation.

IV. CONCLUSION

Based on all the explanations explained in the analysis and discussion section, it can be concluded that the *first*; the quality of health services concerning the dimensions of

trustworthness, communication, infrastructural quality, emphaty and responsiveness have a positive and significant effect on patient satisfaction in the inpatient installation of RSUD dr. Abdoer Rahem Situbondo with the dimension of responsiveness that has the greatest impact on satisfaction, but the dimension of personnel, healthscape and reliability does not have a significant effect, *second*; the quality of health services regarding the dimensions of trustworthness, Communication, Emphaty, Reliability and Responsiveness through patient satisfaction have a positive and significant effect on patient loyalty in the inpatient installation of RSUD dr. Abdoer Rahem Situbondo but the personnel, healthscape, infrastructural quality does not have a significant effect. *Third*, patient satisfaction at the inpatient facility has a positive and significant effect on patient loyalty.

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