

Study of Service Quality and Patient Satisfaction to Trust And Loyalty in Public Hospital, Indonesia

Titin Lestariningsih¹, Ernani Hadiyati², Rini Astuti³

¹Master's Graduates Gajayana University, Malang, East Java, Indonesia

²Lecturer Gajayana University, Malang, East Java, Indonesia

³Lecturer Gajayana University, Malang, East Java, Indonesia

ABSTRACT : *Test and prove the relationship of service quality, patient satisfaction, trust, and loyalty directly and through mediation. Population 6088 patients who had received inpatient service at public hospital Batu, East Java, Indonesia. Questionnaire was given to 100 respondents. The data were processed with SPSS 21 and SmartPLS 3.0. Hypothesis testing with Structural Equation Modeling-Partial Least Square (SEM-PLS) model showed a significant and insignificant relationship between the variables. Service quality is not significant to loyalty, but there are moderating variables that is trust. Trust strengthens the influence of service quality on loyalty.*

KEYWORDS –service quality, patient satisfaction, trust, loyalty

I. INTRODUCTION

Health development is an effort to improve the health of the nation, so it needs the cooperation of all society elements. The government of Indonesia opens an opportunity for private parties to involve in investing in health sectors so there will be competition between state-owned and private companies. Private hospitals have convenient amenities, high standard service quality, and have comfortable atmosphere. Nowadays, public hospitals recognize the importance of service quality where should be implemented for patients satisfaction, trust, and may impact on their loyalty. Consumers will re-use hospital services if they get services according to their needs. On the contrary, consumers who do not get good quality service will feel dissatisfied and may switch to other health service organizations.

II. LITERATURE REVIEW

2.1 Service Quality

Kotler and Keller (2009: 143) states that the service quality is the number of features and products or services characteristics that depend on the ability to meet consumers needs. According to Parasuraman, Berry, and Zeithmal (1988) service quality (SERVQUAL) dimensions consist of 1) tangible, where this dimension divided into: physical facilities, equipment, and personnel appearance; 2) reliability means ability to perform promised service performance; 3) responsiveness means willingness to provide services; 4) assurance means the knowledge and honesty of employees that will foster trust; 5) empathy means caring, individual attention, and company to the consumer. Furthermore, Hadiyati (2010) states that SERVQUAL dimension have significant effect on customer loyalty.

Service quality is characteristic of service in providing quality and able to fulfill consumers expectation. The dimensions of service quality are: 1) reliability: ease of understanding procedure; 2) responsiveness: responsive to consumer complaints; 3) assurance: skills and responsibilities; 4) empathy: attention and concern; 5) physical evidence: cleanliness of the room, environment, waiting room, and convenient parking.

2.2 Patient Satisfaction

Kotler and Keller (2007:177) states that customer satisfaction is a feeling of pleasure and disappointment after comparing the results (performance) of the product with the expected results. Mowen and

Minor (2002:94) express that satisfaction and consumer dissatisfaction is the effect of comparing between expectations before and after purchasing.

Customer satisfaction is a feeling of satisfaction after getting a service as the result of comparing between the service performance and the desired expectations. Several customer satisfaction indicators are: getting a good experience, satisfied service, service received is accordance with the cost incurred, and services that exceed customer expectations.

2.3 Trust

Morgan and Hunt (1994) express that customers experience trust when there is comfort, reliability, and integrity in partnering. Doney and Cannon (1997) express that trust is the sustainable ability to meet consumers and generate positive outcomes in the future. In addition, Zerei et al. (2015) states the following dimensions of hospital service confidence: claims that hospital services are good, fulfillment of commitments promised by hospitals, honest trustworthiness, caring, staffing commitments, staff require patient needs, and commitment based on patient needs.

Trust is the ability to reference comfort, experience and build communication constantly to produce good relationships in the future. Trust indicators consist of: commitment to problem solving, fulfillment of promised commitments, and given service claims are good.

2.4 Loyalty

According to Mowen and Minor (2002:109), brand loyalty is "the actual wisdom of a customer who exhibits a positive attitude toward a brand, is committed to the brand and intends to continue to buy it in the future". Srivastava (2015) defines customer loyalty as a multidimension concept that built from basic behavioral perspective in regards to re-purchasing by maintaining good relationship with service providers. Lupiyoadi (2001) divides loyalty dimensions into: sharing products or services advantage to others, recommending the products or services to others, encouraging friends to do business, and considering being the primary choice in buying products or services.

Loyalty is a behavior that is formed from experience, satisfaction, trust, commitment to a product or service by repurchasing. Loyalty indicators are: reuse of products or services, convey positive things to relatives, recommend, and encourage others to buy the same products or services.

2.5 Relationship Between Service Quality and Customer Satisfaction

Lupiyoadi (2001) suggests customers will feel satisfied if they get good service as they expected. Arsanam et al. (2014) state that service quality adds patient satisfaction. Azizan & Mohammed (2013) state that service quality variant fits customer satisfaction model.

2.6 Relationship Between Service Quality and Trust

Zarei et al. (2015) state that the interaction quality and process quality is the key determinant of patient confidence in private hospitals. Kaffashi et al. (2014) suggest a strong correlation between service quality and loyalty. Khan & Khan (2014) state that quality dimensions such as doctors service orientation, nurses service orientation, hospitals, staff, and treatment costs have a positive effect on patient confidence in private hospitals.

2.7 Relationship Between Customer Satisfaction and Trust

Astuti and Nagase (2014) state that customer satisfaction has significant effect on customer loyalty. Zarei et al. (2015) state that the average score of patient's confidence perceptions was 3.80 and 4.01 for service quality, 38% of the variance was patient confidence, explained by service quality dimensions. The quality of interactions and processes is the strongest factor in predicting patient confidence.

2.8 Relationship Between Service Quality and Loyalty

Patawayati et al. (2013) argue that the interaction between service performance and customer satisfaction contributes customer loyalty. Patient satisfaction, trust and commitment act as the mediation between service quality and loyalty. Kesuma et al. (2013) state that the existence of significant influence service quality and loyalty.

2.9 Relationship Between Customer Satisfaction and Loyalty

According to Kotler and Keller (2007) customer satisfaction with disproportionate customer loyalty, satisfied customers tend to buy back and give praise. High satisfaction or pleasure creates an emotional bond with the brand or company, not merely a rational overload.

2.10 Relationship Between Trust and Loyalty

Patawayati et al. (2013) state that trust affects loyalty in a significantly positive manner, the higher the trust the higher the patient loyalty will be.

2.11 Relationship Between Service Quality and Loyalty through Trust

Alrubaiee and Alkaa'da (2011) suggest that patient perceptions of health quality have a strong and positive impact on patient satisfaction and patient confidence, and patient satisfaction also has a significant impact on loyalty. Khan and Khan (2014) argue that the dimensions of service quality consist of: services orientation of doctors, nurses, and hospitals.

2.12 Relationship Between Customer Satisfaction and Loyalty through Trust

Akhbar and Parvez (2009) believe that 1) trust plays a role in loyalty, 2) trust and satisfaction are significantly and positively relate to loyalty, 3) trust and customer satisfaction positively relate to customer loyalty. Customer satisfaction becomes an important mediation between service quality and loyalty. Patawayati et al. (2013) state that trust is a variable that mediates patient satisfaction and loyalty which indicates that there is a significant positive relationship amongs customer satisfaction, trust, and loyalty.

III. RESEARCH AND METHODOLOGY

This type of research is an explanatory or explanation with causal prediction to test the one-way strength amongs the latent variables. The data was collected, tabulated, and analyzed to test the hypothesis. The population used were patients who have received treatment as inpatient in public hospital. As many as 6088 people with a samples of 100 respondents were used in this research as respondents. The research location is in a public hospital in Batu, East Java, Indonesia. Samples were taken with the following characteristics: the patient has been hospitalized for a minimum of 2 days, the patient with the type of public service or paying cash, the patient with the type of BPJS (government health insurance) service, other insurance with the cost according with the class, the patient was conscious and communicate well, and patient was not health staff family or hospital staff.

Quantitative data were processed using statistics. Data was collected from primary and secondary data. Primary data was collected trough questionnaire based on the determined characteristics. Secondary data was collected from hospitals (research institutes, public relations, and medical records). The sampling technique were used purposive sampling. Responses of perceptions, attitudes, and actions of respondents were measured using Likert scale, consist of strongly agree (5 point), agree (4 point), neutral (3 point), disagree (2 point), and strongly disagree (1 point). The data is tabulated and processed by SPSS 21 and SmartPLS 3.0 analysis tools to test the formulated hypothesis.

3.1 Research Model and Hypothesis

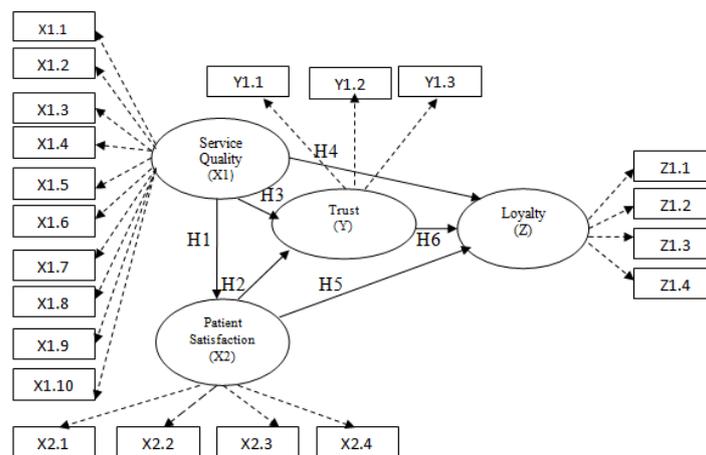


Figure 1: Research Model

Source: Lupiyoadi (2001); Arsanam et al. (2014); Azizan & Mohammed (2013); Zarei et al. (2015); Kaffashi et al. (2014); Khan & Khan (2014); Astuti & Nagase (2014); Patawayati et al. (2013); Alrubaiee dan Alkaa'da (2011); Akhbar dan Parvez (2009); compiled by researcher 2017

In Figure 1, the hypothesis can be described as follows:

- H1: Service quality directly affects patient satisfaction.
- H2: Patient satisfaction directly affects trust.
- H3: Service quality directly affects trust.
- H4: Service quality directly affects loyalty.
- H5: Patient satisfaction directly affects loyalty.
- H6: Trust affects loyalty.
- H7: Service quality affects loyalty through trust..
- H8: Patient satisfaction affects loyalty through trust.

IV. RESULT AND ANALYSIS

4.1 Respondent Characteristics

Characteristics of a total of 100 respondents based on gender, age, education, and main job are as follows:

Table 1: Respondent Characteristics

	n	%		n	%
Total (n=100)			Total (n=100)		
Gender:			Age:		
Male	55	55	< 20	14	14
Female	45	45	21-30	12	12
			31-40	20	20
			41-50	28	28
			> 51	26	26
Education:			Profession:		
Primary Shool	7	7	Civil Servants	6	6
Junior High S	39	39	Employees	11	11
Senior High S	40	40	Entrepreneurs	38	38
Diploma	8	8	Students	8	8
Bachelor	6	6	others	37	37
Master	0	0			

In Table 1, demographic (n = 100) dominant respondents comprised male sex of 55%, age 41-50 of 28%, senior high school 40%, and entrepreneurs 38%.

4.2 Descriptive Statistics

Descriptive statistics provide a description of data in the form of mean, standard deviation, variant, maximum, minimum, sum, range, and skewness (Ghozali ,2016). To know the descriptive statistics can be seen in the Table 2 as follows:

Table 2: Descriptive Statistics

	N	Range	Min	Max	Sum	Mean
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
X1	100	2,00	3,00	5,00	409,15	4,0915
X2	100	2,75	2,25	5,00	410,75	4,1075
Y	100	2,33	2,67	5,00	415,33	4,1533
Z	100	2,50	2,50	5,00	417,50	4,1750
Valid (listwise)	100					

Table 3: Descriptive statistics

	Std.	Variance	Skewness		Kurtosis	
	Deviation		Statistic	Std. Error	Statistic	Std. Error
X1	,45668	,209	,002	,241	-,248	,478
X2	,53919	,291	-,229	,241	,627	,478
Y	,51120	,261	,026	,241	-,025	,478
Z	,54065	,292	-,209	,241	,516	,478

Valid (listwise)

Figure. 2 and Figure 3 show amongs 100 respondents, service quality (X1) is smallest (minimum) 3,0; largest (maximum) 5,00; averaging 4,0915 with a standard deviation of 0,45668; the range value is the maximum and minimum difference value of 2,00 and the sum of 409,15; this applies to the variables X2, Y and Z. Skewness and kurtosis is a measure of whether the data is distributed with normal or not. Measure the skewness of the data (skewness) sequentially -0,248; 0,627; -0,025; 0,516 and measuring the peak of the data distribution (kurtosis), each variable of 0,478. Skewness and kurtosis of latent variables approaching zero, so it is inferred that the data spread normally.

4.3 Bartlett of Sphericity Test

Bartlett of sphericity test is a statistical test to determine whether there is correlation among variables. Other test kits used to measure intercorrelation levels with Kaiser-Meyer-Oikin Measure of Sampling Adequacy (KMO-MSA) values vary from 0 to 1, the desired value should be greater than > 0,50 for factor analysis (Solimun, 2010 & Ghozali, 2016). To know Bartlett of Sphericity and Kaiser-Meyer-Oikin Measure of Sampling Adequacy (KMO-MSA) test is shown in the Table 4 as follows:

Table 4: Kaiser-Meyer Oikin Measure of Sampling Adequacy

Kaiser-Meyer Oikin Measure of Sampling Adequacy	0,878
Bartlett's Tes of Sphericty	Approx. Chi-Square
	Df
	Sig
	1287,803
	190
	0,000

In Table 4, Kaiser-Meyer-Oikin Measure of Sampling Adequacy is 0,878, so the factor analysis can be done as well as Bartlett of Sphericity with Chi-quares = 1287,803 and significant at 0,000. It concludes that each indicator is a loyalty factor. Then the factor analysis test can be proceeded.

4.4 Grouping of Latent Variable Indicators

Factor analysis serves to reduce the number of variables similar to the group of variables (Solimun, 2010). Group latent variable can is shown in the Table 5 as follows:

Table 5: Grouping of Latent Variable Indicators

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,893	45,614	45,614	3,893	45,614	45,614
2	,808	9,472	55,086			
3	,531	6,223	61,309			
4	,434	5,084	66,393			
5	,402	4,714	71,107			
6	,373	4,371	75,478			
7	,328	3,843	79,321			
8	,291	3,405	82,726			
9	,242	2,832	85,559			
10	,219	2,567	88,126			
11	,174	2,037	90,163			
12	,152	1,784	91,946			
13	,138	1,621	93,568			
14	,133	1,564	95,132			
15	,099	1,163	96,294			

16	,083	,977	97,271
17	,073	,860	98,131
18	,071	,833	98,964
19	,052	,615	99,579
20	,036	,421	100,000

In Table 5, the groupings of latent variable consist of 20 indicators which divided into 9 indicators of service quality, 4 patient satisfaction indicators, 3 trust indicators, and 4 loyalty indicators which have value of eigen > 1, with eigen value of 3,893. This factor is able to explain the variation of 45,614%.

The validity and reliability of each construct are analyzed using Structural Equation Modeling Partial-Least Squares (SEM-PLS) by conducting a construct evaluation based on the level of abstraction by assessing convergen and discriminant validity and evaluating the goodness of fit model.

4.5 Outer Loading Indicators

The amount of contribution to latent variables seen in outer loading and weight value, the greater the contribution in determining latent variables. The mean value indicates the actual condition of each indicator according to the respondent's perception (Solimun, 2010). The outer loading is shown in the Table 6 as follows:

Table 6: Outer Loading Indicators

	Original sample estimate	Sample Mean	T-statistic	p-value
Quality of Service				
X1.1	0,641	0,643	9,765	0,000
X1.2	0,726	0,726	13,291	0,000
X1.3	0,729	0,728	13,25	0,000
X1.4	0,685	0,680	11,562	0,000
X1.5	0,813	0,808	23,263	0,000
X1.6	0,672	0,671	9,671	0,000
X1.7	0,598	0,595	7,792	0,000
X1.8	0,712	0,710	15,366	0,000
X1.9	0,581	0,582	7,737	0,000
Patient Satisfaction				
X2.1	0,818	0,819	23,219	0,000
X2.2	0,878	0,878	33,670	0,000
X2.3	0,824	0,820	18,734	0,000
X2.4	0,812	0,808	17,217	0,000
Trust				
Y1.1	0,819	0,813	15,502	0,000
Y1.2	0,878	0,878	39,434	0,000
Y1.3	0,866	0,867	34,846	0,000
Loyalty				
Z1.1	0,864	0,862	23,097	0,000
Z1.2	0,820	0,819	16,802	0,000
Z1.3	0,917	0,918	38,641	0,000
Z1.4	0,907	0,908	40,954	0,000

Table 6 shows that each variable produces a dominant indicator compared with other dimensions: X1.5 = 0.813; X2.2 = 0.878; Y1.3 = 0.878; Z1.3 = 0.917. Each of these indicators is dominant, strongly reflect latent variables. The mean of each dominant indicator > 0.50 can be taken into consideration precedence in improving service quality, patient satisfaction, trust, and loyalty.

4.6 Cross Loading Indicators

Discriminant validity can also be measured by cross loading each indicator of the corresponding larger variables with other latent variables (Ghozali, 2014). The cross loading is shown in the Table 7 as follows:

Table 7: Cross Loading Indicators

	Service Quality	Patient Satisfaction	Trust	Loyalty
X1.1	0,407	0,488	0,641	0,438
X1.2	0,410	0,405	0,726	0,382
X1.3	0,396	0,472	0,729	0,405

X1.4	0,350	0,507	0,685	0,263
X1.5	0,552	0,545	0,813	0,453
X1.6	0,430	0,417	0,671	0,381
X1.7	0,389	0,500	0,672	0,374
X1.8	0,494	0,531	0,712	0,439
X1.9	0,367	0,459	0,581	0,432
X2.1	0,480	0,818	0,595	0,571
X2.2	0,623	0,878	0,608	0,536
X2.3	0,551	0,824	0,524	0,623
X2.4	0,597	0,812	0,646	0,565
Y1.1	0,819	0,544	0,419	0,608
Y1.2	0,878	0,576	0,555	0,631
Y1.3	0,866	0,613	0,603	0,706
Z1.1	0,752	0,613	0,598	0,864
Z1.2	0,615	0,549	0,466	0,820
Z1.3	0,627	0,610	0,503	0,917
Z1.4	0,664	0,637	0,466	0,907

Table 7 indicates that the indicator of the endogenous variable (affected) has a greater cross loading of the exogenous variable (affecting). Loyalty has a value of cross loading (0.864, 0.820; 0.917; 0.907) greater than the correlation of variables that affect it (service quality, patient satisfaction, and trust), as well as other influenced variables. In this study, cross loading of each endogenous variable meet the criteria of discriminant validation.

4.7 Composite Reliability

To prove consistency and accuracy of the instrument of the construct, can be done in two ways, namely composite reliability and cronbach's alpha. The composite reliability is shown in the Table 8 as follows:

Table 8: Composite Reliability of the Latent Variables

Latent Variable	Composite Reliability	Expanation
Service Quality	0.890	Reliabel
Patient Satisfaction	0.901	Reliabel
Trust	0.889	Reliabel
Loyalty	0.930	Reliabel

In Table 8, each variable instrument yields excellent composite reliability > 0.80. Then all indicators are declared reliable.

The next test is the inner model evaluation by looking at the relationship between constructs and parameter coefficient estimation, significance level, and structural model that shows the strength of latent variable estimation. The stability of the estimation uses the t-statistics test with bootstrapping procedure (Ghozali & Latan, 2014). The bootstrapping is shown in the Figure 2 as follows:

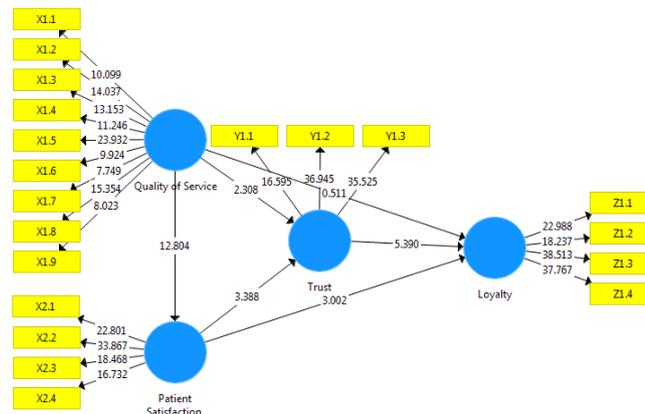


Figure 2: Resampling modelor bootstrapping

In Figure 2, the resampling or bootstrapping model of the difference of logarithmic results after the iteration process, the recalculation of sample data created randomly (Ghozali & Latan, 2014).

4.8 Weight Value

The method of obtaining weight signification through the bootstrapping procedure with the significance value used (two-tailed) t-value 1.65 (significance = 10%), 1.96 (significance = 5%) and 2.58 (significance = 1%) (Ghozali, 2014). The value of weight is shown in the Table 9 as follows:

Table 9: Weight Value Indicators of Latent Variable

	Original Sample Estimate	Sample Mean	T-statistic (t-crisis 1,96)	P-value
Service Quality				
X1.1	0,166	0,166	7,019	0,000
X1.2	0,148	0,148	7,131	0,000
X1.3	0,158	0,158	7,544	0,000
X1.4	0,142	0,142	6,177	0,000
X1.5	0,193	0,191	10,215	0,000
X1.6	0,152	0,151	5,797	0,000
X1.7	0,158	0,156	7,293	0,000
X1.8	0,182	0,183	8,079	0,000
X1.9	0,156	0,155	6,100	0,000
Patient Satisfaction				
X2.1	0,287	0,290	12,302	0,000
X2.2	0,308	0,308	15,665	0,000
X2.3	0,288	0,287	16,642	0,000
X2.4	0,316	0,316	11,608	0,000
Trust				
Y1.1	0,357	0,352	12,564	0,000
Y1.2	0,387	0,391	14,998	0,000
Y1.3	0,425	0,427	15,743	0,000
Loyalty				
Z1.1	0,312	0,312	11,601	0,000
Z1.2	0,262	0,262	12,211	0,000
Z1.3	0,276	0,277	29,514	0,000
Z1.4	0,289	0,289	19,153	0,000

In Table 9, the weight value indicates that the significance of each indicator to the construct with t-statistics > 1.96 so that its validity is accordance with the criteria. Each latent variable has a dominant indicator of other indicators: quality of service(X1.5) of 10,215; patient satisfaction (X2.3) of 16,642; trust (Y1.3) of 15.743; loyalty of (Z1.3) of 29,514, so it is stated that each predominant indicator predict latent variables.

4.9 Cronbach's Alpha

Testing validity by assessing cronbach's alpha as the indicator block of a construct. Reliable construction in confirmatory research if cronbach's alpha > 0.70 and exploratory research > 0.60 are still acceptable (Ghozali, 2014). The cronbach's alpha is shown in the Table 10 as follows:

Table 10: Cronbach's Alpha of Latent Variables

	Cronbach's Alpha	Standard Cronbach's Alpha 0,70	Information
Trust	0,816		Reliabel
Patient Satisfaction	0,853		Reliabel
Quality of Service	0,858		Reliabel
Loyalty	0,900		Reliabel

In Table 10, Cronbach's alpha of service quality, patient satisfaction, trust, and loyalty were > 0.70. So it can be stated that all indicators of the construct meet the reliable criteria.

4.10 Average Variance Extracted (AVE)

Convergent validity test related to the principle of manifestation of a construct must be high. Another method of discriminant validity is to compare between the square root of the average variance extracted (\sqrt{AVE}) and the correlation between constructs in the model (Ghozali, 2014). The test results can be seen by assessing the loading factor for each construct. In the confirmatory research loading value should be more 0.60-0.70. To find out the AVE can be seen in the Table 11 as follows:

Table 11: Average Variance Extracted (AVE) of Latent Variables

Latent Variable	Average Variance Extracted (AVE)	AVE Root	Information
Service Quality	0,473	0,688	Discriminant Validity
Patient Satisfaction	0,695	0,834	Discriminant Validity
Trust	0,731	0,855	Discriminant Validity
Loyalty	0,770	0,877	Discriminant Validity

In Table 11, the validity test of latent variables indicates that the AVE root convergent is greater than the average variance extracted. AVE each construct ≥ 0.50 then this study meets the criteria of discriminant validity. The correlation of latent variables can be seen in the Table 12 as follows:

Table 12: Correlation of Latent Variables

	Trust	Patient Satisfaction	Quality of Service	Loyalty
Trust	1,0000			
Patient Satisfaction	0,6777	1,000		
Service Quality	0,621	0,703	1,000	
Loyalty	0,761	0,688	0,583	1,000

In Table 12, the correlation between independent variables is not equal to zero. This means that there is no correlation between latent variables.

4.11 Multicoloniarity

Multicoloniarity test aims to test whether between independent variables there is a correlation that should be between variables there is no correlation if there is correlation then called orthogonal. The orthogonal variable is an independent variable equal to zero (Ghozali, 2016). The multicoloniarity is shown in the Table 13 as follows:

Table 13: Multicoloniarity of Independent Variables

	Trust	Patient Satisfaction	Quality of Service	Loyalty
Patient Satisfaction				2,000
Service Quality	1,978			2,432
Loyalty	1,978	1,000		2,141

In the Table 13, the correlation test amongs independent variables shows the multicoloniarity of each indicator variable < 5 , so that this research does not have multicoloniarity, it means that there is no correlation amongs independent variables.

4.12 R-Square

Structural model with PLS, can assess R-square as predictor power in structural model. Value 0.75; 0.50; and 0.25 can be concluded that the model is strong, moderate and weak. The R-Square results represent the number of variance of the constructs can be explained by the model (Ghozali 2014). The evaluation of goodness of fit is measured by predictive relevance (Q^2) calculated by the formula $Q^2 = 1 - (1-R_1^2) (1-R_2^2) \dots (1-R_p^2)$ (Solimun, 2010). The R-Square is shown in the Table 14 as follows:

Table 14: R-Square of Latent Variables

	R-Square
Service Quality	0,500

Patient Satisfaction	0,494
Trust	0,635
Predictive-relevance	0,662

In Table 14, R-Square of each latent variable equal to ≥ 0.50 so that R-Square in this study is categorized a moderate. Predictive-relevance (Q2) of 0.662 or 66.2% means that the model is able to explain the loyalty of 66.2%, while the remaining 33.8% is explained by other variables that is not analyzed in this study and also error.

4.13 Hypothesis Testing

Hypothesis testing on SEM-PLS uses t-statistics, each pathway direct effect and through moderation variables. The hypothesis testing results are shown in the Table 15 as follows:

Table 15: Hypothesis Testing

Hypothesis	Eksogen Variable	Endogen Variable	Parth Coefficient	T-statistics ($t_{-kritikis}=1,96$)	p-value	Information
H1	Service Quality	Patient Satisfaction	0,703	12,804	0,000	Significant
H2	Patient Satisfaction	Trust	0,476	3,222	0,001	Significant
H3	Service Quality	Trust	0,286	2,163	0,028	Significant
H4	Service Quality	Loyalty	0,043	0,504	0,614	not Significant
H5	Patient Satisfaction	Loyalty	0,296	2,755	0,003	Significant
H6	Trust	Loyalty	0,534	5,088	0,000	Significant
Hypothesis testing moderation variabel						
H7	Quality of Service to Loyalty through Trust		0,540	6,642	0,000	Significant
H8	Patient Satisfaction to Loyalty through Trust		0,254	2,495	0,006	Significant

Testing hypothesis result can be analyzed as follows:

The effect of service quality on patient satisfaction is obtained by path coefficient which result = 0,703; t-statistics 12,804 > 1,96 and p-value 0,000 < 0,05, so there is enough evidence to accept the hypothesis (H1) that the service quality positively significant effect on patient satisfaction.

The effect of patient satisfaction on trust is obtained by path coefficient, which results = 0,476; t-statistics 3,222 > 1,96 with p-value 0,001 < 0,05, so there is enough evidence to accept the hypothesis (H2) that patient satisfaction positively significant effect on trust.

The effect of service quality on trust is obtained by path coefficient, which results = 0,286; t-statistics 2,163 > 1,96 and p-value 0,028 < 0,05, so there is enough evidence to accept the hypothesis (H3) that the service quality positively significant effect on trust.

The effect of service quality on loyalty is obtained by path coefficient 0,043; t-statistics 0,504 < 1,96 and p-value 0,614 > 0,05, so there is no enough evidence to accept the hypothesis (H4) which means that service quality positively insignificant on loyalty, so it indicates that there are other variables that may become mediation.

The effect of patient satisfaction on loyalty is obtained by path coefficient = 0,296; t-statistics 2,755 > 1,96 and p-value 0,003 < 0,05, so there is enough evidence to accept the hypothesis (H5) which means that patient satisfaction positively significant effect on loyalty.

The effect of trust on loyalty is obtained by path coefficient = 0,534 t-statistics 5,088 > 1,96 and p-value 0,000 < 0,05, so there is enough evidence to accept the hypothesis (H6) which means that trust positively significant effect loyalty.

Quality of service affect loyalty through trust obtained path coefficient with mediation 0,540; t-statistics 6,642 > 1,96 and p-value 0,000 <0,05, so enough evidence to accept hypothesis (H7) quality of service positively significant relation to loyalty through trust. Trust plays a role of strengthening (moderating) the influence of service quality on loyalty.

The effect of patient satisfaction on loyalty through trust obtained path coefficient with mediation 0,254; t-statistics 2,495 > 1,96 and p-value 0.006 <0.05, so there is enough evidence to accept the hypothesis (H8) which means that patient satisfaction positively significant effect on loyalty through trust. Trust acts as strengthening (moderating) variable between patient satisfaction on loyalty.

V. CONCLUSION

1. The analysis result shows that the direct effect of independent variables on dependent variables have fulfilled the criteria of SEM-PLS test.
2. Hypotesis test result on the quality service against loyalty is not significant, while the effect of service quality on loyalty through trust is significant.

VI. RECOMENDATION, LIMITATION AND FUTURE RESEARCH

This research can be used by: 1) government as evaluation of public service, 2) hospital, as information material to make decision, 3) academic, can be used as reference for further research.

This study has limitations, because it only uses the service quality with nine indicators. The researchers can further add more indicators. The effect of service quality on loyalty through trust does not support enough references. Researchers can develop this research by using other analysis tool and different research object.

REFERENCES

- [1] A. Parasuraman, V. Zeithmal and L. Berry SERVQUAL: A multiple item scale for measuring consumer perception of service quality, *Journal of Retail*, 1, 1988. pp12-40.
- [2] Azizan & Mohamed, The effects of perceived service quality on patient satisfaction at a public hospital in State Pahang, Malaysia, *Asian Journal of Social Sciences & Humanities* ISSN: 2186-8492, ISSN: 2186-8484 Print Vol. 2 No. 3 August 2013.
- [3] E. Zarei, Daneshkohan, A. R. Khabiri, M. Arab, An emperical study of the impact of service quality on patient satisfaction in private hospitals, Iran, *Global Journal of Health Science*; vol. 7, N. 1; 2015 ISSN 1916-9736 E-ISSN 1916-9744 Published by Canadian Center of Science and Education.
- [4] E. Hadiyati, Analysis of service quality and its impact on customer (case study at PT Pos (Persero) Post Office Lawang, 2010.
- [5] H.J. Astuti, & K. Nagase, Patient loyalty to healthcare organization: relationship marketing and satisfaction, *International Journal of Management and Marketing Research* Vol. 7, No. 2, 2014, pp. 39-56 ISSN: 1933-3153 (print) ISSN: 2157-0205 (online).
- [6] I.A.W. Kesuma, D.Hadiwidjoyo, N.L.P.Wiagustin, & F.Rohman, Service influence on patients loyalty: consumer relation management as mediation variable (Study on private hospital industry in Denpasar), *www.ijbnet.com. International Journal of Business and Commerce* Vol. 2, No.12: Aug 2013[01-14] (ISSN: 2225-2436).
- [7] I. Ghozali, *Structural equation modeling. Alternative methode with partial least Squares (PLS)* (Semarang: University Publisher, 2014).
- [8] I. Ghozali, *Application of multivariate analysis with SPSS program 23*, Issue 4 (Semarang: Diponegoro University Publisher, 2016).
- [9] I. Ghozali and Latan, *Partial least squares concepts, techniques and programs SmartPLS 3.0 for emperical research* (Semarang. Diponegoro University, 2014).
- [10] J. C. Mowen & M. Minor, *Consumer behavior* (Bandung, volume 2: Erlangga, 2002).
- [11] L. Alrubaiee & F. Alkaa'da, The mediating of patient satisfaction in the patients' perceptions of healthcare quality-patient trust relationship, *www.ccsenet.org/ijms International Journal of Marketing Studies*, 2011, Vol. 3, No. 1.
- [12] M. Akbar, & N. Parvez, Impact of service quality, trust and customer satisfaction on consumer loyalty. *ABAC Journal* Vol. 29, No. 1 (January-April 2009, pp.24-38).

- [13] M.M. Khan, & A.H. Khan, Impact of service quality on patient's trust; A case of health-care in Pakistan. *Journal of Quality and Technology Management. Volume X, Issue 1*, June 2014, Page 35 – 57.
- [14] M. Srivastava, Influence of customer-satisfaction-consumer loyalty relationship: *A Conceptual Research Model. IMJ*.2015.
- [15] P. Arsanam. & K. Yousapronpaiboon, The relationship between service quality and customer satisfaction of pharmacy departments in public hospitals, *International Journal of Innovation, Management and Technology, Vol. 5, No. 4*, August 2014.
- [16] P.M. Doney & J.P Cannon, An examination of nature of trust in buyer-seller relationship, *Journal of Marketing*, 1997, 61(April), 35-51.
- [17] P. Kotler & K. K. Lane, *Marketing management* (12th edition volume 2, Jakarta. PT Macanan Jaya Cemerlang, 2007).
- [18] P. Kotler & K. K. Lane, *Marketing management* (12th edition volume 2, translation, M. Benyamin. Jakarta. Airlangga, 2009).
- [19] Patawayati, Z.Djumilah, S. Margono, & R. Mintarti, Patient satisfaction, trust and commitment: mediator of service quality and its impact on loyalty (An empirical study in Southeast Sulawesi public hospital)". *IOSR Journal of Business and Management (IOSR-JBM)* e-ISSN: 2278-487X. *Volume 7, Issue 6* (Jan. - Feb. 2013), PP 01-14.
- [20] R. M. Morgan & S. D. Hunt, The commitment trust theory of relationship marketing, *Journal of Marketing* 58 (Juli), 1994, 20-38).
- [21] R. Lupiyoadi, *Management of marketing services, theory and practice* (Jakarta: PT Salemba Emban Patria, 2001).
- [22] S. Kaffashi, A. Keshtkaran, A.Pourtaieb, Z. Nejatadhegan, & M. Raadabadi, Health service quality; comment on 'How outpatient service quality in hospitals affect patients' loyalty?' *Jundishapur J Health Sci* 2014;6(2):335-342.
- [23] Solimun, *Multivariate analysis of structural modeling-partial least squares model PLS* (Malang: CV Citra Malang. 2010).