THE INFLUENCE OF SERVICE QUALITY TOWARDS PATIENTS' SATISFACTION AND LOYALTY IN HIDAYAH HOSPITAL, BOYOLALI

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ABSTRACT Hospitals are important institution because it is part of system which presents health services in the community. It is also the contact point for patients who need health services, hence patients experience in hospitals' health services play important roles in their evaluation towards the service quality provided by the hospitals and may influence the regular use of its services in the future. The purpose of this study is to analyze the influence of service quality towards patients' satisfaction and loyalty in Hidayah Hospital, Boyolali. This is a quantitative study with cross-sectional approach. The population of this study is patients who receive health service in Hidayah Hospital, Boyolali. There are 100 participants as the sample of this study obtained through purposive sampling method. The data gathering method is a survey using questionnaire with Likert scale. The data analysis is done by SEM-PLS method (Structural Equation Modeling-Partial Least Square). Result:Service quality had positive and significant effect on patients' satisfaction (T statistic = 33.024 and P value = 0,000). Service quality had positive and significant effect on patients' loyalty (T statistic = 2.972 and P value = 0.003). Patients' satisfaction had positive and significant effect on patients' loyalty (T statistic = 3.148 and P value = 0.002). Service quality had indirect effect on patients' loyalty through mediating patient satisfaction (T statistic = 3.114 and P value = 0.002). Conclusion:Service quality has positive and significant effect on patients' satisfaction and loyalty. Service quality has indirect effect on patients' loyalty through mediating patient satisfaction.

KEYWORDS : Service Quality, Patient Satisfaction, Patient Loyalty

INTRODUCTION

Hospitals are one institution which play important role since hospitals are part of system which gives health service in community and plays important role in consumer satisfaction towards health services.[1] Hospitals are contact point for patients who need health services, thus the quality of meetings between staff and patients and families or nurses accompanying them to the hospital will affect the way patients experience the hospital.[2]

Patients experience towards medical services in the hospitals play a vital role on their evaluation towards service quality and may affect the regular use of the services in the future.[3] It is explained that good quality of one service influences satisfactory level felt by patients who have access to the hospital services.[4][5]

Managing patient expectations in hospitals is very challenging, perception towards hospitals even solely based on the treatment received by the patients in the hospitals. Higher satisfaction is believed to improve health service outcomes, reduce litigation against hospitals, influence the choice of hospital for the next visits and possibly changing it to other hospital choices. [6]

Hospital visitors are potential consumers in the future, [2] experiences experienced by patients and their families or colleagues in hospitals can affect perceptions about the quality of health services provided by the hospital. When customers are satisfied with service at a hospital, they may continue to use the services provided as a result of increasing patient loyalty. [7]

Hidayah Hospital in Boyolali is a private hospital that has been established for seven years. The hospital is growing; the type of health services provided to patients increasingly diverse, the number of patients served is also increasing. This causes more and more problems to be faced in providing health services. As time goes by, more and more competing hospitals appears, this is a factor that will make hospital customers have more choices to access health services.

Therefore, Hidayah Hospital in Boyolali must improve the quality of its services so that patients always feel satisfied with the services provided hence their customers will be loyal to the hospital and do not change into other hospitals when they need health services.

RESEARCH METHOD

This study is a quantitative research using purposive sampling with 100 respondents as its sample. Modified Likert scale questionnaire is the data collection method of this study. This research method is SEM (structural equation modeling) using smartPLS software (smart partial least square).

The variable of this research is service quality which has dimensions, tangibles, reliability, responsiveness, assurance, empathy.[8] Patient satisfaction has dimensions of satisfaction with physical facilities, satisfaction with staff performance, satisfaction with technical and medical services, satisfaction with the expense.[9] Patients loyalty has dimensions oftrust, psychological commitment, switching expenses, word of mouth, cooperation.[10]
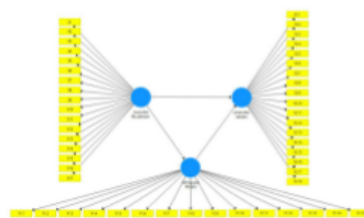

Figure 1. The structural equation model of the inner model and the outer model

RESULT AND DISCUSSION

The results of the descriptive analysis in table 1 show that, according to gender this study was followed by 60% of female respondents and 40% of male respondents. In terms of age this study has the same and even age ranges, there was only one respondent who was under 20 years old. In terms of education, the respondents of this study also had an even education background, the highest was high school and the lowest was bachelor/master/doctoral degrees. For the characteristics of occupations dominated by entrepreneurs and followed by private employees. Meanwhile the average monthly income is 1 million to 5 million rupiah. It can be concluded that Hidayah Hospital in Boyolali is located in a populated area with an average socioeconomic status of the lower to middle class community. In terms of visitation numbers to the hospital, 59 people (59%) has visited more than 3 times, 22 people (22%) has visited twice, and 19 people (19%) has visited for 3 times

TABLE 1. FREQUENCY DISTRIBUTION OF CHARACTERISTICS OF RESEARCH RESPONDENTS

Characteristics	Information		Frequency (f)	Percentage (%)
Gender	1.	Male	40	40%
	2.	Female	60	60%

Age	1.	< 20 yo	1	1%
	2.	21 yo - 30 yo	32	32%
	3.	31 yo - 40 yo	26	26%
	4.	41 yo - 50 yo	21	21%
	5.	> 50 yo	20	20%
Education	1. Elementary school		18	18%
	2. Junior high school		16	16%
	3. Senior high school		36	36%
	4. Diploma		20	20%
	5. Bachelor/Master/ Doctoral Degree		10	10%
Occupation	1. Civil servants		5	5%
	2. Army/police		4	4%
	3. Entrepreneur		49	49%
	4. Privateemployees		38	38%
	5. Students		4	4%
Monthly income	1. ≤ Rp 1 million		22	22%
	2. > Rp 1 million - Rp 2 million		52	52%
	3. > Rp 2 million - Rp 5 million		21	21%
	4. > Rp 5 million - Rp 10 million		2	2%
	5. > Rp 10 million		3	3%
Visitation	1. 2 times		22	22%
	2. 3 times		19	19%
	3. More than 3 times		59	59%
Total			100	100%

The test of validity and reliability used smartPLS software. Validity test uses convergent validity test and discriminant validity test. Convergent validity test looks at the loading factor of each reflective indicator. The loading factor value must be above 0.50. Indicators with loading factor less than 0.50 must be removed or deleted from the model and retested.

In this study, convergent validity testing was performed 4 times. There are 6 indicators excluded from the model because they have a loading factor value below 0.50, i.e.Y1.13, Y1.14, Y1.15, Y2.11, Y2.16, and Y1.7 were also excluded even though their values were above 0.50 but they had the lowest values among the patient satisfaction constructs of 0.510, this is because the AVE value (average variance extracted) of the patient satisfaction variable is not above 0.50. With Y1.7 taken out, the patient satisfaction variable has a AVE value of more than 0.50.
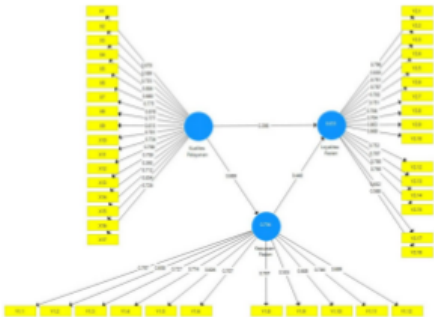

Figure 2. The result of PLS algorithm 4 (loading factor of each indicator)

TABLE 2. AVERAGE VARIANCE EXTRACTED (AVE) VALUES BEFORE AND AFTER THE PLS ALGORITHM ANALYSIS 4

	AVE before	AVE after
Patient satisfaction	0.496	0.520
Service quality	0.501	0.501
Patient loyalty	0.557	0.557

From the 4th PLS Algorithm output AVE from the patient satisfaction variable (Y1) which was initially 0.496 changed to 0.520. This means that the AVE value of all variables is more than 0.50. This is done to meet the discriminant validity test requirements that can be seen in Table 2.

Discriminant validity test uses three ways, first, see the results of cross loading between indicators with the construct must be greater than

other constructs with the same indicator, second, square root of *average variance extrated* (√AVE) for every construct have to bigger than correlation between other latent variables, third, the average variance extracted (AVE) value must be above 0.50.

TABLE 3. LATENT VARIABLE CORRELATION

	(AVE)
Patients satisfaction	0.520
Service quality	0.501
Patients loyalty	0.557

It can be seen in table 3,4,5 the value of cross loading between indicators and constructs is greater than other constructs with the same indicators, the square root value of the average variance extracted (√AVE) for each construct greater than the correlation between other latent variables, and each construct has a value of average variance extracted (AVE) above 0.50.

The construct reliability test is measured by two criteria, which are composite reliability and cronbach alpha, The construct is stated to be reliable if the composite reliability and Cronbach alpha values are above 0.70.

TABLE 4. CRONBACH ALPHA AND COMPOSITE RELIABI LITY VALUE

	Cronbach's Alpha	Composite Reliability
Patients satisfaction	0.906	0.922
Service quality	0.937	0.944
Patients loyalty	0.946	0.952

In table 6 all variables have composite reliability and cronbach's alpha values above 0.70, respectively.

Data analysis is done by testing the structural model or inner model, evaluated by looking at the percentage of variance described, which is by looking at the value of the analysis of R square (R2) which is a test of goodness of fit of the model. Hypothesis testing results can be seen in the statistical T value or P value on the path coefficient (Mean, STDEV, T-Values) from the bootstrapping analysis output.

TABLE 7. R SQUARE (R2) VALUE

	R Square (R²)
Patients satisfaction	0.756
Patients loyalty	0.655

It can be seen in table 7 that R square (R2) value in the patient satisfaction variable is 0.756, it means that the patient satisfaction variable can be explained by the service quality variable by 75.6% while 24.4% is explained by other variables outside this study. R square (R2) value in the patient loyalty variable is 0.655, this means that the patient loyalty variable can be explained by the service quality variable by 65.5% while 34.5% is explained by other variables outside this study.

In hypothesis testing, the indicator is said to be valid if it has a statistical T value ≥ 1.96 or P value ≤ 0.05 on the path coefficient (Mean, STDEV, T-Values) from the output of the bootstrapping analysis.

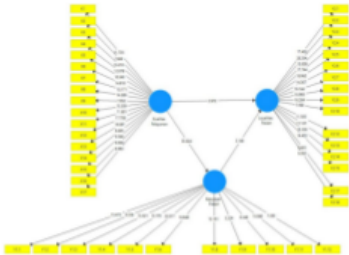**Figure 3. PLS bootstrapping results (loading factor of each indicator)**

TABLE 8: VALUE OF THE PATH COEFFICIENT (MEAN, STDEV, T-VALUES)

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Patients satisfaction > Patients loyalty	0.440	0.449	0.140	3.148	0.002

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Service quality > Patients satisfaction	0.869	0.873	0.026	33.024	0.000
Service quality > Patients loyalty	0.396	0.390	0.133	2.972	0.003

TABLE 9. VALUE OF INDIRECT EFFECTS (MEAN, STDEV, T-VALUES)

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Service quality > Patients satisfaction > Patients loyalty	0.383	0.392	0.123	3.114	0.002

It can be interpreted from table 8 that quality of service has a positive and significant effect on patient satisfaction seen from the parameter coefficient of 0.869 and a statistical T value of 33,024 so that the T statistic value ≥ 1.96 or P value of 0.000 so that the P value ≤ 0.05. Service quality has a significant positive effect on patient loyalty seen from the parameter coefficient of 0.396 and the statistical T value of 2.972 so the value of T statistic ≥ 1.96 or P value of 0.003 so that the value of P value ≤ 0.05. Patient satisfaction has a positive and significant effect on patient loyalty seen from the parameter coefficient of 0.440 and the statistical T value of 3.148 so the value of T statistic ≥ 1.96 or P value of 0.002 so that the value of P value ≤ 0.05.

It can be seen in table 9 that service quality has positive impact towards patients loyalty through patients satisfaction seen from its parameter coefficient of 0.383 and the statistical T value was 3.114 so that the statistical T value was 96 1.96 or the P value was 0.002 so the P value was ≤ 0.05.

The results of the study showed that, service quality had a positive effect on patient satisfaction, so this research supports the research conducted by (Shabbir et al., 2016) which shows the relationship between service quality and patient satisfaction and there are positive results from the association between the quality of health care and patient satisfaction. Quality of service has a positive effect on patient loyalty. The results of this study support the research conducted by (Fatima et al., 2018) which shows that good service quality can directly build customer loyalty. Patients satisfaction has positive impact towards patients loyalty, and through patients satisfaction, service quality has positive impact toward patients loyalty. The results of this study support the research conducted by Sadeh which shows that, if patients are satisfied with the services provided by the hospital, customer satisfaction must lead to their loyalty.[9] From Fatima et al. and Kulsum and Syah, the quality of health services (i.e. physical environment, customer friendly environment, responsiveness, communication, privacy and security) is positively related to patient loyalty which is mediated through patient satisfaction. [10] [11]

From table 10, it can be concluded that the value of the average coefficient of indicators on the dimensions of the variable service quality, patient satisfaction, and patient loyalty starting from the highest to the lowest on each variable is :

Service quality
1. Assurance 13,267
2. Responsiveness 12,300
3. Reliability 11,8755
4. Tangibles 10,876
5. Empathy 9,383

PATIENTS SATISFACTION
1. Staff performance 15,340
2. Physical facilities 12,743
3. Technical and medical services 9,449

In dimension of satisfaction towards the expense shows that it does not meet the validity test requirements. That caused all of the statements to be excluded from the study, which means that indicators of satisfaction with expenses were excluded from the study.

PATIENTS LOYALTY
1. Trust 19,627
2. Psychological commitment 14,164

3. Word of mouth 12,594
4. Switching cost 7,590
5. Cooperation 7,527

By referring to the results of the analysis above, Hidayah Hospital in Boyolali can use them as the strategic reference for evaluation and increasing their service quality hence increasing the patients satisfaction and loyalty to the hospital. It can also be seen that in this study expenses is no longer an indicator of patient satisfaction. That is because almost all people have health insurance such as *BPJS kesehatan* or other health insurances already, so that patients no longer worry about the costs or expenses spent for every health treatment received.

CONCLUSIONS

Based on the results of the analysis, the conclusions can be drawn as follow : Quality of service has a positive effect on patients satisfaction. Quality of service has a positive effect on patients loyalty. Patients satisfaction has a positive effect on patients loyalty. In addition there are some additional conclusions that can be found including service quality indirectly has a positive influence on patient loyalty through mediation of patient satisfaction. The average coefficient value of the indicator on the highest service quality variable is assurance, followed by responsiveness, reliability, tangibles, and empathy. The average coefficient value of the indicator on the highest patient satisfaction variable is satisfaction with staff performance, followed by satisfaction with physical facilities, and satisfaction with technical and medical services. The average coefficient value of the indicator on the highest patient loyalty variable is trust, followed by psychological commitment, word of mouth, switching cost, and cooperation.

This research can provide some input that can be used as consideration for evaluating service quality, patients satisfaction and loyalty. For Hidayah Hospital in Boyolali, hospital managements should continue to strive to improve the quality of hospital services so that customer satisfaction is always maintained, so that customers will be more loyal. For further research, this research is limited for Hidayah Hospital in Boyolali, so the results of this study cannot be generalized. Thus, in future studies it is better to use different samples and from different organizations and for future studies other variables besides service quality, patient satisfaction, and patient loyalty need to be included in order to be able to produce more extensive research that can be applied in hospital management.

This research still has limitations that need to be considered for further research. These limitations are: The results of this study can be applied at Hidayah Hospital in Boyolali, however, further study is needed if it will be applied in another hospital. There are only three variables in this study, which are service quality, patients satisfaction, and patients loyalty. The next researcher is expected to be able to add new variables so that extensive results can be found.

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