



The Service Quality, Patient Satisfaction And It's Impact To Patient Loyalty at X Hospital

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ABSTRACT

This research aims to analyze the positive effect 5Q dimension of service quality; quality of object, quality of process, quality of infrastructure, quality of interaction, quality of atmosphere on patient satisfaction, the positive effect of patient satisfaction on patient loyalty and the positive effect of trust and commitment on patient loyalty. This study used quantitative research and data collection was collected using questionnaire. The target population of this research were people that have admitted as in patients at X hospital Bogor and willing to be respondents of this research. The number of samples were determined to be which 219 samples. The sampling technique use was purposive sampling. Partial Least Square-Structural Equation modelling (PLS-SEM) is applied to this study. The result of data analysis showed that quality of object, quality of infrastructure, quality of interaction, dan quality of atmosphere have positive effect on patient satisfaction, Patient satisfaction and trust have positive effect on patient loyalty. Quality of process has a negative effect on patient satisfaction. Lastly, commitment has a negative effect on patient loyalty.

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INTRODUCTION

Hospital are always included in the service unit category because of their inherent characteristics and the nature of the work done there (Bhalerao & Deshmukh, 2018). The Hospital industry actually is a complicated as well as quickly sector of public services which is presently experience increasing competition and significant adjustment. Hospital competition is particularly unavoidable. Hospitals are trying in such a way to survive, especially private hospitals (Raju & Lonial, 2002). The quality of hospital services is very important in ensuring patient satisfaction and maintaining the reputation of the hospital.

Service quality is an important element for hospital to be superior, so they must be improved and measured properly. Today, due to the growing expectations of ordinary conveniences and higher customer desires, it has become an obligation for hospitals to provide superior health services to patients and full fill their needs (Fatima et al., 2018) The patient experiences in relation to private

hospital services have a strong impact on willingness to return to the same hospital and reuse its service or recommend them to the others. The relationship between service quality and patient loyalty proves the strategic importance of improving the service quality for dragging and retaining patients and expanding market share (Liu et al., 2021).

Satisfied patients will become loyal patients, they are going to come back to the same hospital. If the patient receives high-quality service, a patient going to be committed to the hospital. Satisfaction is a significant factor influencing hospital preference. Patient satisfaction also affects other dimensions of health care, including retention, which is a key factor determining their willingness to return to the same centre. In addition, the provision of high standards of healthcare, motivation, and rewards helps retain patients (Setyawan et al., 2020).

The concept of customer loyalty is at the core of marketing, and patient loyalty in the business sector. From the perspective of public economic research, medical care for patients is a labor value exchange process among medical service providers. Therefore, the patient can be said to be a kind of customer (Liu et al., 2021). Patient loyalty is important for healthcare providers (Uysal & Yorulmaz, 2020) as a key to success for health care providers. Patients have the right to freely choose available health services, causing intense competition among health care providers (Zhou, 2017). The X Hospital Bogor as a private hospital is financially dependent on the number of visits and patient care, therefore needs to evaluate the quality of service. Its service quality can be identified by monitoring the satisfaction and loyalty of patients seeking treatment at X Hospital. The commitment and trust affect loyalty to patients. Patient trust influence patient reliability and commitment which may create the relationship with repurchase intention (Kalia et al., 2021) Patient loyalty is a manifestation and continuation of patient satisfaction in using the facilities and services provided by the hospital. Loyalty serves as evidence of patients as customers who have the power and positive attitude towards the hospital. Increasing the satisfaction of each patient and maintaining that level of satisfaction in the long term could establish patient loyalty which is a basic task for hospital managers. Positive patient satisfaction will increasing patient loyalty to the hospital (Meesala & Paul, 2018).

This study aimed to analyzed the positive effect the 5Q service quality dimension, adapted from (Zineldine., 2000) on patient satisfaction, the positive effect patient satisfaction on patient loyalty and patient loyalty with the impact patient trust and commitment. Quality cannot improve unless it was measured and measurements provide the comparisons that justify the change the organization needs to achieve client/patient satisfaction. This 5Qs model is currently considered an effective and appropriate model for healthcare providers in order to evaluate patient satisfaction and it is considered a valid and reliable instrument. (Ajarmah et al., 2017)

Literatur Review and Submission of Hypotheses, Satisfaction, describe to an insider's perspective, the experiences of a service where the result has been evaluated in the terms of what service was received. Patient satisfaction can be a guideline for hospital to monitor and improve overall hospital performance (Liu et al., 2021). Moreover, patient satisfaction is significantly influence hospital preference and patient loyalty. Patient loyalty is important for the hospital (Uysal & Yorulmaz, 2020). Satisfactory quality of health services results from the implementation of the quality management system of a hospital. The concept of quality of health services is dynamic and evolving and that health care providers should assess the current state of knowledge, so that their services can be considered qualitative as is increasingly recognized that the preferences and views of patients, the publics are also important in determining the quality of healthcare (Kourkouta et al., 2021) The increasing competition in the health industry and the need for people to get good health services have encouraged hospital managers to apply a quality management system (Setyawan et al., 2020).

Quality management systems are one of the main factors influencing the development of health care institutions (Frederick & W. Earl Sasser, 2000; Zeithmal et al., 1988) They augment efficiency and will increase brand loyalty and market share. Quality is considered a determinant of a firm's

competitiveness and of the long-term profitability of service health. To measure the service quality (Zineldine., 2000) expanded the technical-functional and service quality models into the framework of 5Qs such as Quality of Object, Quality of Process, Quality of Infrastructure, Quality of Atmosphere and Quality of interaction.

Relationship between Quality of objects and patient satisfaction, Quality of object, the dimensions consist of facilities, infrastructure and services provided by the hospital (Zineldine., 2000). Patients will receive the service quality while they visit the hospital base on the quality of object providing a sight of health care, and the quality that is effectively for long-term satisfaction.

Quality of object and patient satisfaction have a close relationship. A higher level of quality of object result in a higher of patient satisfaction. (Zineldine., 2000), (Ajarmah et al., 2017) analyses the effect of quality of object on patient satisfaction. (Sharma, 2017) conducted a case study in India which showed that quality of object significantly affect customers satisfaction. Based on prior research, it is hypothesized that quality of object has a positive effect of patient satisfaction.

H1 : Quality of object has a positive effect on patient satisfaction., Relationship between Quality of Process and patient satisfaction. Quality of process is refers to functional qualities that provide effective and efficient processes. These measures encourage the implementation of quality health care activities. This activity can reduce waiting times and increase what patients need for medical services. This indicator for monitoring activities and helping daily decision making. The quality of the process is the evaluation of expectations of the patient. The quality of process directly informs the patient's expectations and directly manages the patient's expectations. (Ajarmah et al., 2017; Arab et al., 2012; Sharma, 2017) analyses the effect quality of process on patient satisfaction. The result of the research show that Quality Process is an important factor of patient satisfaction. This means that the better the quality of process, the more likely the patient satisfaction accepted. Based on description above, the second hypothesis is :

H2 : Quality of process has a positive effect on patient satisfaction., Relationship between Quality of infrastructure and Patient Satisfaction. Quality of the resources and healthcare performance. It includes tangible and non-tangible resources. Non tangible resources such as internal competencies, skills, experience, technology, motivation, leadership, attitude and the important things is, a patient has a best quality services and satisfaction. (Ajarmah et al., 2017) in Jordan, with 324 total respondents, from five military hospitals, show that quality infrastructure has a positive effect on patient satisfaction. The result is the same with research from (Sharma, 2017)

Based on description above and base on prior research, the third hypothesis is : H3 : Quality of Infrastructure has a positive effect on Patient Satisfaction. Relationship between Quality of atmosphere and Patient Satisfaction. Hospital must create an atmosphere that can comfort patient when running the entire series of health services. The service experience received by patient in a pleasant environment will be recorded in patient's memory and affect the patient's survival. Environmental quality where patient interact. Satisfaction is an emotional response to the difference between what patients expect and what they receive. (Sharma, 2017). The research, from (Ajarmah et al., 2017; Sharma, 2017; Zineldine., 2000) analyses the effect of quality of atmosphere to patient satisfaction. Based on prior research and based on description above, the fourth hypothesis is :

H4 : Quality of Atmosphere has a positive effect on Patient Satisfaction. Relationship between Quality of interaction and patient Satisfaction. One factor that can influence service quality is interaction between patient as a user and all hospital component including the information. A high-quality level of interaction increases the objectivity of the patient. The quality of the interaction creates a basic of satisfaction that leads to patient visits. Many research on this subject and patient satisfaction has focused on the relationship of satisfaction and patient visits. Ultimately, customer retention encourages loyalty. (Arab et al., 2012), analyzed the Quality of interaction has a negative effect to patient satisfaction. The research held in Teheran, with 943 respondents from 8 private

hospital. The result was different with research from (Ajarmah et al., 2017; Sharma, 2017). Based on description above, the fifth hypothesis is.

H5 : Quality of interaction has a positive effect on patient Satisfaction. Relationship between patient Satisfaction and patient Loyalty. Loyalty is defined as a strong dedication to continuously re utilize a thing of choice , thus causing repeated purchases of the same items (Liu et al., 2021). Based on (Uysal & Yorulmaz, 2020) The concept of patient loyalty or patient commitment to one hospital, can be defined as the patients intentions and request or patient to maintain a doctor patient relationship due to the medical services by the hospital. Therefore, service quality and patient satisfaction have a positive effect on patient loyalty to the hospital. Satisfied patient will become loyal customer and tent to choose the same hospital for treatment and spread positive word of mouth (Sholeh & Chalidyanto, 2021). Previous researches done by (Liu et al., 2021; Meesala & Paul, 2018; Sholeh & Chalidyanto, 2021; Uysal & Yorulmaz, 2020) so indicating that patient satisfaction has significant effect on patient loyalty. Base on description above, the sixth hypothesis is :

H6 : Patient satisfaction has a positive effect on patient loyalty. Relationship between commitment with patient loyalty, Commitment is an essential component in developing long-term relationship (Kalia et al., 2021; Morgan & Hunt, 1994) Commitment is defined as an eternal desire to maintain a valuable relationship , commitment as the consumer's belief in maintaining rather than ending a relationship that might produce functional and emotional benefits. The patients will always increase their commitment and loyalty to hospital that provide appropriate health care. Furthermore, commitment is a construct that can measure the customer loyalty, and predict the frequency of future purchases. (Morgan & Hunt, 1994). Research conducted by (Kalia et al., 2021), suggest that in the context of patient loyalty, commitment has positive affect. Base on description above, the seven hypothesis is :

H7 : Patient Comittment has a positive effect on patient loyalty. Relationship between trust with patient loyalty. According to (Dagger & Timothy, 2010), trust is the belief that the seller will fulfill the words and obligations of the promised role. Trust is the belief to fulfill a set of obligations such as integrity, policy, and competence by a party (El-Manstrly, 2016). Studies from (Cahyanti, 2021) show that trust is a variable that mediates between quality and loyalty. Previous research done by (Dagger & Timothy, 2010; Kalia et al., 2021; Liu et al., 2021) also indicating that patient trust has a significant effect on patient loyalty. Base on description above, the eight hypothesis is :

H8 : Trust has a positive effect on patient loyalty. Structural Model

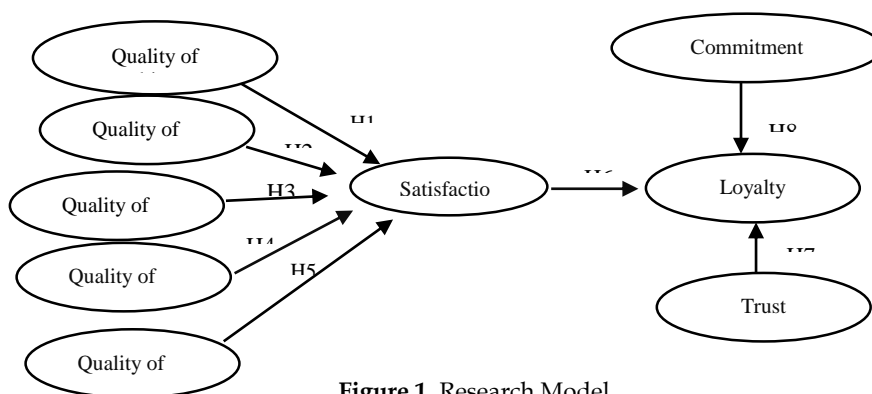


Figure 1. Research Model

RESEARCH METHOD

This research is a quantitative study with a cross sectional approach. The population of this study are all individuals who have been hospitalized as inpatients. This study used purposive sampling

with a sample of 219 respondents who have received a service from a private hospital. The sample was collected during February until April 2022 by digitally sending out the form link to fill the questionnaire. Overall, The questionnaire contains 40 question items spread across nine variables. The Quality of Object (QO) variable consists of four indicators, Quality of Process (QP) variable consists of five indicators, Quality of Infrastructure (QI) consists of six indicators, Quality of Atmosphere (QA) consist of six indicators, Quality of Interaction (QIN) consist of two indicators, Patient Satisfaction (SAT) variable consists of four indicators. Patient Loyalty (LO) variable consists of four indicators, Trust (TRS) variable consist of five indicators, Commitment (COM) variable consist of four indicators The indicator adopted from (Kalia et al., 2021; Sharma, 2017).

Respondents were asked to report how certain of the written statements according to what they thought, felt or experienced using a Likert scale: strongly disagree (1), disagree (2), neutral (3), agree (4), strongly agree (5). Before distributing the actual data, a preliminary study was conducted where all indicators were valid and reliable for the distribution of the actual questionnaire. Data was analyzed using Partial Least Squares - Structure Equation Modeling. (PLS-SEM). All data were analyzed using PLS-SEM with help of software SmartPLS for MAC version 3.0. Evaluation of the outer model measurement model is carried out with a convergent validity test with the condition that the loading factor value is above 0.4. In this test, there is some indicator that is removed, namely PS2 and PS4 because it has an outer loading value below 0.4. The average variance extracted (AVE) value is above 0.5 and the composite reliability value must be greater than 0.7 (Hair et al., 2012). Furthermore, the structural model (inner model) was evaluated with the research results were accepted if the t-statistic > 1.65. Pretest discriminant validity ranged from 0.808 to 0.90, all variable meet Fornell-Larcker criteria, the square root value of AVE must be greater than the correlation value between variables (Ghozali & Lattan, 2015). All variables meet the outerloading, AVE, discriminant validity, and composite reliability values means th at all variables are valid and can be used.

RESULTS AND DISCUSSIONS

The following is demographic data of respondents that have been collected based on gender, level of education and the type of work used in the research.

Table 1. Demographic details of respondents

Variable	Frequency	(%)
Gender		
Male	7	3.2
Female	212	96.8
Education		
Senior High School	43	19.6
Graduates	174	79.5
Post- Graduates	2	0.9
Employment		
Unemployed	2	0.9
House Wife	4	1.8
Government Employee	1	0.5
Private Employee	212	96.8

A Total of 219 respondent were acquired from the research. Table 1 Based on age, most of the research subjects came from the age range of 21-30 years, namely 98 respondents or 44.7%. Meanwhile, based on gender, 212 respondents or 96.8% were women. Most of the respondents' occupations were private employees, which was 96.8% or 212 respondents, and 79.5% or 174 respondents had an undergraduate education background.

Testing convergent and discriminant validity is most often used in research to measure the model (Ghozali & Lattan, 2015). The indicator's convergent validity test is seen from the loading factor value for each construct indicator. The results of the actua test can be seen in table 2 and all

indicators have an outer loading value above 0.4 and the average variance extracted (AVE) value for all variables is above 0.5 and has a composite reliability (CR) value above 0.7.

A good discriminant variable can be shown based on the square root of the AVE for each construct which is greater than the correlation between constructs in the model (Ghozali & Lattan, 2015). Afterwards, we calculated discriminant validity of all existing variables has been achieved because the square root value of the AVE in each has been greater than the correlation between constructs

Table 2. Validity and Reliability Measurements

Indicators	Outer Loading
Quality of object (QO) (CR = 0.924) /AVE = 0.815)	
{QO1} Sense of well-being that you felt in the hospital	0.905
{QO2} Ability of the hospital to treat you the way you expected	0.938
{QO3} Sense of security from physical harm you felt in the hospital	0.851
{QO4} Performance of services when they were supposed to be performed	0.915
Quality of process (QP) (CR = 0.909 /AVE = 0.734)	
{QP1} Waiting time for medication	0.821
{QP2} Waiting time for tests	0.870
{QP3} Speed and ease of admissions	0.911
{QP4} Time between admission	0.828
{QP5} Time between getting into your room	0.849
Quality of infrastructure (QIS) (CR = 0.934 /AVE = 0.753)	
{QIS1} Skills of the nurses attending you	0.853
{QIS2} Skill of those performing your tests	0.881
{QIS3} Skill of the physicians attending you	0.906
{QIS4} Temperature of the food	0.890
{QIS5} Physical appearance of room	0.854
{QIS6} Cleanliness of the hospital	0.819
Quality of atmosphere (QA) (CR = 0.949 /AVE = 0.830)	
{QA1} Responsiveness of nurses to your needs	0.917
{QA2} Ability of information about your condition	0.888
{QA3} Politeness of the nurses	0.920
{QA4} Responsiveness of the physicians to your needs	0.909
{QA5} Hospital concern for family	0.921
{QA6} Hospital concern for visitors	0.917
Quality of interaction (QIN) (CR = 0.916 /AVE = 0.932)	
{QIN1} Adequacy of explanation about your treatment	0.960
{QIN2} Adequacy of instruction upon release from the hospital	0.961
Satisfaction (SAT) (CR = 0.934 /AVE = 0.838)	
{SAT1} I am happy with the efforts this hospital makes toward patients	0.944
{SAT2} I am satisfied with the relationship I have with this hospital	0.957
{SAT3} Hospital services appropriate with my needs	0.946
{SAT4} Financially, is appropriate with me	0.805
Loyalty (LO) (CR = 0.966 /AVE = 0.908)	
{LO1} I would always visit this hospital for medication	0.949
{LO2} I would always visit this hospital for treatment	0.950
{LO3} I would recommend this hospital to my friends	0.961
{LO4} I will choose this hospital every time I need	0.953
Trust (TR) (CR = 0.965 /AVE = 0.878)	
{TR1} I trust the telecom operator and its staff	0.908
{TR2} The company is consistent in providing quality services	0.950
{TR3} I feel very safe while dealing with the company	0.941
{TR4} The staff of the company treats me fairly	0.942
{TR5} If I share my problem with the staff, I know they would respond positively	0.944
Commitment (COM) (CR: 0.929 /AVE : 0.825)	
{COM1} The company provides individualized attention while solving customer complaints	0.910
{COM2} The company offers price significantly lesser than other operators	0.857
{COM3} Customer care ensures that problems will not arise in our relationship	0.926

Indicators	Outer Loading
{COM4} The company takes proactive measures to avoid any future complaint situations	0.939

Table 2. The result of convergent validity test show where composite reliability value range from 0.90 to 0.966, AVE value range from and outer loading value range from 0.821 to 0.961. All variables meet the criteria value mean that all variables are a valid and reliable:

Table 3. Discriminant Validity Using the Fornell - Lacker Criteria

	Commitment	Loyalty	Quality of atmosphere	Quality of infrastructure	Quality of interaction	Quality of object	Quality of process	Satisfaction	Trust
Commitment	0.909								
Loyalty	0.817	0.953							
Quality of atmosphere	0.774	0.804	0.911						
Quality of infrastructure	0.792	0.829	0.861	0.868					
Quality of interaction	0.784	0.799	0.898	0.846	0.961				
Quality of object	0.734	0.749	0.752	0.828	0.742	0.903			
Quality of process	0.555	0.494	0.541	0.615	0.503	0.545	0.856		
Satisfaction	0.847	0.855	0.851	0.847	0.850	0.790	0.552	0.915	
Trust	0.880	0.899	0.853	0.835	0.847	0.771	0.480	0.868	0.937

The result of discriminant validity test show shown in Table 3, overall result of measurement model has meet the Fornell-Lacker criteria.

Table 4. R Result test

Variabel	R ²
<i>Satisfaction</i>	0.830
<i>Loyalty</i>	0.806

From Table 4. Satisfaction constructs are influenced by the construction of Quality of Object, Quality of Process, Quality of Infrastructure, Quality of Atmosphere, and Quality of Interaction by 0.830 or 83.0% while 17.0% are influenced by other constructs outside of this study. Loyalty constructs were influenced by satisfaction, trust and commitment constructs of 0.806 or 80.6%. The study also indicates that loyalty 19.4% was influenced by other constructs not covered by this research

Table 5. R Result test

Hypothesis	Standardized coefficient	t-Statistic	Result
H1. The Quality of object has positive effect on patient satisfaction	0.209	3.178	Accepted
H2. The Quality of process has positive efect on patient satisfaction	0.042	0.987	Not Accepted
H3. The Quality of infrastructure has positive effect on patient satisfaction	0.188	2.149	Accepted
H4. The Quality of atmosphere has positiveeffect on patient satisfaction	0.246	2.556	Accepted
H5. The Quality of interaction has positive effect on patient satisfaction	0.294	3.093	Accepted
H6. Patient Satisfaction has positive effect on Patient Loyalty	0.302	2.944	Accepted
H7. Trust has positive effect on Patient Loyalty	0.634	6.981	Accepted
H8. Commitment has positive effect on Patient Loyalty	0.003	0.003	Not Accepted

Hypothesis testing the significance of the correlation coefficient between the independent variable and the dependent, it can be determined by doing the t-test. The minimum value of t-statistic in this study is 1.65 with a significance of 0.05. The table above shows hypothesis testing regarding whether it is significant or not significant.

Result of H1, indicating that Quality of Object positively affect patient satisfaction. This study has the same result that conducted in India (Sharma, 2017), with 250 respondents were selected randomly come from an academic organization at four private hospitals, they were working. This result consistent with the previous researches stated that quality of object has positive effect to patient satisfaction. (Ajarmah et al., 2017; Zineldine., 2000)

Result of H2, indicating that Quality of Process has negative effect to patient Satisfaction. The hypothesis in quality of process will be positively relationship with patient satisfaction is rejected. This is in contrast to the study by (Ajarmah et al., 2017; Arab et al., 2012; Sharma, 2017) which Quality of process will be positively effect on patient satisfaction. Quality of Process is related with waiting times; the time is taken to understand the problem and provide service healthcare to patient. Result of H3, indicating that Quality Infrastructure has positive effect on patient satisfaction. This result consistent with the previous researches. (Ajarmah et al., 2017; Sharma, 2017). Result of H4, Quality Atmosphere has a positive relationship on patient satisfaction. The hypothesis, the quality of atmosphere related with patient satisfaction is supported. The result is different with study from (Sharma, 2017) quality of atmosphere has a negative effect to patient satisfaction. Result of H5, Quality interaction has a positive relationship on patient satisfaction. The finding of the research is in the line with previous study (Ajarmah et al., 2017; Sharma, 2017), but different result from (Arab et al., 2012), the quality of interaction has negative effect on patient satisfaction. Result of H6, Patient Satisfaction has a positive relationship on Patient Loyalty The finding of the study is in the line with previous research, there is a significant direct effect between patient satisfaction and patient loyalty. The relationship between patient Satisfaction and patient Loyalty have been observed by (Leissen Pollack, 2009; Vaz, 2018).

Patient satisfaction can affect patient behaviour, such as loyalty, which may result in making healthcare recommendation to their family, relatives, friends or the other. In addition, loyalty can improve patient adherence to medical treatments. Another study also found that when patient is satisfied with the service hospital, the patient will lead to repetitive purchase thus providing loyalty (Liu et al., 2021; Meesala & Paul, 2018; Woratschek et al., 2020).

Result of H7, Trust has a positive relationship on Patient Loyalty. The finding of the study is in the line with previous research, there is a significant direct effect between patient trust and patient loyalty (Cahyanti, 2021; Kalia et al., 2021; Liu et al., 2021). Patient trust will be positively associated with patient satisfaction (Tosyali et al., 2019), which will positively predict patient loyalty. The loyalty that the patients and their families have for the hospital also develops their trust in the quality and the capability of the X hospital. Result of H8, Commitment has a negative effect on Patient Loyalty. The hypothesis Commitment will be positive relationship with Patient Loyalty is rejected. The study before by (Kalia et al., 2021) with 650 responses from Indian telecom service users. In this study, it is said that Commitment has a significant impact on patient loyalty. Commitment has positive effect on patient loyalty. (Liu et al., 2021; Olesen & Bathula, 2022).

CONCLUSION

Based on the result of data analysis in this study, it can be concluded that Quality of process is not associated with patient satisfaction. Patient commitment is not associated with patient loyalty. Patient satisfaction and patient trust have a significant and positive effect to patient loyalty. The study found a positive effect between all 4Q; quality of object, quality of infrastructure, quality of atmosphere, quality of interaction on patient Satisfaction. The X hospital should understand the link

between specific dimensions of service quality, patient satisfaction and patient loyalty. Critical dimensions have to be identified so that they will be focused on. To achieve patient loyalty, hospital need to improve good relation and good communication with patients to understand patient needs and patient expectation. Furthermore, patients are expecting more and more quality care, and if they do not receive it, they will go elsewhere. There is some limitation of this study. The limited a sample size of study and the respondents only from inpatient that have service health care in hospital X.

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