

# Analysis of Patient Loyalty At XYZ Hospital, Palembang City

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**Abstract:** This study aims to analyze the factors that influence patient loyalty at XYZ Hospital in Palembang City. The factors studied include service quality, patient trust, hospital facilities, patient experience, and medical staff communication. The method used is a quantitative approach with data collection through a survey of hospital patients. A total of 135 patients agreed to provide responses. PLS SEM was used as a method to analyze the data. The results of the analysis indicate that service quality, trust, and patient experience significantly influence patient loyalty, both directly and through mediation of patient satisfaction. This study provides theoretical implications for the development of literature on patient loyalty in the health sector and offers practical guidance for hospital management to improve the overall patient experience.

Keyword: Hospital, Patient Loyalty, Patient Satisfaction, Service Quality

## **INTRODUCTION**

Patient satisfaction plays an important role in determining their loyalty, so the level of satisfaction will affect patient loyalty (Chen et al., 2022). The level of patient satisfaction and loyalty in the health service sector is good, but it is still uneven. Data from the Ministry of Health in 2023 shows that patient satisfaction and loyalty reached 99%. The Ministry of Health has set national standards, where based on the 2016 Ministry of Health Regulation, the level of patient satisfaction must at least exceed 95%. If health services have patient satisfaction below that figure, then the service is considered not to meet standards or of poor quality.

Customer satisfaction is influenced by several factors, such as positive image, service quality, and the level of satisfaction itself. Hospitals strive to create patient loyalty because the cost of acquiring new patients is increasing. High levels of satisfaction can affect market share and increase profits for service providers (Agha et al., 2017). The integration of these various elements is the key to the success of health care institutions in improving information and building satisfaction through improving service quality. Improving the quality and equality of services is expected to encourage patient loyalty (Gérard et al., 2016). Conversely, low patient satisfaction and loyalty can hinder hospital development. Patients who are dissatisfied with the service will tend to switch to other hospitals that offer better services (Lestari et al., 2021).

According to WHO (2021), the level of satisfaction with health services in various hospitals in the world is still relatively low, such as in Turkey which only reached 78.2%.

Several studies have also revealed the level of patient satisfaction in various countries, such as in Kenya at 40.4% according to Ndambuki, and in Bakhtapur, India, only 34.4% according to Twayana. Patient loyalty to health services is also relatively low, with WHO data showing loyalty figures ranging from 78%-80%. Research in Indonesia found that patient loyalty only reached 60%, so many patients from the middle to upper economic classes chose to seek treatment abroad (Rachmad, 2017). From these data, it can be concluded that the level of patient satisfaction and loyalty in general is still low, becoming a challenge for hospitals in Indonesia and other countries.

Patient satisfaction in South Sumatra, especially in Palembang City, has varying levels of satisfaction caused by various factors such as the rates and services of the Class II Hospital dr. AK. Gani Palembang which makes patients quite satisfied and will feel more satisfied if the speed of administrative procedures is increased and attention to each patient is better (Fitri, 2023). The quality of service at the Muhammadiyah Hospital Palembang has a positive influence on patient satisfaction starting from physical nukti, responsiveness, assurance and reliability (Herudiansyah et al., 2020). In addition to having a positive effect, these factors also have a significant influence (Herudiansyah et al., 2023).

This study proposes a new research model and is the result of modifying several previous research models regarding the influence of SERVQUAL on patient loyalty. Patient dissatisfaction is influenced by several factors, such as service quality, available facilities, and hospital policies. The patient's decision to use health services is influenced by the quality of hospital services (Mohammadi-Sardo & Salehi, 2018). This dissatisfaction can result in a loss of patient trust in the hospital. Other factors that influence patient satisfaction include health status, socioeconomic conditions, demographics, hospital features, staff satisfaction, and the existence of insurance (Salehi et al., 2018).

High patient satisfaction will encourage their loyalty, which can be seen from the frequency of patient visits to the hospital when they need treatment. The relationship between patient satisfaction and loyalty in hospitals has been confirmed by Astuti & Nagase (2014). Wu (2011) also found that consumer loyalty is influenced by brand image, service quality, satisfaction. Dissatisfaction, on the other hand, can lead to a decrease in the number of patient visits, which ultimately impacts hospital revenue (Owaidh et al., 2018).

The ACSI (American Customer Satisfaction Index) model explains that patient satisfaction is influenced by several aspects, such as technical quality of service, functional quality that includes interpersonal communication, and comfort and ease of procedure (Fornell et al., 1996). These factors are the main expectations of patients. Patient loyalty is influenced by their perception of service quality and expectations formed from previous experiences, both from direct use of services and from indirect information such as advertising and recommendations. These expectations also include views on the ability of service providers to maintain or improve quality in the future.

The gap in research on patient loyalty in hospitals shows that although there are many studies that confirm the relationship between service quality and patient satisfaction, there are still other variables that need further research. For example, a study by Fatima et al. (2021) emphasized the importance of service quality in increasing patient satisfaction and loyalty, but did not fully explain how the element of patient trust in doctors contributes in this context. In addition, Aladwan et al. (2021) found that patient satisfaction mediated the relationship between service quality and loyalty, but other factors such as cultural context and social influence have not been explored in depth. Shie et al. (2022) also noted that interactions between patients and medical staff play an important role in building trust, but the lack of understanding of the factors that influence these interactions is a gap that needs to be filled.

By considering these aspects, it is expected to provide a more comprehensive insight into the phenomenon of patient loyalty in hospitals. Based on the description above, the researcher will conduct a study entitled "Analysis of patient loyalty at XYZ Hospital, Palembang City".

#### **METHOD**

This study is a quantitative study that tests the hypothesis and aims to measure the effect of one variable on another variable. This study uses a cross-sectional approach where data is collected over a certain period of time and then analyzed quantitatively. The research subjects used in this study were patients at XYZ Hospital, Palembang City to determine the factors related to patient loyalty. This study was conducted directly by distributing questionnaires to polyclinic patients at XYZ Hospital, Palembang City. A total of 135 patients provided responses. The data analysis method uses PLS SEM. Researchers use PLS-SEM because this analysis is to develop existing theories with an exploratory approach to the research model. In addition, PLS-SEM is in accordance with the orientation of the research, namely to test whether the research model that has been prepared has predictive and explanatory capabilities (Hair & Sarstedt, 2021).

The measurement of indicators of latent variables used in this study is the Likert scale. The Likert scale is used to measure opinions and behavior. The Likert scale in this study uses 5 points. The Likert scale with 5 points describes attitudes with 5 levels. In answering the questionnaire, respondents are only allowed to choose one answer from five answer choices for each question indicator. The respondents' answers will later be measured and placed to assess each indicator in the study. Measurement of service quality and assurance was adapted from Jonkisz et al. (2022) while responsiveness, physical evidence, and empathy were adapted from Ali et al. (2024). In this study, primary data were collected by distributing questionnaires in the form of a Google form via WhatsApp. The target respondents selected were patients visiting the XYZ Palembang hospital.

## **RESULTS AND DISCUSSION**

## **Respondent Overview**

Respondents in this study were 135 respondents, based on the majority of respondents aged 15-30 years as many as 106 people (78.5%). Furthermore, respondents aged 31-40 years amounted to 25 people (18.5%), and only 4 people (3.0%) were aged 41-50 years. The distribution of respondent gender shows the dominance of female respondents as many as 74 people (54.8%), while male respondents amounted to 61 people (45.2%). Most respondents have a Bachelor's/Equivalent educational background as many as 71 people (52.6%), followed by respondents with a High School/Equivalent education as many as 55 people (40.7%). Respondents with a Master's education as many as 7 people (5.2%), while those who did not go to school and D3/Equivalent graduates were only 1 person each (0.7%). Respondents' occupations were dominated by students as many as 50 people (37.0%) and private employees as many as 49 people (36.3%). Other professions include entrepreneurs (12 people, 8.9%), civil servants (13 people, 9.6%), and housewives (8 people, 5.9%). Respondents who are fresh graduates and students are only 1 person (0.7%) and 2 people (1.5%) respectively. Most of the respondents are single, 81 people (60.0%), while those who are married are 54 people (40.0%). The distribution of visit frequency shows that the majority of respondents have visited once (60 people, 44.4%). Followed by respondents who have visited 2-5 times (56 people, 41.5%), and >6 times (18 people, 13.3%). Only 1 person (0.7%) was recorded as not having visited. The majority of respondents have used the service for less than 1 year (54 people, 40.0%), followed by respondents with a duration of service use of 1-3 years (41 people, 30.4%) and 3-5 years (32 people, 23.7%). A total of 8 people (5.9%) have used the service for more than 5 years.

Overall, respondents were dominated by young women aged 15-30 years, most of whom had a bachelor's degree/equivalent. Respondents were generally students or private employees with unmarried status, made 1 visit, and had used the service for less than 1 year.

## **Outer Model**

In data analysis with PLS-SEM, the first stage is to conduct a validity and reliability test on the outer model which is also called the measurement model. Validity and reliability tests are used to test whether the indicators used are valid and able to measure their latent variables (constructs) properly. In this study, SmartPLS 3.2.9 software was used to obtain the output of the outer model. In the results of the actual outer model test, 19 indicators were obtained which were used in the research model. In the outer model, it can be seen that all 31 indicators are valid for measuring the construct according to the required outer loading value, which is >0.7 (Hair et al., 2019). The validity test consists of convergent validity by looking at the AVE value (>0.5) while reliability is by looking at the Cronbach alpha score or it can also be with the composite reliability score (>0.7) (Hair et al., 2019). The following are the results of convergent validity in actual research conducted on 135 samples.

Table 1. Validity And Reliability							
Item	Outer Looding	Item	Outer Loading				
Assurance (CA = 0.9673, CR = 0.9728, AVE = 0.8364)		Empathy CA = 0.9278, CR = 0.9455, AVE = 0.7763)					
ASS1	0.8953	EMP1	0.8746				
ASS2	0.9104	EMP2	0.8781				
ASS3	0.9176	EMP3	0.8531				
ASS4	0.8955	EMP4	0.9023				
ASS5	0.9165	EMP5	0.8964				
ASS6	0.9170	Responsiveness CA = 0.9310, CR = 0.9512, AVE = 0.8300)					
ASS7	0.9484	RSPV1	0.9194				
Reliability (CA = 0.9046, CR = 0.7783)	= 0.9334, AVE	RPPV2	0.9475				
RBT1	0.8987	RSPV3	0.9300				
RBT2	0.8281	RSPV4	0.8438				
RBT3	0.8888	Satisfaction $CA = 0.9$ 0.8086)	211, CR = 0.9411, AVE =				
RBT4	0.9109	STF1	0.8938				
Tangible CA = 0.8633, CR = 0.9165, AVE = 0.7870)		STF2	0.8884				
TGB1	0.7560	STF3	0.9183				
TGB2	0.9448	STF4	0.8962				
TGB3	0.9469	Loyalty CA = 0.9201, CR = 0.9435, AVE = 0.8069)					
		LYL1	0.9291				
		LYL2	0.8773				
		LYL3	0.8895				
		LYL4	0.8964				

Validity test consists of convergent validity by looking at the AVE value (>0.5) (Hair et al., 2019). Based on the above, it is known that the indicators in each dimension have an AVE value> 0.5, where all variables have met the valid criteria and can be analyzed further. The second stage carried out in the outer loading analysis is to assess construct reliability.

Construct reliability is used to see the level of consistency of a measuring instrument in which it can measure research that remains consistent if measurements are taken twice or more on the same research. In this outer model analysis, a reliability test is carried out by evaluating the Cronbach's alpha and composite reliability values with the criteria that if the value is> 0.7 then it is reliable (Hair et al., 2019; Hair et al., 2020). From the table above, it can be seen that the Cronbach's alpha and composite reliability values for all variables are above 0.7 as required (Hair et al., 2019).

## **Inner Model**

The R-square (R2) value or coefficient of determination is used to explain how much the independent variable can influence the dependent variable. The R-square value ranges from 0 to 1 ( $0 \le R2 \le 1$ ), the higher the R-square value, the greater the influence of the independent variable on the dependent variable. As a rule of thumb, the R2 value> 0.75 (strong), R2> 0.50 (moderate), and R2> 0.25 (weak), but if the R-square value is found above 0.9, the research model is said to be overfit (Hair et al., 2019). The R-square (R2) value or coefficient of determination is used to explain how much the independent variable can influence the dependent variable. The R-square value ranges from 0 to 1 ( $0 \le R2 \le 1$ ), the higher the Rsquare value, the greater the influence of the independent variable on the dependent variable. As a rule of thumb, the R2 value > 0.75 (strong), R2 > 0.50 (moderate), and R2 > 0.25 (weak), but if the R-square value is found above 0.9 the research model is said to be overfit (Hair et al., 2019). The results showed that Satisfaction had  $R^2 = 0.8908$ : This value indicates that 89.08% of the variation in the dependent variable Satisfaction can be explained by the independent variables in the model. Only 10.92% of the variation cannot be explained by the model, which is likely caused by other factors outside the model. Interpretation: The model has very strong explanatory power for the Satisfaction variable. Loyalty has  $R^2 = 0.9263$ : This value indicates that 92.63% of the variation in the dependent variable Loyalty can be explained by the independent variables in the model. Only 7.37% of the variation cannot be explained by the model, which is likely due to external factors. Interpretation: The model has very strong explanatory power for the Loyalty variable.

Effect size or F2 is used to determine how much the independent variable can support the dependent variable. The F2 value is classified into 3, namely, if the F2 value> 0.02 then it has a small effect, F2> 0.15 has a moderate effect, and F2> 0.35 has a large effect. If the F2 value is less than 0.02, it can be concluded that the independent variable in the study does not affect the dependent variable (Hair et al., 2019). The results of the study found that between Assurance and Satisfaction (0.0068) there was a very weak and almost insignificant relationship and showed that Assurance only made a small contribution to Satisfaction. The relationship between Reliability and Satisfaction (0.1964) was at a moderate level and showed that Reliability had a greater effect on Satisfaction than other variables. The relationship between Physical Evidence and Satisfaction (0.0133) had a very weak relationship and showed a small contribution of Physical Evidence to Satisfaction. The relationship between Empathy and Satisfaction (0.2476) has the strongest relationship among all paths to Satisfaction and also indicates that Empathy is a major predictor of Satisfaction. The relationship between Responsiveness and Satisfaction (0.0156) has a very weak relationship, indicating a small influence of Responsiveness on Satisfaction. The variables Empathy and Reliability provide the most significant contribution to Satisfaction, while the other variables only provide minimal influence.

The Q2 value is used to validate the predictive ability of a research model if there is a change in the data parameters. The higher the Q2 value, the more precise the ability of a variable to predict the research output. The Q2 value must be greater than 0 to be said to be meaningful or to get a relevant predictive value in the structural model. In the analysis, if the

Q2 value is between 0-0.25, it has a small predictive relevance. If Q2 has a value of 0.25-0.5, the predictive relevance value is moderate, and if the Q2 value>0.5, the predictive relevance value is large (Hair et al., 2019). The Satisfaction variable has a Q<sup>2</sup> value of 0.8773: A high Q<sup>2</sup> value (approaching 1) indicates that the model has very good predictive ability. This value indicates that the model is able to predict Satisfaction with a very high level of accuracy. In general, this model can explain 87.73% of the variation in Satisfaction well. Loyalty has a Q<sup>2</sup> value of 0.904.: A higher Q<sup>2</sup> value indicates that this model also has a very strong predictive ability for the Loyalty variable. With a Q<sup>2</sup> of 0.9041, this model is able to predict Loyalty with an accuracy rate of 90.41% with a very high level and shows very good prediction quality. The satisfaction model shows very good predictive ability with a Q<sup>2</sup> value of 0.8773. The model in the study has a good capacity to predict changes in Satisfaction and also loyalty.

Table 2. Hypothesis Testing						
	Hypothesis	Original Sample	T statistics	P values	Results	
H1	Assurance $\rightarrow$ Satisfaction	-0,1169	0,8329	0,4049	Not Supported	
H2	Assurance $\rightarrow$ Loyalty	0,2381	2,0388	0,0415	Supported	
H3	Reliability $\rightarrow$ Satisfaction	0,5026	4,0192	0,0001	Supported	
H4	Reliability $\rightarrow$ Loyalty	-0,0301	0,3162	0,7519	Not Supported	
H5	Tangible $\rightarrow$ Satisfaction	-0,1080	1,1449	0,2523	Not Supported	
H6	Tangible $\rightarrow$ Loyalty	0,2335	2,9783	0,0029	Supported	
H7	Empathy $\rightarrow$ Satisfaction	0,5263	4,7691	0,0000	Supported	
H8	Empathy $\rightarrow$ Loyalty	0,1742	1,5656	0,0622	Not Supported	
H9	Responsiveness $\rightarrow$ Satisfaction	0,1434	1,1878	0,2350	Not Supported	
H10	Responsiveness $\rightarrow$ Loyalty	0,0612	0,5821	0,5605	Not Supported	
H11	Satisfaction $\rightarrow$ Loyalty	0,3307	3,9892	0,0001	Supported	

## **Hypothesis Testing**

## The Effect of Assurance on Satisfaction

From table 2 above, it is known that Path Coefficient = -0.1169: This indicates relationship between Assurance and Satisfaction. This value is very low, indicating that if there is an influence, it is not significant. T-Statistics = 0.8329: T-Statistics is used to measure the statistical significance of this relationship. A small T-Statistics (less than 1.645) indicates that the relationship between Assurance and Satisfaction is not strong enough to be considered significant. P-Value = 0.4049 is considered greater than 0.05. In hypothesis testing, P-Value less than 0.05 indicates a significant relationship. Because the P-Value here is greater, it means that this relationship is not statistically significant. The hypothesis between Assurance and Satisfaction is negative, because the influence between Assurance and Satisfaction is not supported and the direction is negative, because the influence between Assurance and Satisfaction is not significant enough.

The results of this study are in line with previous research in which assurance was unable to predict the level of patient satisfaction (Sutanto, 2023). Patient satisfaction is not influenced by assurance factors (Bentum-Micah et al., 2020). The results of this study contradict previous results where the greater the assurance, the greater the patient satisfaction (Emon et al., 2023). Assurance was found to have a positive effect on patient satisfaction (Suleiman & Abdulkadir, 2022). The higher the assurance, the higher the patient satisfaction (Al-Damen, 2017).

## The Effect Assurance on Loyalty

From table 2 above, it is known that Path Coefficient = 0.2381: A positive relationship between Assurance and Loyalty indicates that the higher the value of Assurance, the higher the value of Loyalty. This value is quite significant although not too high. T-Statistics = 2.0388

shows that T-Statistics is greater than 1.645 indicating that the relationship between Assurance and Loyalty is quite significant and can be trusted. P-Value = 0.0415 means that P-Value is less than 0.05, which indicates that the relationship between Assurance and Loyalty is statistically significant. The hypothesis between Assurance and Loyalty is supported and the direction is positive, because this relationship is statistically significant.

The results of this study are in line with previous results that the assurance factor is able to foster patient loyalty (Manshur et al., 2022). The level of patient loyalty is influenced by the assurance factor (Bentum-Micah et al., 2020). The greater the assurance, the greater the patient loyalty (Munandar, 2020; Ribowo & Ardansyah, 2024). This result differs from previous findings where assurance was unable to predict the level of patient loyalty (AlOmari & Hamid, 2022).

## The Effect of Reliability on Satisfaction

From table 2 above, it is known that Path Coefficient = 0.5026: This shows that the relationship between Reliability and Satisfaction is positive. This means that the higher the Reliability value, the higher the Satisfaction value. T-Statistics = 4.0192 is much greater than 1.645, which means that this relationship is very strong and statistically significant. P-Value = 0.0001 is smaller than 0.05, which shows that this relationship is very statistically significant and positive. The hypothesis between Reliability and Satisfaction is supported, because this relationship is statistically significant.

The results of this study are in line with previous findings where reliability has a positive impact on patient satisfaction (Al-Damen, 2017). The same findings revealed that the reliability factor would make patients feel more satisfied (AlOmari & Hamid, 2022). Reliability was found to have a positive impact on patient satisfaction (Bentum-Micah et al., 2020). The results of this study contradict previous research in which reliability was unable to predict the level of patient satisfaction (Sutanto, 2023). Reliability was found to have a positive effect on patient satisfaction (Suleiman & Abdulkadir, 2022).

# The Effect of Reliability on Loyalty

From table 2 above, it is known that Path Coefficient = -0.0301: A negative relationship between Reliability and Loyalty, indicating that changes in Reliability do not have a significant impact on Loyalty. T- Statistics = 0.3162 is lower than 1.645, indicating that this relationship is not strong enough to be considered significant. P-Value = 0.7519: P- is greater than 0.05, indicating that the relationship between Reliability and Loyalty is not statistically significant and is negative. The hypothesis between Reliability and Loyalty is not supported, because this relationship is not proven to be significant.

The results of this study are in line with previous research that reliability is not a factor that determines the level of patient loyalty (Bentum-Micah et al., 2020). This result is different from previous findings where reliability would make patients more loyal to the hospital (AlOmari & Hamid, 2022). The greater the reliability, the greater the patient loyalty (Munandar, 2020; Ribowo & Ardansyah, 2024).

# The Effect of Tangible on Satisfaction

From table 2 above, it is known that Path Coefficient = -0.1080 indicates a negative relationship and that the influence of Physical Evidence on Satisfaction is very weak. T-Statistics = 1.1449 is less than 1.645, which indicates that this relationship is not strong enough. P-Value = 0.2523 is greater than 0.05, which indicates that this relationship is not significant in a negative direction. The hypothesis between Physical Evidence and Satisfaction is not supported, because this relationship is not significant.

The results of this study are in line with previous research in which tangible was unable to predict the level of patient satisfaction (Sutanto, 2023). The high or low tangible does not affect patient satisfaction (Al-Damen, 2017). The results of this study contradict previous findings that tangible has a positive effect on patient satisfaction (Suleiman & Abdulkadir, 2022). Tangibility has been found to increase patient satisfaction (AlOmari & Hamid, 2022). The high level of patient satisfaction is due to the high level of tangibility (Bentum-Micah et al., 2020).

## The Effect of Tangible on Loyalty

From table 2 above, it is known that Path Coefficient = 0.2335: A positive relationship, indicating a clear influence between Physical Evidence and Loyalty. T-Statistics = 2.9783 is greater than 1.645, indicating a statistically significant relationship. P-Value = 0.0029 is smaller than 0.05 indicating that this relationship is very statistically significant and has a positive direction. The hypothesis between Physical Evidence and Loyalty is supported, because this relationship is statistically significant.

The results of this study are in line with previous results that the tangibility factor is able to foster patient loyalty (Manshur et al., 2022). The greater the tangibility, the greater the patient loyalty (Ribowo & Ardansyah, 2024). The results of this study differ from previous findings that tangibility had no effect on changes in patient loyalty (AlOmari & Hamid, 2022). Patient loyalty is not influenced by the patient's tangibility factor (Bentum-Micah et al., 2020). The level of tangibility does not determine the level of patient loyalty (Munandar, 2020).

## The Effect of Empathy on Satisfaction

From table 2 above, it is known that Path Coefficient = 0.5263 means that there is a positive relationship between Empathy and Satisfaction and shows a significant and large influence. T-Statistics = 4.7691 is greater than 1.645, which indicates that this relationship is very statistically significant. P-Value = 0.0000 is less than 0.05, which indicates that this relationship is very significant and the value is positive. The hypothesis between Empathy and Satisfaction is supported, because this relationship is significant.

The results of this study are in line with previous research in which empathy was able to predict the level of patient satisfaction (Bentum-Micah et al., 2020; Sutanto, 2023). empathy factors were found to have a positive effect on patient satisfaction (Suleiman & Abdulkadir, 2022). Increased empathy will also be followed by increased patient satisfaction (Al-Damen, 2017). The results of this study differ from previous findings that empathy had no effect on changes in patient satisfaction (AlOmari & Hamid, 2022).

## The Effect of Empathy on Loyalty

From table 2 above, it is known that Path Coefficient = 0.1742 where the relationship is positive. P-Value = 0.0622 is greater than 0.05, which indicates that this relationship is not significant at the 5% level, but close enough to be considered and the direction is positive. The hypothesis between Empathy and Loyalty is not strongly supported, because this relationship is not significant enough even though it is close to the limit.

The results of this study are in line with previous findings that empathy has no effect on changes in patient loyalty (AlOmari & Hamid, 2022). The results of this study differ from previous findings that the empathy factor is able to determine the level of patient loyalty (Bentum-Micah et al., 2020). Patients' empathy mediated the relationship between service quality and patients' loyalty to the hospital (Zhang et al., 2018). The greater the empathy, the greater the patient's loyalty (Munandar, 2020; Ribowo & Ardansyah, 2024).

#### The Effect of Responsiveness on Satisfaction

From table 2 above, it is known that Path Coefficient = 0.1434: A very small positive relationship indicates that Responsiveness has almost no effect on Satisfaction. T-Statistics = 1.1878 which is low from 1.645 indicates that this relationship is very weak. P-Value = 0.2350 is greater than 0.05, which indicates that this relationship is not significant and the direction is positive. The hypothesis between Responsiveness and Satisfaction is not supported, because this relationship is not statistically significant.

The results of this study are supported by previous research where responsiveness was unable to predict the level of patient satisfaction (Al-Damen, 2017). The results of this study also support previous findings that the responsiveness factor has no effect on changes in patient satisfaction (AlOmari & Hamid, 2022). The results of this study differ from previous studies where responsiveness was able to predict the level of patient satisfaction (Bentum-Micah et al., 2020; Sutanto, 2023). Empathy factors were found to have a positive relationship with patient satisfaction (Emon et al., 2023). The higher the empathy given by the hospital, the more satisfied the patient will be with the services provided (Suleiman & Abdulkadir, 2022).

#### The Effect of Responsiveness on Loyalty

From table 2 above, it is known that Path Coefficient = 0.0612: A positive relationship was found between Responsiveness and Loyalty. T-Statistics = 0.5821 is lower than 1.645 indicating that this relationship is almost non-existent. P-Value = 0.5605 is greater than 0.05, indicating that this relationship is not significant and the direction is positive. The hypothesis between Responsiveness and Loyalty is not supported, because this relationship is not statistically significant. The results of this study contradict previous findings that the responsiveness factor influences changes in patient loyalty (AlOmari & Hamid, 2022). The responsiveness factor was found to be able to determine the level of patient loyalty (Bentum-Micah et al., 2020). The greater the responsiveness, the greater the patient loyalty (Munandar, 2020; Ribowo & Ardansyah, 2024).

## The Effect of Satisfaction on Loyalty

From table 2 above, it is known that Path Coefficient = 0.3307: A positive relationship indicates that Satisfaction has a significant influence on Loyalty. T-Statistics = 3.9892 is greater than 1.645, which indicates that this relationship is very statistically significant. P-Value = 0.0001 is less than 0.05, which indicates that this relationship is very statistically significant and the direction is positive. The hypothesis between Satisfaction and Loyalty is supported, because this relationship is statistically significant.

This result is supported by previous findings where Patient satisfaction has a significant impact on patient loyalty in the hospital healthcare sector (AlOmari & Hamid, 2022; Rahman et al., 2021). Semakin pasien merasa puas dengan pelayanan yang diberikan maka akans semakin loyal mereka pada rumah sakit (Abekah-Nkrumah et al., 2021). Care providers need to develop a deep understanding of patient context and issues and pay attention to their level of access to ensure greater patient satisfaction and greater patient loyalty (Kijima et al., 2021). Patient satisfaction and hospital image have a positive and significant influence on patient loyalty (Sukamuljo et al., 2021).

## **Mediation Analysis**

Patient satisfaction is able to mediate the effect of reliability on loyalty with a path coefficient of 0.1662 and a p value of 0.0043. Patient satisfaction is able to mediate the effect of empathy on loyalty with a path coefficient of 0.1740 and a p value of 0.0046. Patient satisfaction is unable to mediate each of the effects of assurance, tangible, responsiveness on loyalty with path coefficients of -0.0387, -0.0357, 0.0474 and p values of 0.4427, 0.2803,

0.2785, respectively. The results of previous research found that patient satisfaction was able to mediate the influence of assurance and reliability on patient loyalty, but patient satisfaction did not mediate the influence of empathy, responsiveness, tangibility on patient loyalty (AlOmari & Hamid, 2022). These results mean that the factors that increase patient satisfaction and patient loyalty vary from hospital to hospital.

## **Importance Performance Map Analysis**

The findings of this study can provide significant managerial implications for XYZ Private Hospital to continue to prioritize the maintenance and improvement of aspects that require improvement based on the findings of the Importance-Performance Matrix Analysis (IPMA). The results of the study indicate that the Tangible variable is considered an important factor by respondents whose implementation has been running with good performance and must be maintained so that patient satisfaction can continue to increase. Based on the findings of the study, Private Hospitals are advised to continue to emphasize the importance of Tangible by focusing on improvements in Investment in physical facilities, cleanliness, comfort of waiting rooms, and modern equipment can directly improve patient experience. Routine maintenance of Hospital infrastructure can be carried out to maintain high service standards. In addition, hospitals need to identify and improve areas with low performance but high importance, through investment in technology and human resource development. Regular monitoring, such as patient satisfaction surveys, should be implemented to monitor service progress and support strategic decision making.

Optimization of resources is also crucial by paying more attention to improving lowperforming aspects, as well as rewarding staff who show significant progress. Finally, communication and education to patients must be strengthened to build better trust relationships and improve overall patient satisfaction. The results of the IPMA analysis of the Assurance indicator show that several indicators of the variables, namely ASS1 (BPJS doctors at this hospital have a good reputation), ASS2 (BPJS doctors at this hospital can provide good health services), ASS3 (BPJS referral hospitals have a good reputation as a place for treatment), ASS4 (Medical personnel at hospitals serving BPJS have broad medical insight), ASS5 (Medical personnel at hospitals serving BPJS are experienced in the medical field), ASS6 (There is a guarantee of trust in the services at this hospital), ASS7 (There is a guarantee of security in the services at this hospital), are indicators that are important but have not been running with good performance. These results indicate a gap that needs to be addressed immediately to improve patient satisfaction.

# CONCLUSION

The results of this study concluded that the factors that influence patient satisfaction are reliability and empathy while other factors such as assurance, tangibility, responsiveness do not affect patient satisfaction. The factors that influence patient loyalty are assurance and tangibility while other factors such as reliability, empathy, responsiveness do not affect patient loyalty. Patient satisfaction mediates the effect of reliability and empathy on patient loyalty. Patient satisfaction does not mediate the effect of assurance, tangibility, responsiveness on patient loyalty.

Improving the quality of service in hospitals can be done by ensuring that service standards are continuously improved through regular training for staff and medical personnel, considering that good service quality has been proven to have a significant influence on patient loyalty. Strengthening assurance also needs to be done by building patient trust through service transparency, providing accurate information, and effective communication. For example, health education programs or seminars can increase patient confidence in the hospital. In addition, innovation in tangible aspects is very important, such as investment in physical facilities, cleanliness, waiting room comfort, and modern equipment to improve the patient experience directly.

Improvements in responsiveness are also a priority, such as reducing waiting times, speeding up administrative processes, and expanding communication channels through digitalbased applications. Finally, empathy in service must be emphasized by ensuring that medical personnel and staff have strong empathy skills, actively listen to patients, and provide genuine attention to their needs.

Research development can be done by including mediating or moderating variables, such as customer satisfaction or trust, to see if both strengthen the relationship between service variables and loyalty. In addition, collecting more diverse data by expanding the research object to various types of organizations, such as educational institutions, technology companies, or the non-profit sector, can provide more generalized results. In terms of analysis methods, the use of more complex statistical techniques, such as Structural Equation Modeling (SEM), can help explore deeper relationships between the variables studied. The focus of the research can also be directed at the responsiveness and empathy variables that are close to being significant, by exploring factors that may inhibit their influence on loyalty.

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