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THE EFFECT OF PATIENT *SATISFACTION* ON PATIENT *LOYALTY* MEDIATED BY *PATIENT TRUST* AND HOSPITAL *BRAND IMAGE* AT THE JAKARTA EDUCATION DENTAL AND ORAL HOSPITAL

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ABSTRACT

This study aims to find out and analyze "The Effect of Patient *Satisfaction* on Patient *Loyalty* mediated by *Patient Trust* and Hospital *Brand Image* at Jakarta Educational Dental and Oral Hospital". The data collection technique method uses *non-probability* sampling with *a purposive sampling* method. The data was collected directly from a sample that had adjusted the criteria and disseminated through a questionnaire to 250 respondents using a Likert scale of 1-5 where 1 showed strong disapproval, while 5 indicated strongly agreed. The statements in this study consisted of 25 statements obtained from four variables, namely patient satisfaction, patient *loyalty*, *patient trust*, and *hospital brand image*. The questionnaire is distributed through Google Forms. The analytical methods used in this study are *Partial Least* Square (PLS) and *Structural Equation Model (SEM)*. The results of this study show that patient satisfaction has a positive influence on patient loyalty, patient satisfaction has a positive influence on patient trust, patient *trust* has a positive influence on patient *loyalty*, *patient satisfaction* has a positive influence on hospital brand image, Hospital Brand Image has a positive influence on patient *loyalty*, patient satisfaction has a positive influence on patient loyalty mediated by patient *trust*, patient satisfaction has a positive influence on *patient loyalty* mediated by *Hospital Brand Image.*

Keywords: *Hospital Brand Image, Patient Loyalty, Patient Satisfaction, Patient Trust*

INTRODUCTION

Under the market economy system, the core of corporate competition is customer-oriented, acquiring and creating customer preferences and loyalty to the quality of the company's services in order to achieve the continuous development of the enterprise. The concept of customer loyalty is the core of marketing, and patient loyalty comes from customer loyalty in business (Liu et al., 2021). From the perspective of public economic research, patient care is the process of exchanging the value of labor between medical service providers. The patient is passively treated in the hospital, and the patient is subjectively reluctant to come back. Therefore, customer loyalty in the healthcare industry differs significantly from other industries (Liu et al., 2021).

In this era of globalization, every company and public institution needs to improve services professionally in their respective fields. Currently, public awareness has grown of the importance of good health, makes health services a top priority for the community. In accordance with the provisions of Law Number 36 of 2009 concerning Health, that all parties, both government and private, organize health development in a coordinated, effective, and efficient manner. The goal is to achieve the highest level of health (RI, 2009). It also highlights everyone's right to access safe, quality, and affordable health sector resources and health services (Juhana et al., 2015).

The doctor-patient relationship is the customer relationship. Medical services for patients are based on the relationship of trust between the supply and demand sides of health services. This is manifested in the patient's willingness to be loyal to the real attitudes and behaviors of the hospital. This situation can bring economic and social benefits to the hospital, reduce the cost of developing and maintaining new customers, provide health value to the patients themselves, and reduce the loss of customers in the hospital. In addition, loyal customers are willing to pay more, express higher purchase intentions, and resist conversions (Liu et al., 2021).

Hospitals are healthcare providers with the principle of trust, and their success is largely determined by the quality of service, satisfaction, and patient loyalty (Yusri et al., 2017). The challenge faced in the service industry is that hospitals must be able to try to provide the best service to patients (Zahra et al., 2022). There is convincing evidence that when patients receive high-quality services in a hospital, they are more likely to return to the same hospital in the future. In addition, the patient will also say positive things and recommend them to their friends and relatives (Arab et al., 2012). Referrals from friends, relatives, and other patients are considered an important source of information for the selection of providers (Arab et al., 2012).

The level of oral health problems is influenced by many factors, such as low income, lack of access to care, and lack of awareness about the need for such care. It was also found that oral health status is influenced by individual beliefs, socioeconomic background, number of visits to the dentist, and oral health behaviors. Furthermore, levels of anxiety and depression are thought to contribute to oral health outcomes. Poor dental and oral health is a major public health problem in Indonesia, with around 89% and 74% of the population suffering from dental caries and periodontitis, respectively. One of the most important steps in maintaining good oral health is regular visits to the dentist, as it allows the dentist to assess the risk of oral health problems and provide preventive and restorative care (Santoso et al., 2020).

Consumer reaction to poor service can be measured by two factors, namely loyal or switching to another service provider. Services are difficult to prove until a patient visits and get hospital services. In addition, the quality of services provided to customers may vary from specific hospital visits, which can have an impact on satisfaction and loyalty. One possible cause of declining loyalty is patient dissatisfaction with treatment. The patient then decides to stop using the service for himself or his family (Sofia et al., 2018).

Satisfaction is considered a predictor of behavioral intentions. Satisfied patients will return to the same provider and recommend them to their family and friends (*positive word of mouth*). It is considered that satisfaction reflects a positive assessment of patients from their healthcare experience (Lacap & Alfonso, 2022). Customers who are satisfied with the quality of the services provided cause customer loyalty and increase customer purchase intent. This study was conducted to test the relationship between patient satisfaction and patient loyalty to health services (Yusri et al., 2017).

METHOD

Research Design

This study uses hypothesis testing which aims to test the effect of patient *satisfaction* free variables on bound variables, namely patient *loyalty* with mediation variables, namely *patient trust* and *hospital brand image. The unit of analysis of* this study is patients who come regularly

to the Jakarta Education Dental and Oral Hospital in the last 2 (two) years. The data from this study is *cross-sectional* data, that is, the data is obtained only within a certain period of time.

Variables and Measurements

Patient Satisfaction

The free variable in this study was *patient satisfaction* which was defined as the feeling felt by patients based on their assessment of the suitability between their expectations and the performance of the service provider. Customers are happy when performance meets or exceeds expectations, and will be disappointed when not (Sumaedi et al., 2014). The question items used to measure *patient satisfaction* are:

1. The medical treatment I received was perfect
2. During medical visits, I am always allowed to say all my complaints
3. My doctor is very competent
4. The hospital is strategically located
5. There are a few things about the medical system that need to be improved
6. Follow-up after treatment is good
7. I feel confident that I can get the medical care I need without financial restraint
8. Patients do not have to wait long for treatment in this hospital
9. If I need hospitalization, I can be registered directly without any difficulty

Patient loyalty

The variable tied to this study is *patient loyalty* which is defined as a firmly held commitment to consistently reuse preferred services in the future leading to the use of the same service or *brand* (Zhou et al., 2017). The question items used to measure *patient loyalty* are:

1. I will still go to the same hospital in the next five years
2. If I were given the option to choose another hospital, I would still choose the same hospital
3. I consider myself loyal to this hospital
4. For me, this hospital is definitely better than other hospitals
5. I will still be treated in this hospital even if the price of treatment has increased a bit
6. I won't change hospitals if other hospitals offer better prices

Patient trust

The mediation variables in this study were *patient trust* and *hospital brand image.* Patient trust is defined as the patient's belief that a doctor has the skills to perform the diagnosis and treatment necessary for the benefit of the patient so that the patient can receive medical services with confidence (Yang & Wu, 2018). The question items used to measure *patient trust* are:

1. The hospital and its services are in accordance with existing claims
2. Hospitals can fulfill agreements and commitments given
3. Honest and trustworthy staff
4. Hospital staff care and are committed to solving patient problems
5. Hospital staff want the best for patients
6. The hospital is committed to meeting the needs and satisfaction of patients

Brand Image

Brand image is a mediating variable that can be defined as *the brand* perception that is stored in the customer's memory and reflects the customer's overall impression. A positive *brand image* is considered an important ability of the company to maintain its market position (Vimla & Taneja, 2020). The question items used to measure *brand image* are:

1. The hospital has a good reputation
2. The hospital has excellent facilities
3. The hospital has a comfortable environment
4. The hospital provides excellent service

Data Collection Methods

In this study, questionnaires were used as a data collection method. A questionnaire is a method of collecting data that can be given directly to respondents through questions or written explanations. This study used *google Forms* to get samples without being restricted by region. The list of questions includes respondent data and questions about the effect of patient *satisfaction* on patient *loyalty* mediated by *patient trust* and *hospital brand image* at the Jakarta Educational Dental and Oral Hospital. The data in this study was obtained from a sample of patients who had been treated regularly at the Jakarta Educational Dental and Oral Hospital for the last 2 (two) years. The number of samples in this study refers to the calculation according to Hair et. al (2017) with a minimum of 250 respondents.

Sampling Methods

The population of this study is all patients who have been treated at the Educational Dental and Oral Hospital, Jakarta which includes: RSGM-P Trisakti University, RSGM-P Universitas Indonesia, RSGM-P Universitas Yarsi, and RSGM-P Universitas Prof. Dr. Moestopo. The sampling technique in this study is a *purposive* sampling technique with *a non-probability sampling* method with the condition that you have done at least 2 treatments in the last 2 years at the Educational Dental and Oral Hospital, Jakarta. The age of respondents is at least 17 years old, which is classified as an adult when filling out the questionnaire.

Table 3.1
Respondent Profiles by Place of Care

RSGM-P	**Number of Respondents**	**Percentage (%)**
Trisakti University	93	37,2%
University of Indonesia	53	21,2%
Prof. Dr. Moestopo University	71	28,4%
Yarsi University	33	13,2%
Total	**250**	**100%**

The table of respondents' profiles based on the place of treatment shows that the majority of respondents are patients who received treatment at RSGM-P Trisakti University as many as 93 people with a percentage of 37.2%. Furthermore, the second most respondents came from RSGM-P Universitas Prof. Dr. Moestopo as many as 71 people with a percentage of 28.4%. Then from RSGM-P Universitas Indonesia as many as 53 people with a percentage of 21.2%, and RSGM-P Yarsi University as many as 33 people with a percentage of 13.2%.

Table 3.2
Respondent Profile by Gender

Gender	Number of Respondents	Percentage (%)
Men	115	46%
Woman	133	54%
Total	**250**	**100%**

Source: Outpus SPSS (attached)

In label's profile, respondents showed that the majority of respondents by gender were women as many as 133 people with a percentage of 54%. There were 115 respondents of the male gender with a percentage of 46%.

Table 3.3
Respondent Profiles by Age

Gender	Number of Respondents	Percentage (%)
17 – 25 years old	159	63,6%
26 – 35 years old	69	27,6%
36 – 45 years old	22	8,8%
46 – 55 years old	8	3,2 %
Total	**250**	**100%**

Source: Outpus SPSS (attached)

The results of the frequency of the total respondents showed that the majority of respondents who took part in the study aged 17-25 years were 159 people or 63.6%, followed by the age of 26-35 years as many as 69 people or 27.6%, aged 36-45 years as many as 22 people or 8.8%, aged 46-55 years as many as 8 people or 3.2%.

Table 3.4
Respondent Profile Based on the Number of Treatments Received at RSGM-P in the Last 2 Years

Number of treatments	Number of Respondents	Percentage (%)
2 times	174	69,6%
> 2 times	76	30,4%
Total	**250**	**100%**

Source: Outpus SPSS (attached)

The frequency results of the total respondents showed that the majority of respondents treated 2 times at RSGM-P in the last 2 years as many as 174 people with a percentage of 69.6%, and > 2 times as many as 76 people with a percentage of 30.4%.

Data Analysis

This study used *partial least square* (PLS) and *variance-based structural equation modeling* (SEM) analysis. There are 2 test models in the PLS test, namely the measurement model and the structural model. This study uses a measurement model, which tests validity and reliability. Structural models are used to see the relationships between research variables.

Measurement Model (*Outer Model*)

Evaluation of the *outer model* is basically to conduct early detection of the ability of each indicator to influence each latent variable in the study. *convergent validity* and *composite reliability* are criteria used as parameters in conducting *outer model* analysis using SmartPLS.

Structural Model (*Inner Model*)

The next step after doing the *outer* model test is to do the *inner model* test. *Inner* model testing is carried out to see the relationship between the construct, significance value, and *R-square* of the research model.

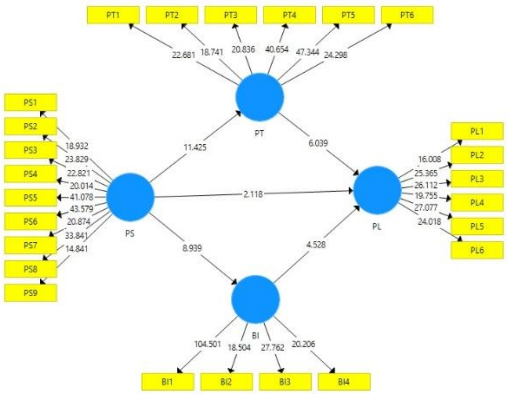

Chart 2. Structural Model

Evaluation of the PLS structural model begins by looking at the *R-square* of each dependent latent variable. *R-squared* is used to assess how much influence a particular independent latent variable has on the dependent latent variable. The table below is the result of *the R-square* using PLS.

Table 3.10. *R-square*

Variables	***R Square***	***R Square Adjusted***
Patient Loyalty	0,503	0,497
Patient Trust	0,322	0,319
Brand Image	0,221	0,218

Source: Outpus PLS (attached)

The value (*R-square adjusted*) for the patient *loyalty* variable was 0.497 or 49.7%. This value indicates that the patient *loyalty* variable can be explained by the *patient satisfaction, patient trust,* and *hospital brand image* variables of 49.7% while the remaining 50.3% is influenced by other variables not found in the study.

The *value (R-square adjusted*) for the *patient trust* variable was 0.319 or 31.9%. The value indicates that the patient *trust* variable can be explained by the *patient satisfaction* variable of 31.9% while the remaining 68.1% is influenced by other variables not found in the study.

The *value (R-square adjusted*) for the *brand image* variable is 0.218 or 21.8%. This value indicates that the *brand image* variable can be explained by the *patient satisfaction* variable of 21.8%. While the remaining 78.2% was influenced by other variables that were not contained in the study.

Hypothesis Test

Testing of structural relationship models explains the relationships between research variables. Structural model testing is tested using the T-test. The basis for direct hypothesis testing is the output of images and values contained in the *output of patch coefficients* and *indirect effects*. Here's a full explanation of hypothesis testing:

This test was conducted to see whether each independent variable had a significant influence on its dependent variables. The basis for taking the hypothesis is as follows:

a. If the *p-value* > 0.05 then H0 is accepted which can be inferred that there is no significant relationship between the two variables
b. If the *p-value* ≤ 0.05 then H0 is rejected which can be concluded that there is a significant relationship between the two variables

RESULTS AND DISCUSSION

Descriptive Statistics

Descriptive statistical tests are performed to describe and characterize the data in detail. Descriptive statistical tests are examined based on *mean* and standard deviation. The mean is the average value of the respondent's answer, and the standard deviation value indicates the variance of the respondent's answer. A standard deviation value close to zero means less variability in respondents' responses. However, if the standard deviation value is farther from zero, it can be interpreted that the respondent's answer is more different. The following is the result of a descriptive statistical calculation of each variable described through the average value (*mean*) and standard deviation:

Table 4.1

Descriptive Statistics of *Patient Satisfaction* Variables

No.	Questionnaire	*Mean*	Standard Deviation
1.	The medical treatment I received was perfect	3,976	0,728
2.	During medical visits, I am always allowed to say all my complaints	4,192	0,725
3.	My doctor is very competent	4,356	0,638
4.	The hospital is strategically located	4,300	0,517
5.	There are a few things about the medical system that need to be improved	4,328	0,598
6.	Follow-up after treatment is good	4,436	0,513

7.	I feel confident that I can get the medical care I need without financial restraint	4,124	0,692
8.	In this hospital, patients do not have to wait long for treatment	4,292	0,607
9.	If I need hospitalization, I can be registered directly without any difficulty	4,116	0,738
Average Patient Satisfaction Score		**4,236**	**0,639**

Based on the results of *descriptive* patient satisfaction statistics, an average score of 4,236 was obtained, which showed that the average respondent had felt satisfaction with treatment at RSGM-P. The standard deviation value in the *patient satisfaction* variable is 0.639. The value indicates that respondents' responses are quite varied.

The first question item gets a *mean* value of 3,976 indicating that the medical care received is impeccable. The second question item gets a mean value of 4.192 which indicates that during a medical visit, the patient is always allowed to say all patient complaints. The third question item gets a *mean* value of 4,356 which indicates the doctor is very competent. The fourth question item gets a mean value of 4,300 indicating that the hospital is strategically located. The fifth question item gets a mean value of 4,328 which indicates that there are some things regarding the medical system that need to be improved. The sixth question item earned a *mean* value of 4,436 indicating that follow-up after treatment was good. The seventh question item earned a *mean* value of 4,124 indicating that the patient felt confident he could get the medical care he needed without financial restraint. The eighth question item gets a mean value of 4,292 which indicates that in this hospital patients do not have to wait long for treatment. The ninth question item gets a mean value of 4,116 which indicates that if it requires hospitalization then the patient can be immediately registered without difficulty.

Table 4.2
Descriptive Statistics of *Patient Loyalty* Variables

No.	**Questionnaire**	***Mean***	**Standard Deviation**
1.	I will still go to the same hospital in the next five years	4,060	0,712
2.	If I were given the option to choose another hospital, I would still choose the same hospital	4,212	0,699
3.	I consider myself loyal to this hospital	4,144	0,725
4.	For me, this hospital is definitely better than other hospitals	4,140	0,734
5.	I will still be treated in this hospital even if the price of treatment has increased a bit	4,116	0,693
6.	I won't change hospitals if other hospitals offer better prices	4,072	0,736
Average Patient Loyalty Value		**4,124**	**0,716**

Based on the results of *descriptive* patient loyalty statistics, an average score of 4,124 was obtained, which showed that the average respondent had the closest loyalty to the hospital

where they received treatment. The standard deviation value on the *patient loyalty* variable is 0.716. The value indicates that respondents' responses are quite varied.

The first question item got a *mean* value of 4,060 indicating that the respondent would still go to the same hospital in the next five years. The second question item gets a mean value of 4,212 which indicates that if the respondent is given the choice to choose another hospital, then the respondent will still choose the same hospital. The third question item got a mean value of 4,144 indicating that the respondent considered himself loyal to this hospital. The fourth question item got a *mean* value of 4,140 which indicates for respondents this hospital is clearly better than other hospitals. The fifth question item got a *mean* value of 4,116 indicating that respondents would continue to seek treatment at this hospital even though the price of treatment increased slightly. The sixth question item got a mean value of 4,072 indicating that the respondent would not switch hospitals if other hospitals offered better prices.

Table 4.3
Descriptive Statistics of *Patient Trust* Variables

No.	**Questionnaire**	***Mean***	**Standard Deviation**
1.	The hospital and its services are in accordance with existing claims	4,036	0,685
2.	Hospitals can fulfill agreements and commitments given	4,248	0,648
3.	Hospital staff are honest and trustworthy	4,328	0,605
4.	Hospital staff care and are committed to solving patient problems	4,372	0,547
5.	Hospital staff want the best for patients	4,368	0,531
6.	The hospital is committed to meeting the needs and satisfaction of patients	4,152	0,647
Average Patient Trust score		**4,251**	**0,610**

Based on the results of *descriptive* statistics of patient trust, an average value of 4,251 was obtained, which showed that the average respondent felt that RSGM-P had been able to generate patient trust. The standard deviation value on the *patient trust* variable is 0.610. The value indicates that respondents' responses are quite varied.

The first question item gets a *mean* value of 4,036 indicating that the patient agrees that the hospital and its services match the existing claim. The second question item gets a mean value of 4,248 indicating that the hospital can fulfill the agreements and commitments given. The third question item earned a mean value of 4,328 indicating that the hospital staff was honest and trustworthy. The fourth question item earned a mean value of 4,372 indicating that hospital staff care and are committed to solving patient problems. The fifth question item earned a *mean* value of 4,368 indicating that hospital staff wanted the best for the patient. The sixth question item earned a *mean* score of 4,152 indicating that the hospital is committed to meeting patient needs and satisfaction.

Table 4.4
Descriptive Statistics of *Hospital Brand Image* Variables

No.	Questionnaire	*Mean*	Standard Deviation
1.	The hospital has a good reputation	4,340	0,567
2.	The hospital has excellent facilities	4,352	0,618
3.	The hospital has a comfortable environment	4,216	0,635
4.	The hospital provides excellent service	4,184	0,669
Hospital Brand Image average score		**4,273**	**0,622**

Based on the results of *descriptive* statistics of hospital brand image, an average value of 4,273 was obtained, which shows that the average respondent felt that the hospital had been able to provide a good *brand image* to patients. The standard deviation value on the *hospital brand image* variable is 0.622. The value indicates that respondents' responses are quite varied.

The first question item received a *mean* value of 4,340 which indicates that the hospital has a good reputation. The second question item received a mean value of 4,352 which indicates that the hospital has superior facilities. The third question item received a mean value of 4,216 which indicates that the hospital has a comfortable environment. The fourth question item gets a mean value of 4,184 which indicates that the hospital provides excellent service.

Hypothesis Testing Results

Statistical testing of each hypothesized relationship using PLS is carried out by simulation, namely by bootstrapping the sample. The following are the results of the PLS analysis with *bootstrapping method:*

Table 4.5. *R-square* Hypothesis Test Results

Hypothesis	*Estimate*	*P-Values*	Decision
H1: There is a positive influence of patient *satisfaction* on *patient loyalty*	0,112	0,017	Supported
H2: There is a positive effect of patient *satisfaction* on *patient trust*	0,567	0,000	Supported
H3: There is a positive influence of patient *trust* on *patient loyalty*	0,418	0,000	Supported
H4: There is a positive influence of *patient satisfaction* on *hospital brand image*	0,470	0,000	Supported
H5: There is a positive influence of *hospital brand image* on *patient loyalty*	0,292	0,000	Supported

Hypothesis One

Based on Table 4.5 shows that the first hypothesis tests the effect of patient *satisfaction* on *patient loyalty* with the sound of hypothesis zero (H0) and alternative hypothesis (Ha) as follows:

H0: There is no positive effect of patient *satisfaction* on *patient loyalty*

Ha: There is a positive influence of patient *satisfaction* on *patient loyalty*

Based on the hypothesis test results in the table above, the first hypothesis has an *estimated* value of 0.112 with a *p-value* of 0.017 ≤ 0.05 which can be interpreted to mean that Ha is supported (H0 is rejected). Therefore, it can be concluded that patient *satisfaction* positively affects *patient loyalty*.

Hypothesis Two

The second hypothesis tests the effect of patient *satisfaction* on *patient trust* with the sound of the null hypothesis (H0) and the alternative hypothesis (Ha) as follows:

H0: There is no positive effect of patient *satisfaction* on *patient trust*

Ha: There is a positive influence of patient *satisfaction* on *patient trust*

Based on the hypothesis test results in the table above, the second hypothesis has an *estimated* value of 0.567 with a *p-value* of 0.000 ≤ 0.05 which can be interpreted to mean that Ha is supported (H0 is rejected). Therefore, it can be concluded that patient *satisfaction* positively affects *patient* trust.

Third Hypothesis

The third hypothesis tests the effect of patient *trust* on *patient loyalty* with the sound of the null hypothesis (H0) and the alternative hypothesis (Ha) as follows:

H0: There is no positive influence of patient *trust* on *patient loyalty*

Ha: There is a positive influence of patient *trust* on *patient loyalty*

Based on the results of the hypothesis test in the table above, the third hypothesis has an *estimated* value of 0.418 with a *p-value* of 0.000 ≤ 0.05 which can be interpreted to mean that Ha is supported (H0 is rejected). Therefore, it can be concluded that patient *trust* positively affects *patient loyalty*.

Fourth Hypothesis

The fourth hypothesis tests the effect of *patient satisfaction* on *hospital brand image* with the sound of the null hypothesis (H0) and the alternative hypothesis (Ha) as follows:

H0: There is no positive influence of *patient satisfaction* on *hospital brand image*

Ha: There is a positive influence of *patient satisfaction* on *hospital brand image*

Based on the hypothesis test results in the table above, the fourth hypothesis has an *estimated* value of 0.470 with a *p-value* of 0.000 ≤ 0.05 which can be interpreted to mean that Ha is supported (H0 is rejected). Therefore, it can be concluded that *patient satisfaction* positively affects *the hospital's brand image*.

Fifth Hypothesis

The fifth hypothesis tests the effect of *hospital brand image* on *patient loyalty* by sounding hypothesis zero (H0) and alternative hypothesis (Ha) as follows:

H0: There is no positive influence of *hospital brand image* on *patient loyalty*

Ha: There is a positive influence on *hospital brand image* on *patient loyalty*

Based on the hypothesis test results in the table above, the fifth hypothesis has an *estimated* value of 0.292 with a *p-value* of 0.000 ≤ 0.05 which can be interpreted to mean that Ha is supported (H0 is rejected). Therefore, it can be concluded that hospital *brand image* positively affects *patient loyalty*.

Table 4.6. Indirect Relationship Hypothesis Test Results

Hypothesis	***Estimate***	***P-Values***	**Decision**
H6: There is a positive influence of patient *satisfaction* on patient *loyalty* mediated by *patient trust*	0,137	0,000	Supported (partial *mediation)*
H7: There is a positive influence of patient *satisfaction* affecting *patient loyalty* mediated by *hospital brand image*	0,237	0,000	Supported *(partial mediation)*

Sixth Hypothesis

Based on Table 4.6 shows that the sixth hypothesis tests the effect of patient satisfaction on patient *loyalty* mediated by the *patient trust* with the sound of hypothesis zero (H0) and alternative hypothesis (Ha) as follows:

H0: There is no positive influence of patient *satisfaction* on patient *loyalty* mediated by *patient trust*

Ha: There is a positive influence of patient *satisfaction* on patient *loyalty* mediated by *patient trust*

Based on the hypothesis test results in the table above, the sixth hypothesis has an *estimated* value of 0.137 with a *p-value* of 0.000 ≤ 0.05 which can be interpreted to mean that Ha is supported (H0 is rejected). Therefore, it can be concluded that patient *satisfaction* positively affects patient *loyalty* mediated by *patient trust.*

Seventh Hypothesis

The seventh hypothesis tests the effect of patient *satisfaction* on *patient loyalty* mediated by *hospital brand image* with the sound of the null hypothesis (H0) and the alternative hypothesis (Ha) as follows:

H0: There is no positive influence of patient *satisfaction* affecting *patient loyalty* mediated by *hospital brand image*

Ha: There is a positive influence of patient *satisfaction* affecting *patient loyalty* mediated by *hospital brand image*

Based on the hypothesis test results in the table above, the seventh hypothesis has an *estimated* value of 0.237 with a *p-value* of 0.000 ≤ 0.05 which can be interpreted to mean that Ha is supported (H0 is rejected). Therefore, it can be concluded that patient *satisfaction* positively affects *patient loyalty* mediated by *hospital brand image.*

Discussion of Hypotheses

1. Hypothesis 1

The first hypothesis tests the effect of patient *satisfaction* on *patient loyalty*. The results of this study show that patient *satisfaction* positively affects *patient loyalty*. The results of the study are in line with previous studies that show results that satisfaction affects loyalty positively and significantly in Dental and Oral Hospitals (Sari et al., 2020). Patient satisfaction and loyalty are two strategic pillars that hospitals need to continue to develop and monitor in order to be maintained for many years. Another study states that the higher the patient

satisfaction in the hospital, the higher patient loyalty will be (Utami et al., 2020). In addition, previous researchers also stated that customer satisfaction affects buyer behavior, where satisfied customers will become loyal. The results of this study are also supported that customer satisfaction has a significant effect on customer loyalty (Normasari dkk, 2013).

2. Hypothesis 2

The second hypothesis tests the effect of patient *satisfaction* on *patient trust*. The results of this study show that patient *satisfaction* positively affects *patient trust*. Previous studies have shown that there is a positive influence between patient satisfaction and patient trust (Bajamal, 2018). Other studies have also stated that patient satisfaction affects patient confidence in hospitals (Wididana, 2017). The results of this study support the results of previous research conducted by Javedein which found that there is a positive and significant relationship between consumer satisfaction and trust, in his research on sports industry services in Iran (Seyed Javadein et al., 2008).

3. Hypothesis 3

The third hypothesis tests the effect of patient *trust* on *patient loyalty*. The results of this study show that patient *trust* positively affects *patient loyalty*. The results of this study are in line with previous studies that patient trust and commitment to the hospital will affect patient loyalty (Patawayati, 2013). Other studies also support the results of this study which show that trust has a significant effect on patient loyalty in hospitals (Purba et al., 2021). Trust is very useful and important in building a relationship, but building trust is not easy and in this case, it requires a concerted effort in relation to the Hospital. Therefore, the higher the trust, the higher the patient's loyalty (Bajamal, 2018).

4. Hypothesis 4

The fourth hypothesis tests the effect of *patient satisfaction* on *hospital brand image*. The results of this study show that *patient satisfaction* positively affects *the hospital's brand image.* Previous research has shown that there is a significant influence between customer satisfaction and the image of the company (Normasari dkk, 2013). Previous research supports the results of this study which states that patient satisfaction has a significant positive impact on the *hospital's brand image* (Ramli, 2019). Other studies also state that customers will have the satisfaction that the company expects if the organization builds a *brand image* and provides good service (Raka Sukawati, 2021).

5. Hypothesis 5

The fifth hypothesis tests the effect of *hospital brand image* on *patient loyalty.* The results of this study show that *hospital brand image* positively affects *patient loyalty*. The results of this study are in line with previous studies which showed that the higher the *hospital's brand image* among patients, the higher the loyalty of patients (Utami et al., 2020). Previous research has shown that *brand image* has a significant positive impact on loyalty (Normasari dkk, 2013). The image will stick in the minds of consumers if consumers perceive a brand differently from its competitors and will eventually form loyalty to a particular brand (Rangkuti, 2002). Previous research stated that the better the brand image of a hospital, the higher the loyalty of patients in using medical facilities in the hospital (Wiranata & Supriyadi, 2018).

6. Hypothesis 6

The sixth hypothesis tests the effect of patient satisfaction on patient loyalty mediated by patient trust. The results of this study show that patient satisfaction positively affects patient

loyalty mediated by patient trust. Patient trust in doctors is the most important factor in the doctor-patient relationship (Liu et al., 2021). Previous research has shown that trust and satisfaction act as important mediators between perceived qualities and the desire to return to the hospital (Han & Hyun, 2015). Previous research has studied the relationship between loyalty and trust in hospitals and found that the relationship between the two is significant and very positive, with trust playing an important role as a mediating dimension, especially in the health field (Gambarov et al., 2017).

7. Hypothesis 7

The seventh hypothesis tests the effect of patient *satisfaction* on *patient loyalty* mediated by *hospital brand image.* The results of this study show that patient satisfaction positively affects patient *loyalty* mediated by *hospital brand image*. Previous research has stated that the hospital's brand image partially mediates the relationship between service quality and satisfaction (Alomari, 2022). Other studies state that brand image directly affects loyalty and *brand image* indirectly affects loyalty through patient satisfaction (Vimla & Taneja, 2020). Other studies have recognized that *brand image* stimulates customer satisfaction. This is because they not only build an ongoing relationship with the brand but also create a positive WOM (Chao et al., 2015). Similarly, other researchers found that brand image is an antecedent for customer "satisfaction and loyalty," as companies have to spend huge resources to build and improve their *brand image*. Many studies also recognize that because of a strong brand image, customers will be loyal to the brand (Taqi & Muhammad, 2020).

CONCLUSION

Based on the results of the research and discussion processed in the previous chapter, there are 7 hypotheses that are accepted as follows:

1. *Patient satisfaction* has a positive influence on *patient loyalty.*
2. *Patient satisfaction* has a positive influence on *patient trust.*
3. *Patient trust* has a positive influence on *patient loyalty*.
4. *Patient satisfaction* has a positive influence on hospital *brand image.*
5. *Hospital brand image* has a positive influence on *patient loyalty.*
6. *Patient satisfaction* has a positive influence on patient *loyalty* mediated by *patient trust.*
7. *Patient satisfaction* has a positive influence on *patient loyalty* mediated by *hospital brand image.*

Suggestion

1. Further research can be carried out on all Dental and Oral Hospitals in Indonesia, not only the Education hospitals in Jakarta.
2. Further research can add other variables that can affect *patient loyalty*, such as *service quality* variables (Rosadi et al., 2020)

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