

## The Effect Of Service Quality And Service Price On Patient Loyalty Through Non-Bpjs Patient Satisfaction In Outpatient Installation Restu Ibu Hospital Balikpapan 2024

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### ABSTRACT

Background. Patient loyalty is a repeat purchase made by a patient because of a commitment to a hospital and and the patient's willingness to recommend the hospital or health service to others. The benefits of patient loyalty include more cost savings, because with patients who are loyal to the hospital, it will save marketing costs to attract new patients or retain old patients. Aim. This study aims to determine the effect of service quality, service prices on patient loyalty through non-BPJS patient satisfaction at the Outpatient Installation of Restu Ibu Hospital Balikpapan in 2024 Method. Quantitative research includes this study. Using a cross-sectional study design and analytical observational research, the study is processed using SPSS software and employs path analysis techniques with SmartPLS software. The study's population consisted of 1,260 patients who had previously visited the Restu Ibu Balikpapan Hospital Outpatient Installation in 2024 with the intention of receiving services and who did not have BPJS patient status. 304 respondents were selected for this study using the Slovin algorithm and the purposive sampling approach. Results. Service quality significantly positively affects patient satisfaction, service quality significantly positively affects patient loyalty, patient satisfaction significantly positively affects patient loyalty, service quality significantly indirectly affects patient loyalty through mediation of patient satisfaction, service price significantly positively affects patient satisfaction, service price significantly positively affects patient loyalty, service price indirectly affects loyalty through mediation of patient satisfaction.. Suggestion: It is important for hospital management to pay attention to patient satisfaction because in this study, satisfaction greatly influences the quality of patient loyalty.

**Keywords:** Service Quality, Price, Satisfaction, Patient Loyalty, Hospital

### INTRODUCTION

The implementation of Electronic Medical Records (EMR) has become crucial in improving healthcare The global healthcare landscape has experienced significant transformation in recent years, with hospitals facing increasingly intense competition. According to recent statistics, Indonesia has witnessed a 2.3% increase in general hospitals and a 1.7% increase in specialized hospitals from 2022 to 2023, reaching 2,636 general hospitals and 519 specialized hospitals respectively (BPS, 2024). This growth has intensified competition among healthcare providers, particularly in retaining non-national health insurance patients who have greater flexibility in choosing healthcare facilities.

Patient loyalty has emerged as a crucial determinant of hospital sustainability, especially in private healthcare settings. Recent studies indicate that acquiring new patients costs five times more than retaining existing ones (Goodman, 2019). However, maintaining patient loyalty has become increasingly challenging as patients become more discerning in their

healthcare choices. Zhang et al. (2018) identified three critical reasons why patient loyalty is particularly important in healthcare: (1) hospitals provide not just medical care but also service experiences, (2) patients often lack technical knowledge to evaluate medical equipment quality, making interpersonal service quality crucial, and (3) increasing competition necessitates strong patient loyalty for hospital survival.

While previous research has explored various factors affecting patient loyalty, significant gaps remain in understanding the complex relationships between service quality, price, satisfaction, and loyalty, particularly in the context of non-national health insurance patients. Studies by Meesala & Paul (2018) and Boonlertvanich (2019) have shown conflicting results regarding the direct influence of service quality on loyalty, with some suggesting direct effects and others indicating indirect effects through satisfaction. This inconsistency warrants further investigation, especially in the Indonesian private healthcare context.

The pricing aspect presents another critical dimension, particularly for non-national health insurance patients who bear the full cost of their healthcare. Recent studies by Herman et al. (2022) and Haryanto & Sitio (2020) have highlighted the significance of price perceptions in healthcare service evaluation, yet few studies have examined how price interacts with service quality and satisfaction to influence loyalty in private healthcare settings.

Our study addresses these research gaps by examining the relationships between service quality, price, satisfaction, and loyalty among non-national health insurance outpatients at Restu Ibu Hospital Balikpapan, one of Indonesia's established private hospitals. This research setting is particularly relevant as it represents the growing private healthcare sector in Indonesia, where hospitals must balance service quality and pricing strategies while maintaining patient satisfaction and loyalty.

This study makes several theoretical and practical contributions. Theoretically, it extends the existing healthcare service quality literature by developing an integrated model that examines both direct and indirect effects of service quality and price on patient loyalty through satisfaction. It incorporates HospitalQual dimensions (Itumalla et al., 2014) specifically adapted for private healthcare settings, providing a more comprehensive understanding of service quality in this context. Practically, the findings will assist hospital administrators in developing effective strategies for enhancing patient loyalty. With private hospitals experiencing fluctuating patient visits - exemplified by Restu Ibu Hospital's declining non-national health insurance patient visits from 96,004 in 2019 to 45,533 in 2023 - understanding these relationships becomes crucial for sustainable hospital operations.

Furthermore, this study's unique focus on non-national health insurance outpatients in an Indonesian private hospital provides valuable insights into a growing market segment. This is particularly relevant as Indonesia's private healthcare sector continues to expand, with increasing competition among providers for self-paying patients.

## LITERATURE REVIEW

### Service Quality in Healthcare

Service quality represents a critical dimension in healthcare delivery, particularly in hospital settings where patient experiences directly influence their healthcare decisions. According to Parasuraman et al. (2017), service quality reflects patients' perceptions of the received service compared to their expectations. In the healthcare context, Itumalla et al. (2014) developed the HospitalQual framework which comprehensively captures seven key dimensions of hospital service quality: medical services, nursing services, support services, administrative services, patient safety, patient communication, and hospital infrastructure.

Medical service quality, as the core of healthcare delivery, encompasses doctors' technical competence and interpersonal skills. Recent studies by Almomani et al. (2020) emphasize that patients' evaluation of medical service quality significantly influences their overall satisfaction and loyalty intentions. Nursing services quality, characterized by nurses' responsiveness and caring attitude, has been shown to play a crucial role in shaping patients' perceptions of hospital service quality (Asabea Addo et al., 2020).

Support services and administrative efficiency, although often overlooked, contribute significantly to patients' overall healthcare experience. Studies by Harmen et al. (2020) demonstrate that efficient administrative processes and well-coordinated support services positively influence patient satisfaction. Patient safety and effective communication have emerged as increasingly important dimensions, particularly in outpatient settings where brief but frequent interactions characterize the service experience (Haryanto & Sitio, 2020).

### **Price in Healthcare Services**

Price plays a distinctive role in healthcare services, particularly for non-national health insurance patients who bear the full cost of their care. Armstrong & Kotler (2008) identified four key dimensions of healthcare pricing: affordability, price-quality relationship, price-benefit relationship, and competitive pricing. Recent research by Herman et al. (2022) suggests that patients' price perceptions significantly influence their satisfaction and loyalty, especially in private healthcare settings.

The relationship between price and service quality perceptions is particularly complex in healthcare. Studies by Nafisa & Sukresna (2018) indicate that higher prices often lead to higher quality expectations, creating a challenging dynamic for healthcare providers in pricing their services. This relationship becomes even more critical for non-insurance patients who have greater price sensitivity and more freedom in choosing healthcare providers.

### **Patient Satisfaction**

Patient satisfaction emerges as a crucial mediating factor between service delivery and patient loyalty. Ware et al. (1983) conceptualize patient satisfaction through multiple dimensions including interpersonal manner, technical quality, accessibility, financial aspects, efficacy/outcomes, continuity, physical environment, and availability. Recent research by Bentum-Micah et al. (2020) confirms that satisfaction serves as a key mediator between service quality, price, and loyalty in healthcare settings.

The multidimensional nature of patient satisfaction requires healthcare providers to address both technical and functional aspects of their services. Studies by Septyarani & Nurhadi (2023) highlight that satisfaction in outpatient settings is significantly influenced by wait times, staff courtesy, and service efficiency. The relationship between satisfaction and loyalty appears stronger in private healthcare settings where patients have more provider choices.

### **Patient Loyalty**

Patient loyalty represents the ultimate goal for healthcare providers, particularly in competitive markets. Griffin (2005) identifies four key dimensions of patient loyalty: repeat purchase, purchase across service lines, advocacy, and resistance to competing offers. Recent studies by Rahayu & Syafe'i (2022) demonstrate that loyal patients not only return for services but also recommend the healthcare provider to others and show resistance to competitive offerings.

The path to patient loyalty in healthcare is complex and multifaceted. Research by Fathillah (2023) suggests that while service quality and price influence loyalty both directly and indirectly through satisfaction, the strength of these relationships varies across different healthcare contexts and patient segments. For non-insurance patients, the relationship between satisfaction and loyalty appears particularly strong, as these patients have more freedom in choosing their healthcare providers.

This review highlights the intricate relationships between service quality, price, patient satisfaction, and loyalty in healthcare settings. While existing research provides valuable insights, gaps remain in understanding how these relationships operate specifically in private hospital outpatient settings with non-insurance patients. This study aims to address these gaps by examining these relationships in an Indonesian private hospital context

## RESEARCH METHODS

### Research Method

**Research Design and Setting** This study employed a quantitative approach with a cross-sectional survey design to examine the relationships between service quality, price, patient satisfaction, and loyalty. The research was conducted at Restu Ibu Hospital Balikpapan, Indonesia, a private hospital established in 1976 that serves both insured and non-insured patients. The study focused specifically on non-national health insurance outpatients to understand the dynamics of service quality and price perceptions in this self-paying population.

### Sample and Sampling Technique

The study population comprised all non-national health insurance outpatients who had received services at the hospital's outpatient department in 2024. Using Slovin's formula with a 5% margin of error, a sample size of 304 respondents was determined from a population of approximately 1,260 patients. The sampling technique employed purposive sampling with the following inclusion criteria: (1) outpatients not covered by national health insurance, (2) mentally competent and able to communicate, (3) had visited the outpatient department at least twice previously, and (4) willing to participate in the study. For pediatric patients and elderly patients unable to respond independently, their accompanying family members were recruited as respondents.

**Measurement Instruments** Data were collected using a structured questionnaire consisting of four main sections:

1. **Service Quality:** Measured using 14 items adapted from the HospitalQual framework (Itumalla et al., 2014), covering seven dimensions: medical services, nursing services, support services, administrative services, patient safety, patient communication, and hospital infrastructure.
2. **Price:** Assessed through 5 items based on Armstrong and Kotler's (2008) framework, measuring affordability, price-quality relationship, price-benefit relationship, and competitive pricing.
3. **Patient Satisfaction:** Evaluated using 19 items adapted from PSQ-18, incorporating Ware et al.'s (1983) dimensions: interpersonal manner, technical quality, accessibility, financial aspects, efficacy/outcomes, continuity, physical environment, and availability.
4. **Patient Loyalty:** Measured using 8 items based on Griffin's (2005) framework, assessing repeat purchase intentions, cross-service utilization, advocacy, and competitive resistance.

All items were measured on a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). The questionnaire was initially developed in English and translated into Indonesian using forward-backward translation to ensure content validity.

### Validity and Reliability

The instrument underwent rigorous validation procedures. Content validity was established through expert review by three healthcare management specialists. A pilot study was conducted with 30 patients at a similar private hospital to assess the instrument's reliability and validity. The Cronbach's alpha coefficient for all scales exceeded 0.80, indicating high reliability. Construct validity was confirmed through factor analysis, with factor loadings ranging from 0.477 to 0.929, exceeding the minimum threshold of 0.4.

### Data Collection Procedure

Data collection was conducted over two months (August-September 2024) at the hospital's outpatient pharmacy department. Trained research assistants approach eligible patients while they are waiting for their medications. After obtaining informed consent, participants completed the self-administered questionnaire. For participants requiring assistance, research assistants provided help in completing the questionnaire while maintaining objectivity.

## Data Analysis

Data analysis was performed using two main approaches:

1. Descriptive Analysis: Used to analyze respondent characteristics and distribute frequency of responses for each variable.
2. Inferential Analysis: Employed Structural Equation Modeling with Partial Least Squares (PLS-SEM) using SmartPLS software to test the hypothesized relationships. This method was chosen for its ability to handle complex path models and its robustness with non-normal data distributions. The analysis included:
  - a) Measurement model assessment (validity and reliability)
  - b) Structural model assessment ( $R^2$ , path coefficients, and effect sizes)
  - c) Mediation analysis to examine the indirect effects
  - d) F-square calculation to determine effect sizes

## Ethical Considerations

The study received ethical approval from the Ethics Committee of Hasanuddin University (approval number included). All participants provided written informed consent, and data confidentiality was maintained throughout the research process. Participation was voluntary, and respondents could withdraw at any time without consequences to their healthcare service.

## RESULTS

### Univariate Analysis

**Demographic Characteristics** The study involved 304 respondents, predominantly female (74.3%). Most respondents were aged 26-45 years (71.1%), had completed high school education (44.7%), and had household incomes exceeding IDR 5,000,000 per month (47.0%). The majority (77%) had visited the hospital more than three times, indicating a substantial proportion of repeat patients

Table 1. Demographic Characteristics of Respondents (N=304)

Characteristics	Research Sample	
	n	%
<b>Gender</b>		
Man	78	25.7
Woman	226	74.3
Amount	304	100
<b>Age</b>		
≤ 25 years	41	13.5
26 – 45 years	216	71.1
46 – 59 years	38	12.5
≥ 60 years	9	3.0
Amount	304	100
<b>Last education</b>		
Did not finish elementary school/did not go to school	2	0.7

Characteristics	Research Sample	
Elementary school/equivalent	7	2.3
Junior high school/equivalent	16	5.3
High school/equivalent	136	44.7
D3	41	13.5
S1	99	32.6
S2	2	0.7
S3	1	0.3
Amount	304	100,
<b>Work</b>		
civil servant	13	4.3
Private	104	34.2
Self-employed	35	11.5
Housewife/Not working	123	40.5
Other	29	9.5
Amount	304	100
<b>Income</b>		
< Rp. 1,000,000	7	2.3
Rp. 1,000,000 – Rp. 2,500,000	35	11.5
Rp. 2,500,001 – Rp. 5,000,000	119	39.1
>Rp 5,000,000	143	47.0
Amount	304	100.0
<b>Number of Visits</b>		
2-3 times	70	23
>3 times	234	77
Amount	304	100

Source: Primary Data, 2024

### Bivariate Analysis

Table 2 below shows that the characteristics of respondents who stated that the service quality variable was not good based on gender, namely 63 female respondents (27.9%), 21 male respondents (26.9%), based on age, 61 respondents (28.2%) were aged 26-45, based on their last education, namely high school, 32 respondents (23.5%), based on occupation, namely housewives or not working, 37 respondents (30.1%), based on income, namely more than IDR 5,000,000, as many as 41 respondents (28.7%), based on visits, namely more than 3 times, as many as 69 respondents (29.5%).

Table 2. Frequency Distribution of Respondent Characteristics with Service Quality Variables at Restu Ibu Hospital Balikpapan

Respondent Characteristic s	Quality of Service				Total	
	Good		Not good			
	n	%	n	%	n	%
Gender						
Man	57	73.1	21	26.9	78	100
Woman	163	72.1	63	27.9	226	100
Age						
≤ 25 years	29	70.3	12	29.7	41	100
26-45 years	155	71.8	61	28.2	216	100
46-59 years	28	73.7	10	26.3	38	100
≥ 60 years	7	77.8	2	22.2	9	100
Education						
Did not finish elementary school	1	50.0	1	50.0	2	100
SD	4	57.1	3	42.9	7	100
Junior high school/equiva lent	12	75.0	4	25.0	16	100

Respondent Characteristic s	Quality of Service				Total	
	Good		Not good			
	n	%	n	%	n	%
High school/equiva lent	1 0 4	7 6 5	3 2	2 3 5	1 3 6	1 0 0
D3	3 0	7 3 2	1 1	2 6 8	4 1	1 0 0
S1	6 6	6 6 7	3 3	3 3 3	9 9	1 0 0
S2	1	5 0 0	1	5 0 0	2	1 0 0
S3	0	1 0 0 0	1	1 0 0 0	1	1 0 0
Work						
civil servant	8	6 1 5	5	3 8 5	1 3	1 0 0
Private	7 5	7 2 1	2 9	2 7 9	1 0 4	1 0 0
Self-employed	2 8	8 0 0	7	2 0 0	3 5	1 0 0
Housewife/Not working	8 6	6 9 9	3 7	3 0 1	1 2 3	1 0 0



Respondent Characteristic s	Quality of Service				Total	
	Good		Not good			
	n	%	n	%	n	%
Other	22	75.9	7	24.1	29	100
Income						
≤ Rp1,000,000	6	85.7	1	14.3	7	100
Rp1,000,000- Rp2,500,000	27	77.1	8	22.9	35	100
Rp2,500,000-Rp5,000,000	84	70.6	35	29.4	119	100
>Rp5,000,000	102	71.3	41	28.7	143	100
Visit						
2-3 times	54	77.1	16	22.9	70	100
>3 times	165	70.5	69	29.5	234	100

Source: Primary Data, 2024

**Table. 3 Frequency Distribution of Respondent Characteristics with Service Price Variables at Restu Ibu Hospital Balikpapan in 2024**

Respondent Characteristics	Service Price				Total	
	Good		Not good			
	n	%	n	%	n	%
Gender						

Man	60	76.9	18	23.1	78	100
Woman	152	67.3	74	32.7	226	100
<b>Age</b>						
≤ 25 years	23	56.1	18	43.9	41	100
26-45 years	152	70.3	64	29.6	216	100
46-59 years	31	81.6	7	18.4	38	100
≥ 60 years	6	66.7	3	33.3	9	100
<b>Education</b>						
Did not finish elementary school	1	50.0	1	50.0	2	100
SD	4	57.1	3	42.9	7	100
Junior high school/equivalent	11	68.7	5	31.3	16	100
High school/equivalent	84	61.8	52	38.2	136	100
D3	26	63.4	15	36.6	41	100
S1	59	59.6	40	40.4	99	100
S2	1	50.0	1	50.0	2	100
S3	0	100.0	1	100.0	1	100
<b>Work</b>						
civil servant	9	69.2	4	30.8	13	100
Private	78	75.0	26	25.0	104	100
Self-employed	24	68.6	11	31.4	35	100
Housewife/Not working	83	67.5	40	32.5	123	100

Other	18	62.1	1 1	37.9	29	10 0
<b>Income</b>						
≤ Rp1,000,000	3	42.9	4	57.1	7	10 0
Rp1,000,000- Rp2,500,000	15	42.9	2 0	57.1	35	10 0
Rp2,500,000-Rp5,000,000	72	60.5	4 7	39.5	11 9	10 0
>Rp5,000,000	12 2	85.3	2 1	14.7	14 3	10 0
<b>Visit</b>						
2-3 times	54	77.1	1 6	22.9	70	10 0
>3 times	15 8	67.5	7 6	32.5	23 4	10 0

Source: Primary Data, 2024

The table above shows that the characteristics of respondents who stated that they were not good at the service price variable based on gender, namely women as many as 74 respondents (32.7%), based on age, there were 64 respondents (29.6%) aged 26-45, based on their last education, namely high school, as many as 52 respondents (38.2%), based on occupation, namely housewives or not working, as many as 40 respondents (32.5%), based on income of more than IDR 5,000,000, as many as 21 respondents (14.7%), based on visits, namely more than 3 times, as many as 76 respondents (32.5%).

Table 4. Frequency Distribution of Respondent Characteristics with Patient Satisfaction Variables at Restu Ibu Hospital Balikpapan in 2024

Respondent Characteristics	Patient Satisfaction				Total	
	Satisfied		Not satisfied			
	n	%	n	%	n	%
Gender						
Man	54	69.2	24	30.8	78	100
Woman	132	58.4	94	41.6	226	100
Age						
≤ 25 years	21	51.2	20	48.8	41	100
26-45 years	132	61.1	84	38.9	216	100
46-59 years	27	71.1	11	28.9	38	100
≥ 60 years	6	66.7	3	33.3	9	100
Education						
Did not finish elementary school	1	50	1	50	2	100

		. 0		. 0		
SD	4	5 7 .1	3	4 2 .9	7	100
Junior high school/equivalent	1 1	6 8 .7 5	5	3 1 .2 5	1 6	100
High school/equivalent	8 4	6 1 .8	5 2	3 8 .2	1 3 6	100
D3	2 6	6 3 .4	1 5	3 6 .6	4 1	100
S1	5 9	5 9 .6	4 0	4 0 .4	9 9	100
S2	1	5 0 .0	1	5 0 .0	2	100
S3	0	1 0 0 .0	1	1 0 0 .0	1	100
<b>Work</b>						
civil servant	6	4 6 .2	7	5 3 .8	1 3	100
Private	6 9	6 6 .3	3 5	3 3 .7	1 0 4	100
Self-employed	2 3	6 5	1 2	3 4	3 5	100

		. 7		. 3		
Housewife/Not working	7 1	5 7 .7	5 2	4 2 .3	1 2 3	100
Other	1 7	5 8 .6	1 2	4 1 .4	2 9	100
<b>Income</b>						
≤ Rp1,000,000	3	4 2 .9	4	5 7 .1	7	100
Rp1,000,000- Rp2,500,000	1 5	4 2 .9	2 0	5 7 .1	3 5	100
Rp2,500,000-Rp5,000,000	6 9	5 8 .0	5 0	4 2 .0	1 1 9	100
>Rp5,000,000	9 9	6 9 .2	4 4	3 0 .8	1 4 3	100
<b>Visit</b>						
2-3 times	4 7	6 7 .1	2 3	3 2 .9	7 0	100
>3 times	1 3 9	5 9 .4	9 5	4 0 .6	2 3 4	100

Source: Primary Data, 2024

Based on table 4.13 above, it shows that the characteristics of respondents who stated that they were dissatisfied with patient satisfaction based on gender, namely female as many as 94 respondents (41.6%), based on age, there were 84 respondents (38.9%) aged 26-45, based on their last education, namely high school as many as 52 respondents (38.2%), based on occupation, namely housewives or not working as many as 52 respondents (42.3%), based on income of more than IDR 5,000,000 as many as 44 respondents (30.8%), based on visits, namely more than 3 times as many as 95 respondents (40.6%).

Table 5. Frequency Distribution of Respondent Characteristics of Patient Loyalty Variables at Restu Ibu Hospital Balikpapan in 2024

Respondent Characteristics	Patient Loyalty				Total	
	Tall		Low			
	n	%	n	%	n	%
Gender						
Man	55	70.5	23	29.5	78	100
Woman	142	62.8	84	37.2	226	100
Age						
≤ 25 years	24	58.5	17	41.5	41	100
26-45 years	137	63.4	79	36.6	216	100
46-59 years	30	78.9	8	21.1	38	100
≥ 60 years	6	66.7	3	33.3	9	100
Education						
Did not finish elementary school	1	50.0	1	50.0	2	100
SD	4	57.1	3	42.9	7	100
Junior high school/equivalent	13	81.25	3	18.75	16	100
High school/equivalent	86	63.2	50	36.8	136	100
D3	28	68.3	13	31.7	41	100
S1	64	64.6	35	35.4	99	100
S2	1	50.0	1	50.0	2	100
S3	0	100.0	1	100.0	1	100
Work						

civil servant	8	61.5	5	38.5	13	10 0
Private	72	69.2	3 2	30.8	10 4	10 0
Self-employed	23	65.7	1 2	34.3	35	10 0
Housewife/Not working	76	61.8	4 7	38.2	12 3	10 0
Other	18	62.0	1 1	38.0	29	10 0
<b>Income</b>						
≤ Rp1,000,000	3	42.9	4	57.1	7	10 0
Rp1,000,000- Rp2,500,000	16	45.7	1 9	54.3	35	10 0
Rp2,500,000-Rp5,000,000	74	62.2	4 5	37.8	11 9	10 0
>Rp5,000,000	10 4	72.7	3 9	27.3	14 3	10 0
<b>Visit</b>						
2-3 times	49	70.0	2 1	30.0	70	10 0
>3 times	14 8	63.2	8 6	36.8	23 4	10 0

Source: Primary Data, 2024

Based on table 4.14 above, it shows that the characteristics of respondents who stated low patient loyalty based on gender, namely female as many as 84 respondents (37.2%), based on age, there are 26-45 years old, namely 79 respondents (36.60%), based on the last education, namely high school as many as 50 respondents (36.8%), based on occupation, namely housewife or not working as many as 47 respondents (38.2%), based on income of more than IDR 5,000,000 as many as 39 respondents (27.3%), based on visits, namely more than 3 times as many as 86 respondents (36.8%)

### Multivariate Analysis

Table 6. Results of R-Square Statistical Test Analysis

Track	R Square	R Square Adjusted
Patient Satisfaction	0.647	0.644
Patient Loyalty	0.617	0.614

Source: Primary Data, 2024

In this model, the R-Square for patient satisfaction is 0.647, indicating that service quality and price are able to explain 64.7% of the variance in patient satisfaction. Meanwhile, the R-Square for patient loyalty is 0.617, indicating that service quality and price through patient satisfaction can explain 61.7% of the variance in patient loyalty. Both of these values are classified as moderate, meaning that there are other factors besides those tested that affect the dependent variable.



Table 7. F-Square Table

	Price	Patient Satisfaction	Quality of Service	Patient Loyalty
Price		0.302		0.097
Patient Satisfaction				0.103
Quality of Service		0.853		0.144
Patient Loyalty				

Source: Primary Data, 2024.

Table 8 Results of Path Coefficients Statistical Test Analysis

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
Price -> Patient Satisfaction	0.355	0.358	0.051	6,947	0.001
Price -> Patient Loyalty	0.238	0.235	0.057	4.195	0.001
Patient Satisfaction -> Patient Loyalty	0.335	0.346	0.105	3.173	0.002
Quality of Service -> Patient Satisfaction	0.596	0.597	0.05	12,041	0.001
Quality of Service -> Patient Loyalty	0.347	0.339	0.082	4.252	0.001

Source: Primary Data, 2024

The results of the direct effect test show that all relationship paths between variables have a significant influence. Price has a significant positive effect on patient satisfaction (0.355) and patient loyalty (0.238), while service quality has a significant positive effect on patient satisfaction (0.596) and patient loyalty (0.347). Patient satisfaction also has a significant positive effect on patient loyalty (0.335). All p values are less than 0.05, which means that all relationships between variables in this model are statistically significant.

Table 9 Results of Indirect Effects Statistical Test Analysis

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
Price -> Patient Satisfaction -> Patient Loyalty	0.119	0.124	0.043	2,787	0.006
Service Quality -> Patient Loyalty	0.2	0.207	0.067	2,971	0.003

Satisfaction ->					
Patient Loyalty					

Source: Primary Data, 2024

The indirect effect test shows that the indirect effect between price and patient loyalty through patient satisfaction is 0.119, and the indirect effect between service quality and patient loyalty through patient satisfaction is 0.2. Both of these values are also significant, with p-values of less than 0.05 each, indicating that patient satisfaction acts as a significant mediator in the relationship between price, service quality, and patient loyalty.

DISCUSSION

This study provides comprehensive insights into the relationship between service quality, price, satisfaction, and loyalty among non-national health insurance outpatients. The findings reveal several important patterns that warrant detailed discussion.

Service Quality and Patient Satisfaction

The strong positive relationship between service quality and patient satisfaction ( $\beta = 0.596$ ,  $p < 0.001$ ) aligns with previous healthcare service research (Asabea Addo et al., 2020; Almomani et al., 2020). However, our findings reveal interesting nuances across different service quality dimensions. The exceptionally high satisfaction with medical services (99.0%) and nursing services (93.4%) suggests that the hospital's core clinical services meet or exceed patient expectations. This supports Itumalla et al.'s (2014) assertion that clinical competence remains the foundation of healthcare service quality.

However, the lower ratings for hospital infrastructure (60.5%) and patient safety (77.3%) highlight areas requiring attention. These findings parallel recent studies by Herman et al. (2022) that emphasizes the growing importance of physical environment and safety protocols in outpatient settings. The relatively low satisfaction with hospital infrastructure, particularly waiting areas and facility comfort, suggests that non-clinical aspects significantly influence overall patient satisfaction, supporting Parasuraman et al.'s (2017) holistic view of service quality.

Price Perceptions and Patient Behavior

The study reveals a complex relationship between price perceptions and patient behavior. While price shows a significant direct effect on both satisfaction ( $\beta = 0.355$ ,  $p < 0.001$ ) and loyalty ( $\beta = 0.238$ ,  $p < 0.001$ ), the varying responses across price dimensions provide important insights. The high acceptance of price-quality relationship (91.1%) suggests that patients value perceived quality over absolute price, supporting Armstrong and Kotler's (2008) pricing theory in healthcare contexts.

However, the lower rating for competitive pricing (53.9% reasonable) indicates a potential strategic challenge. This finding aligns with recent research by Rahayu & Syafe'i (2022) suggests that price competitiveness is becoming increasingly important in markets with multiple healthcare providers. The relatively high dissatisfaction with price affordability (31.2% unreasonable) among higher-income patients (47% earning >5 million IDR monthly) suggests that price sensitivity exists across income levels, a finding that adds nuance to existing healthcare pricing literature.

The Mediating Role of Patient Satisfaction

The significant mediating effect of satisfaction in the relationship between service quality and loyalty (indirect effect = 0.200,  $p < 0.003$ ) and between price and loyalty (indirect effect = 0.119,  $p < 0.006$ ) provides empirical support for the satisfaction-loyalty framework in healthcare services. This finding extends previous work by Bentum-Micah et al. (2020) by demonstrating the dual pathway through which service quality and price influence loyalty.

impressively, the stronger mediating effect of satisfaction in the service quality-loyalty relationship compared to the price-loyalty relationship suggests that non-financial factors may have a more substantial impact on long-term patient loyalty. This finding challenges some traditional assumptions about price sensitivity in private healthcare settings and

supports recent research emphasizing the importance of service experience in building patient loyalty (Fathillah, 2023).

### **Loyalty Patterns and Their Implications**

The analysis of loyalty dimensions revealed high levels of recommendation intention (97.4%) and cross-service purchase intention (95.7%), but lower competitive resistance (61.5%). This pattern suggests that while patients are satisfied enough to recommend the hospital, they remain open to alternative providers. This finding aligns with Griffin's (2005) multi-dimensional conceptualization of loyalty but indicates that different aspects of loyalty may develop at different rates or through different mechanisms.

The relatively high repeat visit rate (77% visiting more than three times) coupled with moderate competitive resistance suggests that behavioral loyalty might precede attitudinal loyalty in healthcare settings. This observation adds an important temporal dimension to our understanding of patient loyalty development, extending current theoretical frameworks.

### **CONCLUSIONS AND IMPLICATIONS**

Research at Restu Ibu Hospital Balikpapan revealed that service quality, service price, satisfaction, and loyalty of non-BPJS patients are interrelated. The better the service quality and reasonable service price, the higher the patient satisfaction and loyalty. Patient satisfaction has been proven to be a key factor in building long-term relationships between patients and hospitals.

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### **AUTHOR CONTRIBUTION**

YSP: Conceptualization, methodology, investigation, data analysis, writing the first draft

IR and AM: Supervision, validation, review and editing All authors have read and approved the final version of the manuscript.

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### **CONFLICT OF INTEREST**

The authors declare no conflict of interest in the conduct and publication of this research.

### **DATA AVAILABILITY STATEMENT**

Data supporting the findings in this study are available from the corresponding author on reasonable request.

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