
The Impact of Price and Service Quality on Patient Loyalty at Pratama BHG Dental Polyclinic with Patient Satisfaction as an Intervening Variable

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Abstract: *This study aims to identify and analyze the influence of 1) price on patient loyalty, 2) service quality on patient loyalty, 3) patient satisfaction on patient loyalty, 4) price on patient satisfaction, 5) service quality on patient satisfaction, 6) price on patient loyalty through patient satisfaction, 7) service quality on patient loyalty through patient satisfaction. The data used is primary data obtained from the responses of 100 respondents. The data analysis tool used is path analysis. The instrument testing results concluded that all variables are valid and reliable as data collection tools. The data analysis results found that: 1) price has a positive effect on patient loyalty, 2) service quality has a positive effect on patient loyalty, 3) patient satisfaction has a positive effect on patient loyalty, 4) price has a positive effect on patient satisfaction, 5) service quality has a positive effect on patient satisfaction, 6) price has a positive effect on patient loyalty through patient satisfaction, 7) service quality has a positive effect on patient loyalty through patient satisfaction.*

INTRODUCTION

The service industry, including the healthcare sector, continues to grow with over 100,000 service industries recording an annual growth rate of 10-15% and a business value of USD 1.3 million (Bernard, 2020). The healthcare sector is one of the most important service sectors in many countries, including Indonesia. To achieve the national goal of maintaining and improving public health, healthcare services are spread across Indonesia. The intense competition in this sector gives patients the freedom to choose the facilities they believe can provide the best care according to their needs. The success of a clinic largely depends on its ability to meet patient expectations, which directly affects their satisfaction and loyalty (Kotler & Keller, 2018).

Patient satisfaction is influenced by the quality of service received compared to their expectations. According to Kotler and Keller (2018), satisfaction is an emotional state of pleasure or disappointment experienced by a person resulting from comparing the perceived performance of a product or service and their expectations. If performance exceeds expectations, patients will feel very satisfied and loyal to the healthcare provider. This loyalty is important because it affects

patients' decisions to seek future medical visits and recommend the service to others. In a competitive environment, clinics must continuously improve their service quality to achieve and maintain patient satisfaction.

Pratama BHG Dental Polyclinic in Makasar, East Jakarta, is one of the clinics offering a range of dental and general health services. Despite offering comprehensive services, data shows a decline in patient visits and revenue in 2023. Additionally, there has been an increase in patient complaints, indicating issues with the quality of service provided. Complaints include staff unfriendliness, long wait times, insufficient cleanliness, and unprofessional appearance of doctors. This data highlights the need for improvements in service quality to meet patient expectations and create patient loyalty (Bove & Johnson as cited in Widjaja, 2016).

Based on these issues, this study aims to examine "The Influence of Price and Service Quality on Patient Loyalty at Polyclinic Pratama Bahagia with Patient Satisfaction as an Intervening Variable." By understanding the factors affecting patient satisfaction and loyalty, the clinic can develop effective strategies to improve service quality and meet patient expectations. This research is expected to provide insights for healthcare providers to enhance patient satisfaction and build mutually beneficial long-term relationships.

LITERATURE REVIEW

Patient Loyalty

Patient loyalty is a deep commitment from patients to continue using or repurchasing specific healthcare services consistently in the future, despite marketing efforts that might alter their behavior (Hurriyati as cited in Kristanto, 2022). Loyal patients are highly satisfied with a product or service and are enthusiastic about recommending it to others (Griffin, 2016). Factors influencing patient loyalty include price, service quality, image, convenience, patient satisfaction, and assurance (Vigaretha & Handayani, 2018).

Loyalty develops through four stages: cognitive, affective, conative, and action (Dharmmesta as cited in Sri Rahayu, 2023). The first stage involves comparing product information, the second is based on satisfaction after use, the third indicates the intention or commitment to repurchase, and the fourth represents a concrete manifestation of that intention (Crosby & Taylor, 1983). Customers who reach the action loyalty stage tend to be stable and less likely to switch to other products (Griffin as cited in Widjaja & Nugraha, 2017).

Price

Service quality is a crucial factor in maintaining customer loyalty in clinics and hospitals. According to Parasuraman as cited in Lupiyoadi (2016), service quality reflects the gap between customer expectations and actual experiences. Arianto (2018) adds that service quality refers to efforts made to meet customer needs promptly. Kotler as cited in Mariansyah & Syarif (2020) explains that service is an intangible act or performance that does not result in ownership but focuses on fulfilling customer needs and wants according to their expectations.

Total Quality Control (TQC) is a fundamental prerequisite for competing and surviving in the healthcare service industry. TQC involves all members of the organization in efforts to create high service quality that adds value to customers (Rusdarti as cited in Andrie, 2017). Service quality is evaluated based on five dimensions: tangibles, reliability, responsiveness, assurance, and empathy (Lovelock & Wright as cited in Marnis & Nursina, 2017). Patient perceptions of service quality are shaped by past experiences, word-of-mouth references, and comparisons with service standards set by service providers (Tjiptono as cited in Sukma & Utomo, 2020).

Service Quality

According to Parasuraman as cited in Lupiyoadi (2016), service quality reflects the extent of the gap between customer expectations and the actual experiences they receive from the service. Arianto (2018) adds that service quality refers to the efforts made to meet customer needs and requirements, as well as the timeliness in fulfilling their expectations. Kotler as cited in Mariansyah & Syarif (2020) defines service as any action or activity offered by one party to another that is intangible and does not result in ownership. Kotler as cited in Hastuti & Juanim (2019) emphasizes that service quality should start from understanding patient needs and end at patient perceptions. This means that the perception of good service quality is not based on the service provider's point of view but on the patient's perspective. According to Tjiptono as cited in Sukma & Utomo (2020), service quality refers to the attitudes or methods of employees in providing satisfaction to patients.

Patient Satisfaction

Patient satisfaction is the result of their evaluation of healthcare services, involving a comparison between their expectations and the actual service received (Kotler as cited in Karunia et al., 2022). Pohan (2017) states that patient satisfaction encompasses the level of feelings experienced after evaluating service performance and comparing it with their expectations. Satisfied patients are more likely to repurchase services, build loyalty, and provide positive word-of-mouth recommendations (Tjiptono as cited in Prayitno & Sumarto, 2021). Patient satisfaction is significantly influenced by their perceptions and expectations. The absence of complaints does not always mean satisfaction; patients might switch to other services without expressing dissatisfaction directly. Patient satisfaction positively impacts healthcare services by meeting their needs, encouraging repeat visits, building loyalty, and supporting positive recommendations (Tjiptono as cited in Permatasari, 2016). Indicators of patient satisfaction according to Tjiptono (2016) include the alignment of expectations, likelihood of returning for future visits, and willingness to recommend the services to others.

METHOD

Research Type

This research employs a quantitative approach using path analysis, where data is directly collected from the field and then processed to achieve research results. Data collection uses research tools and quantitative/statistical data analysis methods to test the established hypotheses. This method analyzes a population or sample. Data is collected from respondents through distributing questionnaires containing statements about price, service quality, patient satisfaction, and patient loyalty. The goal is to explore the relationships between variables and determine the correlation coefficients among variables using PLS (Partial Least Squares).

Population

The population in this study consists of all patients of the Dental Polyclinic at Pratama BHG Dental Polyclinic from January 2021 to February 2024, totaling 11,361 individuals. The sample for this study includes all outpatients at the Pratama BHG Dental Polyclinic. Hair as cited in Giantari et al. (2021) suggests that the number of research indicators can be multiplied by 5 or 10 to obtain the minimum sample size for a study. In this study, there are 20 indicators, so the minimum sample size required is $20 \times 5 = 100$. Therefore, the researcher collected data from 100 respondents aged 18 and above, targeting patients who have visited the Dental Polyclinic at

Pratama BHG Dental Polyclinic more than once. The sampling method used is non-probability sampling with a purposive sampling technique.

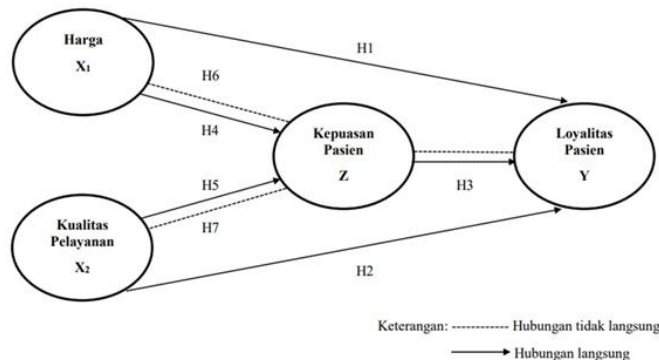


Figure 1. Research Framework

RESULT AND DISCUSSION

Measurement Test (Outer Model)

The outer model is carried out by testing validity and reliability. The validity test aims to test the accuracy of the data collected and uses two validity tests, namely discriminant and convergent validity. Furthermore, reliability analysis aims to measure the stability and level of trust in the collected data, analyzed using the Cronbach Alpha indicator (Sugiyono, 2013).

Convergent Validity Test

This assessment seeks to evaluate the strength of the relationship between constructs and latent variables. The reliability of each item is assessed through the standard factor value, which indicates the extent of the correlation between each measurement item and its respective construct. Outer Loading Factor Outer loading refers to the coefficient that measures the extent to which measurement indicators (observed variables) represent the latent variables (constructs) involved in partial path analysis. This demonstrates the intensity of the connection between the indicator and the assessed latent variable. The outer loading factor value must be >0.7 to be considered feasible or ideal, indicating that the indicator is deemed valid in measuring the construct. However, in empirical research, a loading factor value greater >0.5 is still considered acceptable. Therefore, factor loading values below 0.5 should be excluded from the model (deleted). The results of convergent validity testing for each indicator in this study are shown in the table below:

Figure 2. Loading Factor

No	Indicator	Outer Loading	Description	No	Indicator	Outer Loading	Description
1	LP 1	0.795	Valid	18	KP18	0.799	Valid
2	LP 2	0.793	Valid	19	H 19	0.849	Valid
3	LP 3	0.766	Valid	20	H 20	0.834	Valid
4	LP 4	0.776	Valid	21	H 21	0.820	Valid
5	LP 5	0.750	Valid	22	H 22	0.803	Valid
6	LP 6	0.739	Valid	23	H 23	0.797	Valid
7	LP 7	0.738	Valid	24	KL 24	0.820	Valid
8	LP 8	0.713	Valid	25	KL 25	0.709	Valid
9	LP 9	0.753	Valid	26	KL 26	0.798	Valid
10	KP 10	0.774	Valid	27	KL 27	0.821	Valid
11	KP 11	0.803	Valid	28	KL 28	0.792	Valid
12	KP 12	0.816	Valid	29	KL 29	0.815	Valid
13	KP 13	0.780	Valid	30	KL 30	0.785	Valid
14	KP 14	0.774	Valid	31	KL 31	0.843	Valid
15	KP 15	0.763	Valid	32	KL 32	0.793	Valid
16	KP 16	0.766	Valid	33	KL 33	0.815	Valid
17	KP 17	0.765	Valid				

According to the table, the outer loading value for each indicator shows > 0.7 . As a result, all indicators can be retained in the research and do not need to be removed from the research process. Average Variance Extracted (AVE) Test Average Variance Extracted (AVE) is a statistical measure used to measure the extent to which variations in the indicators used to measure a construct can be explained by the construct itself. If the AVE value is above 0.5, the variable is regarded as having no reliability issues.

Figure 3. Average Variance Extracted (AVE)

Variable	Average Variance Extracted (AVE)	Description
Patient Loyalty	0.575	Valid
Patient Satisfaction	0.612	Valid
Price	0.673	Valid
Service Quality	0.639	Valid

The table above shows that each variable has an Average Variance Extracted value that exceeds 0.5. Therefore, each variable used in this research can reflect the latent variable they represent.

Discriminant Validity Test

The discriminant validity test is carried out by comparing the AVE value with the square of the correlation between constructs to evaluate discriminant validity (or comparing the square root of AVE with the correlation between constructs). Cross-Loading Factor value analysis Cross-loading refers to a situation where an indicator has a high correlation with more than one latent variable. A good cross-loading value for an indicator is above 0.700 with the highest correlation in the latent variable.

Figure 4. Cross Loading Factor

Indicator	Price	Patient Satisfaction	Service Quality	Patient Loyalty
LP 1	0.490	0.558	0.465	0.795
LP 2	0.539	0.637	0.536	0.793
LP 3	0.429	0.550	0.475	0.766
LP 4	0.531	0.516	0.577	0.776
LP 5	0.604	0.598	0.471	0.750
LP 6	0.407	0.489	0.417	0.739
LP 7	0.478	0.523	0.285	0.738
LP 8	0.297	0.473	0.495	0.713
LP 9	0.518	0.591	0.457	0.753
KP 10	0.538	0.774	0.457	0.573
KP 11	0.536	0.803	0.604	0.661
KP 12	0.572	0.816	0.491	0.664
KP 13	0.484	0.780	0.542	0.495
KP 14	0.429	0.774	0.466	0.570
KP 15	0.451	0.763	0.472	0.508
KP 16	0.505	0.766	0.518	0.501
KP 17	0.452	0.765	0.451	0.522
KP 18	0.412	0.799	0.535	0.596

Discussion

Based on the analysis of data in Table 4.16 and Figure 4.5, the path coefficients can be explained as follows: The first hypothesis (H1) posits that price positively affects patient loyalty, with a significant original sample value of 0.256, t-statistic of 2.202 (exceeding the critical value of 1.960), and P-value of 0.028 (< 0.05). This indicates that price has a significant positive impact on patient loyalty, supported by previous studies (Herman et al., 2022; Han & Ryu, 2019; Griffin, 2019) that show competitive and affordable pricing influences patients' loyalty through their purchasing decisions.

The second hypothesis (H2) shows that service quality positively impacts patient loyalty, with a significant original sample value of 0.188, t-statistic of 2.091, and P-value of 0.037 (< 0.05), aligning with studies by Fatima et al. (2017), Meesala (2016), Ariany and Lutfi (2021), and Ksatriyani and Djawoto (2019) that underscore the importance of timely, reliable, and visually appealing services in enhancing patient loyalty.

The third hypothesis (H3) asserts that patient satisfaction positively influences patient loyalty, demonstrated by an original sample value of 0.446, t-statistic of 3.453, and P-value of 0.001 (< 0.05). This is supported by previous research (Suwandi et al., 2022; Moliner, 2009; Rahmilia, 2015; Keshavarz and Jamshidi, 2018) which shows that high patient satisfaction from healthcare experiences increases loyalty. The fourth hypothesis (H4) indicates that price positively affects patient satisfaction, with an original sample value of 0.388, t-statistic of 3.227, and P-value of 0.001 (< 0.05). Consistent with studies by Suwandi et al. (2015), Pranama, and Sukresna (2016), this suggests that competitive pricing meeting customer expectations significantly boosts patient satisfaction.

The fifth hypothesis (H5) indicates that service quality positively impacts patient satisfaction, with an original sample value of 0.435, t-statistic of 3.644, and P-value of 0.000 (< 0.05). This aligns with theories by Kotler and Keller (2009), Tjiptono (2008), and studies by Lasadika (2019), Kaura et al. (2015), and Keshavarz and Jamshidi (2018), which emphasize that high-quality service delivery improves patient satisfaction.

The sixth hypothesis (H6) shows that patient satisfaction mediates the effect of price on patient loyalty, with an original sample value of 0.173, t-statistic of 2.280, and P-value of 0.023 (< 0.05), suggesting that satisfaction significantly bridges the relationship between price and loyalty. This

finding is supported by Winata and Prabowo (2022), and Yandini and Rangkuti (2023), indicating that patient satisfaction enhances the loyalty derived from competitive pricing.

The seventh hypothesis (H7) reveals that patient satisfaction mediates the effect of service quality on patient loyalty, with an original sample value of 0.194, a t-statistic of 2.365, and P-value of 0.018 (< 0.05). This result is consistent with previous studies (Yandini and Rangkuti, 2023; Putri and Pradiani, 2023) that highlight the crucial role of service quality and patient satisfaction in fostering patient loyalty. Overall, the research confirms that both price and service quality significantly influence patient loyalty through the mediating effect of patient satisfaction. This suggests that healthcare providers should focus on competitive pricing and high-quality service to enhance patient satisfaction and loyalty.

CONCLUSION

Based on the research conducted on the influence of price and service quality on patient loyalty at the Pratama BHG Dental Polyclinic, with patient satisfaction as an intervening variable, several conclusions can be drawn: Price and service quality positively impact patient loyalty. Patient satisfaction also enhances loyalty at the Pratama BHG Dental Polyclinic, acting as a mediator between price and patient loyalty and between service quality and patient loyalty. Friendly, efficient, and professional service quality, along with appropriate pricing, is crucial in building and maintaining customer loyalty. However, this research has limitations such as restricted variables, a theoretical model that may not encompass all relevant aspects, a research sample that might not fully represent the patient population and analysis methods that may not adequately capture the complexity of the relationships between variables.

The recommendations provided by the authors include: (1) Setting prices that correspond with service quality, conducting market research to set competitive yet value-reflective prices, improving service quality through staff training and continuous evaluation, and focusing on patient satisfaction through survey programs and feedback. (2) Future research should refine variable measurements with more detailed dimensions, consider the dynamics of the relationship between patient satisfaction as a mediating variable and patient loyalty, and involve all healthcare services at Pratama BHG Dental Polyclinic for a more comprehensive view. Other variables such as communication, problem handling, and promotions should also be further researched to understand the factors influencing patient loyalty more thoroughly. By considering these suggestions, future research can provide greater contributions to understanding the factors affecting patient loyalty at Pratama BHG Dental Polyclinic and offer a stronger foundation for managerial decision-making within the clinic.

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