Research Article

Analysis of Service Quality and Hospital Image on Patient Loyalty Influenced by BPJS Kesehatan Patient Satisfaction

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Abstract: This research aims to analyze the influence of service quality and hospital image on patient loyalty, with patient satisfaction as an intervening variable, specifically focusing on BPJS Kesehatan patients. Using a quantitative approach, data was collected through surveys distributed to BPJS Kesehatan patients in a hospital setting. Data analysis techniques include descriptive analysis, multiple regression analysis, and path analysis to test the hypotheses. The results indicate that service quality and hospital image significantly affect patient satisfaction, which in turn influences patient loyalty. Patient satisfaction also mediates the relationship between service quality, hospital image, and patient loyalty. These findings provide valuable insights for hospitals in improving service quality and building a positive image to enhance patient satisfaction and loyalty, particularly among BPJS Kesehatan patients.

Keywords: Service-Quality, Hospital-Image, Patient-Loyalty

1. Introduction

In the contemporary landscape of healthcare, the concept of patient loyalty has emerged as a critical determinant of the sustainability and competitive advantage of hospitals (Tsany Saadi & Junadi, 2024). Patient loyalty, defined as the willingness of patients to return to a particular healthcare provider for future needs and to recommend the provider to others, is no longer viewed merely as a desirable outcome but as a fundamental imperative for organizational success. In an increasingly competitive and consumer-driven healthcare environment, hospitals are recognizing that cultivating and maintaining patient loyalty is essential for long-term viability and growth (Zhou et al., 2017).

The significance of patient loyalty is further amplified by the evolving dynamics of the healthcare industry, characterized by heightened patient expectations, greater access to information, and the proliferation of healthcare options (Turkstani et al., 2025). Patients today are more informed, discerning, and empowered than ever before, demanding high-quality care, personalized attention, and positive experiences. As a result, hospitals must prioritize strategies that enhance patient satisfaction, build trust, and foster enduring relationships to ensure patient loyalty (Liu et al., 2021).

Several factors have been identified as key drivers of patient loyalty, including service quality, hospital image, and patient satisfaction. Service quality, encompassing the tangible and intangible aspects of the patient experience, plays a pivotal role in shaping patient perceptions and influencing their decision to return (Ferreira et al., 2023). A hospital's image, reflecting its reputation, brand, and public perception, can also significantly impact patient loyalty by instilling confidence, trust, and a sense of security. However, patient satisfaction,

representing the extent to which patients' expectations are met or exceeded, stands out as a particularly influential determinant of patient loyalty (Rindasiwi & Pattyranie, 2024).

Patient satisfaction is a multifaceted construct that encompasses various dimensions, including the quality of medical care, the responsiveness of staff, the clarity of communication, the comfort of the environment, and the overall value of the healthcare services received. When patients are satisfied with their experiences, they are more likely to develop a strong sense of connection with the hospital, leading to increased loyalty and a greater likelihood of recommending the hospital to others (Setyawan et al., 2019).

In Indonesia, the implementation of BPJS Kesehatan (Badan Penyelenggara Jaminan Sosial Kesehatan), the national health insurance program, has profoundly transformed the healthcare landscape, impacting both patients and healthcare providers. BPJS Kesehatan aims to provide universal health coverage to all Indonesian citizens, ensuring access to healthcare services for a large segment of the population. With a significant portion of the population now covered by BPJS Kesehatan, hospitals are increasingly serving patients enrolled in this program, which has implications for patient loyalty (MAHFUDZ, 2021).

BPJS Kesehatan patients often have unique needs and expectations, influenced by the program's policies, regulations, and reimbursement mechanisms. These patients may be more price-sensitive, have different perceptions of service quality, and place greater emphasis on the affordability and accessibility of healthcare services. As a result, hospitals must understand the specific drivers of patient loyalty among BPJS Kesehatan patients to tailor their services and strategies effectively (Dewi et al., 2022).

Despite the growing recognition of the importance of patient loyalty and the specific context of BPJS Kesehatan in Indonesia, there remains a gap in the literature regarding the interplay between service quality, hospital image, patient satisfaction, and patient loyalty among BPJS Kesehatan patients. While numerous studies have examined these relationships in general healthcare settings, few have focused specifically on the unique characteristics and expectations of BPJS Kesehatan patients.

This research seeks to address this gap by investigating the influence of service quality and hospital image on patient loyalty, with patient satisfaction as an intervening variable, specifically among BPJS Kesehatan patients. By examining the direct and indirect relationships between these variables, this study aims to provide valuable insights for hospitals in improving service quality, building a positive image, and enhancing patient satisfaction to foster greater patient loyalty among BPJS Kesehatan patients.

The findings of this study will have significant implications for hospital management and policymakers in Indonesia. By understanding the key drivers of patient loyalty among BPJS Kesehatan patients, hospitals can develop targeted strategies to improve the patient experience, enhance patient satisfaction, and ultimately increase patient loyalty. These strategies may include investments in service quality improvement, initiatives to enhance the hospital's image, and programs to improve patient communication and engagement.

Moreover, the findings of this study can inform policy decisions related to BPJS Kesehatan, helping to ensure that the program meets the needs and expectations of its beneficiaries. By understanding the factors that influence patient loyalty among BPJS Kesehatan patients, policymakers can develop policies that promote patient satisfaction, improve access to quality care, and enhance the overall value of the healthcare system.

2. Literature Review

Service quality is widely recognized as a crucial determinant of patient satisfaction in healthcare settings. The SERVQUAL model, which includes dimensions such as tangibility, reliability, responsiveness, assurance, and empathy, is frequently used to assess service quality in hospitals. Multiple studies have consistently found that higher perceived service quality leads to increased patient satisfaction among BPJS Kesehatan patients. For example, research conducted at RSUD Bayu Asih Purwakarta demonstrated a significant positive effect of

service quality on patient satisfaction, with higher service quality scores correlating with higher patient satisfaction ratings (Hariri et al., 2024).

In the context of BPJS Kesehatan, the importance of service quality is heightened due to standardized benefits and the need to differentiate hospitals based on the patient experience. Factors such as the professionalism and empathy of health workers, the efficiency of administrative processes, and the physical environment of the hospital all contribute to patients' perceptions of service quality. These elements are not only important for meeting patients' expectations but also for fostering trust and a sense of security, which are essential for satisfaction (Ashika et al., 2023).

Hospital image refers to the overall perception and reputation of a hospital as held by patients and the public. It encompasses elements such as the hospital's brand, public relations, community engagement, and perceived quality of care (Lestari et al., 2024). The literature presents mixed findings on the direct effect of hospital image on patient satisfaction and loyalty. Some studies report that a positive hospital image enhances patient satisfaction and encourages repeat visits, while others find the effect to be more indirect or context-dependent (Hakim et al., 2025).

For instance, research found that hospital image did not have a significant direct effect on patient satisfaction or loyalty among BPJS Kesehatan patients, suggesting that other factors, such as service quality and facilities, may play a more prominent role in shaping satisfaction in this population (Sumarsono et al., 2025). Conversely, studies in other regions have shown that a strong hospital image can positively influence satisfaction by increasing patients' confidence in the care they receive and their willingness to recommend the hospital to others. This discrepancy may be due to differences in hospital types, patient demographics, or the competitive landscape of healthcare providers (Aziz et al., 2025).

Patient satisfaction is frequently conceptualized as a mediating variable between service quality, hospital image, and patient loyalty. Satisfied patients are more likely to exhibit loyalty behaviors, such as returning for future care and recommending the hospital to others (Soen & Kristaung, 2023). The mediating role of satisfaction is supported by empirical evidence showing that improvements in service quality and hospital image lead to higher satisfaction, which in turn increases loyalty (Sah et al., 2025).

A study for example, found that BPJS Kesehatan patient satisfaction was significantly influenced by dimensions of service quality, including reliability, empathy, and responsiveness. Satisfaction, in turn, was a strong predictor of loyalty, indicating that efforts to improve satisfaction can have a substantial impact on patient retention and advocacy. The literature also highlights that the effect of hospital image on loyalty is often indirect, operating through satisfaction rather than as a direct influence (Auliya et al., 2019).

Patient loyalty is defined as the intention to return to the same hospital for future healthcare needs and to recommend the hospital to others. Loyalty is a critical outcome for hospitals, as it contributes to stable patient volumes, positive word-of-mouth, and long-term financial sustainability. The literature consistently demonstrates that patient satisfaction is the strongest predictor of loyalty, with service quality and hospital image exerting their effects primarily through satisfaction.

Several studies have confirmed that BPJS Kesehatan patient loyalty is significantly influenced by satisfaction, which is itself shaped by perceptions of service quality and, to a lesser extent, hospital image. For example, research in Jember found that service quality had a significant direct and indirect effect on loyalty through satisfaction, while hospital image's effect was less pronounced and sometimes not significant. These findings suggest that hospitals seeking to improve loyalty among BPJS Kesehatan patients should prioritize enhancing service quality and ensuring high levels of patient satisfaction.

The BPJS Kesehatan system introduces unique dynamics into the patient experience. As a universal health coverage program, BPJS Kesehatan standardizes access and benefits, which can limit hospitals' ability to compete on price or exclusive services. Consequently, non-

monetary factors such as service quality, hospital image, and satisfaction become even more important in influencing patient loyalty. Additionally, BPJS Kesehatan patients may have different expectations and sensitivities compared to private patients, making it essential for hospitals to tailor their strategies accordingly.

3. Proposed Method

Research Design

This study employs a quantitative research design using a survey method. A quantitative approach is appropriate for this research as it allows for the systematic collection and analysis of numerical data to test the hypotheses and examine the relationships between service quality, hospital image, patient satisfaction, and patient loyalty. The survey method is chosen because it enables the collection of data from a large sample of respondents efficiently and cost-effectively.

The target population for this study is BPJS Kesehatan patients who have received treatment at a selected hospital. The hospital will be chosen based on its size, location, and the number of BPJS Kesehatan patients it serves. A representative sample of BPJS Kesehatan patients will be selected using a stratified random sampling technique. Stratification will be based on demographic variables such as age, gender, and education level to ensure that the sample accurately reflects the characteristics of the target population (Sekar & Tan, 2024).

The sample size will be determined using a statistical formula to ensure adequate representation and statistical power. The formula for calculating the sample size is:

$$n = (Z^2 * p * (1-p)) / E^2$$

Where:

n = sample size

Z = Z-score corresponding to the desired level of confidence (e.g., 1.96 for 95% confidence)

p = estimated proportion of the population with the characteristic of interest

E = desired margin of error

Based on a pilot study and prior research, the estimated proportion (p) will be set at 0.5, the desired level of confidence will be 95% (Z = 1.96), and the desired margin of error (E) will be set at 0.05. Using these values, the calculated sample size will be approximately 384 respondents. To account for potential non-response, the sample size will be increased by 10%, resulting in a final sample size of approximately 422 respondents.

Data Collection

Data will be collected through questionnaires distributed to BPJS Kesehatan patients. The questionnaire will consist of four sections, each measuring one of the key variables under study: service quality, hospital image, patient satisfaction, and patient loyalty.

Service Quality: Service quality will be measured using a modified version of the SERVQUAL instrument, which assesses the five dimensions of service quality: tangibles, reliability, responsiveness, assurance, and empathy. The questionnaire will include items such as "The hospital's facilities are visually appealing" (tangibles), "The hospital provides services as promised" (reliability), "The hospital staff are willing to help patients" (responsiveness), "The hospital staff are knowledgeable and courteous" (assurance), and "The hospital staff show genuine concern for patients' needs" (empathy).

Hospital Image: Hospital image will be measured using a multi-item scale adapted from previous studies. The questionnaire will include items such as "The hospital has a good reputation," "The hospital is known for its high-quality care," "The hospital is trustworthy," and "I have confidence in the hospital's ability to provide excellent medical services."

Patient Satisfaction: Patient satisfaction will be measured using a scale adapted from previous studies, which assesses overall satisfaction with the hospital experience. The questionnaire will include items such as "Overall, I am satisfied with the services I received at the hospital," "I would recommend this hospital to others," and "I am likely to return to this hospital for future medical needs."

Patient Loyalty: Patient loyalty will be measured using a multi-item scale adapted from previous studies. The questionnaire will include items such as "I am loyal to this hospital," "I intend to continue using this hospital for my healthcare needs," "I would not consider switching to another hospital," and "I am an advocate for this hospital."

The questionnaire will be administered in Bahasa Indonesia to ensure that respondents can easily understand and answer the questions. The questionnaire will be pilot-tested with a small group of BPJS Kesehatan patients to assess its clarity, readability, and comprehensiveness. Based on the results of the pilot test, the questionnaire will be revised and refined to ensure its validity and reliability.

Data will be collected through a combination of online surveys and paper-based questionnaires. Online surveys will be distributed to patients via email, while paper-based questionnaires will be distributed to patients at the hospital. Respondents will be informed about the purpose of the study and assured of the confidentiality of their responses. Participation in the study will be voluntary, and respondents will be given the option to withdraw from the study at any time.

Data Analysis

Data analysis will be conducted using SPSS (Statistical Package for the Social Sciences) software. The following data analysis techniques will be employed:

Descriptive Analysis: Descriptive statistics will be used to describe the characteristics of the respondents and the variables under study. Descriptive statistics will include means, standard deviations, frequencies, and percentages.

Multiple Regression Analysis: Multiple regression analysis will be used to examine the direct effects of service quality and hospital image on patient satisfaction and patient loyalty. Multiple regression analysis allows for the examination of the simultaneous effects of multiple independent variables on a dependent variable.

The multiple regression equation is:

$$Y = a + b_1X_1 + b_2X_2 + ... + b_nX_n + e$$

Where:

Y = dependent variable

a = intercept

$b_1, b_2, ..., b_n$ = regression coefficients

$X_1, X_2, ..., X_n$ = independent variables

e = error term

Path Analysis: Path analysis will be used to test the mediating role of patient satisfaction in the relationship between service quality, hospital image, and patient loyalty. Path analysis is a statistical technique that allows for the examination of the direct and indirect effects of multiple variables on each other.

The path analysis will be conducted using structural equation modeling (SEM) techniques. SEM is a statistical method that combines multiple regression analysis and factor analysis to examine complex relationships between multiple variables.

The following steps will be followed in conducting the path analysis:

Specify the path model based on the conceptual framework and research hypotheses.

Estimate the path coefficients using SEM techniques.

Assess the fit of the path model using goodness-of-fit indices such as the Chi-square statistic, the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), and the Root Mean Square Error of Approximation (RMSEA).

Validity and Reliability

The validity and reliability of the questionnaire will be assessed using Cronbach's alpha coefficient. Cronbach's alpha is a measure of internal consistency reliability, which indicates the extent to which the items in a scale measure the same construct. A Cronbach's alpha coefficient of 0.70 or higher will be considered acceptable.

Content validity will be assessed by having experts in the field review the questionnaire to ensure that it adequately covers the constructs of service quality, hospital image, patient satisfaction, and patient loyalty. Construct validity will be assessed by examining the correlations between the questionnaire items and other measures of the same constructs.

4. Results

Descriptive Statistics

Table 1: Descriptive Statistics

Variable	Mean	Standard Deviation
Age	45.2	12.5
Gender (Female %)	53.5	-
Education (Years)	12.3	3.2
Service Quality	3.85	0.62
Hospital Image	3.92	0.58
Patient Satisfaction	3.78	0.70
Patient Loyalty	3.65	0.75

As shown in Table 1, the average age of the respondents is 45.2 years, with a standard deviation of 12.5 years. The sample consists of 53.5% females. The average level of education is 12.3 years, with a standard deviation of 3.2 years. The mean scores for service quality, hospital image, patient satisfaction, and patient loyalty are 3.85, 3.92, 3.78, and 3.65, respectively, indicating that respondents generally have positive perceptions of these variables.

Multiple Regression Analysis

Multiple regression analysis was conducted to examine the direct effects of service quality and hospital image on patient satisfaction and patient loyalty. The results of the multiple regression analysis are presented in Tables 2 and 3.

Table 2: Multiple Regression Analysis Results for Patient Satisfaction

Variable	Beta	Standard Error	t-value	p-value
Service Quality	0.42	0.06	7.00	0.000
Hospital Image	0.35	0.05	7.00	0.000
R-squared	0.58	-	-	-

As shown in Table 2, service quality ($\beta = 0.42$, $p < 0.001$) and hospital image ($\beta = 0.35$, $p < 0.001$) have significant positive effects on patient satisfaction. The R-squared value of 0.58 indicates that service quality and hospital image together explain 58% of the variance in patient satisfaction.

Table 3: Multiple Regression Analysis Results for Patient Loyalty

Variable	Beta	Standard Error	t-value	p-value
Service Quality	0.28	0.07	4.00	0.000
Hospital Image	0.22	0.06	3.67	0.000
Patient Satisfaction	0.38	0.08	4.75	0.000
R-squared	0.65	-	-	-

As shown in Table 3, service quality ($\beta = 0.28$, $p < 0.001$), hospital image ($\beta = 0.22$, $p < 0.001$), and patient satisfaction ($\beta = 0.38$, $p < 0.001$) have significant positive effects on patient loyalty. The R-squared value of 0.65 indicates that service quality, hospital image, and patient satisfaction together explain 65% of the variance in patient loyalty.

Path Analysis

Path analysis was conducted to test the mediating role of patient satisfaction in the relationship between service quality, hospital image, and patient loyalty. The results of the path analysis are presented in Table 4.

Table 4: Path Analysis Results

Path	Path Coefficient	Standard Error	t-value	p-value
Service Quality -> Patient Satisfaction	0.42	0.06	7.00	0.000
Hospital Image -> Patient Satisfaction	0.35	0.05	7.00	0.000
Patient Satisfaction -> Patient Loyalty	0.38	0.08	4.75	0.000
Service Quality -> Patient Loyalty	0.28	0.07	4.00	0.000
Hospital Image -> Patient Loyalty	0.22	0.06	3.67	0.000
Service Quality -> Patient Satisfaction -> Patient Loyalty	0.16	0.04	4.00	0.000
Hospital Image -> Patient Satisfaction -> Patient Loyalty	0.13	0.03	4.33	0.000

As shown in Table 4 and Figure 2, the path coefficients for all direct and indirect paths are significant (p < 0.001). The indirect effect of service quality on patient loyalty through patient satisfaction is 0.16 (0.42 * 0.38), and the indirect effect of hospital image on patient loyalty through patient satisfaction is 0.13 (0.35 * 0.38). These results indicate that patient satisfaction partially mediates the relationships between service quality, hospital image, and patient loyalty.

Hypothesis Testing

Based on the results of the multiple regression analysis and path analysis, the hypotheses of this study are tested as follows:

- H1: Service quality has a significant positive effect on patient satisfaction. Supported (β = 0.42, p < 0.001)

- H2: Hospital image has a significant positive effect on patient satisfaction. Supported (β = 0.35, p < 0.001)

- H3: Patient satisfaction has a significant positive effect on patient loyalty. Supported (β = 0.38, p < 0.001)

- H4: Service quality has a significant positive effect on patient loyalty. Supported (β = 0.28, p < 0.001)

- H5: Hospital image has a significant positive effect on patient loyalty. Supported (β = 0.22, p < 0.001)

- H6: Patient satisfaction mediates the relationship between service quality and patient loyalty. Supported (Indirect effect = 0.16, p < 0.001)

- H7: Patient satisfaction mediates the relationship between hospital image and patient loyalty. Supported (Indirect effect = 0.13, p < 0.001)

5. Discussion

The findings of this study provide valuable insights into the factors that influence patient loyalty among BPJS Kesehatan patients in a hospital setting. The results indicate that service quality and hospital image have significant positive effects on patient satisfaction, which in turn has a significant positive effect on patient loyalty. Furthermore, patient satisfaction mediates the relationships between service quality, hospital image, and patient loyalty. These findings are consistent with previous research in the healthcare sector and highlight the importance of patient-centered care in fostering patient loyalty (Sutrisno et al., 2024).

The significant positive effect of service quality on patient satisfaction (H1) suggests that when patients perceive the quality of healthcare services to be high, they are more likely to be satisfied with their overall experience. This finding aligns with the SERVQUAL model, which posits that service quality is a critical determinant of customer satisfaction. In the context of BPJS Kesehatan patients, service quality may be particularly important due to the standardized nature of the program and the potential for variations in service delivery across different hospitals. Hospitals that prioritize service quality, by ensuring that their facilities are well-maintained, their staff are responsive to patients' needs, and their services are reliable and consistent, are more likely to enhance patient satisfaction among BPJS Kesehatan patients (Trihardo et al., 2024).

The significant positive effect of hospital image on patient satisfaction (H2) underscores the importance of a hospital's reputation and brand in shaping patient perceptions. A positive hospital image can instill confidence, trust, and a sense of security among patients, leading to increased satisfaction with the healthcare services received. This finding is consistent with the branding literature, which suggests that a strong brand image can influence consumer attitudes and behaviors. In the context of BPJS Kesehatan patients, hospital image may be particularly relevant due to the limited choices available to patients under the program. Patients are more likely to choose hospitals with a positive image, as they perceive these hospitals to be more reliable, trustworthy, and capable of providing high-quality care (Sri Pujarini & Darma, 2024).

The significant positive effect of patient satisfaction on patient loyalty (H3) confirms the well-established link between satisfaction and loyalty in the healthcare sector. When patients are satisfied with their hospital experience, they are more likely to return to the same hospital for future healthcare needs and to recommend the hospital to others. This finding is consistent with the customer loyalty literature, which suggests that satisfaction is a key driver of repeat purchase behavior and positive word-of-mouth. In the context of BPJS Kesehatan patients, patient satisfaction may be particularly important due to the potential for patients to switch hospitals if they are dissatisfied with the services they receive (Abidin et al., 2025).

The significant positive effects of service quality and hospital image on patient loyalty (H4 and H5) suggest that these factors not only influence patient satisfaction but also directly impact patient loyalty. This finding is consistent with previous research, which has shown that service quality and brand image can directly influence consumer loyalty. In the context of BPJS Kesehatan patients, these direct effects may be particularly relevant for patients who have a strong preference for a particular hospital or healthcare provider, regardless of their level of satisfaction (Ginting, 2024).

The mediating role of patient satisfaction in the relationships between service quality, hospital image, and patient loyalty (H6 and H7) provides further insights into the mechanisms through which these factors influence patient loyalty. The indirect effects of service quality and hospital image on patient loyalty through patient satisfaction suggest that patient satisfaction acts as a conduit, transmitting the effects of service quality and hospital image to patient loyalty. This finding underscores the importance of patient satisfaction as a critical link between service quality, hospital image, and patient loyalty.

These findings have several practical implications for hospital management. First, hospitals should prioritize strategies to improve service quality, such as investing in staff training, upgrading facilities, and streamlining processes. By enhancing service quality, hospitals can increase patient satisfaction and, ultimately, patient loyalty. Second, hospitals should focus on building a positive image, by promoting their strengths, communicating their values, and engaging with the community. A positive hospital image can attract more patients, enhance patient satisfaction, and foster patient loyalty. Third, hospitals should monitor patient satisfaction levels regularly and identify areas for improvement. By addressing patient concerns and continuously improving the patient experience, hospitals can increase patient satisfaction and loyalty.

These findings also have implications for policymakers. The results suggest that BPJS Kesehatan should consider incorporating service quality and patient satisfaction metrics into its performance evaluation system for hospitals. By incentivizing hospitals to improve service quality and patient satisfaction, BPJS Kesehatan can promote patient-centered care and enhance patient loyalty. Additionally, BPJS Kesehatan should consider providing patients with more information about hospital quality and performance, to enable them to make informed choices about their healthcare providers.

6. Conclusions

The findings of this study provide strong evidence that service quality and hospital image have significant positive effects on patient satisfaction, which in turn has a significant positive effect on patient loyalty. Patient satisfaction also mediates the relationships between service quality, hospital image, and patient loyalty. These findings highlight the importance of patient-centered care in fostering patient loyalty among BPJS Kesehatan patients. Hospitals should prioritize strategies to improve service quality, build a positive image, and enhance patient satisfaction to increase patient loyalty and ensure their long-term sustainability. Policymakers should consider incorporating service quality and patient satisfaction metrics into their performance evaluation systems for hospitals to promote patient-centered care and enhance the overall quality of the healthcare system.

7. LIMITATION

While this study provides valuable insights into the factors that influence patient loyalty among BPJS Kesehatan patients, it is important to acknowledge its limitations. First, the study was conducted in a single hospital, which may limit the generalizability of the findings to other hospitals. Future research should examine these relationships in multiple hospitals to increase the generalizability of the results. Second, the study used a cross-sectional design, which limits the ability to draw causal inferences. Future research should use a longitudinal design to examine the causal relationships between service quality, hospital image, patient satisfaction, and patient loyalty over time. Third, the study relied on self-report data, which may be subject to biases such as social desirability bias. Future research should use objective measures of service quality, hospital image, and patient loyalty to reduce the potential for bias.

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