



Original Article

The Effect of Brand Equity on Patient Loyalty with Patient Satisfaction as a Mediating Variable in Inpatient Services

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Abstract:

Low inpatient utilization, reflected in suboptimal Bed Occupancy Rate (BOR), remains a challenge for many hospitals. Strengthening brand equity is increasingly recognized as a strategic approach to enhance patient loyalty and improve service utilization. This study aimed to examine the effect of brand equity on patient loyalty, with patient satisfaction as a mediating variable, among inpatients at RSI Siti Aisyah Madiun. This study employed a quantitative cross-sectional design involving 100 inpatient respondents selected using purposive sampling. Data were collected using a structured questionnaire measuring brand equity, patient satisfaction, and patient loyalty. Data analysis included descriptive statistics, validity and reliability testing, classical assumption tests, multiple regression analysis, and Sobel test for mediation analysis. The results showed that brand equity had a significant positive effect on patient satisfaction and patient loyalty ($p < 0.05$). Patient satisfaction also significantly influenced patient loyalty ($p = 0.05$). Mediation analysis revealed that patient satisfaction partially mediated the relationship between brand equity and patient loyalty. Brand equity plays a crucial role in strengthening patient loyalty, both directly and indirectly through patient satisfaction. Hospital management should prioritize brand-building strategies supported by consistent service quality to enhance patient satisfaction, foster loyalty, and potentially improve inpatient utilization and BOR.

Keywords: brand equity, patient satisfaction, patient loyalty, hospital marketing, inpatient services.

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Introduction

Hospitals are increasingly required to maintain service utilization and long-term sustainability in a highly competitive healthcare environment. One commonly used indicator to evaluate inpatient service performance is the Bed Occupancy Rate (BOR), which reflects the effectiveness of bed utilization. A BOR below the recommended

standard may indicate suboptimal patient retention and inefficiencies in inpatient service management.

RSI Siti Aisyah Madiun has shown BOR values of 65.24% in 2022, slightly increasing to 66.33% in 2023 and 69% in 2024. Although this upward trend suggests gradual improvement, the Bed Occupancy Rate (BOR) remains below the Barber–Johnson standard, indicating persistent challenges in sustaining optimal inpatient utilization. This condition highlights the importance of strengthening non-clinical factors that influence patients' decisions to revisit and recommend hospital services.

Previous studies emphasize that patient loyalty plays a crucial role in improving hospital performance, as loyal patients are more likely to reuse services and provide positive word-of-mouth recommendations ([Rosyida et al., 2025](#)). In healthcare settings, patient loyalty is not solely driven by clinical outcomes, but also by patients' perceptions, experiences, and emotional attachment to the hospital brand ([Górska-Warsewicz, 2022](#)).

Brand equity has emerged as a strategic concept in healthcare management, representing the added value of a hospital brand as perceived by patients. Strong brand equity reflects patients' awareness, favorable associations, and perceived quality of services, which collectively shape trust and confidence in healthcare providers ([Eslami, 2020](#)). Empirical evidence shows that hospitals with strong brand equity tend to achieve higher levels of patient satisfaction and loyalty ([Triastuti & Basabih, 2023](#); [Syah et al., 2024](#)).

Several studies have demonstrated a direct relationship between brand equity and customer loyalty across service industries, including [healthcare \(Susanty & Kenny, 2021; Hanifi et al., 2025\)](#). Furthermore, patient satisfaction has been identified as a key mediating factor that links brand equity to loyalty, as satisfaction reflects the degree to which patient expectations are fulfilled during healthcare experiences ([Vimla & Taneja, 2020](#)).

Despite growing evidence on the importance of brand equity in healthcare, empirical studies examining the mediating role of patient satisfaction between brand equity and patient loyalty in inpatient hospital settings remain limited, particularly in the Indonesian context. Therefore, this study aims to analyze the effect of brand equity on patient loyalty with patient satisfaction as a mediating variable among inpatients at RSI Siti Aisyah Madiun. The findings are expected to provide strategic insights for hospital management in strengthening branding efforts to enhance patient loyalty and improve inpatient service utilization.

Methods

This study employed a quantitative approach with a cross-sectional design. The research aimed to examine the effect of brand equity on patient loyalty, with patient satisfaction as a mediating variable, among inpatients at RSI Siti Aisyah Madiun. A quantitative design was selected to allow statistical testing of hypothesized relationships between variables.

Research Setting and Population

The study was conducted at RSI Siti Aisyah Madiun, a private hospital providing inpatient healthcare services. The study population consisted of all inpatients who received care at the hospital during the data collection period. The research focused on inpatients because inpatient services represent a major contributor to hospital service utilization and Bed Occupancy Rate (BOR).

Sample and Sampling Technique

A total of 100 respondents were included in this study. The sample was selected using purposive sampling based on the following inclusion criteria:

1. adult inpatients who had completed or were near completion of their inpatient treatment,
2. patients who were able to communicate effectively, and
3. patients or family members who were willing to participate in the study.

The sample size was considered adequate for regression and mediation analysis.

Research Variables and Operational Definitions

The study involved three main variables:

- Brand Equity (Independent Variable):

Brand equity was measured based on patient perceptions of the hospital brand, including three dimensions: brand awareness, brand association, and perceived quality.

- Patient Satisfaction (Mediating Variable):

Patient satisfaction refers to the overall evaluation of inpatient services based on patients' experiences and fulfillment of expectations during hospitalization.

- Patient Loyalty (Dependent Variable):

Patient loyalty represents patients' intentions to revisit the hospital, recommend the hospital to others, and maintain a long-term relationship with the hospital.

Research Instrument

Data were collected using a structured questionnaire developed from relevant literature. All items were measured using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire consisted of sections measuring brand equity, patient satisfaction, and patient loyalty.

Prior to hypothesis testing, the instrument was subjected to validity and reliability testing to ensure the quality of the measurement.

Data Collection Procedure

Data were collected by distributing questionnaires to eligible respondents during the inpatient discharge process. Respondents were informed about the purpose of the study, and informed consent was obtained prior to participation. Confidentiality and anonymity of respondents were ensured throughout the research process.

Data Analysis Technique

Data analysis was conducted using statistical software. The analysis included:

1. Descriptive Statistics to describe respondent characteristics and variable distributions.
2. Validity and Reliability Tests to assess the quality of research instruments.
3. Classical Assumption Tests, including normality, multicollinearity, and heteroskedasticity tests.
4. Regression Analysis to test the direct effects between variables.
5. Sobel Test to examine the mediating effect of patient satisfaction on the relationship between brand equity and patient loyalty.

A significance level of 5% ($p < 0.05$) was used for all statistical tests.

Results

1. Respondent Characteristics

A total of 100 respondents participated in this study. The respondents were inpatients of RSI Siti Aisyah Madiun with varying demographic characteristics, including gender, age, educational background, inpatient class, and payment method. The diversity of respondent characteristics reflects the heterogeneity of the inpatient population and provides a comprehensive overview of patient perceptions toward hospital services.

2. Descriptive Statistics of Research Variables

Descriptive analysis was conducted to describe respondents' perceptions of brand equity, patient satisfaction, and patient loyalty. Overall, respondents reported favorable perceptions across all variables.

Brand equity demonstrated a high mean score, indicating positive patient perceptions toward the hospital brand. Among its dimensions, perceived quality showed the highest mean score, followed by brand association and brand awareness. Patient satisfaction also showed a high mean value, suggesting that most respondents were satisfied with the inpatient services received. Patient loyalty similarly exhibited a high mean score, reflecting patients' intentions to revisit and recommend the hospital.

3. Instrument Validity and Reliability

The validity test results indicated that all questionnaire items had corrected item-total correlation values exceeding the critical value of the correlation coefficient (r -table) for a sample size of 100 respondents. Therefore, all items were considered valid and suitable for further analysis.

Reliability testing showed a Cronbach's alpha value of 0.961, exceeding the minimum acceptable threshold of 0.70. This result indicates excellent internal consistency and confirms that the measurement instrument was reliable.

4. Classical Assumption Tests

Prior to regression analysis, classical assumption tests were conducted to ensure the suitability of the data for regression modeling.

- Normality Test: The residuals were normally distributed, indicating that the normality assumption was met.
- Multicollinearity Test: Tolerance values exceeded 0.10 and Variance Inflation Factor (VIF) values were below 10, indicating no multicollinearity among independent variables.
- Heteroskedasticity Test: The scatterplot and statistical test results indicated no heteroskedasticity, confirming homoscedastic residuals.

These results suggest that the regression models met the required assumptions.

5. Hypothesis Testing

1) Effect of Brand Equity on Patient Satisfaction (H2)

Regression analysis revealed that brand equity had a significant positive effect on patient satisfaction ($p < 0.05$). This result supports H2, indicating that higher levels of brand equity are associated with higher patient satisfaction.

2) Effect of Brand Equity on Patient Loyalty (H1)

The results showed that brand equity significantly influenced patient loyalty ($p < 0.05$). Thus, H1 was supported, confirming that brand equity directly contributes to increased patient loyalty.

3) Effect of Patient Satisfaction on Patient Loyalty (H3)

Patient satisfaction was found to have a significant positive effect on patient loyalty ($p < 0.05$). Therefore, H3 was supported, indicating that satisfied patients are more likely to demonstrate loyal behavior toward the hospital.

4) Mediating Effect of Patient Satisfaction (H4)

To examine the mediating role of patient satisfaction, a regression analysis including both brand equity and patient satisfaction as predictors of patient loyalty was conducted, followed by a Sobel test. The results showed that both brand equity and patient satisfaction had significant effects on patient loyalty ($p < 0.05$), while the effect of brand equity decreased compared to the direct model.

The Sobel test yielded a significant z-value, indicating that patient satisfaction partially mediated the relationship between brand equity and patient loyalty. Therefore, H4 was supported, confirming partial mediation.

Discussion

5.1 The Effect of Brand Equity on Patient Loyalty

The findings of this study indicate that brand equity has a significant positive effect on patient loyalty among inpatients at RSI Siti Aisyah Madiun. This result confirms **H1** and supports the notion that a strong hospital brand plays a critical role in fostering loyal patient behavior.

In healthcare settings, brand equity serves as a psychological assurance mechanism that reduces patients' perceived risk and uncertainty when choosing hospital services. Hospitals with strong brand equity are perceived as more reliable, trustworthy, and capable of delivering consistent service quality, which encourages patients to return and recommend the hospital to others. This finding is consistent with previous studies by Triastuti and Basabih (2023) and Susanty and Kenny (2021), which demonstrated that brand equity positively influences loyalty through favorable brand perceptions and trust formation.

Furthermore, this result aligns with the systematic review by Górska-Warsewicz (2022), which emphasized that patient-based brand equity is a key determinant of behavioral intentions in hospital settings. In the context of RSI Siti Aisyah Madiun, strengthening brand equity may contribute to improving inpatient utilization, as loyal patients are more likely to reuse inpatient services, thereby supporting improvements in BOR.

5.2 The Effect of Brand Equity on Patient Satisfaction

The analysis revealed that brand equity significantly affects patient satisfaction, supporting **H2**. This finding indicates that patients who perceive the hospital brand positively tend to report higher satisfaction with inpatient services.

Brand equity shapes patients' expectations prior to service utilization and influences how patients evaluate their healthcare experiences. When hospital services meet or exceed these expectations, patients experience higher satisfaction. This finding is in line with Eslami (2020), who reported that brand-related perceptions enhance perceived value and satisfaction by signaling service consistency and professionalism.

Empirical evidence from Hanifi et al. (2025) also supports this relationship, showing that brand equity positively influences satisfaction, which subsequently strengthens loyalty. In healthcare contexts, where services are experiential and emotionally charged, a strong brand identity enhances patients' confidence and comfort during hospitalization, leading to more positive evaluations of care.

5.3 The Effect of Patient Satisfaction on Patient Loyalty

The results demonstrated that patient satisfaction has a significant positive effect on patient loyalty, confirming **H3**. This finding reinforces the widely accepted

premise that satisfied patients are more likely to revisit healthcare providers and recommend them to others.

Satisfaction reflects the degree to which patient expectations are fulfilled during healthcare encounters. When patients feel that their needs are adequately addressed and their expectations are met, they develop a positive emotional response toward the hospital, which translates into loyalty. This finding is consistent with Rosyida et al. (2025), who emphasized that satisfaction is a critical predictor of revisit intention and word-of-mouth behavior in healthcare services.

Additionally, Hasibuan et al. (2026) highlighted that patient satisfaction significantly enhances loyalty, particularly when supported by emotional and social factors. In the inpatient setting of RSI Siti Aisyah Madiun, improving patient satisfaction may therefore serve as an effective strategy to increase patient retention and stabilize inpatient service utilization.

5.4 The Mediating Role of Patient Satisfaction in the Relationship Between Brand Equity and Patient Loyalty

The mediation analysis confirmed that patient satisfaction partially mediates the relationship between brand equity and patient loyalty, supporting **H4**. The results indicate that brand equity influences patient loyalty both directly and indirectly through patient satisfaction.

This finding suggests that while brand equity independently contributes to loyalty, its effect is strengthened when patients experience satisfaction during service encounters. The partial mediation observed in this study is consistent with findings by Hanifi et al. (2025) and Vimla and Taneja (2020), who reported that satisfaction acts as an important behavioral mechanism linking brand-related perceptions to loyalty outcomes.

In healthcare settings, patients may remain loyal to a hospital not only because of its strong brand image but also because their experiences confirm the brand's promises. Therefore, hospital branding strategies should be supported by consistent service quality and patient-centered care to ensure satisfaction and reinforce loyalty.

5.5 Implications for Hospital Management

The findings of this study have important managerial implications for RSI Siti Aisyah Madiun and similar healthcare institutions. Strengthening brand equity—particularly by enhancing perceived quality, improving brand awareness, and reinforcing positive brand associations—can increase patient satisfaction and loyalty.

Given the hospital's BOR levels, which remain near the lower threshold of the recommended standard, improving patient loyalty through strategic brand management may contribute to increased inpatient utilization. Hospital management should therefore integrate branding strategies with service quality improvement initiatives to ensure that brand promises align with patient experiences.

Conclusion

This study examined the effect of brand equity on patient loyalty with patient satisfaction as a mediating variable among inpatients at RSI Siti Aisyah Madiun. The findings demonstrate that brand equity has a significant positive effect on both patient satisfaction and patient loyalty. In addition, patient satisfaction was found to significantly influence patient loyalty and partially mediate the relationship between brand equity and loyalty.

These results confirm that brand equity plays a strategic role in shaping patients' perceptions, experiences, and behavioral intentions in hospital services. A strong hospital brand not only directly enhances patient loyalty but also

indirectly strengthens loyalty by increasing patient satisfaction. This indicates that branding efforts in healthcare should be supported by consistent service quality and patient-centered care to ensure that brand promises align with patient experiences.

Suggestion

From a managerial perspective, the findings suggest that hospital management should prioritize strengthening brand equity through improving perceived service quality, reinforcing positive brand associations, and increasing brand awareness among patients. Enhancing patient satisfaction can further amplify the impact of brand equity on loyalty, which may contribute to improved inpatient service utilization and higher Bed Occupancy Rate (BOR).

This study contributes to the healthcare marketing literature by providing empirical evidence on the mediating role of patient satisfaction in the relationship between brand equity and patient loyalty in an inpatient hospital setting. However, this study is limited by its cross-sectional design and focus on a single hospital. Future research is recommended to employ longitudinal designs, include multiple hospitals, and consider additional variables such as trust, perceived value, or service quality to further explore factors influencing patient loyalty in healthcare services.

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