

The Importance of Hospital Image, Service Trust Level, and Physiotherapy Service Satisfaction on Patient Loyalty

A Case Study in a Type D Private Hospital

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ABSTRACT

Patient loyalty is essential for sustaining physiotherapy services, where prolonged treatment and discomfort often lead to high drop-out rates. This mixed-methods observational study examined how hospital image and patient trust shape satisfaction and loyalty among physiotherapy outpatients at KS Hospital between March and May 2025. A total of 160 outpatients were recruited through accidental sampling and completed a structured questionnaire, analyzed using partial least squares structural equation modeling (PLS-SEM). Qualitative data were gathered through in-depth interviews with a service manager, a specialist, and patients, triangulated to validate and enrich the quantitative findings. Hospital image significantly predicted satisfaction ($\beta = .544, p < .001$) and indirectly influenced loyalty through satisfaction ($\beta = .202, p < .001$). Patient trust showed both direct ($\beta = .274, p < .001$) and satisfaction-mediated ($\beta = .294, p < .001$) effects on loyalty. Satisfaction was the central mediating variable, explaining 70% of the variance in loyalty ($R^2 = .695$), with word-of-mouth emerging as its strongest indicator. Interview findings reinforced that service uniqueness and facility quality strengthen image and trust, which in turn foster satisfaction and encourage patients to return. These results underscore satisfaction's pivotal role in translating hospital image and trust into patient loyalty. Hospital management should prioritize improving service responsiveness and distinctiveness while ensuring equitable, empathetic care to strengthen long-term patient commitment to physiotherapy services. As a result, patient visit numbers can be maintained or even improved.

Keywords

Hospital Image
Patient Trust
Patient Satisfaction
Patient Loyalty
Physiotherapy

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Introduction

Physiotherapy services in Indonesia play an important role in the health system, not only for curative and rehabilitative care but also for health promotion and disease prevention, especially for non-communicable diseases such as hypertension, stroke, and diabetes mellitus. In hospitals, physiotherapy significantly contributes to patient recovery, including post-operative management, and has been shown to reduce hospital stays and ultimately improve public health outcomes [1], [2].

However, physiotherapy services face challenges like long treatment durations, the need for patient commitment, and pain during therapy, which can lead to high patient drop-out rates. According to the Minister of Health Regulation No. 65 of 2015, the dropout rate is a quality indicator for physiotherapy services, with a target of under 50% within three months. Given these challenges, maintaining patient loyalty and retention is essential [2], [3].

Patient loyalty and retention are primarily influenced by service quality and satisfaction. Satisfaction depends on the alignment of services with patient expectations and builds trust and loyalty. Conversely, negative experiences such as long wait times, scheduling issues, or poor facility conditions can erode trust and lead patients to seek care elsewhere [2], [4]-[6].

Understanding what sustains loyalty in turn requires understanding how patients form judgments about a provider. Consumer-loyalty theory holds that loyalty develops through a sequence in which cognitive evaluations of a service give rise to satisfaction, which, over repeated encounters, consolidates into affective and ultimately behavioural loyalty [4]. Building on this logic, service-marketing research on hospitals shows that patients' overall impression of a provider brand or hospital image shapes the trust they place in that provider, and that both image and trust jointly influence satisfaction, which in turn drives loyalty; trust has also been shown to act directly on loyalty independent of any single satisfying encounter [5], [10]-[12]. This image-trust-satisfaction-loyalty chain, and the closely related role of commitment, has been corroborated across general hospital services capes [11], brand-relationship contexts [13], the hospitality sector [14], and patient-loyalty studies in Taiwanese general hospitals [16], reinforcing earlier evidence that satisfaction, trust, and commitment each play distinct but interlocking roles in sustaining customer relationships more broadly

[15], [17]. In this chain, negative experiences such as long wait times, scheduling issues, or poor facility conditions can simultaneously erode trust and depress satisfaction, with downstream effects on loyalty and, ultimately, drop-out [2], [6]-[8].

While this image–trust–satisfaction–loyalty pathway has been documented extensively in general inpatient hospital settings [5], [10], [12], [16] and in other service industries [13], [14], [17], far less is known about whether it holds in specialized, longitudinal service lines such as physiotherapy, where loyalty is tested repeatedly across many visits rather than judged from a single encounter. Existing physiotherapy-specific research has examined service quality and satisfaction in isolation [1]-[3], [6] but has not explained how image and trust jointly translate into loyalty within this setting, and even less is known about how this pathway operates in smaller, private, lower-classification hospitals that depend heavily on national health insurance coverage, rather than in the larger or referral-tier hospitals that dominate the existing literature. This is the gap the present study addresses.

KS Hospital offers a setting well-suited to closing this gap. It is a type D hospital in Regency S, operating since 2013 and providing physiotherapy services since 2020, that began collaborating with the national health insurance scheme (BPJS) in 2023; since then, over 80% of its physiotherapy patients have been BPJS-covered. Unlike the larger or more established hospitals typically studied in hospital-image research, KS Hospital competes directly with two nearby facilities, a longer-established type C public hospital and an orthopedic clinic, both within two kilometers, making image, trust, and loyalty strategically consequential for a smaller provider with limited differentiation. Examining physiotherapy outpatients in this type D, insurance-dependent context, therefore extends the image–trust–satisfaction–loyalty model to a population and a service line that it has rarely been tested on.

To position physiotherapy as a flagship service, KS Hospital expanded the unit in 2023, increasing the number of physiotherapists and adding equipment, including infrared, microwave diathermy, TENS, electrical stimulation, and ultrasound devices. Services were extended to operate from 08:00 to 18:00 across two shifts. Despite these efforts, the physiotherapy unit did not meet its target drop-out rate of under 10% in 2024, as mandated by the hospital director. A preliminary study in January 2025 with 10 outpatients found 5 dissatisfied patients, mainly due to waiting times exceeding 60 minutes, which exceeded the limit set by the Ministry of Health Regulation No. 6 of 2024. These unresolved gaps between operational investment and patient outcomes suggest that the determinants of satisfaction and loyalty in this setting are not yet well understood and warrant closer empirical examination.

Compounding the issue, most patients reported choosing KS Hospital's physiotherapy service based on recommendations from health workers or family members, or simply on proximity, rather than on a deliberate evaluation of service quality; some had also encountered

negative reviews about long wait times, including on Google Reviews. Because the large majority of these patients are BPJS-covered, payment type was treated in this study as a descriptive characteristic of the patient population, relevant to understanding patients' expectations and cost-sensitivity within a public-insurance context, rather than as a hypothesized predictor within the structural model. Building on the theoretical pathway outlined above, this study therefore aims to examine the direct effects of hospital image and patient trust on patient satisfaction, the direct and satisfaction-mediated effects of hospital image and patient trust on patient loyalty, and the mediating role of satisfaction itself, among physiotherapy outpatients at KS Hospital to identify which levers of image and trust hospital management can act on to convert physiotherapy into the flagship, loyalty-generating service it was intended to be.

Material and Methods

A. Study Design

This study employed a sequential explanatory mixed-methods design, combining a quantitative observational (cross-sectional) study with a subsequent qualitative descriptive component. The quantitative phase was conducted first to test the hypothesized relationships among hospital image, patient trust, satisfaction, and loyalty; the qualitative phase was conducted afterward, informed by the quantitative results, to provide explanatory depth and contextual interpretation of those findings. This sequencing, quantitative first, qualitative second, with qualitative questions derived from quantitative results, is the defining feature of an explanatory sequential design, distinguishing it from designs in which both strands run concurrently or qualitative data precede quantitative testing [7].

B. Setting and Population

The study was conducted in the physiotherapy unit of KS Hospital between March and May 2025. The population comprised all outpatients undergoing physiotherapy at the unit during this period.

C. Quantitative Phase

Sampling proceeded in the following steps:

1. Eligibility screening. All outpatients presenting to the physiotherapy unit during March–May 2025 were screened against the inclusion and exclusion criteria below.
2. Inclusion criteria: age ≥ 18 years at the time of treatment; participation in at least three physiotherapy sessions at KS Hospital; non-psychiatric primary diagnosis.
3. Exclusion criteria: patients who dropped out of physiotherapy; patients who travelled out of town for more than two weeks during data collection.

4. Recruitment. Eligible patients were recruited using accidental (convenience) sampling.
5. Consent. All participants provided informed consent in accordance with research ethics requirements before data collection.

Quantitative data were collected through a structured, interviewer-administered questionnaire covering four sections corresponding to the study constructs: patients' perceptions of hospital image, level of patient trust, patient satisfaction with outpatient physiotherapy services, and patient loyalty to KS Hospital. The questionnaire comprised 108 items in total, each rated on a four-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree).

Sample size was determined according to established guidelines for Partial Least Squares Structural Equation Modelling (PLS-SEM), which recommend a sample size of either (a) 100–200 respondents, or (b) at least 5–10 times the number of free parameters (indicators) in the structural model, whichever is larger. The tested model included two exogenous constructs (hospital image and patient trust), one mediating construct (patient satisfaction), and one endogenous construct (patient loyalty). Based on the number of indicators specified for these constructs, the minimum required sample size was calculated at 80–160 respondents. Of 250 subjects, 165 met the inclusion criteria, but 5 were referred to the larger hospital and were excluded from the sample. A final sample of 160 outpatients was therefore considered sufficient for PLS-SEM parameter-based criteria, ensuring adequate statistical power for path coefficient estimation.

Instrument validity and reliability were established before the main data collection through a pilot test conducted in approximately February 2025, involving 50 respondents. The validity samples were not included as the main sample for this study. A sample of this size also supports an approximately normal sampling distribution for the computed validity/reliability statistics. validity test used outer loading with a minimum value of 0.5 or more, and reliability test used composite reliability with a minimum value of 0.7. From this validity and reliability test, we obtained that all 115 questions were suitable for the instrument.

D. Qualitative Phase

Qualitative data were collected after the quantitative analysis was completed, with interview questions developed based on the quantitative findings. Informants were purposively selected to represent three perspectives relevant at all managerial levels to the quantitative results, namely a board director, a service manager, and the head of the marketing division. Data were collected through observation and in-depth interviews, guided by structured observation and interview guidelines. The researcher served as the primary data collection instrument. The data was taken, then recorded, coded, and analysed thoroughly. The

duration of each interview is about 45-60 minutes per session, and the session could be repeated until we meet data saturation. Data validity in the qualitative phase was established through two forms of triangulation. Source triangulation by comparing accounts across the three informant groups (three levels of management, in accordance with different levels of policymakers) to identify convergence or divergence in perspectives. Method triangulation by comparing findings obtained through interviews against those obtained through direct observation.

This study was approved by the Health Research Ethics Committee of Public Health Diponegoro University (Approval Number: 106/EA/KEPK-FKM/2025). All participants provided informed consent before participating in the study. The confidentiality of all participants was strictly maintained throughout the research process.

Results and Discussions

A. Quantitative Finding

A total of 160 outpatients participated in this study. Table 1 presents the demographic characteristics of the respondents. Most participants were aged 60–79 years ($n = 70$; 43.75%), followed closely by those aged 40–59 years ($n = 68$; 42.50%). Females comprised the majority of the sample ($n = 110$; 68.75%). Regarding educational attainment, senior high school graduates represented the largest proportion ($n = 66$; 41.25%), followed by respondents with a bachelor's degree ($n = 39$; 24.38%). More than half of the participants were unemployed ($n = 82$; 51.25%), whereas 38.75% were employed in the private sector. Most respondents were covered by the Indonesian National Health Insurance (BPJS) ($n = 142$; 88.75%), while only a small proportion used private health insurance ($n = 11$; 6.88%) or paid for healthcare out of pocket ($n = 7$; 4.38%).

Table 1. Demographic criteria

	f (frequency)	Percentage (%)
Age		
• < 20	1	0.60
• 20–39	20	12.40
• 40–59	68	42.50
• 60–79	70	43.75
• ≥ 80	1	0.60
Gender		
• Female	110	68.75
• Male	50	31.25
Education		
• Elementary school	8	5.00
• Junior high school	12	7.50
• Senior high school	66	41.25
• Practical senior high school	1	0.63
• 3 Years Diploma	15	9.38
• 4 Years Diploma	4	2.50

	f (frequency)	Percentage (%)
• Bachelor's degree	39	24.38
• Master's degree	15	9.38
Occupation		
• Unemployed	82	51.25
• Private sector	62	38.75
• Civil servant	10	6.25
• Employee of a state-owned enterprise	3	1.88
• Local government-owned enterprise employee	3	1.88
Funding resource		
• National Health Insurance (BPJS Kesehatan)	142	88.75
• Private insurance	11	6.88
• Fee for service	7	4.38

The quantitative analysis validated the research model using 160 outpatient respondents at the KS Hospital physiotherapy unit. Measurement model testing confirmed instrument reliability and validity through convergent and discriminant validity assessments. All constructs, such as hospital image, patient trust, satisfaction, and loyalty, met the validity thresholds, with composite reliability scores exceeding 0.8 (Table 2). Outer loading and cross-loading also met the criteria, exceeding 0.5, and every indicator in its construct has a greater loading number than other constructs [8].

Table 2. Outer Loading for Each Indicator

Variables	Indicator	Outer Loading
HI (Hospital Image)	HB1	0.818
	HB2	0.748
	HB3	0.819
	HB4	0.816
PL (Patient Loyalty)	PL1	0.801
	PL2	0.685
	PL3	0.760
	PL4	0.833
PS (Patient Satisfaction)	PS1	0.803
	PS2	0.688
	PS3	0.743
	PS4	0.727
	PS5	0.781
PT (Patient Trust)	PT1	0.793
	PT2	0.754
	PT3	0.793

Discriminant validity was assessed using the cross-loading criteria, in which each indicator's loading on its own construct is expected to exceed its loadings on all other constructs. As shown in Table 3, all 17 indicators met this criterion: the four hospital image indicators (HI1–HI4) loaded most strongly on Hospital Image (0.748–0.819), the four loyalty indicators (PL1–PL4) loaded most strongly on Patient Loyalty (0.685–0.833), the five satisfaction indicators (PS1–PS5) loaded most strongly on Patient Satisfaction (0.688–0.803), and the three trust indicators (PT1–PT3) loaded most strongly on Patient Trust (0.754–0.793), in each case outweighing their cross-loadings on the other three constructs.

Table 3. Cross-Loading for Each Indicator

Indicators	Hospital Image	Patient Loyalty	Patient Satisfaction	Patient Trust
HI1	0.818	0.732	0.741	0.710
HI2	0.748	0.683	0.682	0.451
HI3	0.819	0.664	0.711	0.624
HI4	0.816	0.680	0.637	0.523
PL1	0.690	0.801	0.670	0.708
PL2	0.563	0.685	0.606	0.510
PL3	0.687	0.760	0.668	0.553
PL4	0.712	0.833	0.747	0.544
PS1	0.742	0.735	0.803	0.648
PS2	0.601	0.597	0.688	0.425
PS3	0.604	0.697	0.743	0.515
PS4	0.659	0.574	0.727	0.515
PS5	0.634	0.657	0.781	0.525
PT1	0.558	0.595	0.604	0.793
PT2	0.621	0.534	0.493	0.754
PT3	0.526	0.626	0.551	0.793

These results confirm adequate discriminant validity, indicating that the four constructs are empirically distinct and that each indicator appropriately represents its intended latent variable within the measurement model.

Internal consistency, reliability, and convergent validity were also evaluated using composite reliability, Cronbach's alpha, and average variance extracted (AVE), as presented in Table 4.

Table 4. Composite Reliability, AVE, and Cronbach's Alpha for Each Variable

Variables	Composite Reliability	Cornbach Alpha	AVE
Hospital Image (HI)	0.877	0.742	0.567
Patient Loyalty (PL)	0.854	0.776	0.599
Patient Satisfaction (PS)	0.865	0.769	0.525
Patient Trust (PT)	0.823	0.718	0.640

All four constructs demonstrated strong reliability, with composite reliability values ranging from 0.823 (Patient Trust) to 0.877 (Hospital Image), well above the recommended threshold of 0.70, and Cronbach's alpha values ranging from 0.718 (Patient Trust) to 0.776 (Patient Loyalty), also exceeding the acceptable cut-off of 0.70. Convergent validity was likewise confirmed, as AVE values for all constructs surpassed the minimum threshold of 0.50, ranging from 0.525 (Patient Satisfaction) to 0.640 (Patient Trust). Taken together, these results indicate that the measurement model possesses adequate internal consistency and that each construct's indicators capture a sufficient proportion of variance in their respective latent variable, supporting the overall reliability and validity of the structural model [8].

Fig. 1 illustrates the structural path analysis model, showing the hypothesized relationships among hospital image, patient trust, patient satisfaction, and patient loyalty. The

model presents both direct and indirect pathways, highlighting patient satisfaction as the mediating construct linking hospital image and patient trust to patient loyalty.

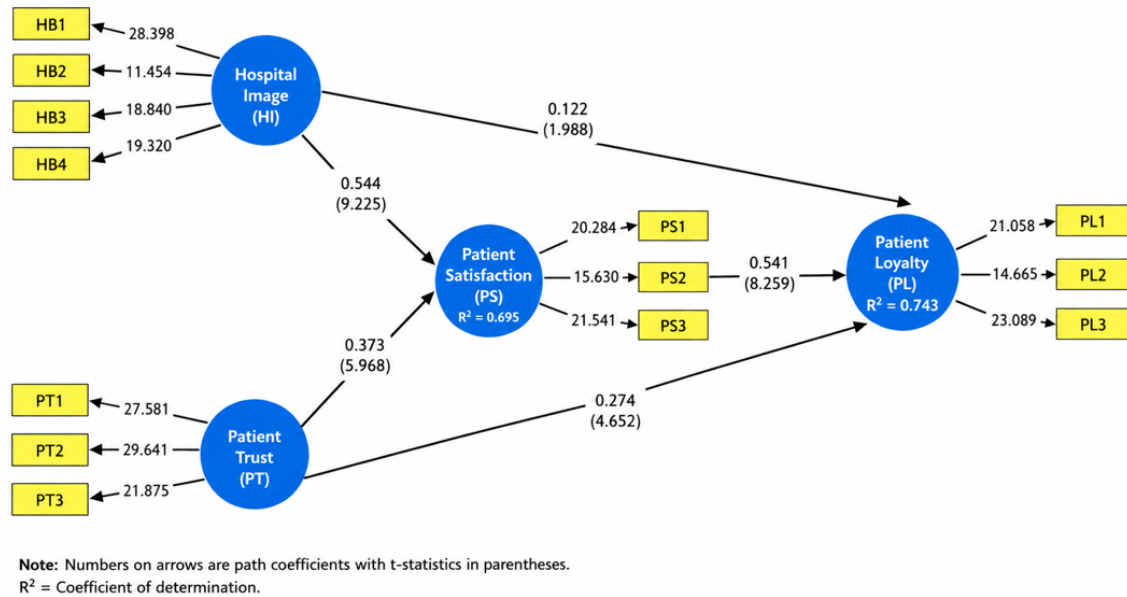


Fig. 1. Path Analysis

Table 5 presents the results of the direct path analysis, including the path coefficients, t-statistics, and p-values for each hypothesized relationship in the structural model. The path coefficient indicates the direction and magnitude of the relationship between constructs, while the t-statistic and p-value are used to determine its statistical significance. A direct effect is considered statistically significant when the t-statistic exceeds 1.96 and the p-value is less than 0.05 at the 95% confidence level. These results provide empirical evidence for evaluating the proposed hypotheses and identifying the significant direct relationships among the study variables.

Table 5. Path Coefficient, T-statistics, and P-value for Direct Pathway

Variables	Path Coefficient	T statistics (O/STDEV)	P values
Hospital Image (HI) -> Patient Loyalty (PL)	0.122	1.988	0.047
Hospital Image (HI) -> Patient Satisfaction (PS)	0.544	9.225	<0.001
Patient Satisfaction (PS)-> Patient Loyalty (PL)	0.541	8.259	<0.001
Patient Trust (PT) -> Patient Loyalty (PL)	0.274	4.652	<0.001
Patient Trust (PT) -> Patient Satisfaction (PS)	0.373	5.968	<0.001

Table 6 presents the results of the indirect path analysis, including the path coefficients, t-statistics, and p-values for the hypothesized mediating relationships in the structural model. The path coefficient indicates the magnitude and direction of the indirect effect, whereas the t-statistic and p-value are used to assess its statistical significance. An indirect effect is considered statistically significant when the t-statistic exceeds 1.96 and the p-value is less than 0.05 at the 95% confidence level. These findings indicate whether the mediator significantly

transmits the effect of the independent variable to the dependent variable and provide evidence for evaluating the proposed mediation hypotheses.

Table 6. Path Coefficient, T-statistics, and P-value for Indirect Pathway

Variable	Path coefficient	T statistics ([O/STDEV])	P values
Hospital Image (HI) -> Patient Satisfaction (PS) -> Patient Loyalty (PL)	0.202	4.885	<0.001
Patient Trust (PT) -> Patient Satisfaction (PS) -> Patient Loyalty (PL)	0.294	5.867	<0.001

Regression analysis using SEM-PLS revealed that hospital image had a strong, direct impact on patient satisfaction (path coefficient = 0.544, $T = 9.225$) ($\beta = 0.544$, $p < 0.001$), primarily driven by the favorability component. While the effect of hospital image on loyalty was statistically significant but weak (path coefficient = 0.122, $T = 1.988$) ($\beta = 0.122$, $p = 0.047$), its practical contribution was limited ($f^2 = 0.022$). The weakness stems from low scores in "uniqueness" and "emotional commitment." Nevertheless, when mediated by satisfaction, the impact of hospital image on loyalty became substantially stronger ($\beta = 0.202$, $p < 0.001$). This highlights the role of satisfaction as a key driver translating image perception into loyalty.

Trust significantly influenced both satisfaction (0.373, $T = 5.968$) and loyalty (0.274, $T = 4.652$), with satisfaction itself acting as a powerful mediator in both cases. This implies that satisfaction bridges the influence of hospital image and trust on patient loyalty. R^2 values of 0.743 for loyalty and 0.695 for satisfaction suggest a strong model explanatory power.

B. Qualitative Finding

1. Strengthening Loyalty Through Community Engagement

Management demonstrated clear awareness that word-of-mouth was the strongest quantitative indicator of patient loyalty (45.3% of respondents strongly agreed), attributing this to deliberate, longstanding efforts to build relationships with the surrounding community and primary care referral networks.

"We believe that public trust is built not only through high-quality medical care but also through a supportive social environment that promotes positive information about the hospital. Therefore, we actively foster good relationships with the community and nearby primary healthcare facilities." (Informant 1)

2. An Incomplete Identity

Despite favourable overall impressions, the *uniqueness* dimension of hospital image received the highest proportion of negative responses (28.8% disagreed or strongly disagreed). Informants linked this to an unresolved transition in the hospital's institutional identity.

"We found that many people are still unaware of what distinguishes this hospital from others. Therefore, we are planning initiatives to strengthen and promote our flagship services." (Informant 2)

3. Staffing Limits Behind Service Delays

The weakest-performing satisfaction indicator, *responsiveness*, was attributed by management to structural staffing constraints rather than a lack of clinical capability.

"After further evaluation, we realized that the main issue was the limited number of healthcare personnel. Currently, each shift is staffed by only one physiotherapist and one rehabilitation medicine specialist. However, patient volume typically peaks during the morning and late afternoon, resulting in frequent overcrowding." (Informant 3)

4. Benevolence As The Foundation of Trust

Consistent with the quantitative finding that benevolence was the highest-rated trust indicator (mean = 3.26; 37.1% rated it 4), management framed empathetic, respectful care as a deliberate institutional commitment rather than an incidental quality.

"We want patients to feel that they are not only treated for their medical conditions but also cared for with attention, compassion, and respect. While standard operating procedures (SOPs) must always be followed, we also plan to provide soft skills training for all staff every two years, with a focus on empathy, effective communication, and professional ethics in patient care." (Informant 1)

5. Listening As a Trust-Building Mechanism

Management also described ongoing feedback channels as part of sustaining patient trust over time.

"We are committed to continuously evaluating physiotherapy and other healthcare services through patient feedback, including Google Reviews and the hospital's suggestion boxes. We hope this feedback will provide valuable insights to support ongoing service improvement." (Informant 2)

6. Building Trust Through Standardized, Sustained Care

Because physiotherapy often requires repeated, long-duration treatment cycles, sometimes extending over months and re-extended based on the attending physician's (DPJP) assessment if symptoms persist, management framed patient trust as essential not just for satisfaction, but for ensuring patients continue returning rather than switching providers mid-treatment. This trust was described as being anchored in consistent adherence to formal clinical standards.

"Patients who seek treatment here expect to recover or at least improve. We are committed to fulfilling those expectations through every service we provide. For physiotherapy patients, treatment is often long-term and requires repeated visits, sometimes extending for months depending on the physician's assessment. Therefore, building patients' trust is essential so they continue their therapy at our hospital rather than moving to another provider. To ensure service quality, we strictly follow clinical practice guidelines and standard operating procedures (SOPs), regularly review the SOPs, emphasize equipment maintenance, promptly report equipment problems, and implement a system for reporting adverse events related to therapeutic modalities." (Informant 2)

Beyond this direct account, the Service Manager further explained that patient trust in the hospital's services is strongly shaped by the perceived quality of therapy delivered throughout treatment, encompassing the medical equipment used, the type of treatment administered, and the performance of both medical and non-medical staff. All service procedures within the

physiotherapy unit were reported to follow Clinical Practice Guidelines (PPK) and Standard Operating Procedures (SOP), with the hospital conducting routine equipment maintenance and submitting monthly side-effect reports from physiotherapy treatment to the quality assurance division as a form of ongoing service-quality oversight.

Discussion

Within the structural model, patient satisfaction emerged as the central mediator linking hospital image and patient trust to loyalty, accounting for substantial variance in satisfaction ($R^2 = 0.695$) and loyalty ($R^2 = 0.743$). This pattern of image and trust operating primarily through satisfaction rather than acting on loyalty directly frames the asymmetries discussed below and is consistent with relationship-marketing models in which satisfaction, not antecedent perceptions alone, is the proximal driver of sustained customer relationships [15], [19].

Hospital image showed the strongest direct effect on patient satisfaction, consistent with Expectation Confirmation Theory: a favourable image sets an expectation that, when met by the actual service experience, translates into satisfaction. This is reflected in the "favourability" dimension, scoring highest among image indicators, indicating that reputation and perceived credibility meaningfully shape how patients evaluate their care, a finding that aligns with prior hospital-branding research identifying image as a primary antecedent of patient satisfaction [5], [10]-[12]. The "uniqueness" dimension, by contrast, scored lowest, suggesting patients view KS Hospital favourably without yet perceiving a clearly distinct identity.

This same uniqueness gap helps explain why the image's direct effect on loyalty was statistically significant but practically negligible ($f^2 = 0.022$). Loyalty is a behavioural and emotional commitment built through accumulated, confirmed experience, not a single favourable impression consistent with foundational loyalty theory, which models loyalty as developing through cognitive, affective, and conative stages rather than forming directly from an antecedent like image [4]. Image supplies only the cognitive starting point; without a distinct, memorable identity, that impression stays generic and provides little pull toward the affective commitment loyalty requires. This is enhanced by emotional commitment registering the lowest agreement levels of any loyalty indicator, indicating many patients hold a positive view of the hospital without yet feeling attached to it, as a gap consistent with branding literature showing that distinctiveness, not favourability alone, is what converts goodwill into durable brand loyalty [12], [13].

Patient trust followed a different pattern. Its indirect effect on loyalty through satisfaction ($\beta = 0.294$) exceeded its direct effect ($\beta = 0.274$), indicating that loyalty is not built primarily on initial trust but develops through the satisfying experiences that trust helps

generate over time [13], [18]. This trust–satisfaction–loyalty pathway, being more robust than the direct trust–loyalty route, reinforces the broader pattern in this model: satisfaction, not antecedent perceptions in isolation, is what most reliably converts positive evaluations into loyalty, echoing prior findings that trust's influence on healthcare loyalty operates substantially through accumulated satisfaction rather than as a standalone driver [16], [17]. Among trust dimensions, benevolence scored highest, underscoring that patients weigh perceived empathy and goodwill heavily, while competence scored lower, a gap that may be limiting the deeper emotional commitment loyalty requires.

The responsiveness dimension of satisfaction was the weakest across the model, pointing to service timeliness as the most actionable constraint on the satisfaction–loyalty pathway. Qualitative findings showed that staffing limitations and waiting times approached the regulatory ceiling despite formal compliance with national healthcare standards, confirming this, indicating that quantitative weakness and operational reality are well aligned in this case [20], [21].

Taken together, these findings depict a hospital that has successfully built a favourable, trustworthy image but has not yet converted that image into a distinctive identity or a fully realized emotional bond with patients. Addressing this requires two complementary moves: improving service responsiveness through additional physiotherapists per shift or optimized peak-hour scheduling, consistent with prior evidence identifying responsiveness as a key determinant of physiotherapy patient satisfaction [2], [3] [22] and strengthening differentiation by actively promoting what is already operationally distinct, since a distinctive, well-communicated identity, not competent service alone, is what research on hospital branding identifies as necessary to convert favourable impressions into durable competitive advantage [12], [13] [23]. The hospital's planned relocation to a larger, age-segregated physiotherapy space targets both gaps simultaneously, as facility quality shapes both functional satisfaction and the service cues patients use to judge image and loyalty [13], [14] [24]. Complementing this, formalizing soft-skills training rather than leaving empathetic communication to individual staff disposition would standardize the benevolence-driven trust-building already valued by patients [16], [17] [25], while strengthening referral relationships with surrounding primary care facilities would extend the word-of-mouth mechanism the strongest loyalty indicator in this study at the community level, consistent with evidence that loyalty accumulates through sustained satisfaction and commitment rather than trust or image in isolation [4], [15], [19] [26].

It should be noted that all BPJS-related findings in this study are descriptive rather than inferential. Payment type was treated as a population characteristic, not a hypothesized predictor entered into the structural model, so the high proportion of BPJS-covered patients

describes the sample rather than demonstrating a statistical effect on satisfaction, trust, or loyalty [27]. Future research could explicitly model payment type as a moderator or covariate if an inferential claim about its role in this pathway is desired.

The findings confirm that hospital image and patient trust significantly affect patient satisfaction, and that satisfaction is the central mechanism through which both constructs translate into loyalty: hospital image's direct effect on loyalty was negligible ($f^2 = 0.022$), while trust's effect on loyalty operated more strongly through satisfaction ($\beta = 0.294$) than directly ($\beta = 0.274$). Satisfaction, therefore, functions as the cornerstone of patient loyalty in this setting, rather than image or trust acting as independent drivers. Practically, these results suggest that KS Hospital should prioritize improving service responsiveness (e.g., physiotherapist staffing and scheduling), strengthening the distinctiveness of its image through targeted communication of its flagship services, and reinforcing benevolence-based trust through standardized, empathetic care, since these are the levers most likely to improve satisfaction and, through it, loyalty [22], [23], [25].

Conclusion

This study confirms that hospital image and patient trust significantly affect patient satisfaction, and that satisfaction is the central mechanism through which both constructs drive loyalty. Satisfaction, therefore, is the cornerstone of patient loyalty in this setting, rather than image or trust acting independently. Practically, KS Hospital, as a type D private hospital, should prioritize improving service responsiveness, strengthening the distinctiveness of its image through targeted communication of its flagship services, and reinforcing benevolence-based trust through standardized, empathetic care, the levers most likely to improve satisfaction and, through it, loyalty.

Limitations and Suggestions

This study has two main limitations related to its sampling approach. First, the use of accidental sampling means only patients who were present and willing to participate during the March–May 2025 data collection period were included, which may have excluded patients with different treatment schedules, severity levels, or attitudes toward participation, limiting the representativeness of the sample relative to the full physiotherapy outpatient population. Second, data were collected within the hospital premises, which may have introduced social desirability bias, patients could have been less willing to report negative perceptions of the hospital's services while still on-site or in proximity to hospital staff, potentially inflating reported satisfaction, trust, or loyalty.

Future studies should incorporate patients as direct informants in the qualitative phase, alongside management perspectives, to triangulate findings from the service recipient's

point of view rather than relying solely on managerial accounts. In addition, because payment type was treated descriptively rather than as a tested predictor in this study, future research should explicitly model funding source (e.g., BPJS, private insurance, fee-for-service) as a covariate or moderator to clarify whether and how it shapes the image-trust-satisfaction-loyalty pathway.

Conflict of Interest

The authors declare no conflict of interest.

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