

Service Quality, Brand Image, and Patient Loyalty in Indonesian Primary Healthcare: Patient Satisfaction as a Mediator

Iqlima Seilena Rachma Nurnaningtyas¹, Liliana Inggrit Wijaya¹

¹Universitas Surabaya, West Java, Indonesia

Corresponding author e-mail: liliana@staff.ubaya.ac.id

Article History: Received on 9 March 2026, Revised on 28 April 2026,
Published on 9 May 2026

Abstract: This study investigates the effects of service quality and brand image on patient loyalty, with patient satisfaction as a mediating variable, at a public primary healthcare centre in Indonesia. Using a cross-sectional survey of 300 outpatients with at least two visits for different diagnoses, data were analyzed via Structural Equation Modeling (SEM) and the Sobel test, and model fit was evaluated with multiple indices. The results indicate that service quality (CR=6.54, $p < 0.001$) and brand image (CR=5.94, $p < 0.001$) significantly enhance patient satisfaction, whereas service quality (CR=0.59, $p = 0.56$), brand image (CR=1.77, $p = 0.08$), and patient satisfaction (CR=-0.01, $p = 0.99$) do not significantly affect patient loyalty, and satisfaction does not mediate the relationships (Sobel $p = 0.995$). The model exhibited poor fit (CFI=0.79, RMSEA=0.092), indicating that findings should be interpreted cautiously. The study contributes to understanding that satisfaction can be improved by service quality and institutional image, but loyalty may depend on other factors such as trust, access, and continuity of care. Health centre managers should not assume satisfaction alone ensures loyalty, and future research should test alternative mediators using longitudinal designs and better-fitting models.

Keywords: Brand Image, Patient Loyalty, Patient Satisfaction, Service Quality

A. Introduction

Primary health care forms the foundation of a responsive health system, serving as the first and most frequent point of patient contact. Quality in this context encompasses not only clinical effectiveness but also safety, timeliness, people-centredness, equity, integration, and efficiency. International evidence shows that both tangible aspects of service, such as facilities and equipment, and intangible aspects, such as responsiveness and empathy, shape patient evaluations and loyalty behaviors (World Health Organization, 2025).

Despite extensive research on patient satisfaction and loyalty, the mechanisms through which these factors operate in public primary-care settings remain unclear. Most studies focus on hospitals or private institutions, and their findings may not generalize to public community health centers. For example, (Batbaatar et al., 2016)

demonstrated that hard and soft dimensions of service quality influence satisfaction and loyalty differently across patient groups, while (Nunu, & Munyewende, 2017) confirmed that patient satisfaction mediates the effect of service quality on loyalty. Cham et al., (2021) similarly found that corporate image influences both satisfaction and loyalty, with satisfaction as a mediator. Nunu, & Munyewende, (2017) further highlighted that patient satisfaction fluctuates over time, underscoring the need for continuous monitoring rather than static assessment. These studies point to the importance of understanding how service quality and brand image jointly affect patient loyalty through patient satisfaction, particularly in public primary-care institutions where empirical evidence remains limited.

To address this gap, the present study examines service quality and brand image as antecedents of patient loyalty in the public primary-care context of UPTD Puskesmas Sooko, Mojokerto Regency, with patient satisfaction as a mediating variable. The study proposes a conceptual framework in which both service quality and brand image influence patient loyalty directly and indirectly through patient satisfaction. The following hypotheses are derived from this framework: service quality positively affects patient satisfaction (H1) and patient loyalty (H3); brand image positively affects patient satisfaction (H2) and patient loyalty (H4); patient satisfaction positively affects patient loyalty (H5); and patient satisfaction mediates the effects of service quality (H6) and brand image (H7) on patient loyalty. A visual conceptual framework figure illustrates these relationships, showing both the direct and mediated pathways expected in the model. Based on this framework, the study addresses the overarching research question: How do service quality and brand image, through patient satisfaction, influence patient loyalty in public primary healthcare?

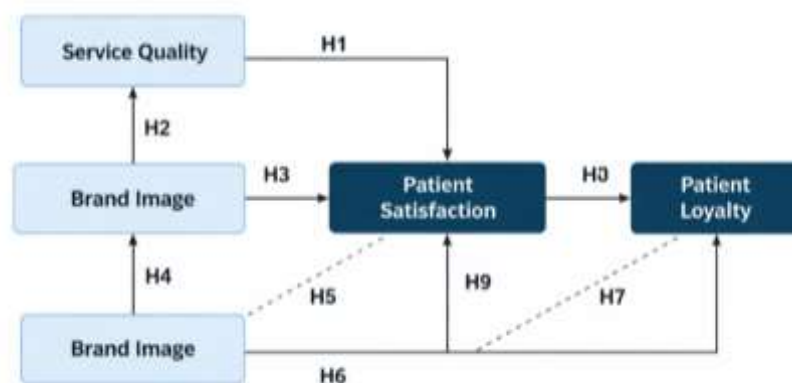


Figure 1. Conceptual Framework

B. Methods

This study employed a quantitative explanatory design to investigate the effects of service quality and brand image on patient loyalty, with patient satisfaction serving as a mediating variable, at UPTD Puskesmas Sooko, Mojokerto Regency. The

independent variables were service quality and brand image, the dependent variable was patient loyalty, and patient satisfaction functioned as the mediating variable. A quantitative explanatory design was selected to enable the testing of theoretically specified direct and indirect relationships among latent constructs using Structural Equation Modeling (SEM).

The research population consisted of all outpatients of UPTD Puskesmas Sooko who had visited at least twice for different diagnoses. Since the total population could not be determined precisely, purposive sampling was used to select 300 respondents, following SEM recommendations of 5–10 observations per estimated parameter. Inclusion criteria required respondents to be at least 17 years old and have experienced at least two visits during the study period.

Primary data were collected via a structured, closed-ended questionnaire distributed online through Google Forms. The questionnaire consisted of 30 items covering the four constructs: service quality, brand image, patient satisfaction, and patient loyalty. Responses were measured on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire was validated and tested for reliability prior to data collection to ensure each item accurately reflected the intended construct. Secondary data were obtained from supporting documentation and relevant literature.

Data analysis proceeded in two stages. First, descriptive statistics were computed to summarize respondent characteristics and response distributions. Second, SEM was applied to test direct and indirect relationships among variables while accounting for measurement error. Model fit was evaluated using standard goodness-of-fit indices, and hypothesis testing relied on critical ratio (CR) values ≥ 1.96 or p-values ≤ 0.05 for significance. The mediating effect of patient satisfaction was tested using the Sobel test, consistent with best practices in evaluating complex causal pathways in quantitative research.

C. Results and Discussion

Table 1. Descriptive Statistics of All Variables

Variable	Indicator	N	Minimum	Maximum	Mean	Std. Deviation
Service Quality (X1)	X1.1.1	300	1.00	5.00	4.3700	0.70812
Service Quality (X1)	X1.1.2	300	1.00	5.00	4.2233	0.66453
Service Quality (X1)	X1.2.1	300	1.00	5.00	4.3867	0.70152
Service Quality (X1)	X1.2.2	300	1.00	5.00	4.3233	0.68338
Service Quality (X1)	X1.3.1	300	1.00	5.00	4.3800	0.68593
Service Quality (X1)	X1.3.2	300	1.00	5.00	4.3633	0.78744
Service Quality (X1)	X1.4.1	300	1.00	5.00	4.3133	0.69047
Service Quality (X1)	X1.4.2	300	1.00	5.00	4.3533	0.69529
Service Quality (X1)	X1.5.1	300	1.00	5.00	4.3933	0.73514
Service Quality (X1)	X1.5.2	300	1.00	5.00	4.2800	0.75065
Average of Variable X1		300			4.3386	0.7102

Brand Image (X2)	X2.1.1	300	1.00	5.00	4.3133	0.67081
Brand Image (X2)	X2.1.2	300	2.00	5.00	4.3700	0.71751
Brand Image (X2)	X2.2.1	300	1.00	5.00	4.3300	0.70433
Brand Image (X2)	X2.2.2	300	1.00	5.00	4.3367	0.71999
Brand Image (X2)	X2.3.1	300	1.00	5.00	4.3367	0.76065
Brand Image (X2)	X2.3.2	300	1.00	5.00	4.3900	0.63185
Average of Variable X2		300			4.3461	0.7009
Patient Loyalty (Y)	Y.1.1	300	1.00	5.00	4.3133	0.70958
Patient Loyalty (Y)	Y.1.2	300	1.00	5.00	4.2367	0.81417
Patient Loyalty (Y)	Y.2.1	300	2.00	5.00	4.3433	0.68338
Patient Loyalty (Y)	Y.2.2	300	2.00	5.00	4.3733	0.62871
Patient Loyalty (Y)	Y.3.1	300	1.00	5.00	4.4233	0.69214
Patient Loyalty (Y)	Y.3.2	300	1.00	5.00	4.3467	0.72681
Average of Variable Y		300			4.3394	0.7091
Patient Satisfaction (M1)	M.1.1	300	1.00	5.00	4.4333	0.69798
Patient Satisfaction (M1)	M.1.2	300	1.00	5.00	4.3133	0.69529
Patient Satisfaction (M1)	M.2.1	300	1.00	5.00	4.3700	0.71283
Patient Satisfaction (M1)	M.2.2	300	1.00	5.00	4.3167	0.72443
Patient Satisfaction (M1)	M.3.1	300	1.00	5.00	4.3500	0.73664
Patient Satisfaction (M1)	M.3.2	300	1.00	5.00	4.3300	0.70907
Patient Satisfaction (M1)	M.4.1	300	1.00	5.00	4.3267	0.71764
Patient Satisfaction (M1)	M.4.2	300	1.00	5.00	4.2567	0.78710
Average of Variable M1		300			4.3371	0.7226

The descriptive statistics indicate that all indicators across the four constructs recorded mean scores above 4.00, ranging from 4.2233 to 4.4333. On a five-point Likert-type scale, this pattern suggests that respondents generally expressed high levels of agreement with all questionnaire items, indicating a strongly positive evaluation of the measured constructs. In survey research, Likert-type scales are commonly used to capture perceptions and attitudes, and mean values located well above the scale midpoint typically reflect favorable respondent judgments rather than neutral or ambivalent positions (Koo & Yang, 2025). More broadly, in healthcare research, high satisfaction- and experience-related scores are often interpreted as evidence that patients perceive the service environment positively and consistently across several dimensions of care (Ferreira et al., 2023).

At the construct level, Brand Image (X2) had the highest overall mean (4.3461), followed by Patient Loyalty (Y) at 4.3394, Service Quality (X1) at 4.3386, and Patient Satisfaction (M1) at 4.3371. The differences among these averages were very small, indicating that respondents evaluated all four constructs positively and in a relatively balanced manner. Substantively, this suggests that UPTD Puskesmas Sooko is not only perceived as delivering good services, but is also viewed as having a strong institutional image, satisfactory patient experience, and a high tendency to retain patient loyalty. This interpretation is consistent with recent healthcare studies showing that perceived service quality, satisfaction, institutional image, and loyalty are closely interrelated and often move in the same positive direction in patient evaluations.

For the Service Quality variable, the highest mean score was found for indicator X1.5.1 (4.3933), while the lowest was X1.1.2 (4.2233). This pattern suggests that the most appreciated aspects of service quality were likely those related to direct service encounters, while comparatively lower ratings may reflect aspects that are more administrative, procedural, or informational in nature. Even so, all service-quality indicators remained in the high range, meaning that respondents still assessed the service positively overall. In the healthcare literature, patients often place particular value on responsiveness, empathy, communication, and assurance during service encounters, while information clarity and process transparency are common areas where organizations can still improve despite generally positive ratings.

For Brand Image, the highest mean was recorded for X2.3.2 (4.3900), while the lowest mean was X2.1.1 (4.3133). These results indicate that the institutional image of Puskesmas Sooko was already strong and favorable in the minds of respondents. The relatively low variation within this construct, especially for the highest-scoring item with a standard deviation of 0.63185, also suggests that respondents shared a fairly consistent view of the institution's image. From a substantive perspective, this finding implies that the health centre has been successful in building positive associations in patients' minds, which is important because recent international research has shown that healthcare brand image can strengthen patient satisfaction, revisit intention, and long-term relational outcomes.

For Patient Loyalty, the highest mean was observed for Y.3.1 (4.4233), whereas the lowest mean was Y.1.2 (4.2367). This pattern suggests that patient loyalty was strongest in the advocacy dimension, particularly in patients' willingness to share positive experiences with others. In contrast, the largest response variation also appeared in Y.1.2 (SD = 0.81417), indicating that the tendency to remain fully committed to the same health facility without considering alternatives was relatively more heterogeneous among respondents. In other words, patient loyalty appears high, but not all respondents expressed the same degree of exclusive commitment. This interpretation aligns with recent primary-care evidence showing that patient loyalty is multidimensional and may be reflected more strongly in trust, recommendation, or return intention than in absolute resistance to alternative providers (Raza et al., 2020).

For Patient Satisfaction, the highest mean was found for M.1.1 (4.4333), while the lowest mean was M.4.2 (4.2567). This indicates that respondents perceived some aspects of their care experience very positively, especially those likely related to ease of access and overall service acceptance, whereas relatively lower ratings may point to process efficiency or waiting-time issues. Nevertheless, all satisfaction indicators remained high, meaning that respondents were generally satisfied with their treatment experience at Puskesmas Sooko. This result is in line with international healthcare research showing that patient satisfaction is often highest when access, provider interaction, and overall care experience meet expectations, while time

efficiency and operational flow frequently remain areas for improvement even in well-rated institutions (Ferreira et al., 2023).

From the perspective of dispersion, all standard deviation values ranged from 0.62871 to 0.81417, which indicates low to moderate variability in responses. This means that respondent answers were not spread far from the mean, so the overall pattern of responses can be considered relatively homogeneous. Methodologically, this degree of homogeneity strengthens the interpretation that respondents shared broadly similar perceptions of the research object. At the same time, the dominance of high mean scores across all constructs suggests a favorable response tendency toward the services of Puskesmas Sooko. In Likert-type measurement, such a combination of high central tendency and modest dispersion usually indicates not only positive evaluations but also reasonable consistency in respondent judgments across items (Koo & Yang, 2025).

Table 2. Goodness-of-Fit Values in the Base SEM Model

Criteria	Test Result	Critical Value	Remark
Chi-square	875.216	≤ chi-square table	Not Fit
Probability	0.000	> 0.05	Not Fit
RMSEA	0.092	≤ 0.08	Not Fit
CMIN/DF	2.47	< 2.00	Not Fit
GFI	0.838	> 0.90	Not Fit
AGFI	0.804	> 0.90	Not Fit
TLI	0.770	> 0.95	Not Fit
CFI	0.794	> 0.95	Not Fit
IFI	0.796	> 0.90	Not Fit
NFI	0.737	> 0.90	Not Fit

The base SEM model did not achieve acceptable overall fit, as indicated by multiple fit indices (Chi-square = 875.216, $p = 0.000$; RMSEA = 0.092; CMIN/DF = 2.47; GFI = 0.838; AGFI = 0.804; TLI = 0.770; CFI = 0.794; IFI = 0.796; NFI = 0.737). All of these values fall outside the commonly recommended thresholds (RMSEA ≤ 0.08, CFI/TLI ≥ 0.90, GFI/AGFI ≥ 0.90), suggesting that the proposed model does not adequately reproduce the observed data (Liang et al., 2025). The significant chi-square value and low probability further indicate a substantial discrepancy between the model and the empirical covariance matrix.

Given these results, the model should be interpreted with caution. Although hypothesis testing was performed using critical ratios ($CR \geq 1.96$) and p-values (≤ 0.05) to determine significance of structural paths, the poor overall model fit implies that the parameter estimates and significance tests may be biased or unreliable. Ideally, model specification or modification guided by theory and modification indices would be required before drawing strong conclusions from the structural paths. In the absence of such specification, any inference about the relationships among service quality, brand image, patient satisfaction, and patient loyalty must be considered tentative.

Table 3. Direct Effect Testing Using Regression Weights

Relationship	Estimate	S.E.	C.R.	P	Remark
Service Quality → Patient Satisfaction	0.587	0.090	6.536	***	Positive, Significant
Brand Image → Patient Satisfaction	0.980	0.165	5.941	***	Positive, Significant
Patient Satisfaction → Patient Loyalty	-0.005	0.801	-0.006	0.995	Not Significant
Service Quality → Patient Loyalty	0.289	0.492	0.588	0.557	Positive, Not Significant
Brand Image → Patient Loyalty	1.344	0.761	1.766	0.077	Positive, Not Significant

The hypothesis testing results based on the standardized regression weights of the modified SEM structural model indicate that service quality and brand image have positive and significant effects on patient satisfaction at Puskesmas Sooko, as shown by their critical ratio values of 6.536 and 5.941, respectively, which exceed 1.96, with p-values below 0.05 and positive coefficients of 0.587 and 0.980; therefore, H1 and H2 are accepted. In contrast, patient satisfaction does not have a significant effect on patient loyalty, as indicated by a CR value of -0.006, a p-value of 0.995, and a coefficient of -0.005, so H3 is rejected. Similarly, service quality has a positive but not significant effect on patient loyalty, with a CR value of 0.588, a p-value of 0.557, and a coefficient of 0.289, meaning that H4 is rejected. Brand image also shows a positive but not significant effect on patient loyalty, with a CR value of 1.766, a p-value of 0.077, and a coefficient of 1.344, so H5 is also rejected. Overall, these findings suggest that service quality and brand image play a stronger role in improving patient satisfaction than in directly shaping patient loyalty, which is consistent with recent SEM-based studies that interpret path significance using critical ratio and p-value thresholds and emphasize that not all positive path coefficients necessarily indicate statistically supported direct effects (Verma et al, 2022).

Table 4. Indirect Effect Testing Using the Sobel Test

Indirect Effect	p-value	Remark
The effect of service quality on patient loyalty through patient satisfaction	0.995	Insignificant Mediation
The effect of brand image on patient loyalty through patient satisfaction	0.995	Insignificant Mediation

The results of the indirect effect testing using the Sobel test indicate that patient satisfaction is not able to mediate the effect of either service quality or brand image on patient loyalty. This is shown by the p-value of 0.995 for both indirect paths, which is greater than 0.05, meaning that the mediation effects are statistically insignificant. Therefore, the effect of service quality on patient loyalty through patient satisfaction and the effect of brand image on patient loyalty through patient satisfaction are not supported empirically. These findings suggest that although service quality and brand image may increase patient satisfaction, the increase in satisfaction is not strong enough to indirectly generate patient loyalty in this model, which is in line with recent mediation literature stating that an indirect effect is only supported when the Sobel test or other mediation significance tests produce a p-value below the accepted significance threshold (Schuler et al., 2025).

Discussion

The findings of this study indicate that service quality and brand image play important roles in shaping patient satisfaction, but they are not yet strong enough to directly or indirectly build patient loyalty. This pattern suggests that, in the context of Puskesmas Sooko, patients are more likely to give positive evaluations of the service experience they receive than to develop a long-term behavioral commitment to remain loyal to the same healthcare facility.

The finding that service quality has a positive and significant effect on patient satisfaction confirms that service quality remains a fundamental basis for the formation of patient perceptions of healthcare services. The better the quality of service perceived by patients, the higher the level of satisfaction that emerges after the service process. This result is consistent with recent international studies showing that service quality significantly contributes to patient satisfaction in healthcare institutions, particularly through dimensions such as responsiveness, communication, assurance, and care processes (Ntihakose et al, 2025).

Substantively, this result shows that patient satisfaction at the health center is not shaped solely by medical outcomes, but also by broader service experiences, such as responsiveness, clarity of information, staff friendliness, and facility comfort. In primary healthcare, direct and repeated service experiences often become the main basis upon which patients evaluate whether the services they receive have met their expectations. This interpretation is in line with recent evidence emphasizing that patient satisfaction in ambulatory and primary-care settings is strongly influenced by communication quality, waiting time, courtesy, and overall service responsiveness (Manzoor et al., 2019; Ntihakose et al, 2025).

This study also shows that brand image has a positive and significant effect on patient satisfaction. This finding indicates that the image of a healthcare institution is not merely a formal identity, but rather patients' overall perception of the institution's reputation, credibility, and reliability. When patients hold a positive perception of a health center, they tend to arrive with more favorable expectations, making satisfaction easier to achieve when the services received are consistent with those expectations. This is consistent with recent international research showing that institutional image, perceived quality, and trust-related perceptions are positively associated with patient satisfaction and subsequent behavioral outcomes in healthcare services (Osei-Frimpong et al., 2018; Raza et al., 2020).

From a managerial perspective, the effect of brand image on patient satisfaction indicates that managing the reputation of a healthcare institution is an important part of service strategy. In Puskesmas Sooko, brand image is likely shaped by the community's collective experience, service consistency, and perceptions of the professionalism of health personnel. Therefore, improving patient satisfaction

depends not only on the technical aspects of service delivery, but also on the institution's ability to maintain a positive public image and public trust over time. Recent international studies likewise emphasize that loyalty-oriented healthcare strategies depend not only on functional service quality but also on institutional reputation, trust, and perceived credibility.

In contrast to the results for patient satisfaction, this study found that service quality does not have a significant effect on patient loyalty. This finding indicates that services perceived as good do not necessarily encourage patients to consistently return to the same provider. In other words, patients may feel satisfied with the quality of care they receive, but their decision to remain loyal appears to be influenced by factors beyond the service experience itself. This result differs from some earlier international findings showing that better healthcare service quality can strengthen patient loyalty, either directly or through other relational mechanisms (Raza et al., 2020).

In the context of a public primary-care facility, the non-significant effect of service quality on loyalty may be explained by structural factors such as geographic proximity, referral systems, health insurance arrangements, and habitual treatment-seeking behavior. In other words, the patient's decision to return is not determined solely by good service, but also by access, convenience, and other practical considerations. This explanation is supported by recent international studies showing that loyalty and willingness to continue using primary-care services are strongly influenced by trust, expectations, institutional mechanisms, and the broader structure of primary-care delivery (Li et al., 2025; Zhou et al., 2017).

This study also found that brand image has a positive but non-significant effect on patient loyalty (Paradilla et al., 2022). This result indicates that a good institutional image does create a positive directional tendency, but it is not strong enough to directly shape loyal patient behavior. Thus, in this context, brand image appears to be more effective in forming initial perceptions and satisfaction than in directly determining patient loyalty to the healthcare facility. This interpretation is consistent with recent international work suggesting that image-related variables often operate through intermediate relational mechanisms rather than functioning as immediate drivers of loyalty behavior.

These findings imply that patient loyalty in primary healthcare facilities may require stronger psychological mediators, such as trust or commitment. Recent international studies show that service quality and institutional image significantly influence patient trust, while trust often acts as an essential prerequisite before loyalty is fully formed (Zaid et al., 2025). Therefore, the non-significant direct effect of brand image on loyalty in this study may indicate that a favorable image alone does not automatically generate patient commitment unless it is accompanied by a strong sense of trust in the institution.

One of the most important findings of this study is that patient satisfaction does not have a significant effect on patient loyalty (Liu et al., 2021). This result indicates that patients who are satisfied do not necessarily become loyal patients. In the context of Puskesmas Sooko, satisfaction appears to reflect an evaluation of a specific service episode rather than a long-term attachment to the institution. Thus, satisfaction in this study seems to be transactional rather than relational.

This finding differs from recent international evidence showing that patient satisfaction can function as a significant predictor of loyalty in some primary-care or outpatient settings. However, these differences also indicate that the role of satisfaction in shaping loyalty is highly contextual. In some healthcare systems, satisfaction may develop into loyalty because it is supported by trust and continuity of care, whereas in other contexts, satisfaction may remain only a positive evaluation without leading to strong revisit behavior (Li et al., 2025).

These differing results also suggest that patient loyalty at Puskesmas may be influenced more strongly by non-affective factors, such as treatment needs, geographic proximity, administrative procedures, physician availability, and continuity of access to services. Therefore, even when patients feel satisfied, they may still consider other healthcare facilities when facing different medical needs. This indicates that patient loyalty in primary healthcare cannot be explained simply through satisfaction alone. Recent studies of primary-care loyalty likewise show that utilization and continued willingness to seek care depend on broader system-level and trust-related factors beyond satisfaction itself (Zhou et al., 2017).

The mediation test results also show that patient satisfaction is unable to mediate the effect of service quality on patient loyalty. This finding is logically consistent because the path from satisfaction to loyalty was itself non-significant. In other words, service quality successfully increases satisfaction, but the increase in satisfaction does not continue into loyalty. Therefore, in this model, patient satisfaction is more appropriately positioned as a direct outcome of service quality than as a bridge toward loyalty. This interpretation is consistent with recent international mediation-oriented healthcare studies showing that when the satisfaction-to-loyalty path is weak or insignificant, indirect effects through satisfaction are unlikely to be supported (Ghorbanzadeh, 2021).

A similarly non-significant mediation finding also occurs in the relationship between brand image and patient loyalty through patient satisfaction. This result strengthens the assumption that the pathway for building patient loyalty in primary-care facilities may require other, more stable mediators, especially trust. This explanation is supported by recent international studies showing that trust plays a major role in explaining how service experience, system responsiveness, and institutional perceptions are translated into loyalty or continued willingness to use healthcare services (Verma et al, 2022).

Overall, the results of this study confirm that service quality and brand image are important factors in improving patient satisfaction, but patient loyalty at Puskesmas Sooko appears to be shaped by a more complex mechanism that cannot be sufficiently explained by satisfaction alone. The differences between these findings and some previous studies represent an important scientific contribution, because they suggest that patient loyalty models are highly contextual. Therefore, future studies should consider additional variables such as trust, commitment, continuity of care, access to services, and other systemic factors in order to explain patient loyalty in primary healthcare facilities more comprehensively (Li et al., 2025; Liang et al., 2025).

D. Conclusions

This study finds that service quality and brand image significantly enhance patient satisfaction at UPTD Puskesmas Sooko, Mojokerto Regency, with higher perceptions of staff reliability, responsiveness, facility comfort, and institutional reputation associated with greater satisfaction. However, neither patient satisfaction nor the two antecedents have a significant direct or indirect effect on patient loyalty, indicating that loyalty in primary healthcare is influenced by other factors such as trust, continuity of care, access convenience, and referral systems. The model explains satisfaction effectively but fails to account for loyalty, and the poor fit of the base SEM model, with CFI = 0.79 and RMSEA = 0.092, suggests that the results are exploratory. Managers should not assume that improving satisfaction alone will generate loyalty; efforts should focus on building trust, ensuring consistent care, and enhancing access. The study is limited by its cross-sectional design, single-site setting, reliance on self-reported data, and poor model fit, which constrain generalizability. Future research should examine alternative mediators such as trust, commitment, or perceived access using longitudinal designs and bootstrapped mediation in a well-fitting model, and comparative studies across public and private primary care facilities are recommended to understand contextual differences in patient loyalty formation.

E. Acknowledgement

We would like to express sincere gratitude to all individuals and institutions who contributed to the completion of this research. Special appreciation is extended to the academic supervisor for the valuable guidance, constructive suggestions, and continuous support throughout the research process. We also wish to thank the head and staff of UPTD Puskesmas Sooko, Mojokerto Regency, for granting permission and providing the necessary assistance during the data collection process. Deep appreciation is also addressed to all respondents who willingly participated in this study and shared their time and experiences. Finally, we are grateful to family, friends, and all parties who provided encouragement, motivation, and support during the completion of this research.

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