

Service Quality and Patient Satisfaction in Primary Healthcare: The Mediating Role of Patient Experience in Central Kalimantan, Indonesia

Lidya Nur Hayya¹, Didin Saepudin², A Rahadian Malik³

¹*Master of Management Program, Universitas Sangga Buana YPKP, Bandung, Indonesia*

Corresponding author: Lidya Nur Hayya

ABSTRACT: This study examines the effect of service quality on patient satisfaction and tests patient experience as a mediating mechanism in a primary healthcare setting. A quantitative explanatory survey was conducted among 138 outpatient patients at UPT Puskesmas Baru, Barito Selatan Regency, Central Kalimantan, Indonesia. Respondents were selected purposively after completing the service process. Data were collected using a five-point Likert questionnaire measuring service quality through SERVQUAL dimensions, patient experience across the service journey, and patient satisfaction, and were analyzed in Jamovi using descriptive statistics, reliability testing, linear regression, and mediation analysis. Service quality had a positive and significant effect on patient experience ($\beta = 0.863$, $p < 0.001$) and on patient satisfaction in the bivariate model ($\beta = 0.732$, $p < 0.001$). Patient experience also significantly predicted patient satisfaction ($\beta = 0.780$, $p < 0.001$). In the mediation model, the indirect effect of service quality on satisfaction through patient experience was significant ($\beta = 0.571$, $p < 0.001$), while the remaining direct effect became non-significant ($\beta = 0.161$, $p = 0.167$), indicating full mediation. The findings show that service quality improves satisfaction primarily when patients experience the service process positively. Primary healthcare managers should therefore evaluate not only service standards but also registration, communication, waiting time, staff interaction, care coordination, and environmental comfort as integrated components of patient-centered quality improvement.

KEYWORDS - service quality, patient experience, patient satisfaction, primary healthcare, SERVQUAL, mediation analysis

I. Introduction

Primary healthcare is the first and most frequent point of contact between communities and the health system. In this setting, the perceived quality of care is shaped not only by clinical competence but also by the way services are organized and delivered. The SERVQUAL framework conceptualizes service quality through tangibles, reliability, responsiveness, assurance, and empathy [1]. In healthcare, these dimensions interact with timeliness, communication, safety, and person-centeredness, all of which can influence how patients evaluate a service encounter [7], [8].

Patient satisfaction is commonly explained through expectation-disconfirmation logic: patients compare what they expected before receiving care with what they perceive after the encounter [2]. However, satisfaction and patient experience are not identical. Patient experience describes what actually occurs during the care journey, including registration, communication, waiting, staff interaction, involvement, comfort, and follow-up, whereas satisfaction

is an evaluative judgment that is partly shaped by expectations [3], [4], [11]. This distinction is important because two patients can receive similar technical care yet report different satisfaction when their experiences of access, communication, or responsiveness differ.

The empirical setting of this study is UPT Puskesmas Baru in Barito Selatan Regency, Central Kalimantan. A preliminary survey in the thesis indicated several process-related concerns, particularly response speed, waiting time, personal attention, and comfort, even though other aspects such as staff courtesy, competence, and perceived safety were rated more positively. These patterns suggest that improving service quality may not translate into higher satisfaction automatically; the effect may depend on whether patients experience the service process positively from registration to completion.

Prior studies have frequently examined the direct association between service quality and satisfaction, while fewer studies in Indonesian primary healthcare settings explicitly model patient experience as the mechanism connecting the two. Recent international evidence also shows that service-quality dimensions can influence satisfaction through patient experience [9], [10]. This study addresses that gap by testing patient experience as a mediator between service quality and patient satisfaction in a public primary healthcare facility in Central Kalimantan. The study aims to determine the direct effects among the three constructs and to establish whether patient experience carries the effect of service quality to patient satisfaction.

II. Literature Review and Hypothesis Development

2.1 Service Quality and Patient Experience

Service quality represents patients' perceptions of whether healthcare delivery is dependable, responsive, competent, empathetic, and supported by an appropriate physical environment. SERVQUAL proposes five dimensions that capture these perceptions [1]. Patient experience, in contrast, reflects the actual sequence of interactions encountered throughout the patient journey [3], [4]. When procedures are clear, staff respond promptly, communication is understandable, and the environment is comfortable and safe, patients are more likely to report a positive experience. Recent healthcare evidence confirms that service quality is closely related to patient experience across different service settings [8]-[10]. Therefore, H1 states that service quality has a positive and significant effect on patient experience.

2.2 Service Quality and Patient Satisfaction

Expectation-disconfirmation theory explains satisfaction as the result of comparing prior expectations with perceived performance [2]. In primary care, the perceived performance of a service is expressed through reliability, responsiveness, assurance, empathy, and physical evidence. High-quality service should therefore increase the likelihood that the encounter meets or exceeds patient expectations. Studies of healthcare quality consistently identify service quality as an important antecedent of satisfaction [6], [8], [10]. Accordingly, H2 states that service quality has a positive and significant effect on patient satisfaction.

2.3 Patient Experience and Patient Satisfaction

Patient experience captures the concrete events and interactions that occur during care, while satisfaction represents the patient's evaluation of those events. Evidence has linked better patient experience to more favorable evaluations of healthcare and other outcomes [5], [6]. Because experience provides the informational and emotional basis from which patients judge a service encounter, a positive experience should strengthen satisfaction. Thus, H3 states that patient experience has a positive and significant effect on patient satisfaction.

2.4 Mediating Role of Patient Experience

Service quality can influence satisfaction directly, but it can also operate through the patient's lived service process. This pathway is consistent with person-centered care, which treats communication, coordination, responsiveness, and respect as integral components of quality rather than peripheral features [7]. Recent mediation evidence shows that patient experience can transmit the effect of service-quality dimensions to satisfaction [10]. Therefore, H4 states that patient experience mediates the effect of service quality on patient satisfaction.

III. Methods

3.1 Design, Setting, and Participants

The study used a quantitative, descriptive-verification explanatory survey design. Data were collected from outpatient patients at UPT Puskesmas Baru, Barito Selatan Regency, Central Kalimantan, Indonesia. The thesis planned a larger recruitment target, but the final dataset reported and analyzed in Chapter IV comprised 138 respondents; this analyzed sample is used consistently in the present article. Purposive sampling was applied. Eligible participants were outpatients aged at least 17 years who had completed the entire service process, were able to understand and complete the questionnaire, and agreed to participate. Emergency patients, patients unable to complete the questionnaire independently, patients who declined participation, and those who had not completed the service process were excluded.

3.2 Measures and Data Collection

Data were collected after respondents had completed the service process using a structured five-point Likert questionnaire. Service quality was measured with 10 items representing tangibles, reliability, responsiveness, assurance, and empathy. Patient experience was measured with 12 items covering registration, environment, care provided, procedures, staff experience, and discharge-related experience. Patient satisfaction was measured with 10 items reflecting communication quality, emotional support, responsiveness of service, care coordination, and overall satisfaction. Participation was voluntary, and the questionnaire informed respondents that data would be used for academic purposes and that confidentiality would be maintained.

3.3 Data Analysis

Data were processed and analyzed using Jamovi. Item-rest correlation was used for validity assessment and Cronbach's alpha for internal consistency. The questionnaire used ordinal Likert responses; the thesis describes transformation to interval scores using the Method of Successive Interval before parametric analysis. Descriptive statistics were followed by assumption checks, simple linear regression, and mediation analysis. Statistical significance was evaluated at $\alpha = 0.05$. The mediation model decomposed the relationship between service quality and patient satisfaction into direct, indirect, and total effects, following standard mediation logic [13], [14].

IV. Results

4.1 Respondent Profile and Measurement Quality

The final analysis included 138 respondents. Women represented 55.8% of the sample, 42.0% were aged 40 years or older, 68.8% used general outpatient services, and the largest group (41.3%) had visited the health center two to three times. All measurement items met the item-rest correlation criterion (> 0.30). Internal consistency was satisfactory for all constructs.

Table 1. Descriptive and reliability summary

Construct	Items	Cronbach's α	Descriptive result
Service quality	10	0.862	84.86% - Very High
Patient experience	12	0.899	83.80% - High
Patient satisfaction	10	0.864	85.17% - Very High

Service quality and patient satisfaction were classified as very high, whereas patient experience was classified as high. At the indicator level, the service-quality items receiving relatively lower ratings concerned the physical environment and facilities, while the lowest patient-experience indicator concerned environmental cleanliness and comfort. For satisfaction, care coordination, service speed, and emotional support remained areas with comparatively lower ratings despite the overall high level of satisfaction.

4.2 Regression Results

Table 2. Bivariate regression results

Hypothesis	Relationship	B	t	p	R ²	Decision
H1	Service quality -> Patient experience	0.863	13.10	<0.001	0.634	Supported
H2	Service quality -> Patient satisfaction	0.732	10.98	<0.001	0.549	Supported
H3	Patient experience -> Patient satisfaction	0.780	16.45	<0.001	0.732	Supported

Service quality explained 63.4% of the variation in patient experience and 54.9% of the variation in patient satisfaction in the bivariate models. Patient experience alone explained 73.2% of the variation in patient satisfaction, indicating that the service journey was strongly associated with patients' final evaluation of care.

4.3 Mediation Analysis

Table 3. Mediation of service quality and patient satisfaction by patient experience

Effect / Path	Estimate	SE	Z	p	Interpretation
Indirect effect (SQ -> PE -> PS)	0.571	0.0996	5.73	<0.001	Significant
Direct effect (SQ -> PS PE)	0.161	0.1167	1.38	0.167	Not significant
Total effect (SQ -> PS)	0.732	0.0748	9.78	<0.001	Significant
Path a: SQ -> PE	0.863	0.0714	12.08	<0.001	Significant
Path b: PE -> PS SQ	0.661	0.1157	5.71	<0.001	Significant

The indirect effect was positive and significant (0.571, $p < 0.001$), while the direct effect of service quality on patient satisfaction became non-significant after patient experience was included (0.161, $p = 0.167$). The result indicates full mediation in the reported model. In other words, the effect of service quality on satisfaction was carried primarily through the experience generated during the service process.

V. Discussion

5.1 Service Quality as an Antecedent of Patient Experience

The positive relationship between service quality and patient experience supports the idea that patients interpret quality through both technical and interpersonal elements of care. Reliable procedures, rapid responses, competent staff, empathy, and adequate facilities shape the events patients actually encounter. This pattern is consistent with SERVQUAL [1] and with recent primary-care research showing that perceived service quality remains sensitive to timeliness, physical conditions, and provider performance [8]. It also aligns with newer evidence that responsiveness, assurance, and tangibility are important predictors of patient experience [10].

For UPT Puskesmas Baru, this relationship is especially relevant because the descriptive results identify the physical environment as a comparatively weaker aspect even though the overall service-quality rating is very high. The result suggests that maintaining professional and accurate care is not sufficient by itself; improvements in comfort, flow, and communication can strengthen the total experience patients carry away from the encounter.

5.2 Service Quality, Patient Experience, and Satisfaction

The bivariate results show that both service quality and patient experience were positively related to satisfaction, with patient experience explaining a larger proportion of satisfaction variance than service quality alone. This finding is consistent with expectation-disconfirmation theory [2]: service attributes matter because patients encounter and interpret them during the visit, and those experiences become the basis for evaluating whether care met expectations. It also reinforces the conceptual distinction between experience and satisfaction emphasized by Bull [11].

Patient experience therefore appears to be the more proximal determinant of satisfaction in this setting. Registration clarity, environmental comfort, professional interaction, communication, waiting time, and discharge information form the immediate evidence from which patients judge the service. Prior evidence has similarly connected positive patient experience with favorable perceptions of healthcare and service effectiveness [5], [6].

5.3 Full Mediation by Patient Experience

The central contribution of this study is the full mediation pattern. Before the mediator was included, service quality had a significant positive association with satisfaction. Once patient experience entered the model, the remaining direct effect was no longer significant, whereas the indirect effect remained strong and significant. This indicates that service quality generated satisfaction primarily by creating a positive service experience rather than by operating as an abstract quality judgment independently of the care journey.

This mechanism is consistent with person-centered care, where the quality of communication, coordination, respect, responsiveness, and the care environment is experienced directly by the patient [7]. It is also consistent with recent mediation evidence showing that patient experience can transmit the effects of service quality to satisfaction [10]. The finding does not imply that service quality is unimportant; rather, it shows that its practical value is realized when quality is converted into concrete experiences that patients can perceive across each stage of care.

VI. Theoretical Implications

This study integrates SERVQUAL, patient-experience theory, and expectation-disconfirmation logic in a primary healthcare context. The full mediation result clarifies the mechanism linking service quality to satisfaction: perceived service quality functions as an upstream condition, while patient experience is the process through which that quality is translated into an evaluative satisfaction outcome.

The findings also support treating patient experience and satisfaction as related but distinct constructs. Experience captures the process of care, whereas satisfaction captures the patient's evaluation of that process relative to expectations. Modeling them separately avoids conflating what happened during care with how the patient ultimately judged it.

VII. Practical Implications

Primary healthcare managers should monitor patient experience as a routine quality indicator rather than relying only on satisfaction scores. At UPT Puskesmas Baru, improvement priorities should include environmental comfort, coordination among staff, service speed, emotional support, and clarity of the patient flow. These areas were comparatively weaker in the descriptive results even though overall ratings were high.

Quality-improvement initiatives should therefore connect operational standards with patient-journey outcomes. Practical actions include simplifying registration and service flow, setting reasonable waiting-time targets, strengthening inter-unit communication, reinforcing empathetic and understandable communication, and ensuring that patients receive clear follow-up information before leaving the facility. Training and supervision should evaluate whether service standards are actually experienced by patients as timely, respectful, safe, and coordinated.

VIII. Limitations and Future Research

The study was conducted at a single primary healthcare facility and used a cross-sectional survey, limiting broad generalization and causal inference. The measures were self-reported and therefore reflect perceptions at the time of data collection. The model included only one mediator, while trust, perceived value, facility image, and loyalty may also influence satisfaction. Future studies should include multiple primary healthcare facilities, use longitudinal or mixed-method designs, and test additional mediating or moderating mechanisms. The thesis also contains a discrepancy between the planned sample size and the final analyzed sample; future reporting should clearly document recruitment, exclusions, and the number of complete cases at each stage.

IX. Conclusion

Service quality, patient experience, and patient satisfaction were evaluated positively by outpatients at UPT Puskesmas Baru. Service quality significantly predicted patient experience and patient satisfaction, while patient experience significantly predicted satisfaction. The mediation analysis provided the most important result: patient experience fully mediated the effect of service quality on patient satisfaction. Accordingly, quality improvement in primary healthcare should not be limited to compliance with service standards. It should ensure that patients experience accessible registration, clear information, responsive staff, coordinated care, reasonable waiting, respectful interaction, and a comfortable environment. When these service-quality attributes are translated into a positive patient journey, they are more likely to produce sustained patient satisfaction.

References

- [1] A. Parasuraman, V. A. Zeithaml, and L. L. Berry, "SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality," *Journal of Retailing*, vol. 64, no. 1, pp. 12-40, 1988.
- [2] R. L. Oliver, "A cognitive model of the antecedents and consequences of satisfaction decisions," *Journal of Marketing Research*, vol. 17, no. 4, pp. 460-469, 1980, doi: 10.1177/002224378001700405.
- [3] J. A. Wolf, V. Niederhauser, D. Marshburn, and S. L. LaVela, "Defining patient experience," *Patient Experience Journal*, vol. 1, no. 1, pp. 7-19, 2014.
- [4] S. L. LaVela and A. S. Gallan, "Evaluation and measurement of patient experience," *Patient Experience Journal*, vol. 1, no. 1, pp. 28-36, 2014.
- [5] C. Doyle, L. Lennox, and D. Bell, "A systematic review of evidence on the links between patient experience and clinical safety and effectiveness," *BMJ Open*, vol. 3, no. 1, e001570, 2013, doi: 10.1136/bmjopen-2012-001570.
- [6] S. N. Bleich, E. Özaltın, and C. J. L. Murray, "How does satisfaction with the health-care system relate to patient experience?" *Bulletin of the World Health Organization*, vol. 87, no. 4, pp. 271-278, 2009, doi: 10.2471/BLT.07.050401.
- [7] M. J. Santana, K. Manalili, R. J. Jolley, S. Zelinsky, H. Quan, and M. Lu, "How to practice person-centred care: A conceptual framework," *Health Expectations*, vol. 21, no. 2, pp. 429-440, 2018, doi: 10.1111/hex.12640.
- [8] M. S. Değer and H. İşsever, "Service quality and related factors in primary health care services: A cross-sectional study," *Healthcare*, vol. 12, no. 10, p. 965, 2024, doi: 10.3390/healthcare12100965.
- [9] S. Zehra, J. Ranjan, and M. Shukla, "Service quality in healthcare: Understanding the relationship between patient experience and healthcare outcomes," *International Journal of Health Care Quality Assurance*, vol. 38, no. 4, pp. 233-250, 2025, doi: 10.1108/IJHCQA-09-2024-0090.
- [10] M. Alfatafta, N. Alsubahi, H. Alfatafta, A. Alshawabka, A. McGarry, A. Ahmad, E. Derkacs, D. Varga, et al., "Assessing service quality and its impact on patient experience and satisfaction in prosthetics and orthotics: A SERVQUAL-based cross-sectional study," *BMC Health Services Research*, vol. 25, art. 985, 2025, doi: 10.1186/s12913-025-13172-z.
- [11] C. Bull, "Patient satisfaction and patient experience are not interchangeable concepts," *International Journal for Quality in Health Care*, vol. 33, no. 1, mzab023, 2021, doi: 10.1093/intqhc/mzab023.
- [12] World Health Organization, *Delivering Quality Health Services: A Global Imperative for Universal Health Coverage*. Geneva: World Health Organization, 2018.
- [13] R. M. Baron and D. A. Kenny, "The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations," *Journal of Personality and Social Psychology*, vol. 51, no. 6, pp. 1173-1182, 1986, doi: 10.1037/0022-3514.51.6.1173.
- [14] A. F. Hayes, *Introduction to Mediation, Moderation, and Conditional Process Analysis*, 3rd ed. New York: Guilford Press, 2022.