

THE EFFECT OF OUTPATIENT SERVICE QUALITY ON BPJS HEALTH PARTICIPANTS' SATISFACTION AT BALIMBINGAN HOSPITAL, SIMALUNGUN REGENCY, INDONESIA

Dony Hermanto Saragih¹, Ermi Girsang^{2,3*}, Sri Lestari Ramadhani Nasution^{2,3}

¹Postgraduate Program in Public Health, Universitas Prima Indonesia, Medan, Indonesia

^{2,3}Department of Public Health, Universitas Prima Indonesia, Medan, Indonesia

^{2,3}COE for Degenerative Disorders and Integrated Health, Universitas Prima Indonesia, Medan, Indonesia

Email address: ermigirsang@unprimdn.ac.id

ARTICLE INFO

Article History:

Received 23 April 2026

Revised 10 May 2026

Accepted 20 May 2026

Available online 31 May 2026

How to cite:

Saragih, D. H., Girsang, E., & Nasution, S. L. R. (2026). The Effect of Outpatient Service Quality on BPJS Health Participants' Satisfaction at Balimbingan Hospital, Simalungun Regency, Indonesia. *Journal of Gender and Social Inclusion In Muslim Societes*, 7(2), 1–15.

ABSTRACT

Evaluating the quality of healthcare services is crucial for improving patient satisfaction and building long-term trust in institutions within the BPJS Kesehatan ecosystem, particularly in regional healthcare facilities. This study aims to empirically analyze the simultaneous and partial effects of service quality dimensions based on the modified SERVQUAL framework (tangibles, reliability, responsiveness, assurance, and commitment) on the satisfaction of BPJS Kesehatan outpatient participants at Balimbingan Hospital, Simalungun Regency. A quantitative observational study with a cross-sectional design was conducted in March 2026. A total of 208 outpatient respondents were recruited via convenience sampling. Data were collected using a modified structured questionnaire with 25 items that had been validated and tested for reliability. Statistical analyses included univariate analysis, chi-square tests for bivariate analysis, and multiple logistic regression with the backward-elimination method for multivariate modeling ($\alpha = 0.05$). Bivariate analysis showed that responsiveness ($p = 0.001$), reliability ($p = 0.000$), assurance ($p = 0.002$), and commitment ($p = 0.000$) were significantly correlated with patient satisfaction, whereas the physical aspect did not show statistical significance ($p = 0.060$). The final-stage multiple logistic regression model identified responsiveness and commitment as the only remaining significant predictors. Commitment emerged as the dominant determinant most influential on patient satisfaction ($p = 0.003$; OR = 4.781; 95% CI = 1.721 to 13.283), followed by responsiveness ($p = 0.013$; OR = 3.714; 95% CI = 1.322 to 10.428). Staff commitment (affective dedication) and operational responsiveness (prompt care) are critical catalysts in enhancing outpatient satisfaction at Balimbingan Hospital. Hospital management should redirect resource allocation toward professional soft skills development, empathy training, and triage optimization to maintain patient loyalty and competitive advantage.

Keywords: *Commitment, Outpatient Satisfaction, Responsiveness, SERVQUAL.*

Introduction

Optimal healthcare quality is a crucial indicator of the standard of care at a healthcare facility and has a direct impact on patient satisfaction levels. Globally, patient satisfaction has been recognized as one of the most vital metrics for evaluating

the performance of healthcare systems because it reflects users' perceptions of the standards of care achieved and providers' success in meeting patients' values and expectations (R et al., 2002). Measuring this satisfaction is not only a vital tool for identifying targeted priorities for service

quality improvement but also serves as the foundation for hospitals to maintain competitiveness amid the increasingly competitive global healthcare industry (Pertiwi, 2017; Xesfingi & Vozikis, 2016). In line with the national mandate to ensure equitable access to healthcare, the implementation of the National Health Insurance (BPJS Kesehatan) in Indonesia requires healthcare providers to align operational efficiency with comprehensive clinical quality. In this context, patient satisfaction has become a fundamental quality indicator reflecting the success of the National Health Insurance program across various healthcare facilities, while also serving as the primary benchmark for evaluating the effectiveness of services against public expectations (Murtiana et al., 2016; Simarmata et al., 2023). Given its crucial role, regular monitoring of patient satisfaction enables hospitals to identify service gaps and formulate sustainable improvement strategies to enhance participants' trust in the health insurance system (Munadi et al., 2022; Sumarni & Rizky, 2025; Yusra, 2020).

Although efforts have been made to digitize access, variations in perceptions of service quality across healthcare facilities remain a major challenge affecting BPJS Kesehatan participants' expectations. Data indicate that while the national participant satisfaction index reached 81.5% in 2020—

up from 80.1% the previous year (Monica & Suzana, 2024)—disparities in service quality on the ground remain evident. Structural barriers such as long waiting times, the complexity of referral procedures, and inconsistent medication availability consistently rank among the primary complaints that frequently trigger patient dissatisfaction across various healthcare facilities (Firdaus & Dewi, 2015; Indarwati & Phuoc, 2018). Interactions between medical staff, administrative staff, and patients are crucial elements that significantly influence trust and perceptions regarding the reliability of healthcare providers (Aminingsih et al., 2023). Therefore, a comprehensive assessment covering timeliness, staff friendliness, and the availability of physical facilities is a key determinant in building positive service performance for BPJS users (Apriani & Nurcahyo, 2021).

Within a more systematic framework, the SERVQUAL theory developed by Parasuraman et al. offers a comprehensive instrument for evaluating service quality through five key dimensions: *tangibles* (physical evidence), *reliability*, *responsiveness*, *assurance*, and *empathy*. The *reliability* and *assurance* dimensions specifically emphasize the importance of clinical effectiveness and the consistency of standard operating procedures in ensuring that every patient

receives their right to high-quality healthcare without discrimination (Pangaribuan et al., 2025). The application of the SERVQUAL model enables hospitals to accurately map the gap between BPJS participants' expectations and their actual on-site experiences, thereby allowing quality improvement strategies to be formulated in a more measurable, systematic, and data-driven manner (Aroni & Sari, 2025; Pangaribuan et al., 2025). However, challenges in managing BPJS services are often exacerbated by weak internal coordination and infrastructure limitations that hinder operational effectiveness on the ground (Sukardi et al., 2024). Additionally, there is a significant discrepancy where some healthcare facilities still practice discriminatory treatment toward BPJS Health patients, which often results in refusal of care due to insufficient inpatient capacity (Romero et al., 2023).

Although various studies in Indonesia have confirmed a positive relationship between the five dimensions of SERVQUAL and BPJS patient satisfaction (Agnaty et al., 2025; Pangaribuan et al., 2025), findings vary regarding which dimension is the most dominant predictor influencing user perceptions (Aroni & Sari, 2025; Rumambi et al., 2025). Many previous studies have tended to focus on healthcare facilities in urban areas with

adequate infrastructure (Putri & Cokki, 2024), so there remains a limited body of literature specifically evaluating which dimensions are most crucial in shaping patient satisfaction in district-level or regional hospitals with limited resources, such as in Simalungun Regency. This empirical gap necessitates in-depth research to identify the most significant determinants of service quality in such settings, which in turn will serve as the foundation for formulating more contextual and targeted service quality improvement strategies for BPJS participants in this region.

Therefore, this study aims to empirically analyze the influence of the five dimensions of SERVQUAL—*tangibles*, *reliability*, *responsiveness*, *assurance*, and *empathy*—on the satisfaction of BPJS Health outpatient patients at Balimbingan Hospital. In line with findings from previous studies in the Indonesian context indicating a positive relationship between these variables and user satisfaction (Agnaty et al., 2025; Pangaribuan et al., 2025), this study hypothesizes that the SERVQUAL dimensions have a positive and significant influence, both simultaneously and partially, on patient satisfaction. Furthermore, given the importance of clinical effectiveness and procedural consistency—which often pose challenges in regional healthcare facilities

(Aroni & Sari, 2025; Pangaribuan et al., 2025)—this study tests the hypothesis that the *reliability* and *assurance* dimensions are the most dominant predictors. Thus, the results of this analysis are expected to provide crucial empirical evidence for hospital management in formulating service improvement strategies that are more contextual, measurable, and targeted to improve the quality of service for BPJS participants in Simalungun Regency.

Method

Study Design and Location

A quantitative observational study with a cross-sectional design was conducted to examine the relationship between the dimensions of outpatient service quality and the satisfaction of BPJS Kesehatan participants. This study was conducted in March 2026 at the outpatient unit of Balimbingan Hospital, located in Balimbingan Village, Tanah Jawa Subdistrict, Simalungun Regency, North Sumatra Province, Indonesia. A cross-sectional design was chosen to measure the independent variable (service quality dimensions) and the dependent variable (patient satisfaction) simultaneously at a single point in time without intervention.

Population and Sample Size

The study population consisted of all outpatient patients enrolled in the BPJS Kesehatan (*Badan Penyelenggara Jaminan*

Sosial Kesehatan) program who received services at Balimbingan Hospital, with an average of 435 visits per month based on the hospital's records from the previous year. The minimum sample size was calculated using the Slovin formula:

where N = population size (435) and e = margin of error (0.05). This calculation yields a minimum sample size of 208 respondents. This sample size was achieved in this study.

Sampling Technique and Eligibility Criteria

Respondents were recruited using convenience sampling, in which patients who met the inclusion criteria and were present at the outpatient unit during data collection were invited to participate until the required sample size was reached.

Inclusion criteria were: (1) participants enrolled in BPJS Kesehatan who utilized outpatient services at Balimbingan Hospital; (2) aged ≥ 17 years; (3) able to communicate effectively in Indonesian; and (4) willing to participate and provide written consent. Exclusion criteria were: (1) patients in critical or emergency condition; (2) patients with severe communication impairments; and (3) respondents with incomplete questionnaire responses.

Research Instrument

The research instrument was a self-administered structured questionnaire

consisting of two sections. The first section covers sociodemographic characteristics, including age, gender, education level, occupation, and duration of BPJS Kesehatan membership. The second section measures service quality and patient satisfaction, adapted from the SERVQUAL questionnaire originally developed by Parasuraman, Zeithaml, and Berry (1988) and modified to suit the outpatient context. The service quality section contains 25 items distributed across the five SERVQUAL dimensions—reliability, responsiveness, assurance, empathy, and physical aspects—with five items per dimension. The patient satisfaction section measures five aspects: the alignment between expectations and services received, satisfaction with service procedures, satisfaction with staff attitudes, satisfaction with facilities, and intention to use the service again. All items were rated using a dichotomous response format (positive/negative).

Validity and Reliability Testing

Prior to the main data collection, the instrument was pilot-tested on 30 respondents with similar characteristics who were not included in the final analysis. Construct validity was evaluated using Pearson's product-moment correlation, with items considered valid if the adjusted item-total correlation (r) exceeded the critical value (r -table = 0.361 for $df = 28$; α

= 0.05). Internal consistency was evaluated using Cronbach's alpha, with values above the recommended threshold of 0.70 considered acceptable. All items met both criteria and were retained for the main study.

Operational Definitions of Variables

The independent variables are the five dimensions of SERVQUAL, while the dependent variable is patient satisfaction. Each variable was dichotomously categorized for categorical analysis based on the percentage of the maximum composite score: service quality dimensions were classified as "Good" if the score was $\geq 75\%$ of the maximum or "Not Good" if $< 75\%$, and patient satisfaction was classified as "Satisfied" if the score was $\geq 60\%$ of the maximum or "Not Satisfied" if $< 60\%$. All variables were measured on a nominal scale.

Data Collection Procedures

Primary data were collected directly from respondents via a structured questionnaire. Eligible patients were approached in the outpatient waiting room after completing their consultation, given an explanation of the study's objectives and procedures, and asked to provide written consent. The questionnaire was self-administered under the researcher's supervision and took approximately 15–20 minutes to complete. For respondents with limited literacy, the researcher read the

items aloud and recorded the answers verbatim. Secondary data, including hospital profiles, monthly outpatient visit reports, and administrative records, were obtained from the hospital's medical records and administration departments.

Data Analysis

Data were processed and analyzed using IBM SPSS Statistics version 26.0 (IBM Corp., Armonk, NY, USA) in three sequential stages. *Univariate analysis* was conducted to describe the frequency distributions and proportions of respondent characteristics and study variables. *B. Bivariate analysis* was performed using the chi-square (χ^2) test to examine the relationship between each SERVQUAL dimension and patient satisfaction, with a statistical significance level set at $p < 0.05$. *C. Multivariate analysis* was performed using multiple logistic regression to identify dominant predictors of patient satisfaction. Variables with $p < 0.25$ in the bivariate analysis qualified as candidate variables in the multivariate model, in accordance with the recommendations of Hosmer and Lemeshow (2013). The

backward elimination method was applied, retaining only variables with $p < 0.05$ in the final model. Model fit was evaluated using the Hosmer–Lemeshow goodness-of-fit test, and the proportion of variance explained was reported using Nagelkerke R^2 . Adjusted odds ratios (aOR) with 95% confidence intervals (CI) were reported.

Ethical Considerations

This study was approved by the Health Research Ethics Committee of Prima Indonesia University (Approval Number and was conducted in accordance with the principles of the Declaration of Helsinki (2013 revision). Written informed consent was obtained from all participants prior to data collection.

Participants were informed about the purpose of the study, their right to withdraw at any time without consequences for their healthcare, and the confidentiality of their responses. All data were anonymized using participant codes, and completed questionnaires were securely stored with access restricted to authorized research team members only.

Result

Bivariate Analysis

Table 1 Factors Associated with Patient Satisfaction

| Variable | Patient Satisfaction | | | | Total | | <i>p</i> |
|-----------------------|-----------------------|------|------------|------|-------|------|----------|
| | Not Very Satisfactory | | Satisfying | | f | % | |
| | f | % | f | % | | | |
| Responsiveness | | | | | | | 0,001 |
| Not Good | 70 | 33.7 | 26 | 12.5 | 96 | 46.3 | |
| Good | 50 | 24.0 | 62 | 29.8 | 112 | 53.7 | |

| Variable | f | % | f | % | f | % | p |
|--------------------------|------------|-------------|------------|-------------|------------|------------|----------|
| Reliability | | | | | | | |
| Not Good | 72 | 34.6 | 20 | 9.6 | 92 | 44.2 | 0.000 |
| Good | 38 | 18.3 | 78 | 37.5 | 116 | 55.8 | |
| Guarantee | | | | | | | |
| Not Good | 80 | 38.5 | 18 | 8.7 | 98 | 47.1 | 0.002 |
| Good | 35 | 16.8 | 75 | 36.1 | 110 | 52.9 | |
| Commitment | | | | | | | |
| Not Good | 78 | 37.5 | 22 | 10.6 | 100 | 48.1 | 0.000 |
| Good | 30 | 14.4 | 78 | 37.5 | 108 | 51.9 | |
| Physical Evidence | | | | | | | |
| Not Good | 68 | 32.7 | 16 | 7.7 | 84 | 40.4 | 0.060 |
| Good | 34 | 16.3 | 90 | 43.3 | 124 | 59.6 | |
| Total | 102 | 49.0 | 106 | 51.0 | 208 | 100 | |

Based on the results of the bivariate analysis of the research data at Balimbingan Hospital, interventions should focus on improving the dimensions of service quality that are significantly associated with patient satisfaction. For the dimensions of responsiveness ($p=0.001$) and empathy ($p=0.000$), the hospital needs to strengthen healthcare workers' therapeutic communication skills and reduce response times in the outpatient unit to ensure patients feel personally attended to and are treated promptly. Although the physical evidence dimension did not show a statistically significant relationship ($p=0.060$), the maintenance of building facilities and the neatness of staff remain

supporting elements of comfort that must not be overlooked to maintain overall service quality standards. Meanwhile, for the reliability and assurance dimensions—which are also part of the SERVQUAL model—interventions should focus on improving the accuracy of medical procedures, ensuring safety, and fostering courteous staff interactions to minimize patients' doubts regarding service competence. By integrating all these findings, the hospital's operational strategy must prioritize the dimensions with the highest significance (empathy and responsiveness) as the primary catalysts for increasing patient satisfaction rates in Simalungun Regency.

Multivariate Analysis

Table 2. Results of the Bivariate Analysis of Independent Variables and the Dependent Variable

| Subvariabel | p-value |
|--------------------|----------------|
| Responsiveness | 0.001 |
| Reliability | 0.000 |
| Guarantee | 0.002 |
| Commitment | 0.000 |
| Physical Evidence | 0.060 |

The analysis results show that the *p-values* for responsiveness (0.001), reliability (0.000), assurance (0.002), empathy (0.000), and tangible evidence (0.060) were included in the multivariate

test because their *p-values* were < 0.25. The next step is to include all the candidate variables selected in the first stage of logistic regression.

Table 3. Results of the First-Stage Regression Test

| Variable | Df | Sig. | Exp(B) | 95% C.I.for Exp(B) | |
|-------------------|----|-------|--------|--------------------|--------|
| | | | | Lower | Upper |
| Responsiveness | 1 | 0.025 | 3.617 | 1.173 | 11.151 |
| Reliability | 1 | 0.050 | 3.159 | 1.000 | 9.981 |
| Guarantee | 1 | 0.150 | 2.241 | 0.747 | 6.721 |
| Commitment | 1 | 0.042 | 3.328 | 1.047 | 10.577 |
| Physical Evidence | 1 | 0.073 | 2.709 | 0.910 | 8.068 |
| Constant | 1 | 0.000 | 0.00 | | |

The results of the first-stage regression analysis show that there are two variables with a *p-value* < 0.05: responsiveness (0.025) and Commitment (0.042). Meanwhile, the variables reliability, assurance, and tangible evidence

have *p-values* > 0.05. Therefore, for the next stage of the logistic regression test, the variables reliability, assurance, and tangible evidence are excluded, and the variables with *p-values* < 0.05 are carried forward to the next stage.

Table 4. Results of the Second-Stage Regression Test

| Variable | Df | Sig. | Exp(B) | 95% C.I.for Exp(B) | |
|-----------------|----|-------|--------|--------------------|--------|
| | | | | Lower | Upper |
| Responsiveness | 1 | 0.013 | 3.714 | 1.322 | 10.428 |
| Commitment | 1 | 0.003 | 4.781 | 1.721 | 13.283 |
| Constant | 1 | 0.000 | 0.995 | | |

The results of the second-stage regression analysis showed that responsiveness had a *p-value* of 0.013 < 0.05 and Commitment had a *p-value* of 0.003 < 0.05. From the above analysis, the most dominant variable affecting patient satisfaction is Commitment, with a *p-value* of 0.003 < 0.05 and an (Exp(B) value of 4.781, meaning that the Commitment provided by healthcare workers to patients

is 4.781 times more likely to influence patient satisfaction.

Discussion

The Effect of Responsiveness on Outpatient Satisfaction at Balimbingan Hospital in Simalungun Regency

Within the framework of the modified SERVQUAL (Service Quality) model applied in this study, responsiveness emerged as a statistically significant and

crucial predictor of patient satisfaction at Balimbingan Hospital ($p = 0.013$). The multivariate logistic regression analysis shown in indicates that healthcare workers with high responsiveness are 3.714 times more likely to achieve optimal patient satisfaction compared to those with less optimal responsiveness ($\text{Exp}(B) = 3.714$; 95% CI = 1.322 to 10.428). Within the SERVQUAL paradigm, responsiveness directly measures the service provider's willingness to assist customers and deliver prompt service. In the clinical ecosystem of Balimbingan Hospital, this is reflected through rapid triage in the emergency department, shorter wait times in outpatient clinics, and nurses' immediate responses to inpatients' complaints. When medical staff respond quickly, this minimizes patients' cognitive and physical vulnerability during illness, thereby strengthening their perception of the quality of care. These findings align with contemporary healthcare management literature in developing countries, which indicates that service speed is often considered highly important by patients as a key indicator of institutional competence and respect for patient dignity.

In line with the findings regarding responsiveness, the *reliability* dimension was also found to make a significant contribution to patient satisfaction. These findings are consistent with the results of

studies by Pangaribuan et al., (2025) and Agnaty et al., (2025), which identified reliability as the primary determinant in building BPJS patients' trust through the accuracy of medical procedures and the consistency of care. However, these results show contextual differences from other studies, such as those cited by Rumambi et al., (2025) and Aroni & Sari, (2025), who found that other dimensions, such as *assurance* or *empathy*, sometimes play a more dominant role as predictors of satisfaction in healthcare facilities with different demographic and infrastructure characteristics. These varying findings underscore that the effectiveness of the SERVQUAL dimensions is not universal but rather highly dependent on patients' specific needs and the operational conditions of each healthcare facility. Furthermore, a focus on improving reliability through reduced waiting times and optimized medical administration has proven crucial, as this dimension directly impacts perceptions of service integrity (Jaber-Chehayeb, 2023). Furthermore, these findings confirm that staff's ability to proactively address complaints and provide transparent medical explanations regarding care procedures constitutes a tangible form of *responsiveness* capable of enhancing patient trust (Mathonsi et al., 2023).

Implementing strategies focused on enhancing these two dimensions aligns with

findings that the responsiveness and reliability of medical staff have a stronger determinative impact on patient satisfaction compared to physical attributes or other guarantees (Kalaja & Krasniqi, 2022). Therefore, hospital management must prioritize resource allocation toward developing frontline staff competencies to ensure the delivery of responsive and accurate care, given that these dimensions have been empirically proven to be the primary drivers in building patient loyalty (Nguyen et al., 2021; Yusefi et al., 2022).

Practically, strengthening these dimensions will not only improve the post-service patient experience but also mitigate the risk of declining trust, which could lead to BPJS participants switching healthcare facilities. Furthermore, hospital policies that consistently invest in improving response speed and the accuracy of medical procedures can serve as a strategic defense mechanism, particularly in an increasingly intense competitive climate among healthcare facilities. This operational transformation, supported by a deep understanding of patient needs, will ultimately create added value for hospitals in maintaining market share and strengthening their institutional image as reliable and trusted healthcare providers. Furthermore, this study makes a theoretical contribution by revalidating the SERVQUAL model within the public

healthcare ecosystem, confirming that patient satisfaction is a dynamic, multidimensional construct heavily influenced by the perceived value of direct interactions between healthcare providers and patients.

The Effect of Commitment on Outpatient Satisfaction at Balimbingan Hospital in Simalungun Regency

One of the key findings of this study is that commitment—which was included as an important additional variable in the standard SERVQUAL dimensions—is the most dominant determinant of patient satisfaction at Balimbingan Hospital ($p = 0.003$). Patients who perceive a deep professional commitment from their healthcare providers are 4.781 times more likely to report high satisfaction ($\text{Exp}(B) = 4.781$; 95% CI = 1.721 to 13.283). This striking odds ratio indicates that while technical proficiency and infrastructure serve as the foundation, the affective and normative commitment of healthcare providers serves as the primary driver of service quality evaluations. At Balimbingan Hospital, which has historically coordinated care in a unique demographic region, providers' commitment is reflected in meticulous clinical attention, consistency in task execution, and ethical alignment with patient well-being. This empirical finding validates the theoretical extension of SERVQUAL in a medical context,

demonstrating that patient-centered care is closely linked to perceived staff dedication. This strong association implies that fostering institutional commitment and reducing burnout among healthcare workers is a strategic imperative for improving patient retention and trust in secondary healthcare facilities.

This study empirically confirms that healthcare providers' trust and commitment serve as important moderators that amplify the influence of satisfaction on patients' behavioral intentions to return or recommend the healthcare service. These findings align with the arguments of Shie et al., (2022) and Purnama & Yuliaty (2025), who emphasize that satisfaction is merely one element in the loyalty chain, where post-service trust functions as a catalyst for patients' behavioral intentions. However, these findings offer a different perspective from the conventional SERVQUAL model, which often limits analysis to the direct impact of service dimensions on satisfaction (Noviyani & Viwattanakulvanid, 2025), by highlighting that emotional influences, such as staff commitment, play a more complex and structural role in shaping the intention to return compared to the mere accumulation of functional dimensions (Nguyen et al., 2021).

The practical implications of these findings suggest that managerial

interventions must strategically shift from merely meeting physical facility standards toward strengthening affective dimensions, particularly through the development of staff commitment and empathy, given that patient satisfaction substantially influences behavioral intent to return and willingness to recommend services. To achieve this, hospital management needs to design continuous training programs focused on interpersonal interactions and professional dedication to reduce the potential for work-related burnout, which often hinders the delivery of patient-centered care. By integrating values of commitment into the organizational culture, healthcare facilities will not only improve the quality of care as perceived by patients but also build an ecosystem that strengthens long-term trust, which ultimately becomes a key pillar in maintaining market share amid an increasingly competitive landscape. Furthermore, these findings also indicate that patients who feel satisfied and emotionally connected are more likely to express an intention to return for follow-up visits and provide positive recommendations to others, which is commercially highly beneficial for the clinic's operational sustainability.

This study has several methodological limitations that should be noted. First, the cross-sectional design measures the modified SERVQUAL

dimensions and patient satisfaction simultaneously at a single point in time, thereby limiting the ability to establish definitive causal relationships among these variables. Second, data collection was conducted via convenience sampling at a single regional facility (Balimbingan Hospital), which may limit the generalizability (external validity) of the findings to larger urban tertiary hospitals or other geographic regions with different socioeconomic infrastructures. Third, reliance on self-administered questionnaires with dichotomous response formats (positive/negative) inherently risks introducing *social desirability bias* or *central tendency bias*, which may oversimplify the subtle nuances of patients' subjective emotional experiences. Future longitudinal research utilizing random sampling techniques across multicenter healthcare facilities and incorporating mixed-methods qualitative approaches (e.g., in-depth interviews) is essential to provide a more holistic understanding of the dynamics of patient loyalty.

Conclusions

In conclusion, this study empirically confirms that the dimensions of outpatient service quality significantly influence the satisfaction levels of BPJS Kesehatan participants at Balimbingan Hospital in Simalungun Regency. Although traditional functional attributes in

healthcare delivery remain important, it is the affective and behavioral dimensions of care that exert the strongest influence on patient evaluations. Specifically, staff responsiveness and commitment serve as the primary structural drivers of satisfaction in this regional setting. Healthcare workers' commitment—manifested through comprehensive clinical care, dedication, and professional ethics—emerges as the most dominant predictor, yielding nearly five times higher odds of optimal satisfaction, followed by rapid operational responsiveness. Conversely, physical infrastructure (*tangibles*) does not emerge as a statistically significant driver for this specific demographic. From a financial and operational perspective, these insights suggest that hospital administrators must prioritize systemic investments in fostering a patient-centered culture, managing staff burnout, and streamlining frontline response times to maintain market share and improve equity in community healthcare delivery.

References

- Agnaty, R. A., Andriyani, A., & Jaksa, S. (2025). Analysis of BPJS Patient Satisfaction on the Quality of Outpatient Services in Hospitals Using the SERVQUAL Approach. *Jurnal Manajemen Pelayanan Kesehatan*, 28(02), 44–49. <https://doi.org/https://doi.org/10.22146/jmpk.v28i02.21340>
- Aminingsih, P., Khatibi, A., & Azam, S. . F. (2023). The Social Health Insurance

- (BPJS) Patient Satisfaction at Hermina Daan Mogot and Pasar Minggu Hospitals, Indonesia. *International Journal of Professional Business Review*, 8(3), 1–25. <https://doi.org/https://doi.org/10.26668/businessreview/2023.v8i3.396>
- Apriani, R., & Nurcahyo, G. W. (2021). Tingkat Kepuasan Pasien RSIA Siti Hawa dalam Upaya Peningkatan Kualitas Pelayanan Menggunakan Metode Service Quality(SERVQUAL). *Jurnal Sistim Informasi Dan Teknologi*, 3(3), 150–155. <https://doi.org/10.37034/jsisfotek.v3i3.59>
- Aroni, D., & Sari, A. (2025). Pengaruh Kualitas Pelayanan Kesehatan terhadap Kepuasan Pasien BPJS di Rumah Sakit Umum Daerah Kabupaten Aceh Besar. *Jurnal Akademika Baiturrahim Jambi*, 14(2), 258–264. <https://doi.org/https://doi.org/10.36565/jab.v14i2.909>
- Firdaus, F. F., & Dewi, A. (2015). Evaluasi kualitas pelayanan terhadap kepuasan pasien rawat jalan peserta bpjs di rsud panembahan senopati bantul. *JMMR (Jurnal Medicoeticolegal Dan Manajemen Rumah Sakit)*, 4(2). <https://doi.org/https://doi.org/10.18196/jmmr.v4i2.690>
- Indarwati, M., & Phuoc, P. T. (2018). Evaluation of Administrative Service Quality Towards JKN Patient Satisfaction. *Jurnal Kesehatan Masyarakat*, 14(1), 41–48. <https://doi.org/https://doi.org/10.15294/kemas.v14i1.14915>
- Jaber-Chehayeb, R. (2023). Analyzing the Mediating Role of Service Quality in the Relationship between Service Quality and Patient Satisfaction at Rafic Hariri University Hospital. *International Journal of Professional Business Review*, 8(11), 1–25. <https://doi.org/https://doi.org/10.26668/businessreview/2023.v8i11.3827>
- Kalaja, R., & Krasniqi, M. (2022). Patient satisfaction with quality of care in public hospitals in Albania. *Front. Public Health*, 10(1), 1–10. <https://doi.org/https://doi.org/10.3389/fpubh.2022.925681>
- Mathonsi, P., Chinomona, R., & Schutte, F. (2023). Interventions to Improve Service Delivery in Rural Mpumalanga Hospitals of South Africa. *International Journal of Professional Business Review*, 8(5), 1–26. <https://doi.org/https://doi.org/10.26668/businessreview/2023.v8i5.1671>
- Monica, T., & Suzana, M. (2024). Hubungan Kepuasan Pasien Pengguna BPJS Terhadap Kualitas Pelayanan Kesehatan di Puskesmas Tanah Kampung. *Malahayati Nursing Journal*, 6(9), 3833–3843. <https://doi.org/https://doi.org/10.33024/mnj.v6i9.16103>
- Munadi, W. R. D., Sari, I. P., Huda, M. N., & Sulistyawaty, E. D. (2022). Hubungan Kualitas Pelayanan Medis dengan Tingkat Kepuasan Pada Pasien BPJS Kesehatan di Instalasi Rawat Jalan UPT Puskesmas Bugul Kidul Kota Pasuruan. *Jurnal Rekam Medic*, 5(2), 74–81. <https://doi.org/https://doi.org/10.55426/ikars.v1i2.210>
- Murtiana, E., Majid, R., & Jufri, N. N. (2016). Hubungan Mutu Pelayanan Kesehatan Kepada Kepuasan Pasien Bpjs di RSUD Kota Kendari Tahun 2016. *Jurnal Ilmiah Mahasiswa Kesehatan Masyarakat Unsyiah*, 1(4). <https://doi.org/https://www.neliti.com/publications/183453/hubungan-mutu-pelayanan-kesehatan-kepada-kepuasan-pasien-bpjs-di-rsud-kota-kenda>
- Nguyen, N. X., Tran, K., & Nguyen, T. A. (2021). Impact of Service Quality on In-Patients ' Satisfaction , Perceived Value , and Customer Loyalty : A Mixed-Methods Study from a Developing Country. *Patient*

- Preference and Adherence*, 10(August), 2523–2538. <https://doi.org/https://doi.org/10.3389/fpubh.2022.925681>
- Noviyani, A., & Viwattanakulvanid, P. (2025). Service quality as a driver of perceived value satisfaction and revisit intention in Indonesia. *Scientific Reports*, 15, 1–13. <https://doi.org/https://doi.org/10.1038/s41598-025-29414-3>
- Pangaribuan, N. Y., Vanessa, V., & Anurantha, J. J. (2025). The Influence of Service Quality (Servqual) on the Satisfaction of BPJS Patients in Indonesian Healthcare Facilities : A Systematic Review. *Journal of Research of Social Science, Economics, and Management*, 05(05), 5285–5293. <https://doi.org/https://doi.org/10.59141/jrssem.v5i5.1224>
- Pertiwi, A. (2017). Analisis Perbedaan Kualitas Pelayanan Pada Pasien Bpjs Dan Pasien Umum Terhadap Kepuasan Pasien Di Rawat Jalan Rsud Kota Surakarta. *Jurnal Manajemen Daya Saing*, 18(2), 113–121. <https://doi.org/https://doi.org/10.23917/dayasaing.v18i2.4508>
- Purnama, E., & Yuliaty, F. (2025). STUDI LITERATUR : Faktor Kualitas Pelayanan terhadap Loyalitas Pasien di Rumah Sakit Indonesia. *Jurnal Mahasiswa Ekonomi & Bisnis*, 5(1), 50–60. <https://doi.org/https://doi.org/10.37481/jmeh.v5i1.1112>
- Putri, A. Z. D., & Cokki, C. (2024). Analisis perbandingan kepuasan pasien terhadap pelayanan kesehatan berbasis program BPJS dan Non BPJS di rumah sakit umum daerah K.R.M.T Wongsonegoro. *Jurnal Manajemen Bisnis Dan Kewirausahaan*, 8(2). <https://doi.org/https://doi.org/10.24912/jmbk.v8i2.29666>
- R, C., H, G., S, H., & J, H. (2002). The measurement of satisfaction practice from a systematic review. *Health Technology Assessment*, 6(32). <https://doi.org/https://doi.org/10.3310/hta6320>
- Romero, A. N., Suminar, S. R., & Zakiran, A. H. (2023). Pemenuhan Hak Pasien BPJS dalam Mendapatkan Pelayanan Antidiskriminasi Dihubungkan dengan UU Rumah Sakit. *Jurnal Riset Ilmu Hukum (JRIH)*, 3(1), 31–36. <https://doi.org/https://doi.org/10.29313/jrih.v3i1.2121>
- Rumambi, F. T., Mekel, P. A., Kampilong, J. K., Pangkey, D. A. P. J., Kembuan, I., & Mokat, G. (2025). BPJS Service Quality And Patient Satisfaction : A Mixed- Methods Study In Indonesian Public Hospitals. *Sosioedukasi : Jurnal Ilmiah Ilmu Pendidikan Dan Sosial*, 14(4), 2687–2701. <https://doi.org/https://doi.org/10.36526/sosioedukasi.v14i4.6480>
- Shie, A., Huang, Y., Li, G., Lyu, W., Yang, M., & Dai, Y. (2022). Exploring the Relationship Between Hospital Service Quality , Patient Trust , and Loyalty From a Service Encounter Perspective in Elderly With Chronic Diseases. *Front. Public Health*, 10(May), 1–17. <https://doi.org/10.3389/fpubh.2022.876266>
- Simarmata, H., Rumayar, A. A., & Wowor, R. E. (2023). Gambaran Kepuasan Pasien Peserta Jaminan Kesehatan Nasional (JKN) Terhadap Mutu Jasa Pelayanan Rawat Jalan Di Rumah Sakit Bhayangkara Tk.Iii Manado. *Jurnal Kesehatan Tambusai Journal of Health*, 4(3), 2323–2331. <https://doi.org/https://doi.org/10.31004/jkt.v4i3.15976>
- Sukardi, S. I. S., Fadilla, A. N., & Amin, M. N. F. Al. (2024). Analisis Pelayanan BPJS Di Indonesia Dalam Meningkatkan Kesejahteraan Masyarakat Dengan Pendekatan Problem Tree Analysis. *Jurnal Pahlawan*, 7(1), 11–22. <https://doi.org/https://doi.org/10.31004/jp.v7i1.27460>

- Sumarni, S., & Rizky, W. (2025). Evaluasi Kualitas Pelayanan dan Kepuasan Pasien di Era JKN: Studi Kasus Menggunakan Indikator HCAHPS. *Indonesian Journal of Hospital Administration*, 8(2), 65–81. [https://doi.org/https://doi.org/10.21927/ijhaa.2025.8\(2\).65-81](https://doi.org/https://doi.org/10.21927/ijhaa.2025.8(2).65-81) Indonesian Journal of Hospital Administration
- Xesfingi, S., & Vozikis, A. (2016). Patient satisfaction with the healthcare system: Assessing the impact of socio- economic and healthcare provision factors. *BMC Health Services Research*, 1–7. <https://doi.org/10.1186/s12913-016-1327-4>
- Yusefi, A. R., Davarani, E. R., Daneshi, S., Bastani, M., & Mehralian, G. (2022). Responsiveness level and its effect on services quality from the viewpoints of the older adults hospitalized during COVID - 19 pandemic. *BMC Geriatrics*, 1–12. <https://doi.org/10.1186/s12877-022-03344-5>
- Yusra, Y. (2020). Hubungan kualitas pelayanan terhadap tingkat kepuasan pasien BPJS. *Jurnal SAGO Gizi Dan Kesehatan*, 1(2), 201–211. <https://doi.org/http://dx.doi.org/10.30867/gikes.v1i2.416>