

THE EFFECT OF SERVQUAL DIMENSIONS ON PATIENT SATISFACTION AMONG BPJS MANDIRI PATIENTS AT PERTAMINA CIREBON HOSPITAL

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Abstract

Patient satisfaction is an important outcome of healthcare service quality, particularly in outpatient services for National Health Insurance participants. This study aimed to analyze the partial and simultaneous effects of the SERVQUAL dimensions—tangibles, reliability, responsiveness, assurance, and empathy—on patient satisfaction among BPJS Mandiri patients at the Specialist Polyclinic of Pertamina Cirebon Hospital. A quantitative cross-sectional design was used. The study population comprised 1,200 BPJS patients visiting the Specialist Polyclinic during November 2024–January 2025, and 92 respondents were selected using accidental sampling. Data were collected using a questionnaire and analyzed using descriptive analysis and multiple linear regression. The instrument consisted of 48 items; all items were valid and all variables demonstrated high reliability. The results showed significant positive effects of tangibles ($t=3.066$; $p=0.003$), reliability ($t=3.690$; $p<0.001$), responsiveness ($t=3.063$; $p=0.003$), assurance ($t=4.382$; $p<0.001$), and empathy ($t=3.017$; $p=0.003$) on patient satisfaction. Assurance was the most dominant dimension. Simultaneously, the five SERVQUAL dimensions significantly affected patient satisfaction ($F=47.831$; $p<0.001$), with an Adjusted R^2 of 0.702. Overall satisfaction was 78.30%, categorized as satisfied, while responsiveness had the lowest score (73.60%). The findings indicate that hospital management should maintain healthcare professionals' competence and professionalism while prioritizing waiting-time management, queue efficiency, punctuality, and responsiveness.

Keywords: SERVQUAL; Patient Satisfaction; BPJS Mandiri; Outpatient Services; Hospital Management.

INTRODUCTION

Healthcare is a basic human need and a crucial component in improving quality of life. Hospitals are required not only to provide safe and effective clinical services but also to provide a service experience that meets patient expectations. In the National Health Insurance (JKN) system, this demand is becoming increasingly important due to high patient mobility and the complexity of the referral process (Trisnantoro, 2022; Awati & Syamiyah, 2025). Specialist polyclinics are a crucial point of contact between BPJS patients and referral hospitals. Patients undergo a series of processes, from registration and membership verification, queuing, doctor examinations, necessary supporting examinations, and medication collection. The quality of each contact point can shape patient perceptions of overall service quality (Gultom et al., 2022; Norsaputera et al., 2025).

Pertamina Cirebon Hospital serves BPJS patients, including BPJS Mandiri participants or Non-Wage Workers. The specialist polyclinic provides services from various specialist doctors and is one of the main points of referral services for BPJS patients. This research thesis places service quality as the main variable assessed through five dimensions of SERVQUAL, namely tangibles, reliability, responsiveness, assurance, and empathy. ■ filecite ☆ turn6file11 ☆ L596-L621 ↗ (Adi et al., 2026; Awati & Syamiyah, 2025). SERVQUAL views service quality through the gap between expectations and the service received. Tangibles relate to physical facilities and the appearance of staff; reliability to the ability to provide services accurately and consistently; responsiveness to the willingness and speed to help patients; assurance to competence, politeness, and the ability to foster trust; while empathy relates to individual attention to patients. This framework is widely used to evaluate the quality of health services. (Slamet & Sulistiyowati, 2022; Arini et al., 2025). Service issues at the research site were evident in a preliminary survey of 10 BPJS patients. The average gap between expectations and actual service was -1.81. The largest gap was found in responsiveness, particularly examination waiting time of -2.6, staff responsiveness to complaints of -2.2, and timeliness of service reliability of -2.2. These initial findings indicate that speed and timeliness are issues that require attention. (Norsaputera et al., 2025; Arni et al., 2023).

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Previous research has shown that the relationship between service quality and patient satisfaction can vary depending on facility characteristics and patient groups. This thesis notes that previous research, among others, has demonstrated the role of reliability and responsiveness in BPJS patients and the role of assurance and empathy in outpatients. However, research specifically examining the five dimensions of SERVQUAL in BPJS Mandiri patients at the specialist polyclinic at Pertamina Hospital, Cirebon, is still limited (Gultom et al., 2022; Alhayat et al., 2023; Raudha et al., 2025). Based on these conditions, this study aims to analyze the influence of tangibles, reliability, responsiveness, assurance, and empathy on BPJS Mandiri patient satisfaction at the specialist polyclinic at Pertamina Hospital, Cirebon, both partially and simultaneously. The study also aims to identify the most dominant dimensions and service aspects that need to be prioritized for improvement (Adi et al., 2026; Arini et al., 2025).

METHOD

The study used a quantitative approach with a cross-sectional design. The object of the study was BPJS Mandiri patient services at the Specialist Polyclinic of Pertamina Hospital, Cirebon. The population was 1,200 BPJS patients who visited between November 2024 and January 2025. The sample size was calculated using the Slovin formula with a 10% error rate, resulting in 92 respondents. The sampling technique used accidental sampling, where patients who came and met the research criteria were recruited as respondents (Sugiyono, 2022).

The respondent criteria in this thesis include BPJS patients aged at least 17 years, having visited at least twice, being able to read and write, and being willing to be respondents. The independent variables consist of tangibles (X1), reliability (X2), responsiveness (X3), assurance (X4), and empathy (X5), while the dependent variable is patient satisfaction (Y). Data were collected using a questionnaire (Sugiyono, 2022).

Ordinal data was transformed into interval data using the Method of Successive Intervals (MSI), then analyzed using multiple linear regression. Testing included descriptive analysis, validity testing, reliability testing, classical assumption testing, t-test, F-test, and coefficient of determination. The regression model used was $Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5$. (Ghozali, 2021; Sugiyono, 2023).

The instrument's validity was tested using Pearson Product Moment correlation. With $n = 92$, the r table at $\alpha = 5\%$ was 0.196. All 48 questions had a calculated r greater than the r table, thus being declared valid (Ghozali, 2021).

Reliability was tested using Cronbach's Alpha. The alpha values for tangibles, reliability, responsiveness, assurance, empathy, and satisfaction were 0.841; 0.853; 0.827; 0.869; 0.836; and 0.848, respectively. All values were above 0.70 and were categorized as having high reliability (Ghozali, 2021).

The Kolmogorov-Smirnov normality test showed an Asymp. Sig. value of 0.200, indicating a normally distributed residual. Other assumption tests in the thesis did not reveal any issues hindering the regression modeling. The analysis was conducted using SPSS.

This study used patient survey data. Information regarding the research ethics document is included in the thesis appendix; the ethics approval number is not included in this article because it was not available in the data extracted for the article.

RESULTS AND DISCUSSION

A. Respondent Characteristics

The study involved 92 BPJS Mandiri patients. Fifty female respondents (54.35%) and 42 male respondents (45.65%). The largest age group was 46–55 years old (30 people (32.60%)), followed by 36–45 years old (25 people (27.20%)). The highest educational level was high school/equivalent (38 people (41.30%)). The highest occupation was private sector employee (26 people (28.26%)). Based on the frequency of visits, the 2–3 times group was the largest group, namely 31 people (33.70%).

Characteristics	Main categories	n	%
Gender	Woman	50	54.35
Age	46–55 years	30	32.60
Education	High school/equivalent	38	41.30
Work	Private employees	26	28.26
Frequency of visits	2–3 times	31	33.70

B. Descriptive Analysis

Descriptive results show that all SERVQUAL dimensions are in the satisfied category, except for assurance, which is in the very satisfied category. The highest score is assurance at 82.80%, while responsiveness is the

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dimension with the lowest score at 73.60%. Overall patient satisfaction scored 78.30% and is included in the satisfied category. The category ranges used in this thesis are very satisfied 81–100%, satisfied 61–80%, quite satisfied 41–60%, less satisfied 21–40%, and dissatisfied 0–20%.

Variables	Score (%)	Category
Tangibles	78.30	Satisfied
Reliability	78.60	Satisfied
Responsiveness	73.60	Satisfied
Assurance	82.80	Very satisfied
Empathy	77.40	Satisfied
Patient satisfaction	78.30	Satisfied

At the indicator level, the parking and access aspects scored 70.40% on the tangibles dimension. For reliability, the service indicator, which met the promised time limit, scored 72.80%. For responsiveness, the service waiting time indicator, which was not too long, scored 68.80%, the lowest indicator score in the study. These findings reinforce the pre-survey findings that wait time is a critical point in the patient experience.

C. Multiple Linear Regression Results

Variables	Coefficient B	t count	Sig.
Tangibles (X1)	0.187	3,066	0.003
Reliability (X2)	0.214	3,690	0,000
Responsiveness (X3)	0.193	3,063	0.003
Assurance (X4)	0.241	4,382	0,000
Empathy (X5)	0.178	3,017	0.003

The regression coefficients of all variables are positive. Assurance has the largest coefficient, namely 0.241, followed by reliability 0.214, responsiveness 0.193, tangibles 0.187, and empathy 0.178. Based on the thesis output, the regression equation can be written as $Y = 0.412 + 0.187X1 + 0.214X2 + 0.193X3 + 0.241X4 + 0.178X5$.

D. Partial Hypothesis Test

The t-test showed that all SERVQUAL dimensions had a positive and significant effect on patient satisfaction. Tangibles had a t-value of 3.066 and p-value of 0.003; reliability had a t-value of 3.690 and p-value of <0.001; responsiveness had a t-value of 3.063 and p-value of 0.003; assurance had a t-value of 4.382 and p-value of <0.001; and empathy had a t-value of 3.017 and p-value of 0.003. All calculated t-values were greater than the t-value of 1.985, thus the partial hypothesis was accepted.

E. Simultaneous Test and Coefficient of Determination

The F-test yielded a value of $F=47.831$ with a significance of $p<0.001$. Thus, tangibles, reliability, responsiveness, assurance, and empathy together significantly influence patient satisfaction. The Adjusted R^2 value of 0.702 indicates that 70.2% of the variation in patient satisfaction can be explained by the five SERVQUAL dimensions, while 29.8% is explained by other factors outside the model.

Methodological note to authors: The ANOVA output in the thesis displays a total df of 99, while the method and assumption test state $N=92$. Due to this inconsistency, this article does not display the df in the F-test table and maintains $N=92$ as per the research method. The original SPSS output should be verified before final submission.

DISCUSSION

A. The Influence of Tangibles on Patient Satisfaction

Tangibles have a positive and significant impact on patient satisfaction. These results indicate that physical facilities, waiting room comfort, environmental cleanliness, completeness of equipment, and staff appearance are all part of the patient experience. The thesis notes that the tangible dimension contributes through waiting room comfort, cleanliness, completeness of medical equipment, and professionalism of staff appearance (Kristiawan et al., 2023; Arini et al., 2025).

However, a score of 70.40% on the parking and access indicators indicates that the patient experience begins before entering the examination room. From a hospital management perspective, tangible improvements should not

only focus on clinical spaces but also include access, parking, signage, waiting areas, cleanliness, and environmental comfort (Kristiawan et al., 2023).

This finding aligns with the research of Kristiawan et al. (2023), which in the thesis was used as a reference, stating that the quality of service and infrastructure is related to outpatient satisfaction.

B. The Influence of Reliability on Patient Satisfaction

Reliability has a positive and significant effect on patient satisfaction with $t = 3.690$ and $p < 0.001$. Reliability describes a hospital's ability to provide services promptly, consistently, accurately, and on time as promised. In specialist polyclinic services, this aspect relates to the certainty of administrative processes, the accuracy of practice schedules, the consistency of standard operating procedures (SOPs), and the accuracy of clinical services (Pratama & Sukwika, 2024; Adi et al., 2026).

The reliability coefficient of 0.214 is the second-highest after assurance. This indicates that patients require not only competent healthcare professionals but also a reliable service process. The indicator of timely service received a score of 72.80%, indicating that the punctuality of physician practice and schedule consistency require management attention (Pratama & Sukwika, 2024).

C. The Influence of Responsiveness on Patient Satisfaction

Responsiveness had a positive and significant effect on patient satisfaction with a t-value of 3.063 and p-value of 0.003. Despite its significance, responsiveness had the lowest average score, at 73.60%. This indicates that responsiveness is both a crucial factor and the service area most in need of improvement (Norsaputera et al., 2025).

The most significant finding was the service waiting time indicator, which only scored 68.80%. This result is consistent with a pre-survey that found a gap of -2.6 in examination waiting time and -2.2 in staff responsiveness to complaints (Norsaputera et al., 2025; Arni et al., 2023).

The practical implication is that management needs to control variations in waiting times through doctor scheduling, queuing systems, synchronization between units, monitoring actual waiting times, and proactive communication in the event of delays. The thesis's recommendations specifically propose a time-slot-based appointment system to reduce waiting times (Norsaputera et al., 2025; Arni et al., 2023).

D. The Influence of Assurance on Patient Satisfaction

Assurance was the most dominant dimension. The t-value of 4.382 was the highest among all dimensions, while the regression coefficient of 0.241 was also the largest. These results indicate that the competence, professionalism, courtesy, communication, and sense of security provided by healthcare workers are important determinants of patient satisfaction (Alhayat et al., 2023; Fitriani et al., 2024).

This thesis interprets high assurance as a competitive advantage for Pertamina Cirebon Hospital that needs to be maintained through continuous competency development. In the context of BPJS Mandiri patients, trust in the competence of healthcare professionals can become increasingly important because patients expect safe and professional referral services (Fitriani et al., 2024).

The implication is that quality improvement should not only focus on reducing wait times. Hospitals need to maintain clinical quality, professional communication, patient safety, and the ability of healthcare workers to provide understandable explanations (Fitriani et al., 2024; Alhayat et al., 2023).

E. The Influence of Empathy on Patient Satisfaction

Empathy had a positive and significant effect on patient satisfaction with a t-value of 3.017, p-value of 0.003, and a coefficient of 0.178. This dimension scored 77.40%. The ability of staff to communicate using easily understood language was relatively highly appreciated (Fitriani et al., 2024; Alhayat et al., 2023).

Empathy demonstrates that healthcare is a personal experience. Patients need attention, respect, the opportunity to express their concerns, and understandable explanations. Therefore, therapeutic communication and patient-centered care must be maintained as part of the service culture (Fitriani et al., 2024).

F. The Simultaneous Effect of SERVQUAL on Patient Satisfaction

The five SERVQUAL dimensions simultaneously significantly influenced patient satisfaction with $F=47.831$ and Adjusted $R^2=0.702$. This indicates that service quality is a significant factor in explaining variations in patient satisfaction across the study sites. This finding supports the use of SERVQUAL as a framework for

evaluating service quality and demonstrates that quality improvement must be carried out multidimensionally (Slamet & Sulistiyowati, 2022; Arini et al., 2025).

The adjusted R^2 value of 0.702 also indicates that 29.8% of the variation in satisfaction remains unexplained by the model. Other factors may include patient experience, perceived value, accessibility, trust, service outcomes, indirect costs, or individual characteristics. Therefore, future research can expand the model with these variables (Asiye & Wahyudi, 2025; Raudha et al., 2025).

The main finding of the study was a discrepancy between the most dominant dimensions and those most in need of improvement. Assurance was a key strength, while responsiveness was a relative weakness. For management, this situation means that the quality strategy should be dual-track: maintaining competence and professionalism while improving the speed and accuracy of the service process (Adi et al., 2026; Norsaputera et al., 2025).

Managerial Implications

- Responsiveness is a top priority through wait time management, queue slot management, doctor schedule synchronization, and periodic wait time monitoring (Norsaputera et al., 2025).
- Reliability is strengthened through process standardization and evaluation of adherence to service schedules and SOPs (Pratama & Sukwika, 2024).
- Assurance is maintained as a strength through competency development, professional communication, patient safety, and a culture of service that builds trust (Fitriani et al., 2024).
- Tangibles are improved at points that are directly felt by patients, especially parking, access, waiting room comfort, cleanliness, and supporting facilities.
- Empathy is strengthened through therapeutic communication, patient-centered care, and responsive complaint handling mechanisms (Fitriani et al., 2024).
- The research results can be used as the basis for a simple quality dashboard. Hospitals can set targets for each dimension, select the indicator with the lowest score, assign a responsible unit, and measure changes after intervention. This approach allows research findings to be translated into a continuous quality improvement program (Awati & Syamiyah, 2025).

CONCLUSION

The five dimensions of SERVQUAL—tangibles, reliability, responsiveness, assurance, and empathy—have a positive and significant influence on BPJS Mandiri patient satisfaction at the Pertamina Hospital Specialist Polyclinic in Cirebon. Partially, the t -values are 3.066; 3.690; 3.063; 4.382; and 3.017, respectively, all significant at $\alpha=5\%$. Assurance is the most dominant dimension.

Simultaneously, all five dimensions significantly influenced patient satisfaction with $F=47.831$ and Adjusted $R^2=0.702$. Patient satisfaction was in the satisfied category at 78.30%. Assurance scored the highest at 82.80%, while responsiveness scored the lowest at 73.60%.

The priority for improvement is to increase responsiveness, particularly wait times and queue efficiency, while maintaining assurance as a service strength. Reliability, tangibles, and empathy need to be continuously enhanced through process standardization, facility improvements, and strengthening patient-centered communication.

RESEARCH LIMITATIONS

The study used a cross-sectional design, so the results reflect patient perceptions during the study period and cannot explain changes in satisfaction over time. The accidental sampling technique also limits the generalizability of the results to all BPJS patients at other hospitals. Furthermore, there was an inconsistency between the $N=92$ method and the normality test output with a total df of 99 in the thesis ANOVA table. This inconsistency needs to be verified using the original data files and SPSS output before the article is submitted.

Future research could use probability sampling, a larger number of respondents, a longitudinal design, and include variables such as patient experience, trust, perceived value, loyalty, and actual waiting time to explain variations in satisfaction not yet explained by the model (Asiye & Wahyudi, 2025; Norsaputera et al., 2025).

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