

Evaluating the Quality of Health Services for BPJS Nasional Indonesia Beneficiaries Using the Servqual Model

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ABSTRACT

Evaluating the quality of health services for BPJS participants is essential to ensure the effectiveness and sustainability of the National Health Insurance program. Although patient visits at the Tinggede Community Health Center have continued to rise, this increase has not been matched by improvements in service quality, highlighting the need for a structured assessment of patient needs. This study aims to evaluate patient perceptions of service quality using the ServQual model, which consists of five key dimensions: Reliability, Responsiveness, Assurance, Empathy, and Tangible. A quantitative cross-sectional design was employed involving 96 BPJS beneficiary respondents. Data were collected through a Likert scale-based questionnaire and analyzed using the Friedman test to compare perceptions across dimensions. Results show that Assurance and Responsiveness received the highest ratings, while Tangible scored the lowest and differed significantly from the top two dimensions. These findings indicate that non-physical elements, particularly competence, trustworthiness, and timely responses from healthcare workers, play a greater role in shaping patient satisfaction than physical facilities. The study contributes empirical evidence on priority areas for improving service quality in primary health care settings. Practical implications include enhancing staff competencies, streamlining service flow to reduce waiting times, and strengthening empathetic communication. The study concludes that efforts to improve service quality should prioritize non-physical dimensions that have the strongest

influence on patient experience. Recommendations include ongoing quality evaluations, broader adoption of digital services, and expanding future studies to different regions and populations to deepen understanding of service quality determinants.

Keywords

BPJS Patients
Patient Satisfaction
Primary Health Care
Service Quality
SERVQUAL

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Introduction

The Indonesian government continues to strive to improve public health through the implementation of the National Health Insurance (JKN) program, which has been managed by the Social Security Administration Agency (BPJS) for Health since January 1, 2014. This program aims to provide comprehensive health protection to the entire community through an inclusive financing scheme, both independently and with government subsidies [1], [2]. As the largest health insurance system in Indonesia, BPJS plays an important role in ensuring that the basic health needs of citizens are met, making the quality of services provided a key indicator of the program's success.

The quality of health services is not only determined by clinical outcomes, but also by patients' perceptions of service aspects such as speed, friendliness, clarity of communication, and facility management [3], [4]. Various international studies show that patient satisfaction levels can vary even though objective health indicators are relatively similar [5]. A similar phenomenon was observed at the Tinggede Community Health Center, with a surge in BPJS patient visits from 5,288 in 2022 to 7,400 in 2023, reaching 2,122 visits in the first quarter of 2024. However, this increase in visit volume has not been accompanied by the expected improvement in service quality, as evidenced by various community complaints regarding service [6]. This situation highlights an imbalance between increased access to services and the quality of services received by BPJS participants.

In the context of primary health care (PHC), identifying patient needs is an important aspect of ensuring service quality, especially for middle-income countries facing resource constraints [7], [8]. Gaps in service quality can have a direct impact on service effectiveness, program sustainability, and public trust in BPJS. This identification effort requires a structured approach, particularly through the assessment of service quality dimensions that are relevant to patients. Previous studies emphasize that trust, communication, and service accuracy are key indicators in building community participation and involvement in health programs [9], [10].

Preliminary study results at the Tinggede Community Health Center (May 2024) revealed various patient complaints, such as long waiting times, unclear communication from staff, unfriendly staff attitudes, and a lack of supporting facilities, such as chairs in the waiting room. These complaints not only reflect operational problems but also indicate a mismatch between public service standards and the quality of service perceived by patients. The literature states that effective PHC facilities generally show higher levels of patient satisfaction, so these complaints indicate that there is a service quality gap that needs attention [11]-[13].

This condition leads to a research gap, namely the lack of systematic studies on BPJS participants' perceptions of service quality in primary health facilities, particularly using the ServQual approach. In fact, the ServQual framework has been proven effective in identifying the dimensions of service that most influence patient experience and can form the basis for continuous service quality improvement [13], [14]. This gap is relevant considering that perceptions of service quality greatly influence the sustainability of the BPJS program and public trust in the health insurance system.

Based on this gap, this study was conducted to identify the needs and perceptions of BPJS patients regarding service quality at the Tinggede Community Health Center using the Service Quality (ServQual) approach. With a quantitative approach based on ServQual, this study is expected to serve as a basis for improving service quality that is more responsive and oriented towards patient needs.

Material and Methods

This study uses a validated approach, such as the ServQual model, which highlights the important dimensions of service quality, namely Reliability, Responsiveness, Assurance, Empathy, and Tangibility [15], [16]. The variable of BPJS participants' health service needs identification is used as a benchmark for the reliability of primary health services. This study design uses a quantitative descriptive approach with a cross-sectional observational approach. It was conducted at the Tinggede Community Health Center in Marawola District, Sigi Regency, from July to August 2024.

The study population consisted of all BPJS patients who visited or used the Marawola District Community Health Center facilities during the study period, totaling 96 BPJS beneficiary respondents, based on the following inclusion and exclusion criteria (Table 1).

Table 1. Inclusion and Exclusion Criteria

Inclusion	Exclusion
Willing to be a respondent	New patients
Not in an emergency	Patients who are not active BPJS participants
Not blind or deaf	
Active as a BPJS participant	
Has used BPJS services more than once	

Based on parameters using G-Power software, a moderate effect size ($f = 0.25$), significance level ($\alpha = 0.05$), and desired statistical power ($1-\beta = 0.80$), the minimum sample size achieved was 85, so the sample of 96 in this study was considered sufficient for the planned analysis. Sample collection was conducted accidentally during the research period in July-August 2024. Data collection used the interview method with a questionnaire as an aid for each respondent. Before data collection, all respondents were informed about the purpose, absence of risk, confidentiality, benefits, and absence of harm as respondents in this study, and that their participation was entirely voluntary. Respondents who were willing then provided their informed consent. Respondents could withdraw at any time without consequences. This study involved a questionnaire-based survey without any intervention.

The variables in this study consist of Reliability, Responsiveness, Assurance, Empathy, and Tangibility. The instrument used in collecting research data is a questionnaire consisting of 25 statements in total. The questionnaire was assessed using a Likert scale with the following criteria: Very Good (3), Good (2), Not Good (1). The response scores were then classified as “Good” if the respondent's score was above the median value and “Not Good” if the respondent's score was below the median value. Meanwhile, the data analysis used was the Friedman test using SPSS 27 software. The analysis results were interpreted in a table model accompanied by a descriptive explanation.

Results and Discussions

A. Respondent Characteristics

In this study, the assessment of respondent characteristics became a supporting aspect of the main variables observed to provide a demographic overview, including gender, age, education, and occupation, as shown in Fig. 1 and Fig. 2.

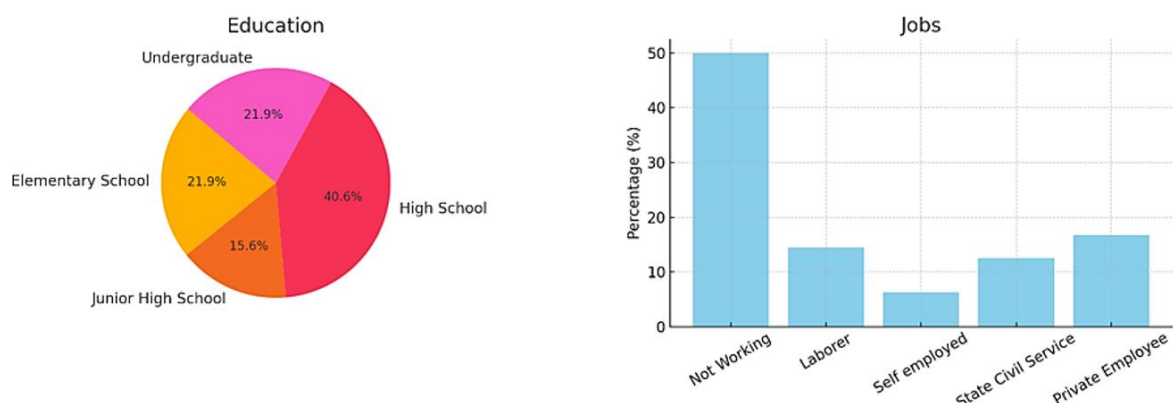


Fig. 1. Distribution of Respondent Characteristics (n = 96): Education and Jobs

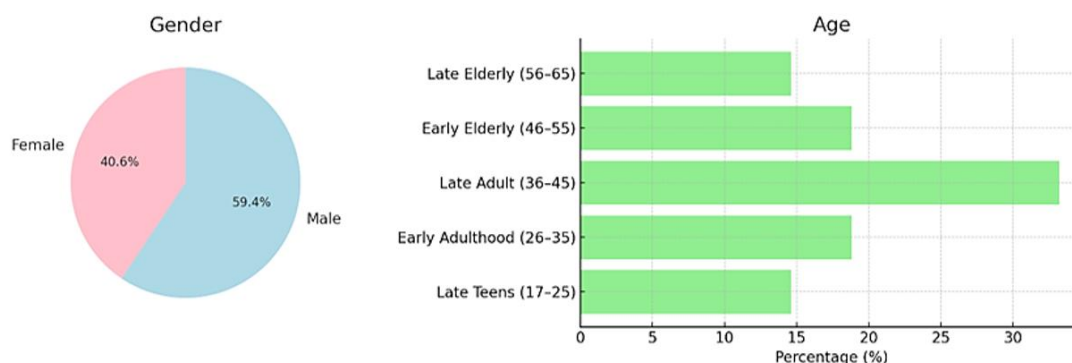


Fig. 2. Distribution of Respondent Characteristics (n = 96): Gender and Age

Fig. 1 shows the demographic characteristics of respondents, indicating that the majority have a secondary education level, with high school graduates dominating at 40.6%, followed by elementary school and university graduates at 21.9% each, and junior high school graduates at 15.6%. In terms of employment, half of the respondents (50%) were unemployed, while the rest consisted of laborers (14%), private employees (16%), civil servants (12%), and entrepreneurs (7%), indicating economic diversity.

Fig. 2 shows that the gender distribution was dominated by males at 59.4%, while females accounted for 40.6%. Based on age, the late adult age group (36–45 years) was the largest at 31.3%, followed by early adults (21.9%), early elderly (18.8%), late elderly (15.6%), and late adolescents (12.5%). Overall, this composition confirms that the respondents are dominated by the productive age group with a secondary education background and diverse employment status, which may influence their perceptions of the quality of health services.

B. Statistics Analysis

Table 2 presents the distribution and mean scores of service quality dimensions among BPJS patients. The table summarizes respondents' assessments across several dimensions of healthcare service quality, providing an overview of patient perceptions regarding the effectiveness, responsiveness, reliability, assurance, and overall quality of services received.

Table 1. Distribution and Mean Scores of Service Quality Dimensions among BPJS Patients

No	Variables	Category	Frequency (n=96)	Mean	Mean Rank	df
1.	Assurance	Not good	18-7%	1.97	3.401	4
		Good	81-3%			
2.	Responsiveness	Not good	31-3%	1.89	3.219	
		Good	68-7%			
3.	Empathy	Not good	35-4%	1.76	2.932	
		Good	64-6%			
4.	Reliability	Not good	22-9%	1.74	2.906	
		Good	77-1%			
5.	Tangibility	Not good	40-6%	1.59	2.542	
		Good	59-4%			

Noted: Measurement scale using a Likert scale 1-4.

The results in Table 2 present descriptive statistics and average ratings for the five dimensions of service quality based on the assessments of 96 respondents. The Assurance dimension received the highest average rating (3.401), followed by Responsiveness (3.219), Empathy (2.932), Reliability (2.906), and Tangible (2.542). Overall, the average scores across all dimensions were above the midpoint 159-197) of the Likert scale by 1-3 points, indicating that respondents generally rated service quality positively. This ranking order shows that assurance and responsiveness are perceived as the most prominent dimensions, while physical evidence is relatively less expected in patients' perception of service quality.

Table 3 presents the results of the Friedman test and paired comparisons with Bonferroni correction.

Table 3. Friedman Test and Pairwise Comparison with Bonferroni Correction

Dimensional Pairs	Mean Rank Differences	Z Test Statistics	p-value	P-value (Bonferroni)
Tangible - Reliability	-0.365	-1.598	0.110	1.000
Tangible - Empathy	-0.391	-1.712	0.087	0.870
Tangible- Responsiveness	-0.677	-2.967	0.003	0.030
Tangible - Assurance	-0.859	-3.766	0.001	0.002
Reliability - Empathy	-0.026	-0.114	0.909	1.000
Reliability - Responsiveness	-0.312	-1.369	0.171	1.000
Reliability - Assurance	-0.495	-2.168	0.030	0.302
Empathy - Responsiveness	0.286	1.255	0.209	1.000
Empathy - Assurance	0.469	2.054	0.040	0.400
Responsiveness - Assurance	-0.182	-0.799	0.424	1.000

Noted:

1. Friedman Test Result: $\chi^2(4) = 32.052$, $*p < 0.001$
2. Effect Size (Kendall's W): 0.083 (small effect)
3. Significance level after Bonferroni correction: $\alpha = 0.005$

The Friedman test showed statistically significant differences among the five dimensions ($\chi^2(4) = 32.052$; $p < 0.001$). Post-hoc analysis revealed that after Bonferroni correction ($\alpha = 0.005$), significant differences only occurred in two pairs: Tangible with Responsiveness ($p = 0.030$) and Tangible with Assurance ($p = 0.002$). There were no significant differences in the other eight pairs. These results indicate that the Tangible dimension consistently received lower ratings than Responsiveness and Assurance, while there were no significant differences between the other intangible dimensions.

This study was conducted to identify the main needs of patients participating in the National Health Insurance (BPJS) program using the Service Quality (ServQual) framework. The findings show a pattern of different perceptions of service quality between dimensions, where Assurance (guarantee/trust) and Responsiveness (responsiveness) consistently received the highest scores, while Tangible (physical evidence) received the lowest scores. Statistical tests showed significant differences, especially between the Tangible dimension and the two highest dimensions. Meanwhile, no significant differences were found between other

intangible dimensions such as Reliability, Empathy, Responsiveness, and Assurance.

This pattern indicates that in the context of primary health care services studied, non-physical aspects of service, particularly the assurance of trust and responsiveness of health workers, are more dominant in shaping perceptions of service quality than physical facilities. These findings are in line with the literature showing that patient orientation has now shifted more towards service experience and interpersonal interaction rather than purely physical aspects.

Studies using the ServQual model in various countries also report that the dimensions of assurance, responsiveness, and empathy are the main determinants of patient satisfaction, often more influential than tangibility and reliability [17], [18]. This applies to outpatient services, inpatient services, and digital-based health services. These three dimensions are considered priority areas that can have a major impact on improving patient satisfaction and loyalty [19]-[21].

The dimensions of assurance, responsiveness, and empathy are key elements in determining the quality of healthcare services as perceived by BPJS users. Emphasis is placed on the importance of health staff competency standards to ensure patient satisfaction, which is closely related to feelings of safety and trust in the services provided [22]. The Assurance dimension is particularly important because it relates to the ability, skills, and professionalism of health workers, which provide patients with a sense of security [23]. Other studies also confirm that the communication skills of health workers are positively correlated with patient satisfaction levels [24].

Furthermore, the dimension of Responsiveness, or the ability of the service system to provide a quick and efficient response to patients, is greatly influenced by various factors such as the availability of health workers and adequate infrastructure in health facilities [25]. During the COVID-19 pandemic, it was also clear that challenges in service responsiveness became more apparent, with prolonged waiting times that could reduce positive perceptions of health facilities [26]. Therefore, healthcare providers need to develop mechanisms that ensure responsiveness, such as continuous training for healthcare workers [27].

Meanwhile, the dimension of Empathy in communication between healthcare workers and patients plays an important role in increasing patient satisfaction. Several studies emphasize that empathetic interactions not only improve the patient experience but also foster a high level of trust in health workers [28]. This aspect is also described by Duku et al., who show that community involvement in health services can improve perceptions of quality through more empathetic and responsive interactions from health workers [29].

Improving the quality of these dimensions is very important for healthcare providers, as it can increase patient satisfaction [30], [31]. Therefore, healthcare providers need to prioritize

integrated efforts to improve quality through training, routine assessments, and improved communication between healthcare workers and patients in order to achieve service excellence [31]-[33]. Various studies show that when healthcare workers understand and respond to patient needs effectively, patient satisfaction levels increase. In addition, empathy from healthcare workers tends to improve interpersonal relationships, which also contributes to a positive perception of the services provided.

Focusing on developing capabilities in these three dimensions is essential to improving the overall quality and satisfaction of healthcare services. Patient satisfaction increases when they feel they are dealing with healthcare workers who have sufficient knowledge and skills [34], [35]. In the dimension of responsiveness, patients tend to indicate a need for shorter waiting times and quick responses [11], [23]. As for the aspect of empathy, the main point for patients is how healthcare workers understand and respond to their emotional needs [36].

Several other studies also offer supportive approaches to quality improvement, such as the OPPE (Ongoing Professional Practice Evaluation) method, which assesses the attitudes, professional development, and service performance of health workers [37]. In addition, the integration of telemedicine into the BPJS system can be an option to improve service access, as proven during the pandemic, although challenges related to low public trust still need to be addressed [38]. External factors such as increases in JKN contributions can also affect people's willingness to pay and raise their expectations of service quality [39]. Support for strengthening the role of community health centers (Puskesmas) as basic health care facilities is also crucial to improving public welfare [40].

Furthermore, based on the research results obtained, it can strategically improve BPJS Kesehatan services so that it supports the achievement of Sustainable Development Goals (SDGs), particularly the third goal related to quality and inclusive health. So far, BPJS is known to improve access to basic and referral services for low-income communities, but service quality and equity standards are not yet evenly distributed, for example, due to differentiation in treatment classes and limitations in doctors, medicines, and supporting facilities [41], [42]. Several studies show that the implementation of BPJS services can support the SDGs through the expansion of equitable access for poor and rural groups, the strengthening of primary service quality through health human resources, and the reduction of quality gaps between service classes to truly realize inclusive services [41]-[44].

Conclusion

This study concludes that the quality of health services for BPJS participants is more influenced by non-physical aspects, particularly Assurance, Responsiveness, and Empathy, which contribute significantly to patient perception and satisfaction, while Tangible is the dimension with the lowest rating. These findings are in line with previous literature that

emphasizes the importance of professionalism, speed of service, and empathetic interaction in shaping a positive service experience.

Based on these results, it is recommended that the Tinggede Community Health Center prioritize strengthening the competence of health workers through continuous training that emphasizes effective communication, increasing patient safety, and public service ethics. It is necessary to review and optimize service flows to shorten waiting times and improve staff response efficiency. Although the Tangibles and Reliability aspects are not the main focus of patient perceptions, improving the quality of waiting room facilities and service consistency remains essential to support the latest experience in comprehensive service.

Limitation and Suggestions

Although it makes an important contribution, this study has several limitations, such as data based on the subjective perceptions of respondents, which may be influenced by social bias, and a sample that only includes BPJS participants, so it cannot be generalized to the perception of the general public. Further research is recommended to cover a wider area with diverse demographic characteristics, as well as to compare perceptions of service quality between BPJS participants and regular or general participants. Further research also needs to explore more effective digital service integration, increasing public trust in telemedicine, and waiting time management mechanisms as part of improving the responsiveness of health services.

Conflict of Interest

The authors declare no conflict of interest.

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