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ORIGINAL ARTICLE

# Healthcare service quality and inpatient satisfaction among participants of the National Health Insurance-Contribution Assistance Recipients (JKN-PBI) programme

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## ABSTRACT

This research analyzes healthcare service quality and its impact on inpatient satisfaction among National Health Insurance-Contribution Assistance Recipient (JKN-PBI) participants at Mulyang Kute Regional General Hospital, Bener Meriah Regency, Indonesia. Employing a descriptive-analytical survey design with a cross-sectional approach, data was collected from 69 randomly selected JKN-PBI inpatients using questionnaires. The study examined five service quality dimensions: tangibles, reliability, responsiveness, empathy, and assurance, and their relationship with patient satisfaction. Bivariate analysis using the Chi-square test revealed that reliability ( $p=0.003$ ) and assurance ( $p=0.000$ ) significantly influenced patient satisfaction, while tangibles, responsiveness, and empathy did not show statistically significant relationships ( $p>0.05$ ). Reliability and assurance, reflecting consistent service delivery and staff competence, were crucial in fostering patient trust and satisfaction. Empathy, though not statistically significant, showed a trend towards positively influencing satisfaction, indicating a need for improvement in patient-centered care. The findings highlight the importance of reliability and assurance in enhancing JKN-PBI patient satisfaction. Recommendations include implementing training programs to improve staff empathy, maintaining high standards in reliability and assurance, and continuous patient feedback monitoring.

**Keywords:** JKN-PBI, patient satisfaction, healthcare service quality, reliability, assurance

## Introduction

Healthcare is a fundamental right of every citizen, which the government must guarantee. As a form of this responsibility, the Indonesian government has launched the National Health Insurance-Contribution Assistance Recipient (JKN-PBI) program to provide access to healthcare services for underprivileged communities. This program aims to reduce disparities in accessing healthcare services, particularly for those unable to pay JKN contributions independently.<sup>1,2</sup> However, access alone is insufficient; good quality healthcare services are paramount in achieving the JKN-PBI's objective of comprehensively improving public health. Without adequate service quality, this program will fail to significantly impact the health status of its participants.<sup>3</sup>

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Patient satisfaction is a crucial indicator in assessing healthcare service quality. High-quality services, such as staff courtesy, adequate facility availability, and service delivery speed, can directly enhance patient satisfaction. When patients are satisfied, it not only reflects the success of healthcare providers but also builds public trust in the overall health system. Furthermore, high patient satisfaction can encourage treatment adherence, ultimately contributing to improved health outcomes. Therefore, enhancing healthcare service quality benefits both patients and the sustainability of the health system itself.<sup>4-6</sup>

Despite JKN-PBI's provision of healthcare access to underprivileged communities, several challenges exist in delivering optimal service quality. Resource limitations, such as healthcare personnel, facilities, and medical equipment, often pose significant obstacles. Additionally, disparities in educational levels and uneven geographical access affect the community's ability to utilize healthcare services effectively. JKN-PBI participants are particularly vulnerable to the adverse effects of poor service quality, including dissatisfaction and treatment non-adherence.<sup>7-9</sup> Consequently, understanding the factors influencing JKN-PBI patient satisfaction is essential in efforts to improve healthcare service quality.

The MUYANG KUTE Regional General Hospital in Bener Meriah Regency plays a crucial role in serving the local community, as evidenced by the inpatient data of patients utilizing the National Health Insurance (BPJS Kesehatan) services. In the last five months of 2024, there were 208 patients in April and 299 in May, attended to by a total of 24 nurses in the inpatient unit. This indicates that the hospital is essential, not only for BPJS participants. However, a preliminary survey and informal interviews with 10 BPJS PBI inpatient participants revealed several issues related to the quality of healthcare services. Complaints included the unfriendliness of administrative staff during registration, the lack of responsiveness and speed of staff in serving patients, delays in doctor visits and medication administration, and a lack of effective communication between healthcare professionals and patients. Additionally, the physical condition of the bathrooms adjacent to the inpatient rooms was a concern due to unpleasant odours.

This research aims to analyze healthcare service quality and its impact on inpatient satisfaction among JKN-PBI participants in MUYANG KUTE Regional General Hospital. The significance of this study lies in its potential to provide valuable insights for policymakers, healthcare providers, and other researchers. By comprehending the factors that influence patient satisfaction, more effective strategies can be formulated to enhance JKN-PBI healthcare service quality. This research employs a quantitative methodology with a survey approach to collect data from JKN-PBI inpatient participants. The findings are expected to serve as a foundation for improving a more inclusive and high-quality health system.

## Method

This research employed a descriptive-analytical survey design, utilizing questionnaires as the primary data collection instrument. A cross-sectional study design was adopted to examine the impact of healthcare service quality on the satisfaction of inpatients covered by the Indonesian Government's Healthcare Insurance (BPJS PBI). The study was conducted at MUYANG KUTE Regional General Hospital, situated in Bukit Subdistrict, Bener Meriah Regency.

The population for this study consisted of all inpatients covered by BPJS PBI at MUYANG KUTE Regional General Hospital during 2024, totaling 2,239 patients, with an average monthly admission rate of 320 patients. A probability sampling method, specifically simple random sampling, was used to determine the research sample. The sample size was calculated using the formula for sample size determination for proportions in a finite population, resulting in a sample of 69 patients. Primary data were gathered through direct interviews with respondents using questionnaires. Secondary data were obtained from hospital documents and reports, including the hospital's 2023 profile.

The independent variables in this study were tangibles, reliability, responsiveness, assurance, and empathy. The dependent variable was patient satisfaction. Each variable was measured using an ordinal scale, categorized as "Good" or "Satisfied" (coded as 1) and "Poor" or "Dissatisfied" (coded as 2). The measurement of independent and dependent variables was based on respondents' answers to questionnaire items, using an ordinal scale. Response scores were grouped into "Good/Satisfied" and "Poor/Dissatisfied" categories based on predetermined score ranges.

Data were processed both manually and using computer software, involving stages of editing, coding, and data entry into the computer program. Data analysis involved univariate analysis to describe the frequency distribution of respondents and bivariate analysis to examine the relationships between

independent and dependent variables using the Chi-square test. The analysis results are presented in frequency distribution tables and described narratively.

## Results

Table 1 presents the patient characteristics (n=154) and their evaluations of service quality across five key dimensions: tangibles, reliability, responsiveness, empathy, and assurance, in addition to overall patient satisfaction.

Table 1. Patient's characteristics (n=69)

Variable	n	%
Tangibles		
Good	54	78,26
Poor	15	21,74
Reliability		
Good	60	86,96
Poor	9	13,04
Responsiveness		
Good	65	94,20
Poor	4	5,80
Empathy		
Good	44	63,77
Poor	25	36,23
Assurance		
Good	60	86,96
Poor	9	13,04
Patient satisfaction		
Satisfied	44	63,77
Unsatisfied	25	36,23

Regarding tangibles, the majority of patients (78.26%) rated the service as "good," while 21.74% rated it as "poor." This indicates that the physical aspects of the service, such as facilities and staff appearance, were generally satisfactory. Similarly, the dimensions of reliability and assurance showed positive results, with over 86% of patients rating them as "good." This suggests that the service was perceived as consistent, dependable, and that staff demonstrated adequate competence. Responsiveness received the highest "good" rating, at 94.20%, indicating that staff were responsive and prompt in providing service. However, empathy presented a contrasting result. Only 63.77% of patients rated it as "good," with 36.23% rating it as "poor." This suggests that the empathetic aspects of the service, such as understanding and attention to patient needs, require improvement. Overall patient satisfaction mirrored the trend seen in the empathy dimension, with 63.77% of patients reporting "good" satisfaction and 36.23% reporting "poor" satisfaction. This highlights that enhancing empathy in service delivery could significantly improve overall patient satisfaction.

Tabel 2 presents an analysis of the relationship between five service quality variables – tangibles, reliability, responsiveness, empathy, and assurance – and patient satisfaction. Each variable is categorised as "Good" or "Poor", while patient satisfaction is categorised as "Satisfied" or "Dissatisfied". The analysis also includes p-values to determine the statistical significance of the relationship between the service quality variables and patient satisfaction. The tangibles variable, which measures the physical aspects of the service such as facilities and staff appearance, revealed that 66.67% of patients who rated tangibles as "Good" reported satisfaction, compared to 53.33% of patients who rated tangibles as "Poor". However, the p-value of 0.250 indicates no statistically significant relationship between tangibles and patient satisfaction.

The reliability variable, which measures the service provider's ability to deliver the promised service accurately and consistently, showed that 65.00% of patients who rated reliability as "Good" were satisfied, while 55.56% of patients who rated reliability as "Poor" were satisfied. The p-value of 0.003 indicates a statistically significant relationship between reliability and patient satisfaction, suggesting that service reliability strongly influences patient satisfaction. The responsiveness variable, which measures the staff's willingness and ability to assist patients promptly, showed that 63.08% of patients who rated responsiveness as "Good" were satisfied, compared to 75.00% of patients who rated responsiveness as "Poor". However, the p-value of 0.540 indicates no statistically significant relationship between responsiveness and patient satisfaction.

Table 2. Bivariate analysis results

Variable	Patient satisfaction						p
	Satisfied		Unsatisfied		Total		
	n	%	n	%	n	%	
Tangibles							
Good	36	66.67	18	33.33	54	100	0,250
Poor	8	53.33	7	46.67	15	100	
Reliability							
Good	39	65.00	21	35.00	60	100	0,003
Poor	5	55.56	1	44.44	9	100	
Responsiveness							
Good	41	63.08	24	36.92	65	100	0,540
Poor	3	75.00	1	25.00	4	100	
Empathy							
Good	39	65.00	21	35.00	60	100	0,260
Poor	5	55.56	4	44.44	9	100	
Assurance							
Good	35	79.00	9	21.00	44	100	0,000
Poor	9	36.00	16	64.00	25	100	

The empathy variable, which measures the staff's level of attention and care towards individual patient needs, showed that 65.00% of patients who rated empathy as "Good" were satisfied, while 55.56% of patients who rated empathy as "Poor" were satisfied. The p-value of 0.260 indicates no statistically significant relationship between empathy and patient satisfaction. The assurance variable, which measures the staff's knowledge and courtesy, as well as their ability to instil trust in patients, showed that 79.00% of patients who rated assurance as "Good" were satisfied, while 36.00% of patients who rated assurance as "Poor" were satisfied. The p-value of 0.000 indicates a statistically significant relationship between assurance and patient satisfaction, suggesting that service assurance strongly influences patient satisfaction.

Of the five variables analysed, only reliability and assurance demonstrated a statistically significant relationship with patient satisfaction ( $p < 0.05$ ). This implies that service reliability and assurance have a strong impact on patient satisfaction. Although tangibles, responsiveness, and empathy did not show statistically significant relationships ( $p > 0.05$ ), the data trends still suggest that better quality in these variables tends to correlate with higher satisfaction levels. Overall, the findings of this study highlight the importance of reliability and assurance in delivering satisfactory patient services.

## Discussion

This research explores the impact of service quality dimensions on patient satisfaction, with findings indicating that while some aspects significantly influence satisfaction, others, though important, do not demonstrate statistically significant effects. Overall, the tangibles dimension was rated "good" by the majority of patients (78.26%); however, bivariate analysis did not reveal a statistically significant relationship with patient satisfaction ( $p = 0.250$ ). This suggests that while tangibles contribute to the overall service experience, they may not be a primary determinant of patient satisfaction. Therefore, healthcare providers should maintain high standards in this area, although efforts to enhance satisfaction might be more effectively focused on other dimensions. Tangibles contribute positively to patient satisfaction but may not be as impactful as other dimensions like empathy or assurance. For instance, in a study conducted in Saudi Arabia, the empathy dimension had the greatest influence on patient satisfaction ( $\beta=0.476$ ), followed by tangibles ( $\beta=0.198$ ) and responsiveness ( $\beta=0.164$ ).<sup>10</sup> Similarly, research at the Lepo-Lepo Health Center in Indonesia showed that patients with higher tangible quality reported greater satisfaction. However, statistical tests revealed no significant relationship between tangibles and overall satisfaction.<sup>11</sup>

Conversely, reliability emerged as a critical factor influencing patient satisfaction, with 86.96% of patients giving a "good" rating and a significant statistical relationship ( $p = 0.003$ ) between reliability and satisfaction. This underscores the importance of delivering consistent and dependable services. Patients value healthcare providers who fulfill their promises and maintain accuracy in service delivery. Consequently, strengthening systems and processes to ensure reliability should remain a priority for healthcare organisations. Patients value consistent and dependable services, emphasizing the importance of healthcare providers fulfilling promises and maintaining accuracy in service delivery. Healthcare organizations should prioritize strengthening systems and processes to ensure reliability.<sup>12</sup> Responsiveness received the highest "good" rating (94.20%), reflecting patients' appreciation for prompt and attentive service. However, the lack

of a statistically significant relationship with satisfaction ( $p = 0.540$ ) suggests that while responsiveness is valued, it may not be a primary driver of overall satisfaction. Nevertheless, maintaining high responsiveness is essential, as it contributes to a positive patient experience and can prevent dissatisfaction. Strategies such as improving communication skills, reducing waiting times, and fostering trust can also positively impact satisfaction levels.<sup>10,12</sup>

Empathy received the lowest "good" rating, with only 63.77% of patients providing this assessment. This indicates a need for improvement in how healthcare providers demonstrate understanding and address individual patient needs. Although the relationship between empathy and satisfaction was not statistically significant ( $p = 0.260$ ), the observed trend suggests that enhancing empathetic care could positively impact patient satisfaction. Training programmes focusing on communication skills and patient-centred care could help address this gap. A meta-analysis reported good empathy can increase patient satisfaction by approximately 1.43 times compared to poor empathy.<sup>13</sup> High levels of empathy are associated with reduced anxiety and distress among patients, leading to better adherence to treatment plans and overall health outcomes.<sup>14</sup> Empathetic interactions foster an environment where patients feel comfortable expressing their symptoms, which is crucial for accurate diagnosis and treatment.<sup>14,15</sup> Enhancing verbal and non-verbal communication skills among healthcare providers can help them better connect with patients. Training that emphasizes understanding individual patient needs and preferences can lead to more tailored and effective care strategies.

Assurance demonstrated the strongest statistical relationship with patient satisfaction ( $p = 0.000$ ), with 86.96% of patients giving a "good" rating. This highlights the importance of staff competence, courtesy, and their ability to instil trust in patients. Assurance is a critical factor in building patient trust and satisfaction. Healthcare providers should prioritise training and development programmes to enhance staff knowledge, professionalism, and interpersonal skills. A study shows that technical competence, empathy, and courteous behavior significantly influence patient perceptions of care quality and satisfaction.<sup>16</sup> Trust is a fundamental component of assurance. Patients are more likely to feel satisfied when they trust their healthcare providers, which can lead to better adherence to treatment plans and improved health outcomes.<sup>17</sup>

This study has several limitations. The relatively small sample size ( $n = 69$ ) may limit the generalisability of the findings. Additionally, the cross-sectional design prevents the establishment of causal relationships between service quality dimensions and patient satisfaction. Future studies with larger samples and longitudinal designs could provide more in-depth insights. Based on these findings, several recommendations are proposed: enhancing empathy through the implementation of training programmes to improve staff communication skills and patient-centred care; strengthening reliability and assurance by focusing on consistent service delivery and staff professionalism to build patient trust; maintaining responsiveness and tangibles by continuing to provide prompt service and ensuring that physical facilities meet patient expectations; and regularly monitoring patient feedback to identify areas for improvement and track progress over time.

## Conclusion

This study investigated the impact of five service quality dimensions (tangibles, reliability, responsiveness, empathy, and assurance) on patient satisfaction. While tangibles and responsiveness were rated favorably by the majority of patients, they did not exhibit statistically significant relationships with overall satisfaction. Conversely, reliability and assurance demonstrated strong, statistically significant associations with patient satisfaction, emphasizing the critical role of consistent, dependable service delivery and staff competence in fostering patient trust and satisfaction. Notably, empathy, although rated lower, showed a trend suggesting its positive influence on satisfaction, despite lacking statistical significance. Overall patient satisfaction mirrored the empathy dimension, indicating that improvements in empathetic care could significantly enhance patient perceptions. The study underscores the importance of reliability and assurance in healthcare service delivery and highlights the need for targeted interventions to improve empathy and maintain high standards across all service quality dimensions. While the study's limitations, including a small sample size, warrant cautious generalization, the findings provide valuable insights for healthcare providers seeking to enhance patient satisfaction. Future research with larger, longitudinal designs is recommended to further explore these relationships and establish causality.

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