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The association between service quality at the internal medicine polyclinic and outpatient satisfaction at Kendari City Regional General Hospital, Indonesia

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Abstract

Background: Patient satisfaction is a key indicator of hospital service quality. At the Internal Medicine Polyclinic of Kendari City Regional General Hospital, fluctuating outpatient visits and waiting-time performance below the institutional target indicate the need to assess service quality from the patient's perspective.

Objective: This study aimed to analyze the association between service quality and outpatient satisfaction, including the tangible, reliability, responsiveness, assurance, and empathy dimensions.

Methods: A quantitative cross-sectional study was conducted among 368 adult outpatients selected through consecutive sampling from October to December 2025. Service quality was assessed using a SERVQUAL-based questionnaire, while satisfaction was measured using a public service satisfaction instrument. Data were analyzed using univariate statistics, Chi-square tests, Fisher's exact test when required, and binary logistic regression.

Results: Most respondents were satisfied with the service (73.4%). Tangible (69.6%), assurance (84.2%), and empathy (98.1%) were mostly rated good, whereas reliability and responsiveness were each rated good by 44.3% of respondents. Overall service quality, tangible, reliability, responsiveness, and assurance were significantly associated with satisfaction ($p < 0.001$). Empathy was not significantly associated with satisfaction (Pearson $p = 0.327$; Fisher's exact $p = 0.389$). The multivariate model had a Nagelkerke R Square of 0.727, but the estimation did not converge, so independent effect sizes and a dominant dimension could not be established reliably.

Conclusion: Outpatient satisfaction was closely associated with service quality, particularly tangible, reliability, responsiveness, and assurance. Hospital improvement should prioritize reliable service processes and rapid staff responses while maintaining physical facilities, professional assurance, and patient-centered empathy.

Keywords: Service Quality; Patient Satisfaction; SERVQUAL; Outpatient Care; Internal Medicine; Hospital Management

1. Introduction

Hospital services must be safe, effective, accessible, and responsive to patient needs. Indonesian regulations require hospitals to provide comprehensive health services and protect patient rights, while international quality frameworks emphasize care that is effective, safe, timely, equitable, integrated, and people-centered (1,2). Patient satisfaction therefore functions as an important indicator of whether service delivery meets patient expectations and operational standards.

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Service quality describes the gap between the service expected by users and the service they perceive. The SERVQUAL model organizes this assessment into five dimensions: tangible, reliability, responsiveness, assurance, and empathy (3,4). Tangible concerns physical facilities and supporting equipment. Reliability refers to the ability to deliver services accurately and consistently. Responsiveness reflects the willingness to assist patients promptly. Assurance concerns competence, courtesy, safety, and trust. Empathy refers to individualized attention and understanding of patient needs.

Outpatient services require close attention because patients interact with several service points within a limited visit, including registration, waiting areas, clinical examination, supporting examinations, pharmacy, and administration. Delays or inconsistent information at one point can shape the patient's assessment of the entire service process. Previous studies in Indonesian hospitals and primary care facilities have reported significant relationships between service quality and patient satisfaction, although the relative importance of each SERVQUAL dimension varies across settings (5-12).

The Internal Medicine Polyclinic of Kendari City Regional General Hospital serves patients with acute complaints, chronic diseases, and repeated follow-up needs. Institutional records show that visits fluctuated from 15,397 in 2022 to 10,779 in 2023 and 11,331 in 2024. The patient satisfaction index reached 91.78% in 2024, while compliance with the outpatient waiting-time target reached 66.68%, below the hospital target of 80% (18,19). These indicators suggest that patient experience may still be affected by service process limitations.

Patient complaints reported in the thesis context included long waiting times, inconsistent staff attention, and communication that did not always meet expectations. These problems relate directly to reliability, responsiveness, assurance, and empathy. Physical comfort and supporting facilities may also affect satisfaction because internal medicine patients often wait for consultation, diagnostic procedures, or medication while experiencing discomfort or fatigue.

Most existing studies assess general outpatient services, pharmacy services, or broader hospital satisfaction. Evidence focused specifically on the Internal Medicine Polyclinic at Kendari City Regional General Hospital remains limited. This study therefore analyzed the association between overall service quality and outpatient satisfaction and examined each SERVQUAL dimension separately. The findings were expected to identify practical priorities for service improvement.

2. Research Methods

This study used a quantitative observational design with a cross-sectional approach. The research was conducted at the Internal Medicine Polyclinic of Kendari City Regional General Hospital from October to December 2025. The study population consisted of internal medicine outpatients, and 368 respondents were included through consecutive sampling until the required sample size was achieved.

Eligible respondents were adult outpatients aged 18 to 60 years, able to communicate, read, and write, and willing to complete the questionnaire. Patients who were unwilling to participate, unable to complete the instrument, or not receiving outpatient services at the Internal Medicine Polyclinic were excluded. Primary data were collected directly from respondents. Secondary data were obtained from the hospital profile, outpatient visit records, and service performance reports.

Service quality was measured through a SERVQUAL-based questionnaire covering tangible, reliability, responsiveness, assurance, and empathy. Patient satisfaction was measured through a public service satisfaction questionnaire adapted to the outpatient setting. Responses were categorized as good or not good for service quality dimensions and satisfied or dissatisfied for patient satisfaction. Data were processed using IBM SPSS Statistics. Univariate analysis described respondent characteristics and variable distributions. Chi-square analysis tested associations at $\alpha = 0.05$. Fisher's exact test was considered when expected cell counts were small. Binary logistic regression was used to assess the simultaneous model, but coefficient interpretation was limited when the estimation failed to converge.

3. Results

3.1. Respondent Characteristics and Variable Distribution

The study included 368 respondents. Women accounted for 51.9% of the sample, and respondents older than 45 years formed the largest age group (33.4%). Most respondents had a bachelor's degree (42.7%), while homemakers were the largest occupational group (21.2%). Overall, 270 respondents (73.4%) were satisfied and 98 respondents (26.6%) were

dissatisfied. Tangible was rated good by 69.6% of respondents, reliability by 44.3%, responsiveness by 44.3%, assurance by 84.2%, and empathy by 98.1%.

3.2. Overall Service Quality and Outpatient Satisfaction

Table 1 Relationship between Overall Service Quality and Outpatient Satisfaction at Kendari City Regional General Hospital, 2025

Overall Service Quality	**Outpatient Satisfaction**				**Total**		**p-value**
Category	Satisfied		Dissatisfied		n	%	
	n	%	n	%			
Good	270	73.4	40	10.9	310	84.2	0.000
Not good	0	0	58	15.8	58	15.8	
Total	270	73.4	98	26.6	368	100.0	

Source: Primary data, 2025

Table 1 show the association between overall service quality and outpatient satisfaction. The chi-square test showed a statistically significant relationship between the two variables ($p < 0.001$). Among the 310 respondents who perceived the overall service quality as good, 270 (87.1%) reported being satisfied with the outpatient services, while 40 (12.9%) reported being dissatisfied. In contrast, all 58 respondents (100.0%) who perceived the overall service quality as poor reported being dissatisfied with the outpatient services, with none reporting satisfaction. These findings indicate that respondents who perceived the overall service quality as good were significantly more likely to be satisfied with the outpatient services than those who perceived the service quality as poor.

3.3. Tangible and Outpatient Satisfaction

Table 2 Relationship between Tangible and Outpatient Satisfaction at Kendari City Regional General Hospital, 2025

Tangible	**Outpatient Satisfaction**				**Total**		**p-value**
Category	Satisfied		Dissatisfied		n	%	
	n	%	n	%			
Good	216	58.7	40	10.9	256	69.6	0.000
Not good	54	14.7	58	15.8	112	30.4	
Total	270	73.4	98	26.6	368	100.0	

Source: Primary data, 2025

Table 2 shows a statistically significant association between the tangible dimension and outpatient satisfaction ($p < 0.001$). Among the 256 respondents who perceived the tangible dimension as good, 216 (84.4%) reported being satisfied with the outpatient services, while 40 (15.6%) reported being dissatisfied. In contrast, among the 112 respondents who perceived the tangible dimension as poor, 54 (48.2%) were satisfied, whereas 58 (51.8%) were dissatisfied. These findings indicate that respondents who perceived the tangible aspects of the outpatient services as good were significantly more likely to report satisfaction than those who perceived them as poor.

3.4. Reliability and Outpatient Satisfaction

Table 3 shows a statistically significant association between the reliability dimension and outpatient satisfaction ($p < 0.001$). Among the 163 respondents who perceived the reliability dimension as good, all 163 (100.0%) reported being satisfied with the outpatient services, and none reported being dissatisfied. In contrast, among the 205 respondents who perceived the reliability dimension as poor, 107 (52.2%) were satisfied, whereas 98 (47.8%) were dissatisfied. These findings indicate that respondents who perceived the reliability of outpatient services as good were significantly more likely to report satisfaction than those who perceived the reliability as poor.

Table 3 Relationship between Reliability and Outpatient Satisfaction at Kendari City Regional General Hospital, 2025

Reliability	**Outpatient Satisfaction**				**Total**		**p-value**
Category	Satisfied		Dissatisfied		n	%	
	n	%	n	%			
Good	163	44.3	0	0	163	44.3	0.000
Not good	107	29.1	98	26.6	205	55.7	
Total	270	73.4	98	26.6	368	100.0	

Source: Primary data, 2025

3.5. Responsiveness and Outpatient Satisfaction

Table 4 Relationship between Responsiveness and Outpatient Satisfaction at Kendari City Regional General Hospital, 2025

Responsiveness	**Outpatient Satisfaction**				**Total**		**p-value**
Category	Satisfied		Dissatisfied		n	%	
	n	%	n	%			
Good	163	44.3	0	0	163	44.3	0.000
Not good	107	29.1	98	26.6	205	55.7	
Total	270	73.4	98	26.6	368	100.0	

Source: Primary data, 2025

Table 4 shows a statistically significant association between the responsiveness dimension and outpatient satisfaction ($p < 0.001$). Among the 163 respondents who perceived the responsiveness dimension as good, all 163 (100.0%) reported being satisfied with the outpatient services, and none reported being dissatisfied. In contrast, among the 205 respondents who perceived the responsiveness dimension as poor, 107 (52.2%) were satisfied, whereas 98 (47.8%) were dissatisfied. These findings indicate that respondents who perceived the responsiveness of outpatient services as good were significantly more likely to report satisfaction than those who perceived the responsiveness as poor.

3.6. Assurance and Outpatient Satisfaction

Table 5 Relationship between Assurance and Outpatient Satisfaction at Kendari City Regional General Hospital, 2025

Assurance	**Outpatient Satisfaction**				**Total**		**p-value**
Category	Satisfied		Dissatisfied		n	%	
	n	%	n	%			
Good	270	73.4	40	10.9	310	84.2	0.000
Not good	0	0	58	15.8	58	15.8	
Total	270	73.4	98	26.6	368	100.0	

Source: Primary data, 2025

Table 5 shows a statistically significant association between the assurance dimension and outpatient satisfaction ($p < 0.001$). Among the 310 respondents who perceived the assurance dimension as good, 270 (87.1%) reported being satisfied with the outpatient services, while 40 (12.9%) reported being dissatisfied. In contrast, all 58 respondents (100.0%) who perceived the assurance dimension as poor reported being dissatisfied with the outpatient services, with none reporting satisfaction. These findings indicate that respondents who perceived the assurance provided by healthcare personnel as good were significantly more likely to report satisfaction with outpatient services than those who perceived it as poor..

3.7. Empathy and Outpatient Satisfaction

Table 6 Relationship between Empathy and Outpatient Satisfaction at Kendari City Regional General Hospital, 2025

Empathy	Outpatient Satisfaction				Total		p-value
Category	Satisfied		Dissatisfied		n	%	
	n	%	n	%			
Good	266	72.3	95	25.8	361	98.1	0.389
Not good	4	1.1	3	0.8	7	1.9	
Total	270	73.4	98	26.6	368	100.0	

Source: Primary data, 2025.

Table 6 shows no statistically significant association between the empathy dimension and outpatient satisfaction (p = 0.389). Among the 361 respondents who perceived the empathy dimension as good, 266 (73.7%) reported being satisfied with the outpatient services, while 95 (26.3%) reported being dissatisfied. Among the seven respondents who perceived the empathy dimension as poor, four (57.1%) were satisfied, whereas three (42.9%) were dissatisfied. These findings indicate that although respondents who perceived better empathy tended to report higher levels of satisfaction, the difference was not statistically significant, suggesting that the empathy dimension was not significantly associated with outpatient satisfaction in this study.

3.8. Multivariate Model

Table 7 Candidate Variable Test in the Logistic Regression Model

Variable	Variable	Variable	Variable	Variable
Tangible	52.142	1	0.000	Signifikan
Reliability	106.205	1	0.000	Signifikan
Responsiveness	106.205	1	0.000	Signifikan
Assurance	189.693	1	0.000	Signifikan
Emphaty	0.962	1	0.327	Tidak signifikan

Source: Primary data, 2025.

Table 7 presents the results of the candidate variable test for inclusion in the logistic regression model. The bivariate analysis showed that four service quality dimensions met the criteria for inclusion in the multivariable logistic regression analysis. Tangible ($\chi^2 = 52.142$, $p < 0.001$), reliability ($\chi^2 = 106.205$, $p < 0.001$), responsiveness ($\chi^2 = 106.205$, $p < 0.001$), and assurance ($\chi^2 = 189.693$, $p < 0.001$) were significantly associated with outpatient satisfaction and were therefore selected as candidate variables for the multivariable model. Among these variables, assurance demonstrated the strongest association with outpatient satisfaction, as indicated by the highest chi-square value ($\chi^2 = 189.693$). In contrast, empathy was not significantly associated with outpatient satisfaction ($\chi^2 = 0.962$, $p = 0.327$) and was excluded from the subsequent logistic regression analysis.

4. Discussion

4.1. Overall Service Quality and Patient Satisfaction

Overall service quality was significantly associated with outpatient satisfaction. Patients who perceived the service as good were much more likely to report satisfaction, while all respondents in the not-good category were dissatisfied. This pattern supports the principle that patient satisfaction results from comparing expectations with the service experience received (4,5). It also agrees with studies in Indonesian hospital settings that found a positive relationship between service quality and outpatient satisfaction (8-12). The finding indicates that improvement must address the complete patient journey rather than one isolated service point.

4.2. Tangible

Tangible was significantly associated with satisfaction. Clean facilities, adequate seating, clear signs, functional toilets, and comfortable waiting areas shape the first and most visible part of the outpatient experience. Internal medicine patients may spend substantial time waiting and may have physical limitations, so environmental comfort has direct practical value. Similar findings have been reported in outpatient and pharmacy service studies, where physical facilities contributed to positive patient evaluations (12,15,16). The hospital should maintain cleanliness, seating capacity, ventilation, accessibility, and clear service information.

4.3. Reliability

Reliability showed a strong bivariate relationship with satisfaction, but only 44.3% of respondents rated it as good. Reliable service requires accurate procedures, consistent schedules, clear administrative requirements, and completion of services as promised. In this study, every respondent who rated reliability as good was satisfied. This pattern suggests that dependable service processes are a major operational priority. Previous studies have linked service reliability with satisfaction because patients value predictable schedules, correct information, and consistent treatment procedures (7,10,17). Improvements should focus on schedule adherence, registration accuracy, coordination between units, and monitoring of waiting time.

4.4. Responsiveness

Responsiveness was also rated good by only 44.3% of respondents and was significantly associated with satisfaction. Outpatients frequently need quick information about registration, consultation sequence, examination results, referrals, and medication. Slow responses or unclear explanations can increase uncertainty, particularly for patients who are tired, anxious, or experiencing pain. The result is consistent with SERVQUAL theory and previous evidence that prompt assistance improves patient experience (3,9,10). Service navigators, visible information points, clear complaint channels, and staffing adjustments during peak hours may improve responsiveness.

4.5. Assurance

Assurance was rated good by 84.2% of respondents and was significantly associated with satisfaction. Patients assess assurance through staff competence, courtesy, clear explanations, confidentiality, and the sense that care is safe. All respondents who rated assurance as not good were dissatisfied, which shows that perceived safety and trust are essential. This finding is consistent with patient-centered quality frameworks and studies showing that professional communication and staff competence influence satisfaction (2,11,12). The hospital should maintain competency development, consistent patient identification, respectful communication, and clear explanations of follow-up care.

4.6. Empathy

Empathy was not significantly associated with satisfaction, although 98.1% of respondents rated it as good. This result should not be interpreted as evidence that empathy is unimportant. The extremely small not-good group reduced variation and statistical power, producing a ceiling effect. Patient responses may also have been influenced by social desirability because questionnaires were completed in the healthcare setting. Empathy remains a core element of respectful care, especially for older adults and patients with chronic diseases. The hospital should preserve attentive listening, simple language, equal treatment, and opportunities for patients to ask questions.

4.7. Multivariate Interpretation and Study Limitations

The multivariate model showed strong overall fit statistics, but it did not reach stable convergence because several categories displayed complete or near-complete separation. Therefore, the Nagelkerke R Square should be viewed as descriptive model information rather than proof that one dimension independently caused satisfaction. The cross-sectional design also prevents causal conclusions. Data were based on patient perceptions at one clinic and one period, so experiences may differ by visit time, workload, clinical condition, and previous hospital use. Future studies should use repeated measurements, include more outpatient clinics, retain continuous scale scores, and combine surveys with observation and qualitative interviews.

5. Conclusion

Service quality at the Internal Medicine Polyclinic was significantly associated with outpatient satisfaction. Tangible, reliability, responsiveness, and assurance had significant bivariate relationships with satisfaction, while empathy did not show a statistically significant relationship because ratings were highly concentrated in the good category. Reliability and responsiveness require the greatest operational attention because more than half of respondents rated

these dimensions as not good. The hospital should improve schedule accuracy, waiting-time management, information delivery, staff availability, and coordination across service points, while maintaining physical facilities, professional assurance, and empathetic communication. The non-convergent logistic regression model means that a dominant independent dimension could not be established reliably.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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