



Patient Satisfaction and Loyalty Based on Servqual and PRP Dimensions at the Dental Polyclinic of Sragen Hospital

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ARTICLE INFO

Keywords:

*Service Quality;
Patient Satisfaction;
Dental Polyclinic;
Hospital*

Article History:

Received : 23/09/2025

Revision : 14/01/2026

Accepted : 15/01/2026

Published : 01/02/2026

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ISSN: 2775-0159



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ABSTRACT

Background: Dental and oral health is part of overall health, and one aspect of dental and oral health services is the presence of a dental and oral polyclinic in a hospital. Good health services pay attention to aspects of service quality, consisting of reliability, responsiveness, guarantees, tangible evidence, and empathy.

Objectives: This study aims to determine the influence of service quality on patient satisfaction at the dental polyclinic of dr. Soehadi Prijonegoro Hospital, Sragen Regency.

Methods: This study uses a concurrent method and a purposive sampling technique with 41 samples. The research variables included the independent variable of service quality and the dependent variable of patient satisfaction levels. The research instrument used was a questionnaire and interview guidelines. Data analysis included validity and reliability tests, as well as Spearman correlation and ordinal regression tests.

Outcome: The results of this study showed that the validity and reliability tests had an interval of 0.329, and all items were declared valid. The correlation between service quality and patient satisfaction at dr. Soehadi Prijonegoro Hospital, Sragen Regency, showed a lowest coefficient value of 0.466 and a highest of 0.587. Service quality simultaneously affects patient satisfaction by 99.8%.

Conclusion: Based on the results of the study, it was concluded that dental and oral polyclinic patients were very satisfied with the quality of services provided by doctors and nurses at dr. Soehadi Prijonegoro Hospital, Sragen Regency.

Citation (Vancouver style):

Wardhana ES, Ratnawati ID, Shafira NZ. Patient satisfaction and loyalty based on Servqual and PRP dimensions at the Dental Polyclinic of Sragen Hospital. *Indones J Dent.* 2026;6(1): 23-31.

INTRODUCTION

Achieving *Healthy Indonesia 2025* is part of the national health development agenda, which aims to ensure that healthcare services are equitable, of high quality, and accessible to the public. Hospitals, as comprehensive healthcare providers, play an important role in delivering promotive, preventive, curative, and rehabilitative services. Among these, dental and oral health services are critical, considering that globally, oral diseases affect approximately 3.58 billion people.^{1,3}

Dental and oral polyclinics are designed to improve and maintain community oral health through preventive measures, treatment, and rehabilitation. One of the crucial determinants of success in healthcare delivery is service quality, which is strongly associated with patient satisfaction. The SERVQUAL framework highlights five dimensions of service quality: *reliability, responsiveness, assurance, empathy, and tangibles*, which together influence patients' perceptions of care. Patient satisfaction itself has been nationally regulated in Indonesia, with the Ministry of Health setting a minimum standard of 90% as the benchmark for healthcare services.^{4,5}

Previous studies show that the influence of each SERVQUAL dimension on patient satisfaction varies across healthcare facilities, suggesting that service quality outcomes are context-specific. However, despite the long-standing operation of dental and oral polyclinics in regional hospitals, systematic evaluations of their performance remain limited. For instance, fluctuations in patient visits over the last five years indicate potential gaps in service delivery and patient satisfaction that require further investigation.^{6,7}

The aim of this study is to assess the relationship between SERVQUAL and PRP service quality dimensions and patient satisfaction in a dental polyclinic of a regional hospital in Central Java. By identifying the most influential service quality dimensions, the findings are expected to provide new insights for healthcare providers, serve as an evaluation tool for improving service performance, and contribute to efforts in enhancing patient-centered care.

RESEARCH METHODS

This study employed a mixed-methods approach with a concurrent embedded design, where quantitative data were collected and analyzed as the dominant method, and qualitative data from semi-structured interviews were embedded within the quantitative phase to provide deeper contextual understanding and support the interpretation of the statistical results. The research aimed to analyze the influence of service quality on patient satisfaction in a dental and oral polyclinic of a regional hospital in Central Java, Indonesia.

The study population comprised all outpatients of the dental polyclinic, and a purposive sampling technique was employed. This study used a total sampling technique. All patients visiting the dental polyclinic between June and August 2024 who met the inclusion criteria were consecutively recruited, resulting in a total of 41 respondents, which corresponded to the average monthly patient visit volume. This approach was chosen due to the relatively small population size, thereby ensuring maximum representativeness of the study population. Inclusion criteria were patients aged ≥ 18 years (or with parental assistance if under 18), literate, and willing to participate, while patients with special needs or emergency conditions were excluded.

Data collection used two validated instruments: the SERVQUAL questionnaire to measure five service quality dimensions (reliability, responsiveness, assurance, empathy, and tangibles) and the Patient Satisfaction Questionnaire (PSQ) to assess satisfaction across interpersonal behavior, comfort of access, technical quality, physical environment, and financial aspects. Both instruments employed a four-point Likert scale. In addition, semi-structured interviews were conducted with randomly selected respondents until data saturation was reached.

Prior to use, questionnaires were tested for validity and reliability. Quantitative data were analyzed with SPSS software, including descriptive (univariate), Spearman's correlation (bivariate), and ordinal regression (multivariate) analyses. A significance level of $p < 0.05$ was considered statistically significant. Qualitative data were analyzed through thematic reduction, display, and conclusion drawing/verification to enrich quantitative findings. All participants signed informed consent forms before data collection. Ethical approval was granted by the Health Research Ethics Committee, Faculty of Dentistry, Universitas Islam Sultan Agung, Semarang, Indonesia (No. 634/B.1-KEPK/SA-FKG/XI/2024).

RESEARCH FINDINGS

Prior to the main survey, the research instrument was tested for validity and reliability among 36 respondents using 20 questionnaire items. The validity test was determined by comparing the calculated correlation coefficient (r-count) with the critical value of r-table at a 5% significance level (r-table = 0.329). All items demonstrated r-count values greater than the r-table threshold, indicating that the instrument was valid. Reliability was assessed using Cronbach's Alpha, which produced values exceeding 0.6, confirming that the questionnaire was internally consistent and reliable for further data collection.

A total of 41 respondents participated in this study. The gender distribution showed that the majority were female (58.54%), while male respondents accounted for 41.46%. In terms of age, more than half were in the adult group (18–44 years, 51.22%), followed by those aged 45–59 years (26.83%), ≥ 60 years (14.63%), and ≤ 17 years (7.32%).

Table 1. Distribution of Respondents by Gender

Gender	Frequency	Percentage (%)
Male	17	41.46
Female	24	58.54
Total	41	100

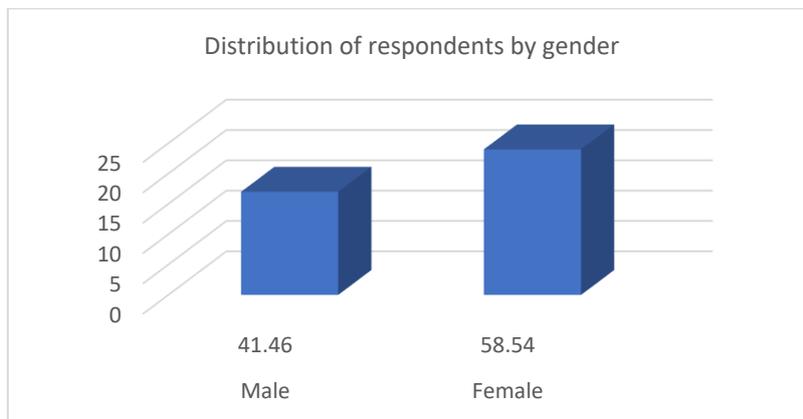


Figure 1. Distribution of respondents by gender

Table 2. Distribution of Respondents by Age

Age Category	Frequency	Percentage (%)
≤ 17 years	3	7.32
18–44 years	21	51.22
45–59 years	11	26.83
≥ 60 years	6	14.63
Total	41	100

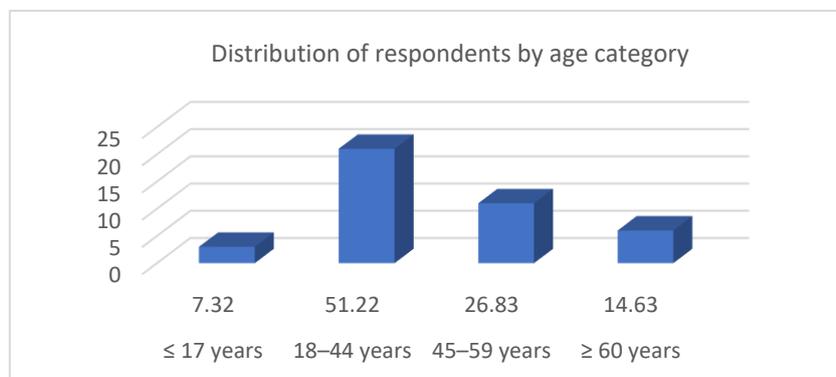


Figure 2. Distribution of respondents by age category

Table 3. Spearman Correlation Test Between Service Quality Dimensions and Patient Satisfaction

Dimension	N	Sig. (p-value)	Correlation Coefficient (r)
Reliability	41	0.00	0.587
Responsiveness	41	0.02	0.466
Assurance	41	0.01	0.495
Tangibles	41	0.00	0.573
Empathy	41	0.00	0.562

The Spearman correlation analysis demonstrated that all five service quality dimensions were significantly associated with patient satisfaction ($p < 0.05$). Among these, the strongest correlation was observed in the reliability dimension ($r = 0.587$), followed closely by tangibles ($r = 0.573$) and empathy ($r = 0.562$). Assurance ($r = 0.495$) and responsiveness ($r = 0.466$) also showed moderate positive correlations. These findings indicate that improvements across all SERVQUAL dimensions contribute meaningfully to higher levels of patient satisfaction, with reliability being the most influential factor.

Table 4. Ordinal Regression Test of the Simultaneous Effect

Pseudo R-Square	Value
Cox and Snell	0.984
Nagelkerke	0.998
McFadden	0.964

The results of the ordinal regression analysis revealed a Nagelkerke R-square value of 0.998, indicating that service quality dimensions including assurance, tangibles, reliability, empathy, and responsiveness collectively account for 99.8% of the variation in patient satisfaction at the dental and oral polyclinic. This demonstrates that almost all factors influencing satisfaction can be explained by the quality of services provided, underscoring the critical role of comprehensive service quality improvement in shaping patient perceptions and experiences.

Qualitative Results

The qualitative analysis, based on in-depth interviews with patients, confirmed that the dimensions of service quality were consistently perceived positively. Patients reported clear, efficient, and reassuring care across all aspects of service delivery.

Table 5. Summary of Qualitative Interview Findings

Dimension	Key Question(s)	Main Findings (Summary)
Reliability	Can you describe your experience with the registration and treatment procedures, including whether they were simple, efficient, and conducted on scheduled?	Procedures were perceived as clear, fast (10–15 minutes), and not bureaucratic; services ran on schedule.
Responsiveness	How did the dentists and staff respond to your needs or complaints during your visit, and how quickly were these issues addressed?	Doctors were consistently prompt, asked about patient needs, and addressed complaints immediately.
Assurance	How clearly did the dentists explain the treatment procedures, potential risks, and expected outcomes, and how did this influence your confidence in the service?	Doctors showed strong competence, explained procedures and risks in detail, and instilled patient confidence.
Tangibles	How would you describe the condition of the facilities and equipment in the dental polyclinic in terms of cleanliness, comfort, and organization?	Facilities were considered adequate, clean, organized, comfortable, and satisfactory; no major complaints.
Empathy	In what ways did the dentists communicate with you to reduce anxiety or discomfort during treatment?	Doctors were calm and reassuring, often using conversation and clear explanations to ease anxiety.

DISCUSSION

This study involved 41 patients who voluntarily participated and provided informed consent, ensuring ethical compliance and confidentiality. The findings demonstrated that all five SERVQUAL dimensions—reliability, responsiveness, assurance, tangibles, and empathy—had a significant influence on patient satisfaction at the Dental and Oral Polyclinic. These results are consistent with previous studies indicating that higher perceived service quality leads to increased patient satisfaction in healthcare settings.^{8,9}

When compared with service quality assessment models used in hospitals abroad, the SERVQUAL framework offers distinct advantages. Several international studies have applied alternative models such as SERVPERF, HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems), and Donabedian’s Structure–Process–Outcome (SPO) model. SERVPERF, commonly used in hospitals in the United States and Europe, focuses solely on performance perceptions without measuring expectation gaps. While this approach

simplifies data collection, it lacks SERVQUAL's ability to identify discrepancies between patient expectations and actual service experiences, which is crucial for targeted service improvement.⁵

The HCAHPS instrument, widely implemented in hospitals in the United States and parts of Europe, emphasizes standardized patient experience indicators such as communication, discharge information, and hospital environment. Although HCAHPS enables benchmarking across institutions, it is less flexible and may not capture context-specific service dimensions, particularly in specialized services such as dental and oral healthcare. In contrast, SERVQUAL allows greater adaptability and sensitivity to local service characteristics, making it more suitable for evaluating outpatient dental services.¹⁰

Another commonly referenced framework is Donabedian's SPO model, which has been applied in hospital quality assessments in countries such as the United Kingdom and Australia. While this model provides a comprehensive structural and outcome-based evaluation, it does not directly measure patients' subjective perceptions of service quality. SERVQUAL complements this limitation by focusing explicitly on patient perceptions and interpersonal aspects of care, which are critical determinants of satisfaction.^{9,11}

In the present study, Spearman correlation analysis revealed that all SERVQUAL dimensions were positively associated with patient satisfaction, with reliability emerging as the strongest predictor and responsiveness as the weakest. This is consistent with Fitriani⁷, who emphasized that correlation coefficients reflect the magnitude of influence among service quality dimensions. Reliability particularly related to simple procedures, punctual service delivery, and professional care was highly valued by respondents. These results align with the SERVQUAL framework proposed by Zeithaml, Bitner, and Gremler and highlight the importance of administrative efficiency, as early service experiences strongly shape overall patient satisfaction.^{11,12}

Responsiveness was also an important factor, with patients appreciating prompt attention to complaints. However, gaps were noted in the provision of pre- and post-treatment instructions, which are essential for effective consultation and communication.¹³ As Nurhaeni emphasize⁶, clear information exchange improves satisfaction, highlighting the need for hospitals to strengthen doctor patient interactions.

In terms of assurance, patients valued the competence and credibility of doctors, particularly the provision of clear procedural explanations before treatment. This aligns with Lampus¹⁴, who argued that such communication fosters trust and satisfaction. Tangibles, including facilities and cleanliness, were generally rated positively, though comfort in waiting

areas was identified as a point for improvement. Previous studies note that clean, organized, and comfortable facilities significantly enhance patient experiences.^{15,16}

Empathy was strongly evident in patient feedback, with respondents reporting that doctors treated them attentively and with kindness. Effective and empathetic communication contributes to patient comfort, prevents conflict, and strengthens satisfaction. This finding reinforces the view that communication and interpersonal skills are as critical as technical competence in healthcare delivery.^{14,17}

Overall patient satisfaction averaged 80%, indicating a “very satisfied” category. High ratings were associated with doctors’ explanations of procedures, consistent with the view that communication strategies play a strategic role in shaping satisfaction. Similar results have been reported by Grabiell¹⁸, who found a significant relationship between communication and patient satisfaction. Nevertheless, some dissatisfaction was linked to uncertainty about waiting times, suggesting that providing estimated service times during registration could improve transparency and confidence in care. Given the central role of patient satisfaction in healthcare quality¹⁰, ongoing attention to both strengths and gaps is essential for sustaining and enhancing service performance.

CONCLUSION

This study concludes that the overall service quality at the Dental and Oral Polyclinic of RSUD dr. Soehadi Prijonegoro Sragen was perceived by patients as very satisfactory across all dimensions, yet none fully met the 90% benchmark set by the Indonesian Ministry of Health Regulation (2019). Each service dimension reliability, responsiveness, assurance, tangibles, and empathy showed a significant influence on patient satisfaction, with reliability, tangibles, and empathy identified as stronger predictors, while responsiveness and assurance also played important roles. Multivariate analysis further confirmed that these dimensions collectively exerted a substantial effect on patient satisfaction, underscoring the importance of holistic improvements in both technical and interpersonal aspects of care to enhance patient experiences and outcomes.

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