

Quality of Health Services in Influencing Patient Satisfaction and Loyalty in Dental Clinics

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ABSTRACT

Introduction: Quality of healthcare services plays a crucial role in determining the overall success of dental clinic operations. It influences not only treatment outcomes but also patients' overall experiences and perceptions. Key elements such as staff friendliness, facility cleanliness, responsiveness to patient needs, and professional competence are essential factors that shape patient satisfaction and encourage long-term loyalty. These factors collectively determine how patients perceive service quality and whether they choose to return for future dental care.

Methods: This study utilized a systematic review approach to explore the relationship between healthcare service quality and its influence on patient satisfaction and loyalty. Data were obtained from major academic databases, including PubMed, Google Scholar, and ScienceDirect. The PICO framework was applied to establish clear inclusion and exclusion criteria. Only articles published from 2019 onward that examined the influence of service quality on patient satisfaction and loyalty were selected. Each study was assessed for methodological quality and relevance. A total of five eligible studies were analyzed using the SERVQUAL model, which consists of five dimensions: tangibles, reliability, responsiveness, assurance, and empathy.

Results: Findings revealed that all five SERVQUAL dimensions influenced patient satisfaction and loyalty, although to different extents. Tangibles, such as modern equipment and clean facilities, were important for creating comfort and a positive perception of care. However, reliability, responsiveness, assurance, and empathy demonstrated stronger and more consistent effects in enhancing both satisfaction and loyalty. Key factors such as personalized attention, professional staff behavior, timely service, and emotional support significantly contributed to positive patient experiences.

Conclusion: The quality of dental healthcare services, particularly when addressing both technical and interpersonal aspects through the SERVQUAL framework, plays a crucial role in building patient satisfaction and loyalty. Clinics that invest in comprehensive quality strategies are better positioned to maintain long-term relationships with patients and improve service competitiveness.

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INTRODUCTION

The quality of healthcare services is one of the main factors determining the success of medical service delivery, including in dental clinics. In the context of dental healthcare, service quality encompasses not only the competence of medical personnel but also non-medical dimensions such as staff friendliness, service speed, facility comfort, and ease of access (1,2). The quality perceived by patients regarding the services they receive can significantly influence their level of satisfaction, which in turn contributes to their loyalty to continue using the clinic's services and to recommend it to others (1,3)(4,5).

Dental clinics, as primary healthcare facilities, must be able to build strong relationships with patients—not only by delivering optimal treatment outcomes but also by providing services that are responsive to patients' needs and expectations (6–8). In today's increasingly competitive healthcare landscape, service quality has become a strategic advantage that must be managed professionally (9,10). Patient satisfaction serves as a crucial indicator of the overall quality of healthcare services delivered by medical personnel and institutions. It is shaped by the patient's perception of various aspects of care, including the professionalism and attitude of healthcare providers, the comfort and cleanliness of the facilities, as well as the efficiency and accuracy of treatment (11,12). When patients feel that their expectations have been met or exceeded, they tend to have a more positive experience. This satisfaction not only enhances their overall impression of the healthcare provider but also significantly increases the likelihood of developing patient loyalty (13,14). Such loyalty can manifest in the form of returning to the same healthcare facility for future needs and recommending the services to others based on their positive experience (15,16)(17).

Previous studies have shown a positive relationship between service quality and both patient satisfaction and loyalty (18–22). Dimensions of service quality such as tangibles, reliability, responsiveness, assurance, and empathy have been found to significantly influence patients' perceptions and attitudes toward healthcare services, including dental care.(23,24) Therefore, it is essential to comprehensively examine past research findings that discuss how service quality affects patient satisfaction and loyalty in dental clinics, in order to provide a scientific foundation for future quality improvements (1,3,25)(26).

This literature review aims to systematically analyze previous studies related to the impact of healthcare service quality on patient satisfaction and loyalty in dental clinics. Consequently, this paper is expected to offer both theoretical and practical contributions to the development of patient-centered dental care services and enhance the competitiveness of dental clinics in delivering optimal and sustainable healthcare services

METHOD

This systematic review was conducted to analyze the quality of healthcare services related to patient satisfaction and loyalty in hospital-based dental clinics. Inclusion and exclusion criteria were formulated using the PICO framework, as shown in Table 1 below.

Table 1: Study Inclusion and Exclusion Criteria (PICO Framework)

PICOT Component	Inclusion Criteria	Exclusion Criteria
Population	An article discussing the quality of dental health services in a hospital environment.	Articles not related to the quality of hospital-based dental services.
Intervention	Hospital dental services including service quality, facilities, HR, waiting time, and communication.	Articles not discussing hospital dental services or their quality.
Comparison	Studies comparing factors influencing satisfaction and loyalty	No comparative analysis or purely descriptive articles.
Outcome	Patient satisfaction and loyalty (perception, intention to return, recommendations).	Articles that do not assess satisfaction or loyalty.
Other Criteria	Published from 2019 onward; written in English or Indonesian.	Published before 2019; written in other languages.

Research Type

The method section should clearly explain the research approach used, whether quantitative, qualitative, mixed-methods, or a literature review:

Literature review: "The screening and selection process followed the Preferred Reporting Items for Literature Reviews and Meta-Analyses (PRISMA) 2020 guidelines. A total of 161 articles were identified through the database searches. After removing duplicates and applying pre-defined inclusion and exclusion criteria, 5 articles were deemed eligible and included in the final synthesis."

RESULTS

Search Strategy

A systematic literature search was conducted using several databases, including PubMed, Google Scholar, and ScienceDirect. The keywords used in the search were: "Quality" "Dental health care," "Patient satisfaction," "Patient loyalty," and. Boolean operators and quotation marks were applied to improve the accuracy and relevance of the search results. The flow of the screening and selection process of articles is presented in Figure 1.

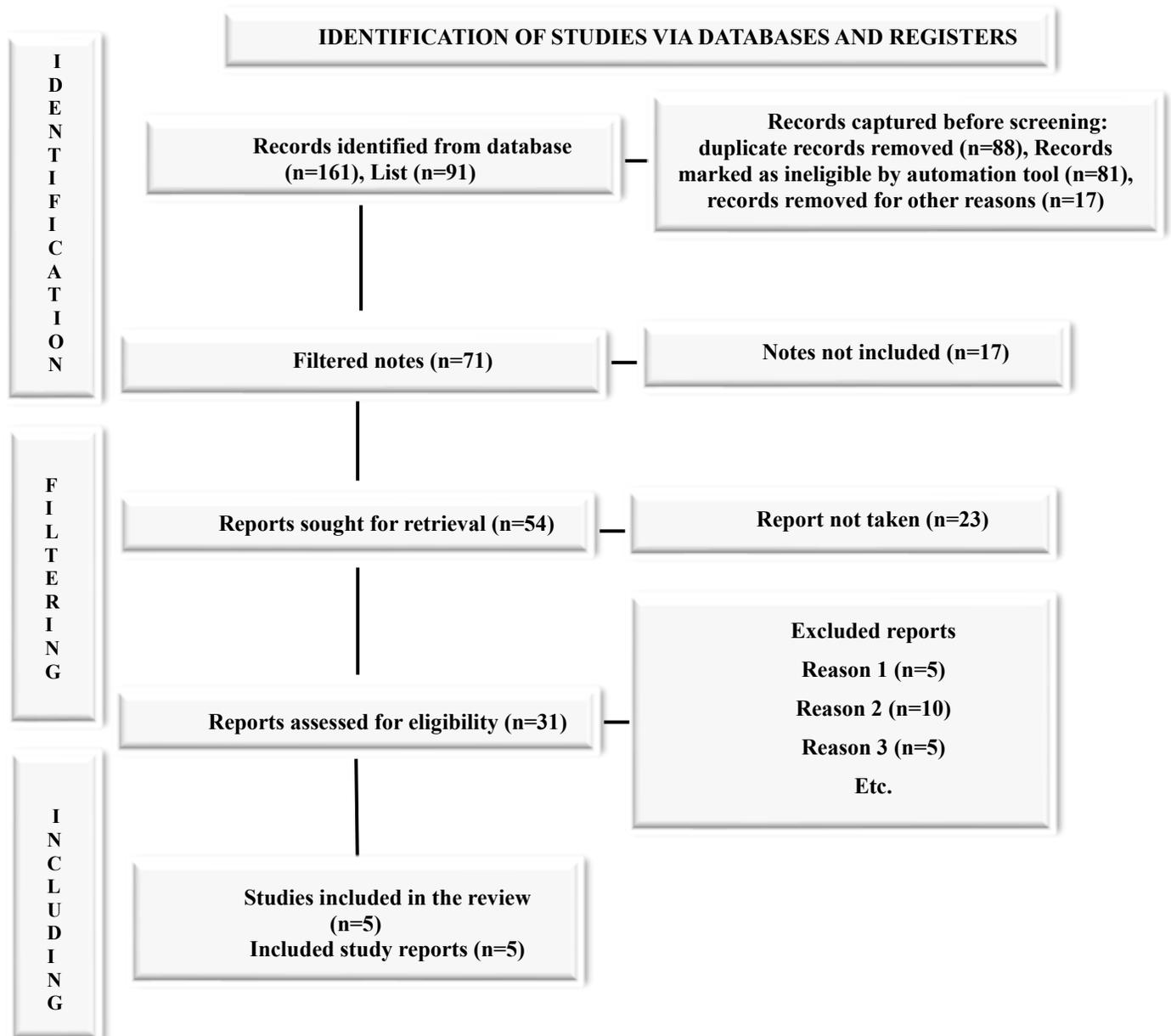


Figure 1. PRISMA Flow Diagram of the Systematic Literature Review

Study Selection

The initial search yielded a total of 161 articles. After removing duplicates and screening titles and abstracts, 20 articles were excluded due to being published before 2019. A further 18 articles were excluded during the eligibility assessment phase because they were either duplicates, did not meet the predefined inclusion and exclusion criteria, or lacked methodological clarity. After the full-text screening, 5 articles met all the inclusion criteria and were included in the final synthesis.

Characteristics of Included Studies

The selected studies were analyzed and grouped based on specific criteria, including the name of the first author, year of publication, study title, research method, key findings, and the database source. These characteristics are presented in Table 2.

Table 2. Classification of Included Studies by Study Type and Healthcare Setting

Classification	Quantitative	Qualitative	Mixed Methods	Review
Private Clinic/Hospital	Lin & Yin (2022), Lwin et al. (2021), Al-Ghanem (2023)	–	–	–
Public Clinic/Hospital	Nugroho (2023), Siripipathanakul (2020)	–	–	–
Total	5	0	0	0

Table 3. Perceived Factors Influencing Patient Satisfaction and Loyalty in Dental Health Services

Perceived Factors	References No. (See Table 2 for details)				
	1	2	3	4	5
Tangibles					
Physical structure	✓	✓	✓	✓	✓
Equipment	✓	✓	✓	✓	✓
Staff appearance	✓	✓	✓	✓	✓
Communication materials	✓	✓	✓	✓	✓
Cleanliness	✓	✓	✓	✓	✓
Neatness	✓	✓	✓	✓	✓
Reliability					
Provision of necessary services	✓	✓	✓	✓	✓
Problem/complaint resolution	✓	✓	✓	✓	✓
Responsiveness					
Punctuality	✓	✓	✓	✓	✓
Willingness to help	✓	✓	✓	✓	✓
Clear service information	✓	✓	✓	✓	✓
Assurance					
Staff courtesy	✓	✓	✓	✓	✓
Knowledge and skills	✓	✓	✓	✓	✓
Trust and sense of security	✓	✓	✓	✓	✓
Empathy					
Individual attention to patients	✓	✓	✓	✓	✓
Staff understanding of patient needs	✓	✓	✓	✓	✓
Respect for patients	✓	✓	✓	✓	✓
Convenient service hours	✓	✓	✓	✓	✓

Tabel 4. The category of customer satisfaction index

No	Index Value	Category
1	81%-100%	Very Satisfied
2	66%-80.99%	Satisfied
3	51%-65.99%	Quite Satisfied
4	35%-50.99%	Slightly Satisfied
5	0%-34.99%	Not Satisfied

DISCUSSION

Based on the review of five journal articles presented in the table, it is evident that the quality of health services plays a significant role in shaping patient satisfaction and loyalty in dental clinics. Overall, the five reviewed studies apply the SERVQUAL model, which consists of five key dimensions: tangibles, reliability, responsiveness, assurance, and empathy. Each of these dimensions contributes differently to the patient's experience while receiving dental health services.

The tangibles dimension reveals varying results. In the study by Lin & Yin (2022), tangibles were found to be insignificant in influencing patient loyalty. However, the other four studies highlight the importance of physical aspects such as facilities, equipment, staff appearance, communication materials, cleanliness, and neatness in enhancing the perception of service quality and providing patient comfort. Although tangibles may not directly affect loyalty, they play an essential role in creating a positive first impression and contributing to patient satisfaction (1).

The reliability dimension consistently shows a strong positive influence on both satisfaction and loyalty. The ability of the clinic to deliver necessary services accurately and to resolve complaints effectively is regarded as a crucial factor in building patient trust. Studies by Siripipatthanakul (2020) and Nugroho (2023), for example, confirm that reliable service not only increases satisfaction but also reinforces patient loyalty to the dental clinic (27,28).

In terms of responsiveness, all five articles agree that the responsiveness of healthcare providers is highly appreciated by patients. Timeliness, willingness to help, and the provision of clear and accurate information all contribute to a satisfying service experience. Prompt responses from medical staff not only enhance satisfaction but also strengthen the patient's trust in the clinic's professionalism, ultimately influencing their loyalty.

The assurance dimension also significantly contributes to patient loyalty. Politeness, competence, and the ability of healthcare staff to instill a sense of security and trust are critical elements in establishing long-term patient-clinic relationships. Al-Ghanem (2023) and Lwin et.al (2021) emphasizes that assurance, through courteous and skilled service delivery, becomes a core value in health services, especially in dental care (29,30).

Finally, the empathy dimension plays a vital role in creating emotional bonds between patients and clinics. Personalized attention, staff understanding, respectful treatment, and flexible service hours all greatly contribute to a positive and meaningful service experience. All reviewed studies indicate that empathy not only enhances satisfaction but also promotes long-term loyalty, as patients feel valued and personally cared for.

In conclusion, the quality of health services in dental clinics, when implemented comprehensively across all five SERVQUAL dimensions, has a significant impact on patient satisfaction and loyalty. A service approach that addresses not only technical aspects but also emotional and interpersonal interactions will result in a stronger, more sustainable relationship between patients and the clinic.

CONCLUSION

The quality of dental healthcare services, particularly when addressing both technical and interpersonal aspects through the SERVQUAL framework, plays a crucial role in building patient satisfaction and loyalty. Clinics that invest in comprehensive quality strategies are better positioned to maintain long-term relationships with patients and improve service competitiveness.

AUTHOR'S CONTRIBUTION STATEMENT

All authors contributed significantly to the development of this study. [Author 1] conceptualized the research idea, designed the study framework, and supervised the overall process. [Author 2] conducted the literature review, collected and analyzed the data, and drafted the initial manuscript. [Author 3] provided critical revisions, refined the

methodology, and ensured the accuracy of the data interpretation. All authors reviewed and approved the final version of the manuscript and agreed to be accountable for all aspects of the work

CONFLICTS OF INTEREST

The authors declare that there are no conflicts of interest related to the publication of this article. All research activities, data collection, analysis, and manuscript preparation for Quality of Health Services in Influencing Patient Satisfaction and Loyalty in Dental Clinics were conducted independently without any financial, personal, or institutional relationships that could inappropriately influence the results or interpretations of the study

DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

The authors acknowledge the use of generative AI and AI-assisted technologies solely to support the writing and editing process of the manuscript Quality of Health Services in Influencing Patient Satisfaction and Loyalty in Dental Clinics. These tools were applied to improve grammar, language clarity, and formatting, while all research ideas, data interpretation, analysis, and final conclusions were entirely developed and verified by the authors. The authors take full responsibility for the content and accuracy of the final manuscript.

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DATA AVAILABILITY STATEMENT

The data supporting the findings of this study, *Quality of Health Services in Influencing Patient Satisfaction and Loyalty in Dental Clinics*, are available from the corresponding author upon reasonable request. All data were collected and analyzed independently by the authors and are not publicly shared to protect participant confidentiality and privacy.

BIBLIOGRAPHY

1. Lin W, Yin W. Impacts of service quality, brand image, and perceived value on outpatient's loyalty to China's private dental clinics with service satisfaction as a mediator. *PLoS One*. 2022;17(6):e0269233.
2. Hajek A, Kretzler B, Koenig HH. Factors associated with dental service use based on the Andersen model: a systematic review. *Int J Environ Res Public Health*. 2021;18(5):2491.
3. Bezerra de Oliveira LA, Gonzaga de Albuquerque AP, de Carvalho RC, de Medeiros DD. What determines patient loyalty in health services? An analysis to assist service quality management. *Total Qual Manag Bus Excell*. 2022;33(11–12):1403–21.
4. Gavurova B, Dvorsky J, Popesko B. Patient satisfaction determinants of inpatient healthcare. *Int J Environ Res Public Health*. 2021;18(21):11337.
5. Goula A, Rizopoulos T, Stamouli MA, Kelesi M, Kaba E, Soulis S. Internal quality and job satisfaction in health care services. *Int J Environ Res Public Health*. 2022;19(3):1496.
6. Alauddin MS, Baharuddin AS, Mohd Ghazali MI. The modern and digital transformation of oral health care: A mini review. In: *Healthcare*. MDPI; 2021. p. 118.

7. Petre I, Barna F, Gurgus D, Tomescu LC, Apostol A, Petre I, et al. Analysis of the healthcare system in Romania: A brief review. In: Healthcare. Multidisciplinary Digital Publishing Institute; 2023. p. 2069.
8. Chávez EM, Kossioni A, Fukai K. Policies supporting oral health in ageing populations are needed worldwide. *Int Dent J*. 2022;72(4):S27–38.
9. Fellows JL, Atchison KA, Chaffin J, Chávez EM, Tinanoff N. Oral health in America: implications for dental practice. *J Am Dent Assoc*. 2022;153(7):601–9.
10. Park S, Kim HK, Choi M, Lee M. Factors affecting revisit intention for medical services at dental clinics. *PLoS One*. 2021;16(5):e0250546.
11. Biresaw H, Mulugeta H, Endalamaw A, Yesuf NN, Alemu Y. Patient satisfaction towards health care services provided in Ethiopian health institutions: a systematic review and meta-analysis. *Heal Serv insights*. 2021;14:11786329211040688.
12. Ali J, Jusoh A, Idris N, Nor KM. Healthcare service quality and patient satisfaction: a conceptual framework. *Int J Qual Reliab Manag*. 2024;41(2):608–27.
13. Alhozgi A, Feine JS, Tanwir F, Shrivastava R, Galarneau C, Emami E. Rural–urban disparities in patient satisfaction with oral health care: a provincial survey. *BMC Oral Health*. 2021;21(1):261.
14. Akthar N, Nayak S, Pai Y. Determinants of patient satisfaction in Asia: Evidence from systematic review of literature. *Clin Epidemiol Glob Heal*. 2023;23:101393.
15. Chang WJ, Chang YH. Patient satisfaction analysis: Identifying key drivers and enhancing service quality of dental care. *J Dent Sci*. 2013;8(3):239–47.
16. Siripipatthanakul S, Bhandar M. A qualitative research factors affecting patient satisfaction and loyalty: a case study of smile family dental clinic. *Int J Trend Sci Res Dev*. 2021;5(5):877–96.
17. Aljarallah NA, Almuqbil M, Alshehri S, Khormi AMS, AlReshaidan RM, Alomran FH, et al. Satisfaction of patients with health care services in tertiary care facilities of Riyadh, Saudi Arabia: A cross-sectional approach. *Front public Heal*. 2023;10:1077147.
18. Harahap YW, Hidayah A, Simamora FA. Modern Contraceptive Use in District: Crossectional Study. *J Public Heal Pharm*. 2021;1(1):19–26.
19. Aripa L. The Quality of Inpatient Health Services at Mamajang Health Center, Makassar City. *J Public Heal Pharm*. 2021;1(2):34–8.
20. Sudirman S, Yusuf H, Nurhidayati N, Ariandini M. Dental Service Quality and Patient Satisfaction: Insights From Anutapura General Hospital, Palu City. *J Public Heal Pharm*. 2024;4(1):56–63.
21. Sudirman, Ali MN, Rahman N. Influence of Social Determinants of Health Service Quality on Patient Satisfaction at Undata Hospital, Palu. *J Public Heal Pharm*. 2024;4(2):113–22.
22. Sudirman, Ambodale S, Sari NDP, Subardin AB, Armini NK. Understanding Patient Needs for Quality Health Services at Primary Healthcare After the Covid-19 Pandemic. *J Public Heal Pharm*. 2024;4(2):139–46.
23. Alamri H. Oral care for children with special healthcare needs in dentistry: a literature review. *J Clin Med*. 2022;11(19):5557.
24. Khan AJ, Sabri BAM, Ahmad MS. Factors affecting provision of oral health care for people with special health care needs: A systematic review. *Saudi Dent J*. 2022;34(7):527–37.
25. Hashem TN, Ali N, Hashem TN, Nimer Ali N. The impact of service quality on customer loyalty: A study of dental clinics in Jordan. *Int J Med Heal Res*. 2019;5(1):65–8.
26. Ferreira DC, Vieira I, Pedro MI, Caldas P, Varela M. Patient satisfaction with healthcare services and the techniques used for its assessment: a systematic literature review and a bibliometric analysis. In: Healthcare. Mdpi; 2023. p. 639.
27. Siripipatthanakul S, Nyen Vui C. Dental practice-related factors and patient loyalty in dental clinics, Laem Chabang, Thailand: The mediating role of patient satisfaction. *Dent Pract Factors Patient Loyal Dent Clin Laem Chabang, Thail Mediat Role Patient Satisf* (October 16, 2021) *Int J Behav Analyt*. 2020;1(2):1–17.
28. Nugroho A, Herman J, Ilmi MI. Pengaruh Pelayanan dan Fasilitas Poli Gigi terhadap Kesiapan Tempur Prajurit Pasmars 2. *Sci J Reflect Econ Accounting, Manag Bus*. 2023;8(2):548–56.

29. Lwin HNN, Punnakitikashem P, Thananusak T. The level and determinants of international patient satisfaction with dental tourism in Bangkok, Thailand. *Cogent Bus Manag.* 2021;8(1):1898316.
30. Al Ghanem EJ, AlGhanem NA, AlFaraj ZS, AlShayib LY, AlGhanem DA, AlQudaihi WS, et al. Patient satisfaction with dental services. *Cureus.* 2023;15(11).