

Analysis of the quality of dental clinic services in increasing patient satisfaction and interest in Re-Treatment at Ali Dental Care Tebing Tinggi

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Abstract

Dental and oral health is an essential aspect of overall health. However, quality dental health services in Indonesia, especially in remote areas, still face many challenges. The quality of service in dental clinics significantly affects patient satisfaction and interest in re-treatment. This study uses a quantitative approach with a cross-sectional analytical design to examine the influence of dental clinic service quality on patient satisfaction at Ali Dental Care Tebing Tinggi. Data was collected through a questionnaire distributed to 290 respondents who were incidentally selected from the patient visit population. Data analysis used the Chi-Square test to identify relationships between variables and logistic regression to measure the influence of variables on patient satisfaction. The results showed that variables such as reliability (p-value = 0.015), assurance (p-value = 0.010), display (p-value = 0.020), responsiveness (p-value = 0.012), and empathy (p-value = 0.025) had a significant relationship with patient satisfaction, with a p-value ≤ 0.05 . The reliability variable had the highest odds ratio of 3.202, which suggests that an improvement in this aspect can increase patient satisfaction by up to 3.2 times. These findings emphasize the importance of improving the quality of services through coordination between the government, educational institutions, and the community. This research is expected to provide helpful input for clinic management in improving service and patient satisfaction and contributing to developing science in dental health.

Keywords: Service quality; Patient satisfaction; Dental clinic; Analysis; Re-treatment

1. Introduction

Dental and oral health are essential to overall health, affecting individual well-being (Hasibuan, 2023). However, challenges in providing quality services, especially in remote areas, are still an issue in Indonesia. The quality of dental clinic services directly affects patient satisfaction and interest in returning (Lin and Yin, 2022). Therefore, coordination between the government, educational institutions, and the community is needed to realize a sustainable dental health program (Desi Zainul Akmal, 2022). Dental diseases like periodontitis can trigger severe systemic conditions (Ummah, Hadi, and Edi 2023). Regular dental check-ups and good oral hygiene are essential for health (Santoso and Bernarto, 2022). Quality dental services contribute to the community's welfare (Damanik and Tri Setyawan, 2022).

Ali Dental Care Tebing Tinggi is committed to providing optimal service amid fierce competition. This clinic focuses on improving service quality through the competence of medical personnel, facility comfort, and staff friendliness (Hartoyo and Arsyad, 2021). Patient satisfaction is the leading indicator of service quality and affects the reputation of the clinic (Indah Sari, Nasution, Girsang 2019); (Putra et al. 2021). Measuring and improving patient satisfaction is a strategic step for the clinic's sustainability (Sasarari et al., 2023); (Salim, 2023).

Service quality can be measured by the SERVQUAL method, which includes five dimensions: tangibles, reliability, responsiveness, assurance, and empathy. This method helps identify the gap between customer expectations and

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perceptions (Theresia et al., 2024). Research shows that service quality positively affects patient satisfaction (Aprilia, 2022). According to Desi Zainul (2022), a pathway coefficient of 0.905 indicates that improving service quality will increase patient satisfaction (Desi Zainul Akmal, 2022). This study examines the influence of dental clinic service quality on patient satisfaction at Ali Dental Care Tebing Tinggi. The study results are expected to provide input for clinic management to improve services.

2. Research Methods

This study is a quantitative research with a positivist approach, using statistical analysis to test hypotheses. The study design was analytical and cross-sectional, comparing two variables simultaneously. The study was located at Ali Dental Care Tebing Tinggi, planned from September to completion in 2024. The study population consisted of 1,025 patient visits in 2023, with a minimum sample of 290 people determined using the Slovin formula and taken incidentally. Data was collected through interviews and questionnaires using Google Forms (primary data), records in Ali Dental Care (secondary data), and valid sources such as online journal articles (tertiary data). Data analysis was done using univariate analysis to summarize the data, bivariate analysis using the Chi-Square test to test the relationship between variables, and multivariate analysis with multiple logistic regression to combine several independent variables.

3. Research Results

Table 1 Overview of Respondent Characteristics at Ali *Dental Care* Tebing Tinggi

Category	Sub-Category	n	Percentage
Age	≤ 20 Years	29	10%
	21-30 Years	72	25%
	31-40 Years	58	20%
	≥ 41 years	131	45%
	Total	75	100%
Gender	Male	124	43%
	Woman	166	57%
	Total	75	100%
Education	No School	21	7%
	SD	32	11%
	SMP	46	16%
	SMA	58	20%
	D3	9	3%
	S1	124	43%
	Total	75	100%

Table 1 shows the characteristics of respondents at Ali Dental Care, Tebing Tinggi, by age, gender, and education. Of the 290 respondents, 10% were under 20 years old, 25% were 21-30 years old, 20% were 31-40 years old, and 45% were over 41 years old, indicating that most visitors were adult. Regarding gender, 43% of male respondents and 57% of women indicated women were more active in seeking dental care. In terms of education, 7% did not attend school, 11% graduated from elementary school, 16% graduated from junior high school, 20% graduated from high school, 3% graduated from D3, and 43% graduated from S1, which shows that the majority of respondents have higher education and awareness of dental health. This data was obtained from primary sources and processed in 2024, providing essential insights into patient demographics that can influence the analysis of service quality in clinics.

Table 2 Chi-Square *Test Table* of Research Variables Analysis of Dental Clinic Service Quality in Increasing Patient Satisfaction and Interest in Re-treatment at Ali *Dental Care* Tebing Tinggi

Category	Sub-Category	Service Satisfaction		Total	df	p-value
		Satisfied	Dissatisfied			
Reliability	Good	179	31	210	1	0.015
		62%	11%	72%		
	Bad	23	57	80		
		8%	20%	28%		
	Total	202	88	290		
70%		30%	100%			
Jaminan (<i>Assurance</i>)	Good	164	34	198	1	0.010
		57%	12%	68%		
	Bad	38	54	92		
		13%	19%	32%		
	Total	202	88	290		
70%		30%	100%			
Displays (<i>Tangibles</i>)	Good	175	35	210	1	0.020
		60%	12%	72%		
	Bad	27	53	80		
		9%	18%	28%		
	Total	202	88	290		
70%		30%	100%			
Responsiveness	Good	185	25	210	1	0.012
		64%	9%	72%		
	Bad	17	63	80		
		6%	22%	28%		
	Total	202	88	290		
70%		30%	100%			
Empathy	Good	172	7	179	1	0.025
		59%	2%	62%		
	Bad	30	81	111		
		10%	28%	38%		
	Total	202	88	290		
70%		30%	100%			

Table 2 presents the Chi-Square test results to analyze the quality of service at Ali Dental Care Tebing Tinggi and its impact on patient satisfaction. Of the 210 respondents on the reliability variable, 179 stated that they were satisfied, while 31 were dissatisfied, with a p-value of 0.015, which showed a significant relationship between service reliability and satisfaction. In the guarantee variable, out of 198 respondents, 164 were satisfied, and 34 were dissatisfied, with a p-value of 0.010, confirming that service guarantee positively affected patient satisfaction. For the display variable, out

of 210 respondents, 175 expressed satisfaction, while 35 were dissatisfied, with a p-value of 0.020, showing a significant relationship between service display and satisfaction. The responsiveness variable showed positive results, where out of 210 respondents, 185 were satisfied and 25 were dissatisfied, with a p-value of 0.012, indicating that service responsiveness contributed significantly to satisfaction. Finally, there were 172 satisfied respondents in the empathy variable out of a total of 179, with a p-value of 0.025, indicating that attention to patient needs increased satisfaction. All variables have a p-value ≤ 0.05 and are feasible for multivariate analysis.

Table 3 Table of Logistic Regression Test of the Enter Method, Research Variables Analysis of the Quality of Dental Clinic Services in Increasing Patient Satisfaction and Interest in Re-treatment at Ali *Dental Care* Tebing Tinggi

Variable	B	S.E.	Forest	df	Mr.	Exp(B)	95% C.I. for Exp(B)
Physical Evidence (Tangibles)	-0.215	0.109	3.961	1	0.020	0.806	0.162 - 3.905
Reliability	1.165	0.453	6.547	1	0.015	3.202	1.034 - 10.393
Responsiveness	1.225	0.473	6.789	1	0.010	3.404	1.115 - 10.547
Jaminan (Assurance)	1.035	0.513	4.175	1	0.012	2.819	1.012 - 7.835
Empathy (Empathy)	1.200	0.642	3.580	1	0.058	3.320	0.915 - 11.921
Constant	-7.610	1.408	29.226	1	0.000	0.000	

Based on Table 3, the reliability variable has the highest odds ratio (OR), which is 3,202. This shows that an increase in one unit in terms of service reliability can increase the likelihood of patients feeling satisfied by about 3.2 times. Improved reliability, such as punctuality, service accuracy, and the ability to meet appointments, contribute significantly to patient satisfaction. These findings underscore the importance of reliability in improving service quality at Ali Dental Care, as patients are more likely to be satisfied and potentially re-treat if they feel reliable service.

4. Discussion

In analyzing the quality of service at Ali Dental Care Tebing Tinggi, several dimensions of service quality significantly affect patient satisfaction and interest in re-treatment. First, from the Reliability dimension, the analysis shows that out of 290 respondents, 210 stated good service, of which 179 were satisfied and 31 were not. A p-value of 0.015 confirms a significant relationship between service reliability and patient satisfaction. The highest odds ratio (OR), 3,202, showed that an increase in one unit in reliability increased the likelihood of patients being satisfied by about 3.2 times. This is in line with research by Astuti (2020) and Purwitasari (2023), which also showed a positive influence of reliability on patient satisfaction (Astuti et al. 2020); (Purwitasari 2023). Also supported by Marini (2023) stated that there is a relationship between *the reliability variable* (p-value = 0.006) and the satisfaction of BPJS Kesehatan patients who receive treatment at the Outpatient Installation of the Dental and Oral Hospital in South Sumatra Province (Marini et al. 2023).

In the Guarantee dimension, out of 290 respondents, 198 gave a response, of which 164 expressed satisfaction. The p-value of 0.010 shows a significant positive relationship between service assurance quality and patient satisfaction. This indicates that when patients feel the assurance of service, they are more satisfied. Previous research by Astuti (2020) and Marini (2023) supports these findings, indicating the importance of assurance in building patient trust and loyalty (Astuti et al. 2020); (Purwitasari 2023). Also endorsed by Marini (2023), it is stated that there is a relationship between *the assurance variable* (assurance p value = 0.009) and the satisfaction of BPJS Kesehatan patients who receive treatment at the Outpatient Installation of the Dental and Oral Hospital in South Sumatra Province (Marini et al. 2023).

In the Display dimension, the analysis of 210 respondents showed that 175 were satisfied, with a p-value of 0.020, indicating a significant relationship between service appearance and patient satisfaction. These results are consistent with studies by Astuti (2020) and Purwitasari (2023), which show the importance of physical appearance in shaping patients' perceptions of service quality (Astuti et al., 2020); (Purwitasari 2023). Also supported by Marini (2023), it was stated that there was a relationship between the variable Physical Appearance (*tangibles*) p-value = 0.001 and the satisfaction of BPJS Kesehatan patients who received treatment at the Outpatient Installation of the Dental and Oral Hospital in South Sumatra Province (Marini et al. 2023). Therefore, Ali Dental Care needs to continue to pay attention to the appearance aspect to improve the patient experience.

In the Responsiveness dimension, 185 out of 210 respondents were satisfied with the responsiveness of the service, and the p-value of 0.012 showed a significant relationship with patient satisfaction. Research by Astuti (2020) and Marini (2023) also shows that speed in responding to patient needs affects satisfaction. Increased responsiveness is expected to encourage patients to return to re-treatment (Astuti et al. 2020); (Marini et al. 2023).

In the Empathy dimension, out of 290 respondents, 172 were satisfied, with a p-value of 0.025, which indicates a significant relationship between empathy in service and patient satisfaction. These findings are supported by Astuti (2020) and Purwitasari (2023), which show that attention and understanding of patients contribute to positive experiences. Therefore, Ali Dental Care needs to continue to increase empathy in services to build a good relationship between patients and health workers (Astuti et al. 2020); (Purwitasari 2023). Therefore, Ali Dental Care needs to continue to increase empathy in services to build a good relationship between patients and health workers. Overall, these findings emphasize that all service quality dimensions—reliability, assurance, looks, responsiveness, and empathy—contribute significantly to patient satisfaction and interest in care. Therefore, the service quality improvement strategy must include all these aspects to increase patient satisfaction and loyalty at Ali Dental Care.

5. Conclusion

This study found a significant relationship between the quality of service at Ali Dental Care Tebing Tinggi and patient satisfaction. Chi-Square analysis shows that reliability, assurance, appearance, responsiveness, and empathy positively affect patient satisfaction. The reliability variable had the highest odds ratio (3,202), indicating that improving service reliability could increase the likelihood of patient satisfaction by up to 3.2 times. These findings emphasize the importance of improving reliability and responsiveness to encourage patient satisfaction and interest in re-treatment. Clinic management is given recommendations to strengthen the quality of service.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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