ANALYSIS THE EFFECT OF SERVICE QUALITY ON PATIENT SATISFACTION AT THE DENTAL CLINIC OF PUSKESMAS TANJUNGSARI BOGOR REGENCY WEST JAVA (A SURVEY OF PATIENTS DIAGNOSED WITH PULPITIS)

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Abstract

According to the 2023 Indonesian Health Survey, 50% of the population has dental and oral problems, but only 11.2% seek treatment. The Tanjungsari Community Health Center dental clinic had 1,070 pulpitis patients from January to June 2025. This study aims to analyze the effect of service quality on patient satisfaction in the dental clinic with pulpitis diagnosed at Tanjungsari Community Health Center in Bogor Regency, West Java. The research design used was quantitative method with a descriptive approach. Data were collected from 119 respondents via questionnaire and analyzed using SPSS software. The variables studied included service quality aspects of reliability, responsiveness, assurance, empathy, and tangibles. The results showed, based on a partial t-test, service quality in the aspects of reliability ($p=0.02$) and tangibles ($p=0.00$) significantly influenced patient satisfaction. A simultaneous F-test showed that service quality simultaneously influenced patient satisfaction, with a calculated F-value of 18.895. The results of this study are recommended to the Head of the Community Health Center, the Health Service, and Community Leaders to improve the quality of services at the Tanjungsari Community Health Center dental clinic by adding human resources, regular training for community health center officers, and routine monitoring and evaluation of patient satisfaction.

Keywords: Service Quality, Patient Satisfaction, Community Health Center.

INTRODUCTION

A Community Health Center, hereinafter referred to as *Puskesmas*, is a primary-level healthcare facility that provides and coordinates promotive, preventive, curative, rehabilitative, and palliative health services within its designated service area. One of the most frequently visited services at a Puskesmas is Dental and Oral Health Services. Individuals who visit Dental and Oral Health Services are generally those experiencing dental and oral diseases (Permenkes no 19 th 2024). Findings from the 2023 Survey Kesehatan Indonesia (SKI) indicate that approximately 50% of the Indonesian population aged three years and above reported experiencing dental and oral health problems. Among the 56.9% of individuals who acknowledged having dental issues, only 11.2% sought assistance from dental professionals to address their health concerns. Several factors contribute to individuals' reluctance to seek immediate treatment for dental and oral health problems. The primary reason was fear of exposure to COVID-19 (81.7%), followed by long waiting times for services (80.2%), and a preference for self-medication (79.3%).

The 2023 SKI report further revealed that, in managing dental and oral health problems, 24.8% of the population chose self-treatment or the use of analgesics for dental discomfort without professional medical guidance (Survey Kesehatan Indonesia, 2023). Empirical evidence suggests that government-owned healthcare facilities are often underutilized by the public. One of the main reasons is that the services provided by these facilities have not met patients' or the community's expectations (Supariani, N. dkk, 2024) Based on a study conducted by Nurhaeni tahun 2022 at Puskesmas Marangkayu, several issues were identified, including limited facilities and infrastructure that could not fully support healthcare services for patients, shortages of healthcare personnel, long waiting times, and inadequate medical equipment and facilities as perceived by the community. Consequently, the services delivered did not align with the expectations of the surrounding community (Nurhaeni, dkk. 2022). Based on a study conducted by Zulmi & Symond tahun 2015 at Puskesmas Rasimah Ahmad found that three out of five patients who had previously visited reported dissatisfaction with the services received. Patients opted to seek treatment at other

dental practices because their complaints were not resolved even after receiving care and waiting for a considerable time. At Puskesmas Guguk Panjang, three out of five visiting patients expressed dissatisfaction, citing short operating hours, inadequate waiting rooms, long waiting times, unfriendly administrative staff, and damaged equipment (Zulmi & Symond, 2015). According to research by Rizaldy & Alnur tahun 2024 at Puskesmas Cikuya, the number of patient visits was 1,191 in 2019, decreased to 600 in 2021, and increased again to 960 in 2022. This fluctuation may be attributed to internal and external factors. Internal factors include services that do not meet patients' expectations, such as inadequate equipment, inefficient staff performance, long waiting times, and unclean waiting areas, which discourage patients from returning for treatment. External factors may include improvements in the overall health status of the community (Rizaldy & Alnur, 2024).

Puskesmas Tanjungsari is located in the eastern region of Bogor Regency, specifically at Jl. H. Abd Halim No. 60, Sirnasari Village, Tanjungsari District. It serves 10 villages with a total population of approximately 59,042 people. Based on visit data obtained from the E-Puskesmas system, the health center serves approximately 100–200 patients per day, of whom 20–25 are dental clinic patients. According to E-Puskesmas data, the waiting time for dental patients from registration to completion of treatment can exceed two hours, with the longest recorded waiting time reaching four hours. This waiting time is significantly longer compared to other clinics. Numerous patients have submitted complaints regarding the prolonged waiting time at the dental clinic, both in written form through the suggestion box and via online reviews on Google Sheets. Such conditions substantially affect patient satisfaction. Furthermore, there are occasions when only one staff member either a dentist or a dental nurse is available in the dental clinic due to scheduled meetings or external assignments. This situation impacts service quality and, consequently, patient satisfaction.

Table 1. Criticisms and Suggestions for the Dental Clinic during the Period 2024–2025.

Clinic	Visit Date	Rating	Criticism	Suggestion
Dental	2/4/2024	4	Good	Good
Dental	24/4/2024	5	Long waiting time	Improve further
Dental	8/5/2024	5	–	Thank you for being friendly
Dental	18/5/2024	5	Very good service	Very good service
Dental	18/6/2024	3	Filling equipment frequently malfunctioned	Repair immediately
Dental	23/8/2024	4	The dentist took a long time with patients	Please be faster as many patients are waiting
Dental	29/11/2024	3	Scaling could not be performed due to broken equipment	Repair the equipment
Dental	5/12/2024	5	None	It is already good; please maintain and improve
Dental	12/12/2025	3	The nurse arrived at 10 a.m.	Arrive according to official working hours
Dental	7/1/2025	2	Very long waiting time	Please be faster
Dental	13/1/2025	3	Only the dental clinic had to wait up to 2 hours	Please make improvements

Source: Tanjungsari Community Health Center Public Satisfaction Survey

Patients attending the dental clinic at Puskesmas Tanjungsari present with various complaints, including throbbing toothache, tooth sensitivity, retained root fragments, loose teeth, and other dental conditions. However, the most frequent diagnosis recorded each month is pulpitis or diseases of the pulp and periapical tissues. Based on data obtained from the E-Puskesmas system for the period 2024–2025, there were 2,048 cases of pulpitis at the dental clinic of Puskesmas Tanjungsari, making it the most prevalent diagnosis.

Table 2. Dental Clinic Patient Diagnoses, January–June 2025

Serial No.	Types of Disease	Code ICD-X	Number of New Cases			Number of Old Cases			Total
			L	P	Jml	L	P	Jml	
1	Disturbances in tooth eruption	K00.6	135	196	331	1	1	2	333
2	Impacted teeth	K01.1	12	26	38	1	7	8	46
3	Dental caries	K02	68	115	183	11	24	35	218
4	Other diseases of hard tissues of teeth	K03	4	5	9	0	0	0	9
5	Pulp and periapical tissue diseases	K04	239	449	688	97	285	382	1070
6	Gum and periodontal disease	K05	88	111	199	2	4	6	205
7	Dentofacial anomalies [including malocclusion]	K07	1	1	2	0	0	0	2
8	Disorders of teeth and other supporting tissues	K08	35	56	91	1	5	6	97
9	Stomatitis and related lesions	K12	12	16	28	0	0	0	28
10	Diseases of lips	K13.0	0	0	0	0	0	0	0
11	Erythema multiforme	L51	0	0	0	0	0	0	0
12	Headache	R51	10	23	33	0	0	0	33
13	Fracture of tooth	S02.5	1	6	7	0	1	1	8

Source: E-Puskesmas, Dental Clinic of Puskesmas Tanjungsari.

Measuring the quality of healthcare services constitutes an important indicator in assessing user satisfaction with healthcare services. Service quality is determined by standards established by healthcare professionals and must align with patients' needs and expectations. Patient satisfaction reflects the perception that the products or services received have met or even exceeded their expectations (Supariani, N., dkk, 2024). High-quality services at a Puskesmas contribute to patient satisfaction, which in turn influences decision-making related to loyalty such as the intention to reuse the services and to recommend them to others. Failure to recognize the importance of service quality and patient satisfaction may affect patients' decisions regarding whether to seek treatment at the health center. Patient satisfaction is widely acknowledged as a critical component of healthcare services and a primary indicator of service quality (Rizaldy & Alnur, 2024). Based on the above background, the author conducted a study presented in the form of a master's thesis entitled *Analysis the Effect of Service Quality on Patient Satisfaction at the Dental Clinic of Puskesmas Tanjungsari, Bogor Regency, West Java*. Through a deeper understanding of these factors, it is expected that effective strategies and policies can be developed to improve service quality and enhance patient satisfaction at the dental clinic of Puskesmas Tanjungsari.

METHOD

This research methodology employs a quantitative approach with descriptive and verificative methods as proposed by Sugiyono (2018), grounded in the philosophy of positivism to test hypotheses through statistical analysis of numerical data. The data utilized consist of primary data collected through questionnaires administered to dental clinic patients at Puskesmas Tanjungsari diagnosed with pulpitis, as well as secondary data derived from literature and patient satisfaction surveys. The study population comprises an average of 170 patients per month based on E-Puskesmas data for the period January–June 2025, with sample selection conducted using simple random sampling. The sample size was determined using the Slovin formula with a 5% margin of error, resulting in a minimum sample of 119 respondents. Data collection techniques included field research through the use of a 5-point Likert-scale questionnaire and library research. Following data collection, instrument testing was conducted to ensure validity and reliability so that the research findings could be scientifically justified.

RESULTS AND DISCUSSION
Validity and Reliability Testing

The results of the validity and reliability tests were conducted on the research instruments covering the variables of service quality: reliability (X1), responsiveness (X2), assurance (X3), empathy (X4), tangible (X5), and patient satisfaction (Y). The validity test was performed by comparing the calculated r-value (r-count) with the r-table value at a 5% significance level.

Table 3. Validity Test of Variables X1, X2, X3, X4, X5, Y

Variabel	Item	r-hitung	r-tabel (n≈119)	Keterangan
Service Quality: Reliability (X1)	item1	0,832	0,180	Valid
	item2	0,901	0,180	Valid
	item3	0,919	0,180	Valid
	item4	0,777	0,180	Valid
	item5	0,811	0,180	Valid
Service Quality: Responsiveness (X2)	item6	0,849	0,180	Valid
	item7	0,924	0,180	Valid
	item8	0,938	0,180	Valid
	item9	0,935	0,180	Valid
	item10	0,915	0,180	Valid
Service Quality: Assurance (X3)	item11	0,888	0,180	Valid
	item12	0,936	0,180	Valid
	item13	0,956	0,180	Valid
	item14	0,850	0,180	Valid
	item15	0,928	0,180	Valid
Service Quality: Empathy (X4)	item16	0,940	0,180	Valid
	item17	0,948	0,180	Valid
	item18	0,972	0,180	Valid
	item19	0,973	0,180	Valid
	item20	0,960	0,180	Valid
Service Quality: Tangible (X5)	item21	0,908	0,180	Valid
	item22	0,817	0,180	Valid
	item23	0,921	0,180	Valid
	item24	0,864	0,180	Valid
	item25	0,710	0,180	Valid
Patient Satisfaction (Y)	item26	0,961	0,180	Valid
	item27	0,969	0,180	Valid

All calculated r-values for the questionnaire items were greater than the r-table value of 0.180, indicating that all items were valid and suitable for measuring the respective variables.

Table 4. Reliability Test of Variables X1, X2, X3, X4, X5, Y

Variabel / Dimensi	Jumlah Item	Cronbach's Alpha	Kategori
X1 – Reliability	5	0.890	Reliabel
X2 – Responsiveness	5	0.950	Reliabel
X3 – Assurance	5	0.945	Reliabel
X4 – Empathy	5	0.978	Reliabel
X5 – Tangible	5	0.897	Reliabel
Y – Patient Satisfaction	2	0.923	Reliabel

Based on the reliability test results presented in Table 4, all six variables demonstrated Cronbach's Alpha values greater than 0.7, indicating that the instruments possess a very good level of internal consistency.

Method of Successive Interval (MSI) Analysis

Linear regression analysis requires interval-scale data. Since the questionnaire in this study used an ordinal scale, it was necessary to transform the ordinal data into interval data. The transformation was conducted using the Method of Successive Interval (MSI).

Classical Assumption Tests
Normality Test

The normality test in this study was conducted using the Kolmogorov-Smirnov test. The basis for decision-making regarding normality was the significance value (Asymptotic Significance), as follows:

1. If significance > 0.05, the data distribution is normal.
2. If significance < 0.05, the data distribution is not normal.

Table 5. Normality Test

One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		119
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	1.27359736
Most Extreme Differences	Absolute	.078
	Positive	.076
	Negative	-.078
Test Statistic		.078
Asymp. Sig. (2-tailed)		.071[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
Source: Data processed using SPSS 26

Based on Table 5, the Asymp. Sig. (2-tailed) value was 0.071, which is greater than 0.05. Therefore, it can be concluded that the data meet the normality assumption and are suitable for regression analysis.

Multicollinearity Test

To ensure that the data do not exhibit multicollinearity, correlation values between independent variables were examined. If the correlation value between variables exceeds 0.8, multicollinearity is indicated. Conversely, if the correlation value is below 0.8, multicollinearity is not present.

Table 6. Multicollinearity Test Results

Correlations		X1	X2	X3	X4	X5
X1	Pearson Correlation	1	.561[**]	.549[**]	.473[**]	.508[**]
X2	Pearson Correlation	.561[**]	1	.751[**]	.667[**]	.591[**]
X3	Pearson Correlation	.549[**]	.751[**]	1	.793[**]	.685[**]
X4	Pearson Correlation	.473[**]	.667[**]	.793[**]	1	.651[**]
X5	Pearson Correlation	.508[**]	.591[**]	.685[**]	.651[**]	1

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Data processed using SPSS 26

Table 6 shows that the correlation values among all independent variables are well below 0.8. Therefore, it can be concluded that there is no multicollinearity among the independent variables in the regression model.

Heteroscedasticity Test

In this study, heteroscedasticity was tested using the Spearman Rank test by correlating each independent variable with the absolute residual values (Abs). The criteria are as follows:

1. If significance > 0.05, the data are free from heteroscedasticity.
2. If significance < 0.05, heteroscedasticity is present.

Table 7. Heteroscedasticity Test

Correlations

			ABS
Spearman's rho	Reliability	Correlation Coefficient	-.133
		Sig. (2-tailed)	.150
	Responsiveness	Correlation Coefficient	-.044
		Sig. (2-tailed)	.638
	Assurance	Correlation Coefficient	-.066
		Sig. (2-tailed)	.477
	Empathy	Correlation Coefficient	.021
		Sig. (2-tailed)	.824
	Tangible	Correlation Coefficient	-.153
		Sig. (2-tailed)	.098
	ABS	Correlation Coefficient	1.000
		Sig. (2-tailed)	.
		N	119

Source: Data processed using SPSS 26

Based on Table 7, all variables have significance values greater than 0.05, indicating that the regression model does not exhibit heteroscedasticity.

Autocorrelation Test

In relation to the Ordinary Least Squares (OLS) assumption, autocorrelation refers to the correlation between one residual and another. A key assumption of the OLS method is the absence of correlation among residuals. Using SPSS 26 for Windows, the Durbin-Watson (DW) statistic obtained was 1.792.

Table 8. Autocorrelation Test Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.675[a]	.455	.431	1.30147	1.792

a. Predictors: (Constant), Tangible, Reliability, Responsiveness, Empathy, Assurance
b. Dependent Variable: Patient Satisfaction

Source: Data processed using SPSS 26

From Table 8, the DW value of 1.792 was compared with the lower limit (dL) and upper limit (dU) values from the Durbin-Watson table. For α = 0.05, k = 5, and n = 119, the values obtained were dL = 1.632 and dU = 1.771, with 4 − dU = 2.229. Since the DW value lies between dU and 4 − dU (1.771 < 1.792 < 2.229), it can be concluded that there is no autocorrelation in the data.

Multiple Linear Regression

The results of the multiple linear regression analysis using SPSS are presented as follows:

Table 9. Regression Results

Coefficients[a]

Model	Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1 (Constant)	1.063	.587		1.810	.073
Reliability	.047	.040	.103	1.721	.002
Responsiveness	.085	.050	.187	1.683	.095
Assurance	.010	.060	.022	.162	.871
Empathy	.042	.049	.101	.849	.397
Tangible	.284	.045	.638	6.341	.000

a. Dependent Variable: Patient Satisfaction

Source: Data processed using SPSS 26

Based on the results presented in Table 9 above, the multiple linear regression equation is obtained as follows:

$$Y = \alpha + \beta 1 X1 + \beta 2 X2 + \beta 3 X3 + \beta 4 X4 + \beta 5 X5 + e$$
$$Y = 1{,}063 + 0{,}047X1 + 0{,}085X2 + 0{,}010X3 + 0{,}042X4 + 0{,}284X5 + 0{,}05$$

Based on the regression equation above, the interpretation is as follows:

1. The constant value (a) of 1.063 indicates that if all service quality variables—reliability, responsiveness, assurance, empathy, and tangible—are equal to zero, then patient satisfaction (Y) would be 1.063.
2. The regression coefficient for the reliability aspect (X1) is 0.047. This positive value indicates a direct relationship between patient satisfaction and the reliability aspect of service quality. This means that a one-unit increase in reliability will increase patient satisfaction by 0.047 units, assuming other independent variables remain constant.
3. The regression coefficient for the responsiveness aspect (X2) is 0.085. This positive value indicates a direct relationship between patient satisfaction and responsiveness. Thus, a one-unit increase in responsiveness will increase patient satisfaction by 0.085 units, assuming other variables remain constant.
4. The regression coefficient for the assurance aspect (X3) is 0.010. This positive value indicates a direct relationship between patient satisfaction and assurance. Therefore, a one-unit increase in assurance will increase patient satisfaction by 0.010 units, assuming other variables remain constant.
5. The regression coefficient for the empathy aspect (X4) is 0.042. This positive value indicates a direct relationship between patient satisfaction and empathy. Hence, a one-unit increase in empathy will increase patient satisfaction by 0.042 units, assuming other variables remain constant.
6. The regression coefficient for the tangible aspect (X5) is 0.284. This positive value indicates a direct relationship between patient satisfaction and tangible aspects of service quality. Thus, a one-unit increase in tangible aspects will increase patient satisfaction by 0.284 units, assuming other variables remain constant.

Correlation Coefficient

The correlation coefficient test was conducted to determine the relationship between the independent and dependent variables.

Table 10. Correlation Coefficient Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.675[a]	.455	.431	1.30147	1.792

a. Predictors: (Constant), Tangible, Reliability, Responsiveness, Empathy, Assurance

b. Dependent Variable: Patient Satisfaction

Source: Data processed using SPSS 26

The correlation coefficient value is 0.675, indicating that the relationship between the independent variables of service quality reliability, responsiveness, assurance, empathy, and tangible—and patient satisfaction falls within the strong category, as it lies between 0.60 and 0.799.

R-Square (Coefficient of Determination)

The purpose of the R^2 test is to determine the extent to which independent variables contribute to the dependent variable. The closer the coefficient of determination is to one, the better the independent variables explain the dependent variable. Conversely, a value closer to zero indicates limited explanatory power.

Table 11. Coefficient of Determination Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.675[a]	.455	.431	1.30147	1.792

a. Predictors: (Constant), Tangible, Reliability, Responsiveness, Empathy, Assurance
b. Dependent Variable: Patient Satisfaction

Source: Data processed using SPSS 26

The R-Square value is 0.455 or 45.5%, meaning that the service quality variables (reliability, responsiveness, assurance, empathy, and tangible) simultaneously explain 45.5% of the variation in patient satisfaction. The remaining 54.5% is explained by other factors not examined in this study.

Hypothesis Testing
Partial Test (t-Test)

The t-test was conducted to determine the partial effect of each independent variable on the dependent variable. The decision criteria are as follows:
1. If t-count < t-table, H₀ is accepted and Hₐ is rejected.
2. If t-count > t-table, H₀ is rejected and Hₐ is accepted.
3. If significance < 0.05, the independent variable has a significant effect on the dependent variable.
4. If significance > 0.05, the independent variable does not have a significant effect on the dependent variable.

Table 12. Hypothesis Testing (t-Test)

Coefficients[a]

Model	Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1 (Constant)	1.063	.587		1.810	.073
Reliability	.047	.040	.103	1.721	.002
Responsiveness	.085	.050	.187	1.683	.095
Assurance	.010	.060	.022	.162	.871
Empathy	.042	.049	.101	.849	.397
Tangible	.284	.045	.638	6.341	.000

a. Dependent Variable: Patient Satisfaction

Source: Data processed using SPSS 26

The results of the partial tests are as follows:
1. Effect of Reliability on Patient Satisfaction
   The t-count value is 1.721 with a significance of 0.002. Since t-count > t-table (1.721 > 1.658) and significance < 0.05 (0.002 < 0.05), reliability has a significant positive effect on patient satisfaction at the 5% significance level.
2. Effect of Responsiveness on Patient Satisfaction
   The t-count value is 1.683 with a significance of 0.95. Since significance > 0.05 (0.95 > 0.05), responsiveness does not have a significant effect on patient satisfaction, despite showing a positive direction.
3. Effect of Assurance on Patient Satisfaction

The t-count value is 0.168 with a significance of 0.871. Since t-count < t-table (0.168 < 1.658) and significance > 0.05 (0.871 > 0.05), assurance does not have a significant effect on patient satisfaction.

4. Effect of Empathy on Patient Satisfaction
   The t-count value is 0.849 with a significance of 0.397. Since t-count < t-table (0.849 < 1.658) and significance > 0.05 (0.397 > 0.05), empathy does not have a significant effect on patient satisfaction.

5. Effect of Tangible on Patient Satisfaction
   The t-count value is 6.341 with a significance of 0.000. Since t-count > t-table (6.341 > 1.658) and significance < 0.05 (0.000 < 0.05), tangible aspects have a significant positive effect on patient satisfaction at the 5% significance level.

Simultaneous Test (F-Test)

A significant F-test indicates that the regression model is appropriate and that the independent variables collectively influence the dependent variable.

Table 13. Simultaneous Test Results (F-Test)

ANOVAª

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	160.023	5	32.005	18.895	.000ᵇ
	Residual	191.402	113	1.694		
	Total	351.425	118			

a. Dependent Variable: Patient Satisfaction
b. Predictors: (Constant), Tangible, Reliability, Responsiveness, Empathy, Assurance

Source: Data processed using SPSS 26

Based on the F-test results, with an F-table value of 2.295, the F-count value obtained is 18.895 with a significance of 0.000. Since F-count > F-table (18.895 > 2.323) and significance < 0.05 (0.000 < 0.05), it can be concluded that service quality variables (reliability, responsiveness, assurance, empathy, and tangible) simultaneously have a significant effect on patient satisfaction.

The Effect of Reliability on Patient Satisfaction

The findings indicate that respondents' perceptions of service quality in the reliability dimension show a calculated t-value greater than the t-table value (1.721 > 1.658) and a significance value lower than the significance level (0.002 < 0.05). This indicator partially demonstrates a significant effect on patient satisfaction. Therefore, the management of Puskesmas Tanjungsari should enhance and carefully monitor the reliability dimension to ensure the achievement of patient satisfaction. This includes punctuality of service delivery, waiting time duration, and clear instructions during procedures. These findings are consistent with previous studies conducted by (Sari, 2017) and (Paraisu & Paramarta, 2024) which state that reliability represents the responsibility of healthcare institutions to deliver services in accordance with what has been promised. This includes fulfilling appointments as scheduled and ensuring accurate diagnoses.

The Effect of Responsiveness on Patient Satisfaction

The results indicate that respondents' perceptions of the responsiveness dimension show a significance value greater than the significance level (0.95 > 0.05). Thus, partially, this indicator does not demonstrate a significant effect on patient satisfaction. Nevertheless, the promptness of dentists and dental nurses in responding to patient complaints constitutes an important aspect of responsiveness that may influence patient satisfaction. These findings align with studies by (Setianingsih, A; Susanti, 2021) (Muchtar & Paramarta, 2024) which report that responsiveness has a positive effect on patient satisfaction. Responsiveness, including attentiveness in listening to patient complaints and promptness in providing assistance, significantly influences patient satisfaction in hospital settings. Therefore, dentists and dental nurses play a crucial role in delivering high-quality service that enhances patient satisfaction.

The Effect of Assurance on Patient Satisfaction

The findings show that respondents' perceptions of the assurance dimension yield a calculated t-value lower than the t-table value (0.168 < 1.658) and a significance value greater than the significance level (0.871 > 0.05). Thus, partially, this indicator does not have a significant effect on patient satisfaction. Consequently, the management of Puskesmas Tanjungsari needs to improve and pay closer attention to the assurance dimension to enhance patient satisfaction. This dimension encompasses the knowledge, competence, courtesy, and trustworthiness of dentists and dental nurses. These findings are consistent with studies by (Meutia & Andiny, 2019) (Kosasih & Paramarta, 2020) and (Rocky et al., 2020) which suggest that assurance—including competence, courtesy, credibility, confidence, and the ability to instill trust—contributes to improved patient satisfaction.

The Effect of Empathy on Patient Satisfaction

The results demonstrate that respondents' perceptions of the empathy dimension show a calculated t-value lower than the t-table value (0.849 < 1.658) and a significance value greater than the significance level (0.397 > 0.05). Therefore, partially, this indicator does not significantly affect patient satisfaction. As a result, the management of Puskesmas Tanjungsari should enhance and carefully address the empathy dimension to improve patient satisfaction. This includes facilitating effective communication, providing personal attention, and understanding patients' individual needs. These findings are in line with studies by (Sari, 2017) (Paramarta & Rahmiyati, 2025) and (Meutia & Andiny, 2019) which define empathy as the ability of healthcare providers to offer individualized attention to patients, including recognizing patients personally, remembering previous health issues or complaints, and demonstrating patience.

The Effect of Tangible Aspects on Patient Satisfaction

The findings reveal that respondents' perceptions of the tangible dimension show a calculated t-value greater than the t-table value (6.341 > 1.658) and a significance value lower than the significance level (0.000 < 0.05). This indicates that, partially, the tangible dimension has a significant effect on patient satisfaction. Tangible aspects such as the comfort of the waiting room, cleanliness of the dental clinic, and completeness of equipment and materials significantly influence patient satisfaction. These results are consistent with studies by (Setianingsih, A; Susanti, 2021) (Anggraini & Nugroho, 2025) which state that tangible aspects represent the physical appearance that patients can directly observe and experience, including adequate and modern facilities and equipment. A positive physical environment can shape patient expectations and perceptions; therefore, healthcare management must carefully select and maintain appropriate tangible aspects to create favorable impressions of service quality and ensure balanced fulfillment of patient needs and satisfaction.

The Simultaneous Effect of Service Quality on Patient Satisfaction

Based on the coefficient of determination test, the R-Square value was 0.455 (45.5%). This indicates that the service quality dimensions reliability, responsiveness, assurance, empathy, and tangible collectively contribute 45.5% to patient satisfaction, while the remaining 54.5% is explained by other factors not examined in this study. Furthermore, the F-test (simultaneous test) results show an F-table value of 2.295, an F-calculated value of 18.895, and a significance value of 0.000. Since the calculated F-value is greater than the F-table value (18.895 > 2.295) and the significance value is less than 0.05, it can be concluded that service quality dimensions (reliability, responsiveness, assurance, empathy, and tangible) simultaneously have a significant effect on patient satisfaction.

These findings are supported by research conducted by (Anathasia & Kosasih, 2024) which demonstrates that service quality factors significantly influence patient satisfaction levels. Attention to these dimensions can help improve healthcare service quality and ensure that patients feel satisfied and well-served. This also underscores the importance of addressing non-medical aspects in delivering effective and comprehensive healthcare services. Similarly, (Marzuq, 2022) states that patient satisfaction is closely related to the quality of service received. When healthcare services exceed patient expectations, service quality is perceived as good; conversely, when services fall below patient expectations, service quality is perceived as poor. Additionally, studies by (Andrian & Nugroho, 2025) (Magdalena et al., 2025) demonstrate that healthcare service quality indicators reliability, responsiveness, empathy, assurance, and tangible collectively have a significant effect on patient satisfaction in hospital settings.

CONCLUSION

Based on the results of the study examining the effect of service quality on patient satisfaction at the dental clinic of Puskesmas Tanjungsari, several conclusions can be drawn as follows:

1. The mean score of the service quality variable in the frequency distribution indicates that the reliability aspect obtained a score of 4.19, which falls into the good category; the responsiveness aspect obtained a score of 4.43, categorized as very good; the assurance aspect obtained a score of 4.38, categorized as very good; the empathy aspect obtained a score of 4.41, categorized as very good; and the tangible aspect obtained a score of 3.94, categorized as good. Meanwhile, the patient satisfaction variable obtained a mean score of 4.20, which is classified as good.

2. The reliability aspect of service quality partially has a significant effect on patient satisfaction at the dental clinic. This is evidenced by the calculated t-value being greater than the t-table value (1.721 > 1.658) and the significance value being lower than the significance level (0.002 < 0.05).

3. The responsiveness aspect of service quality partially does not have a significant effect on patient satisfaction. This is indicated by the significance value not meeting the required significance threshold (0.95 > 0.05).

4. The assurance aspect of service quality partially does not have a significant effect on patient satisfaction. This is demonstrated by the calculated t-value being lower than the t-table value (0.168 < 1.658) and the significance value being higher than the significance level (0.871 > 0.05).

5. The empathy aspect of service quality partially does not have a significant effect on patient satisfaction. This is evidenced by the calculated t-value being lower than the t-table value (0.849 < 1.658) and the significance value being higher than the significance level (0.397 > 0.05).

6. The tangible aspect of service quality partially has a significant effect on patient satisfaction. This is supported by the calculated t-value being greater than the t-table value (6.341 > 1.658) and the significance value being lower than the significance level (0.000 < 0.05).

7. Service quality simultaneously has a significant effect on patient satisfaction. This is demonstrated by the coefficient of determination (R-Square) value of 0.455 or 45.5%, indicating that the service quality variables collectively explain 45.5% of the variance in patient satisfaction. Furthermore, the F-test (simultaneous test) results show a calculated F-value of 18.895 with a significance value of 0.000, indicating that service quality simultaneously has a statistically significant effect on patient satisfaction.

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