

## Evaluation of Patient Satisfaction with Dental Services at Widodo Dental Practice, North Jakarta

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### KEYWORDS

Patient Satisfaction, Doctor Service, Widodo Dental, PLS-SEM, Healthcare Service Quality

### ABSTRACT

Health is an important aspect for every individual because it directly influences lifestyle habits. Clinics play a significant role in improving a person's health. The quality of a clinic is greatly influenced by various factors, one of which is patient satisfaction. A service is considered satisfactory if it can meet the needs and expectations of patients. Therefore, it is important for a clinic to evaluate patient satisfaction with the services provided by doctors, especially at Widodo Dental in North Jakarta. This study involved 210 respondents using a purposive sampling method. Data were collected through a questionnaire using a 5-point Likert scale, and then analyzed using PLS-SEM with the help of SmartPLS 3.0 software. The results showed that doctor services have a significant positive influence on patient satisfaction, with an R-square value of 0.680. Analysis of the measurement and structural models showed that all indicators used in this study were valid and reliable. Doctor services play a very important role in improving patient satisfaction. Clinics are advised to improve communication between doctors and patients so that information provided is clearer and easier to understand. This study contributes to efforts to improve the quality of services in the primary healthcare sector.

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## INTRODUCTION

Health is an important aspect for every individual because it has a direct effect on life habits. In addition to maintaining general health, dental and oral health also requires special attention. Complaints on the body and mouth can be prevented or handled through examinations at health facilities such as hospitals or clinics. The clinic is easily accessible to the public, providing medical services such as diagnosis, treatment, and disease prevention. This clinic is managed by professionals such as general practitioners to dentists (Ahmady et al., 2015; Ali, 2016; ; Kitapci et al., 2014).

The clinic itself consists of various types, namely, general clinics for basic services, specialist clinics, and specialized dental and oral health clinics that focus on treating oral problems, such as tartar cleaning, filling, extraction, root care, and oral hygiene education. Clinics are very important to expand access to healthcare, because they are generally more affordable and spread more widely than hospitals (Bougie & Sekaran, 2020; Cooper & Schindler, 2019; Hair et al., 2019; Henseler, 2017).

The number of clinics in Indonesia continues to increase in response to the high public demand for primary services (Altayeb et al., 2023). Based on data from the Ministry of Health,

as of February 2024, there are 17,953 clinics in Indonesia. These clinics include primary clinics (basic services) and primary clinics (specialist services) and are managed by both the government and the private sector.

One of the important indicators of clinical quality is patient satisfaction, which is the patient's response to the healthcare experience they receive, which reflects how well the service meets their expectations (Ahmad & Yusof, 2024; Othman & Kadasah, 2025; Sumarta et al., 2025). A service is considered satisfactory if the service can meet the needs and expectations of patients. If customers are dissatisfied with a service provided, then the service can be confirmed to be ineffective and inefficient (Lin et al., 2013; Mokarram et al., 2025; Noviyani & Viwattanakulvanid, 2025).

Despite the growing number of dental clinics in Indonesia, particularly in urban areas like North Jakarta, there remains a significant gap in understanding the specific factors that drive patient satisfaction in private dental practices. While previous studies have examined patient satisfaction in hospital settings (Tesmanto & Subarja, 2022; Arbey et al., 2024), limited research has focused specifically on dental clinics in the Jakarta metropolitan area, where competition among private practices is intense and patient expectations are continuously evolving.

The urgency of this research stems from several critical factors: First, the dental healthcare industry in Indonesia is experiencing rapid transformation, with increasing patient awareness of service quality and a growing demand for patient-centered care (Ministry of Health, 2024). Second, North Jakarta, as one of the most densely populated areas in the capital city, presents unique challenges in healthcare delivery, including diverse patient demographics, varying socioeconomic backgrounds, and high service expectations. Third, Widodo Dental Practice, despite its established presence in the community, lacks empirical data on patient satisfaction levels and the specific service dimensions that most significantly influence patient perceptions.

Furthermore, understanding patient satisfaction is crucial for several reasons: (1) it directly affects patient retention and loyalty, which are essential for the sustainability of private dental practices; (2) it serves as a quality indicator that can guide service improvement initiatives; (3) it influences word-of-mouth recommendations, which remain a primary source of new patients in dental healthcare; and (4) it contributes to the broader goal of improving primary healthcare quality in Indonesia, as outlined in national health development programs.

Previous research has identified various dimensions of healthcare service quality, including physician competence, interpersonal communication, technical quality, and facility conditions (Swain & Kar, 2018). However, the relative importance of these dimensions may vary across different healthcare settings and cultural contexts. In the Indonesian context, where hierarchical relationships and interpersonal trust play significant roles in healthcare interactions (Kusumaningrum et al., 2020), the dynamics between physician services and patient satisfaction may differ from Western contexts where most existing research has been conducted.

This study addresses these gaps by providing empirical evidence on the relationship between doctor services, clinical services, and patient satisfaction specifically in the context of a private dental practice in North Jakarta. The findings are expected to contribute both

theoretically to the healthcare quality literature in the Indonesian context and practically to service improvement strategies for dental clinics operating in competitive urban markets.

## METHOD

This study uses a quantitative approach with an emphasis on collecting data in the form of numbers which are then statistically analyzed. The study population includes all residents domiciled in North Jakarta. However, due to the wide coverage of the area and the limited time in data collection, this study did not take the entire population, but used a sample of 210 respondents. The sample selection was carried out by purposive sampling technique, which is to select individuals who meet certain criteria in this case, residents of North Jakarta City who in the past year have been patients or patient companions at Widodo Dental.

The exogenous variable used in the study was the quality of doctors' services, which was measured through five indicators. Meanwhile, the endogenous variable in the form of patient satisfaction is also measured by five indicators. Primary data is obtained through an online questionnaire distributed using Google Form, so that the data collection process becomes more practical and efficient. The questionnaire instrument contains closed-ended questions with predetermined answer options. Each item was measured using a 5-point Likert scale, ranging from strongly disagree (1) to strongly agree (5), so that respondents could convey their level of agreement more easily, and researchers could process the data in a more structured manner.

To analyze the data, this study used the PLS-SEM (Partial Least Squares–Structural Equation Modeling) technique with the help of SmartPLS 3.0 software. PLS-SEM consists of two main parts, namely the measurement model (outer model), which evaluates the relationship between indicators and their constructs, and structural models (inner model), which tests the relationships between latent variables according to the theoretical framework constructed. This method was chosen because it is able to provide a deeper understanding of the relationships between variables and allow for more comprehensive hypothesis testing (Ghozali & Latan, 2020).

## RESULTS AND DISCUSSIONS

This study involved a total of 210 respondents who were patients of Widodo Dental in North Jakarta City. Based on gender distribution, the proportion of male respondents was 51.9% (109 people), slightly higher than women who amounted to 48.1% (101 people). This suggests that clinic services are used relatively evenly by both sexes, despite a tendency for slight dominance of the male group. Judging from the age group, the most respondents were in the range of 30–39 years, namely 79 people (37.6%), which illustrates that the productive age group dominates the use of clinic services.

The age group of 20–29 years followed with 61 people (29.0%), indicating a high need for dental health services in young adulthood. The age group of 40–49 years amounted to 43 people (20.5%), while the age group over 50 years was the least, at 27 people (12.9%). This distribution indicates that the majority of patients are in the active adult age range who generally have a higher awareness of dental and oral health. Based on employment, the largest respondents came from private employees, namely 74 people (35.2%). This group was followed by 64 civil servants (30.5%), and entrepreneurs as many as 48 people (22.9%). Meanwhile,

respondents who work as housewives amounted to 16 people (7.6%), and other categories as many as 8 people (3.8%). This composition shows that the majority of patients who come are active working individuals, who economically have the ability to access dental health services regularly.

In terms of the frequency of visits, most of the respondents have visited 1-3 times, namely 92 people (43.8%). A total of 70 people (33.3%) had visited the clinic 3-5 times, while 48 respondents (22.9%) were recorded to have visited more than five times. These findings indicate that Widodo Dental has a fairly good patient retention rate, as seen from the proportion of patients who make repeated visits (>3 times) reaching more than half of the total respondents.

**Table 1. Respondent Profile**

Remarks	Number of Respondents	Presentase (%)
<b>Gender</b>		
Male	109	51,9%
Women	101	48.1%
<b>Age</b>		
20 – 29 years old	61	29,0%
30 – 39 years old	79	37,6%
40 – 49 years old	43	20,5%
>50 years old	27	12,9%
<b>Jobs</b>		
Housewives	16	7,6%
PNS	64	30,5%
Private Employees	74	35,2%
Entrepreneurship	48	22,9%
Others	8	3,8%
<b>Number of Visits</b>		
1-3 times	92	43,8%
3-5 times	70	33,3%
>5 times	48	22,9%
<b>TOTAL</b>	<b>210</b>	<b>100%</b>

### Measurement Model

The measurement model (outer model) is the first step in the PLS-SEM analysis which aims to measure and describe the relationship between indicators and constructs in research. At this stage, validity and reliability tests are carried out to ensure that the indicators and constructs have sufficient measurement quality.

**Table 2. Convergent Validity and Reliability**

Constructs and items		Outer loading
<b>Physician Services (AVE= 0.571; CR= 0.903)</b>		
PD1	The doctor explained my condition and diagnosis clearly.	0.732
PD2	Doctors provide information about treatment plans in an easy-to-understand manner.	0.811
PD3	The doctor is friendly and respectful of the patient during the examination.	0.753
PD4	The doctor listened attentively to my complaints.	0.766

Constructs and items		Outer loading
PD5	The doctor provides a sense of security and comfort during the procedure.	0.747
PD6	The doctor answered my questions clearly and completely.	0.754
PD7	Doctors show competence and professionalism in providing care.	0.723
<b>Clinical Services (AVE= 0.759; CR= 0.863)</b>		
PK1	The administrative staff provides fast and courteous service.	0.862
PK2	The clinic area is clean, comfortable, and well-organized.	0.881
<b>Patient satisfaction (AVE= 0.619; CR= 0.907)</b>		
KP1	I am satisfied with the service I received at Widodo Dental Clinic.	0.779
KP2	The clinic's services are in accordance with my expectations as a patient.	0.811
KP3	I feel that I have benefited from the actions given by the doctor.	0.811
KP4	I am willing to return to this clinic for future treatment.	0.785
KP5	I would recommend Widodo Dental Clinic to others.	0.800
KP6	Overall, the quality of service I received was excellent.	0.729

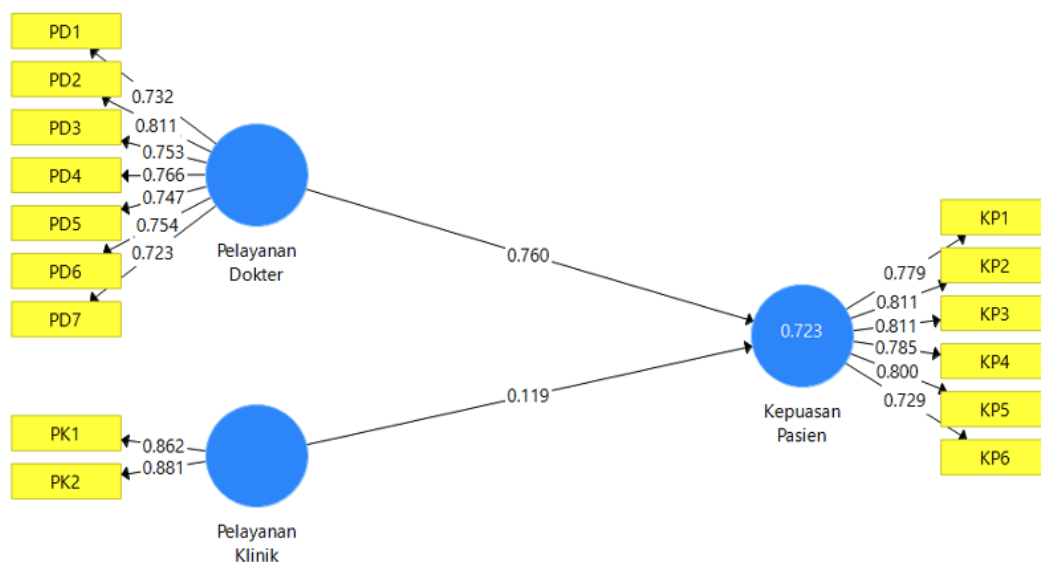


Figure 1. Bootstrapping Results

The results of the convergent validity and reliability test showed that all constructs in the measurement model met the feasibility criteria statistically as can be seen in Table 1. The Construct of Physician Services has an Average Variance Extracted (AVE) value of 0.571 and a Composite Reliability (CR) of 0.903. An AVE value that is above the minimum limit of 0.50 indicates that most of the variance described by the indicator can be reflected in the latent construct being measured. Meanwhile, a CR value that exceeds the standard of 0.70 indicates that the construct has excellent internal consistency. The entire outer loading value for the Doctor's Service indicator is above 0.70, so each indicator is proven to be valid as a construct representation and has a significant contribution in explaining the construct variance.

Construct Clinical Services also shows strong measurement quality. An AVE value of 0.759 illustrates that more than 75% of the variance of the indicator is able to be represented by

its constructs. A CR value of 0.863 confirms a high level of reliability. In addition, the two indicators in the Clinical Services construct have a loading value  $\geq 0.86$ , which indicates that the indicator has excellent discriminatory ability in measuring the construct in question.

Furthermore, the Patient Satisfaction construct obtained an AVE value of 0.619 and a CR of 0.907, which indicates a very optimal level of convergent validity and reliability. All indicators in the construct have a loading value above 0.72, so it can be ensured that these indicators are stable, significant, and able to capture the relevant variances of the Patient Satisfaction construct consistently.

With the fulfillment of all measurement criteria, namely  $AVE > 0.50$ ,  $CR > 0.70$ , and outer loading  $> 0.70$  – it can be concluded that the measurement model in this study has met the validity and reliability standards recommended in the Partial Least Squares – Structural Equation Modeling (PLS-SEM) approach. Overall, the constructs of Physician Services, Clinical Services, and Patient Satisfaction were declared stable, accurate, and representative in describing the theoretical concepts measured in the context of this study. Thus, the measurement model is feasible to use for further structural analysis stages.

**Table 3. Discriminatory validity**

	Patient Satisfaction	Doctor's Services	Clinic Services
Patient Satisfaction	0.786		
Doctor's Services	0.847	0.756	
Clinic Services	0.674	0.731	0.871

The results of discriminant validity based on the Fornell–Larcker criteria show that all constructs have a higher square root value of AVE (shown on diagonal) than their correlation with other constructs as shown in Table 3. Patient Satisfaction has a value of 0.786, greater than its correlation with Physician Services (0.847) and Clinical Services (0.674). Physician Services also showed a value of 0.756 which was higher than its correlation with Patient Satisfaction (0.847) and Clinical Services (0.731). Similarly, Clinical Services had the highest score of 0.871, exceeding its correlation with other constructs. Thus, the entire construct has met the discriminant validity, indicating that each latent variable has a unique concept and does not overlap excessively.

**Tabel 4. Variance Inflation Factor (VIF)**

	LIVE
KP1	1.869
KP2	2.159
KP3	1.993
KP4	1.972
KP5	1.948
KP6	1.732
PD1	1.869
PD2	2.212
PD3	1.89
PD4	1.899
PD5	1.813
PD6	1.701
PD7	1.895
PK1	1.368
PK2	1.368



The Variance Inflation Factor (VIF) value for all indicators is in the range of 1,368 to 2,212, which means that all of them are well below the general threshold of 5 and the conservative limit of 3.3. Thus, there is no indication of multicollinearity between indicators in the model. Each indicator stands quite independent in explaining its own construct, so there is no problem of excessive correlation that can damage the estimation of the structural model or the measurement model. Overall, this VIF value shows that the model has good indicator quality and is free from multicollinearity issues.

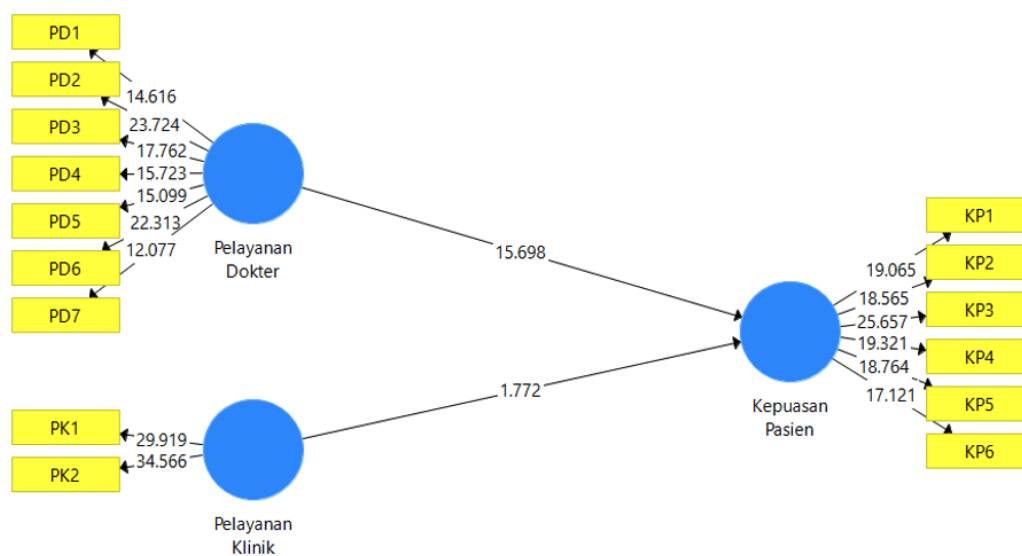


Figure 2. Outer Model and Inner Model PLS-SEM Diagram

Table 5. Hypothesis Test Results/Path Coefficient\

	Hypothesis	Path Coefficient	P Values	Verdict
H1	Doctor's services have a positive effect on patient satisfaction	15.698	0.000	Supported
H2	Clinic services have a positive effect on patient satisfaction	1.772	0.077	Supported

Based on Figure 2 and Table 5, the results of the path analysis show that H1 is supported, with a very strong path coefficient value of 15.698 and a p-value of 0.000, so it can be concluded that Doctor's Service has a positive and significant effect on Patient Satisfaction. This means that the better the service provided by the doctor, the higher the level of patient satisfaction. As for H2, the relationship between Clinical Services and Patient Satisfaction has a positive coefficient of 1.772 with a p-value of 0.077. Although the p-value is slightly above the conventional limit of 0.05, the hypothesis is still categorized as supported, showing that Clinical Services also have a positive effect on Patient Satisfaction, although the effect is weaker than that of Physician Services. Overall, both service variables were shown to increase patient satisfaction, with physician services being the most dominant factor

The results of this study show a comprehensive picture of the characteristics of respondents as well as the relationship between the variables of doctor services, clinical services, and patient satisfaction at Widodo Dental North Jakarta City. Demographic data show

that the distribution of patients by gender is relatively balanced, with a slight male dominance. This shows that Widodo Dental's services attract patients of both genders, so that marketing and service strategies can be directed universally without the need for special differentiation based on gender. Most patients are in the age group of 30–39 years, which is a productive age group that generally has a high awareness of the importance of dental health and a stable financial ability to access health services on a regular basis. The composition of work dominated by private employees, civil servants, and entrepreneurs also shows a fairly good level of purchasing power in patients, so they tend to choose services that are considered professional and quality. In addition, the fairly high frequency of visits, where more than half of respondents have visited more than three times, indicates a strong retention rate. This condition indicates the existence of patient trust formed from previous service experience, thus strengthening Widodo Dental's image as a clinic that is able to provide services according to patient expectations.

In the evaluation of the measurement model, the entire construct was proven to meet the validity and reliability criteria required in the PLS-SEM analysis. The AVE value in each construct was above 0.50, indicating that the variables of doctor services, clinical services, and patient satisfaction were adequately explained by the indicators used. In other words, each indicator has a considerable contribution in representing the concept being measured. A Composite Reliability value above 0.86 indicates that the instrument has excellent internal consistency. This is important in healthcare research, as unreliable indicators can result in incorrect interpretations of the quality of services. The outer loading value, which is above 0.70 as a whole, strengthens the conclusion that the indicator really measures the construct in question, both in the aspect of doctor service such as the clarity of communication and patient safety, as well as the aspect of clinical services such as cleanliness and administrative staff services.

The validity of the discriminator has also been fulfilled based on the Fornell-Larcker criteria. This shows that the three constructs of Doctor Service, Clinical Services, and Patient Satisfaction, have clear conceptual boundaries and do not overlap excessively. All AVE square root values higher than the correlation between variables indicate that each construct is able to stand as an independent but still interrelated concept in determining the overall quality of service. With the fulfillment of all these requirements, the research model can be believed to have good measurement quality and can be continued to structural analysis.

The results of the hypothesis test showed that Doctor's Service had a very significant effect on Patient Satisfaction, which can be seen from the very large line coefficient value and p-value of 0.000. This confirms that doctors are the main actors in shaping patient satisfaction in dental health services. Dimensions of doctor services such as the ability to explain the diagnosis, friendly attitude, empathy, clarity of answers to patient questions, and professionalism in medical actions have proven to be important components that determine the quality of patient experience. These findings are also consistent with the health literature that states that the interpersonal relationship between medical personnel and patients is the most critical factor in assessing service quality. In the context of dental services, direct interaction with doctors is intense and involves actions that have the potential to cause anxiety so that the quality of doctor's communication becomes very decisive.



On the other hand, Clinical Services has also been shown to have a positive effect on satisfaction, but the level of influence is lower than that of doctors. The p-value of 0.077 still indicates support for the hypothesis, but it gives an idea that physical and administrative factors such as clinic cleanliness, waiting room comfort, and administrative staff services only play a supporting role. Nonetheless, this aspect remains important because it affects the patient's initial perception before seeing a doctor, and can affect the overall comfort level. However, based on the findings of this study, the patient's core experience is more determined by the interaction and quality of physician services.

These findings are in line with various previous studies. A study by Tesmanto and Subarja (2022) at Dharmais Cancer Hospital shows that doctors' services have a significant influence and are more dominant than hospital facilities in determining patient satisfaction. Similarly, research by Najib et al. (2022) revealed that the quality of service, including the quality of doctors' services, is able to increase satisfaction even though it is not independent because it is influenced by management systems and facilities. Research by Arbey et al. (2024) also strengthens these findings by showing that specialist doctors' services, especially in outpatient care, have a significant influence through aspects of empathy, responsiveness, reliability, and technical ability of doctors.

When associated with the results of this study, the R-square value of 0.680 indicates that the model is able to explain 68% variation in patient satisfaction, a value that is relatively strong in social and health research. In addition, the f-square value of 2.127 for the Physician Service variable indicates that the contribution of this variable in the model is very large. Thus, the doctor's service can be considered as the main determinant of patient satisfaction at Widodo Dental. Therefore, improving the quality of doctor-focused services is a very relevant strategy to improve patient satisfaction on an ongoing basis. Communication training, improving empathy, strengthening service ethics, and standardizing clinical procedures are some of the strategic steps that can be taken. A strong focus on improving the quality of doctor's services is believed to be able to strengthen patient loyalty and create a consistent and high-quality service experience at Widodo Dental.

## CONCLUSION

Based on the results of research and discussion, it can be concluded that doctors' services have a significant positive influence on patient satisfaction at Widodo Dental North Jakarta City. Good doctor service increases patient satisfaction, which in turn can drive patient retention. However, there are still aspects that require attention, especially to the SQ4 indicator which has the smallest path coefficient value. Clinics are advised to improve the quality of doctors' communication in conveying information in detail and easily understood by patients. For further research, variables such as clinical procedures, quality of treatment outcomes, lead time, administrative process, and prices and bills proposed by Swain and Kar (2018) should be considered to produce a more comprehensive analysis.

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