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Antecedent of patient satisfactions in specialist clinic in west sumatra

Anggi Putri Andrila[1*], Oscar Jayanagara[2]

[1,2]Pelita Harapan University, Jakarta, Indonesia

Abstract

This study aims to analyze the factors that affect patient satisfaction in specialist clinics in West Sumatra. By focusing on three key variables (patient satisfaction, workload, and interpersonal communication skills and burnout), this study explores the direct and mediated influence of these variables on patient satisfaction, with quality of service as the mediating variable. This study used a cross sectional research method of quantitative data. Data was collected from nurses working in specialist clinics and patients who went to specialist clinics, statistical analysis using smartpls 4.0. Burnout, Interpersonal communication skills, Workload have a negative influence and have a significant direct effect on Service quality. Burnout, Interpersonal Communication skills, Workload have a negative influence and have a significant direct effect on Patient Satisfaction, but interpersonal communication skills do not have a significant effect on Patient Satisfaction. Service quality has a direct and significant positive influence on Patient Satisfaction. Burnout, Interpersonal communication skills and Workload indirectly have a negative effect on patient satisfaction through service quality mediation and have significant results

Keywords: Burnout, Interpersonal communication skills, Workload, Service quality, Patient satisfaction.

Introduction

Patient satisfaction is the main indicator that reflects the success of health services, because it is directly related to service quality, patient safety, and loyalty to health facilities (Batbaatar et al., 2021). In the context of specialist hospitals and clinics, patient satisfaction is not only influenced by the success of medical procedures, but also by the quality of interaction between patients and healthcare workers as well as the patient's experience during the treatment process (Alaloul et al., 2022).

Service quality plays a role as a direct indicator assessed by patients and is the main determinant of satisfaction in receiving health services. Quality dimensions such as reliability, responsiveness, assurance, empathy, and tangibles are important factors that shape patients' perceptions of service. (Agu et al., 2020)

In addition, an analysis of 85 international studies, involving 288. 581 nurses from 32 countries, nurse burnout was significantly associated with decreased patient satisfaction. Burnout is also associated with lower quality of service and patient safety issues (patient safety climate, safety grade) suggesting that when burnout is high, patient satisfaction tends to be lower (Li LZ et al., 2021). Burnout in nurses is associated with decreased patient satisfaction as well as decreased quality and safety of healthcare (Jun J et al., 2021).

In nursing services, interpersonal communication skills are a component that greatly determines the patient experience. Effective communication increases patient trust, comfort, and positive perception of services, thus directly affecting satisfaction (Kwame & Petrucka, 2021; Yousefi et al., 2020). Another study confirms that interpersonal communication is the most powerful indicator in predicting the perception of the quality of nursing services (Chen et al., 2022).

Overall, workload, burnout, and interpersonal communication skills affect patient satisfaction through service quality as a mediating variable. Services provided with adequate resources, maintained psychological conditions of staff, and effective communication will improve service quality and have an impact on increasing patient satisfaction (Alaloul et al., 2022). However, research that comprehensively examines all six variables is still limited, so it is important to provide the latest

Correspondence: Anggi Putri Andrila, Pelita Harapan University, Jakarta, Indonesia, **e-mail:** Anggiandrila05@gmail.com, **Received:** December 17, 2025 **Accepted:** February 11, 2026

empirical evidence in the context of specialist clinical services.

Research Methodology

The methodology of this study uses a quantitative approach with a cross-sectional observational design, which aims to analyze the factors that affect patient satisfaction in the Specialist Clinic. The independent variables in this study included interpersonal communication skills of health workers, burnout and workload levels, the bound variable was patient satisfaction while the mediation variable was service quality.

The study population was all patients who received services at specialist clinics during the data collection period. The sample was determined using a non-probability sampling technique with the consecutive sampling method, namely all patients who met the inclusion criteria and were willing to participate during the study period. The inclusion criteria included patients aged ≥18 years, able to communicate well. The number of samples was determined based on the Green (1991) formula, which is N ≥ 50 + 8k (with k = number of independent variables), so that a minimum of 82 respondents were obtained. However, to increase the power of statistics, the study targeted around 100 respondents.

The research instrument is in the form of a structured questionnaire that is prepared based on theory and instruments that have been tested before. Burnout was measured through a survey of health workers using the Maslach Burnout Inventory (MBI) or through patients' perceptions of clinical staff's symptoms of emotional fatigue measured on a Likert scale of 1–5. Service quality is measured using the SERVQUAL dimension (tangibles, reliability, responsiveness, assurance, empathy). Parient satisfaction, interpersonal communication skills, and workload were measured on a Likert scale of 1–5. All analyses are carried out using statistical software such as SmartPLS 4.0.

Data processing techniques using the Partial Least Square (PLS) based SEM method. There are two stages, the first stage is the evaluation of the outer model or measurement model. The second stage is the evaluation of the inner model or structural model.

Research model

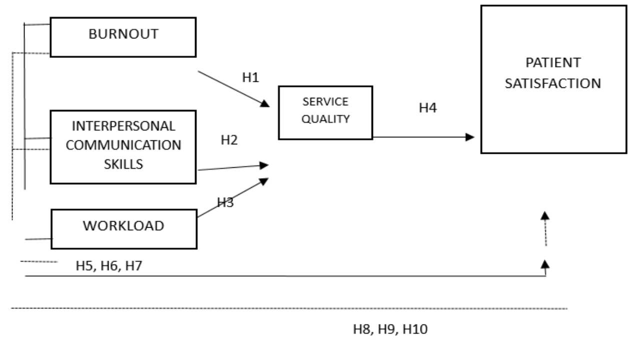

Figure 1 Research methods

Table 1. Respondent characteristics profile

	Nurse (%)	Patients (%)
Age*	33,8 (27-44)	42 (25-59)
Gender		
Women	68 (68)	60 (60)
Male	32 (32)	40 (40)
Marital status		
Single	21 (21)	21 (21)
Married	70 (70)	68 (68)
Divorce	9 (9)	11 (11)
Final education		
SD	0 (0)	0 (0)
Junior High School	0 (0)	3 (3)
High School	0 (0)	27 (27)
Diploma	50 (50)	10 (10)
S1	50 (50)	56 (56)
S2	0 (0)	4 (4)
Income		
< Rp.500.000	0 (0)	1 (1)
IDR 500,000 – 1,000,000	0 (0)	1 (1)
IDR 1,000,000 – 2,000,000	79 (79)	10 (10)
IDR 3,000,000 – 4,000,000	21 (21)	30 (30)
IDR 4,000,000 – 5,000,000	0 (0)	19 (19)
>Rp. 5,000,000	0 (0)	39 (39)

*Values are Mean

Results: A total of 100 patients and 100 nurses participated as respondents in this study. The analysis began with the respondent profile, followed by descriptive analysis and hypothesis testing carried out on the sample group. In addition, the discussion also includes the results of model analysis using PLS-SEM 4.0 statistical processing.

Respondent profile: With a total of 100 patient respondents and 100 respondents, age profiles, gender, marital status, last education and income were obtained. With abnormal data distribution, the mean, minimum, and maximum values of the age characteristics of patients and nurses were 42 (25-59) years and 33.6 (27-44) years, respectively. In both groups, the majority of nurses were women with, 60% and the majority of patients were 40% male. In terms of marital status in nurses, there is little difference between those who are married and single with 70% and 21% and 9% of divorced nurses, respectively. In patients, it was found that the majority were married as much as 68%, only 11% were divorced and 21% were single.

Evaluation of measurement models (Outer Model)

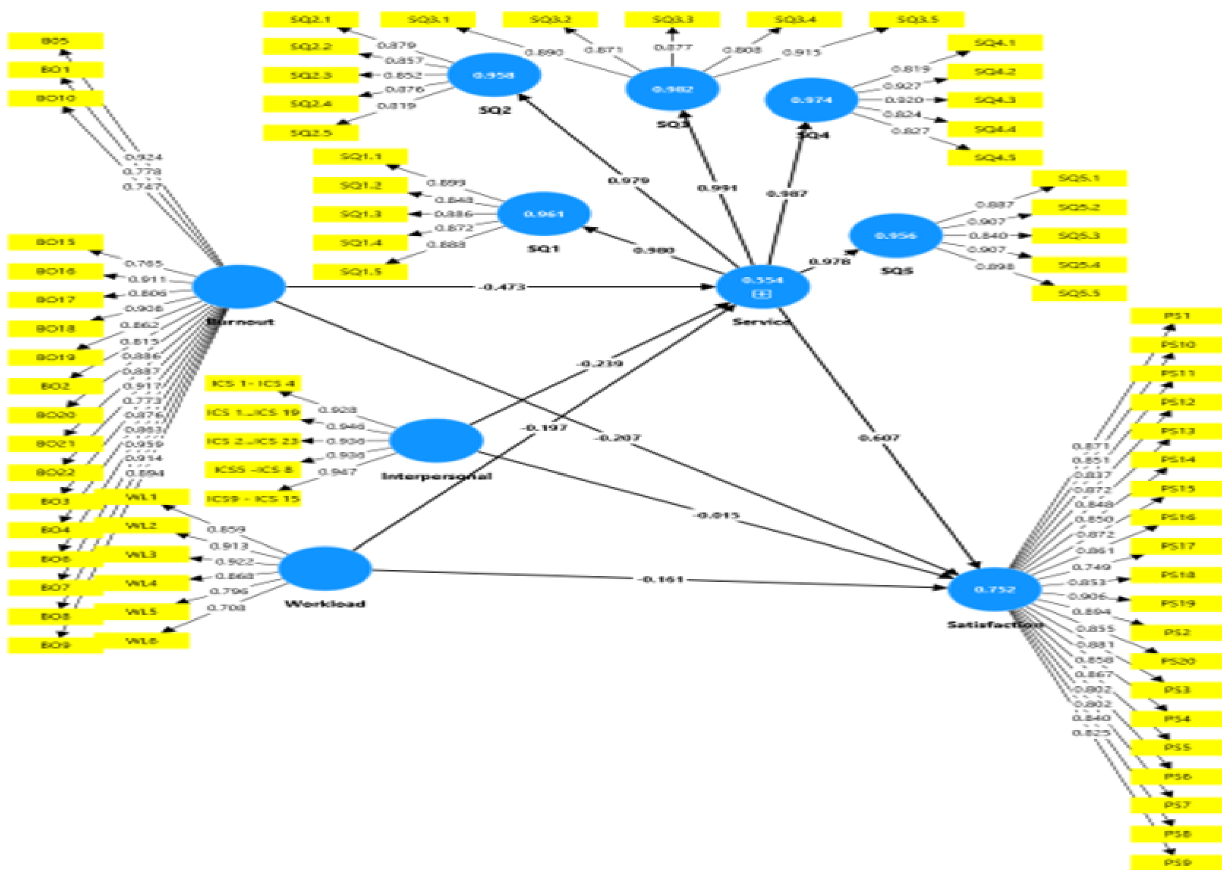

Figure 2. Low Order Measurement Model (*Outer Model*)
Source: Data Processing with PLS 4.0, 2025

Convergent validity low order

Convergent validity aims to determine the validity of each relationship between an indicator and its latent variable. The convergent validity of the measurement model with the reflexive indicator is assessed based on the correlation between the item score or component score and the latent variable score or construct score calculated by PLS.

A loading factor value above 0.7 is said to be ideal and valid. However, a loading factor value above 0.5 is also acceptable as long as the value is not below 0.5. The value of the loading factor (convergent validity) of each indicator, the value of the loading factor > 0.7 can be said to be valid, but the rule of thumb interpretation of the value of the loading factor > 0.5 can be said to be valid. From this table, it is known that all the loading factor values of the Interpersonal communicatin skill (X1), Burnout (X2), Workload

(X3), and dimensions of Service Quality (Z) and Patient Satisfaction (Y) are greater than 0.70. This shows that the indicators are valid.

Discriminant validity: Based on the cross loading value, it can be seen that all indicators that compose each variable in this study have met the discriminant validity because they have the largest outer loading value for the variables they form. Thus, all indicators in each variable in this study have met discriminant validity.

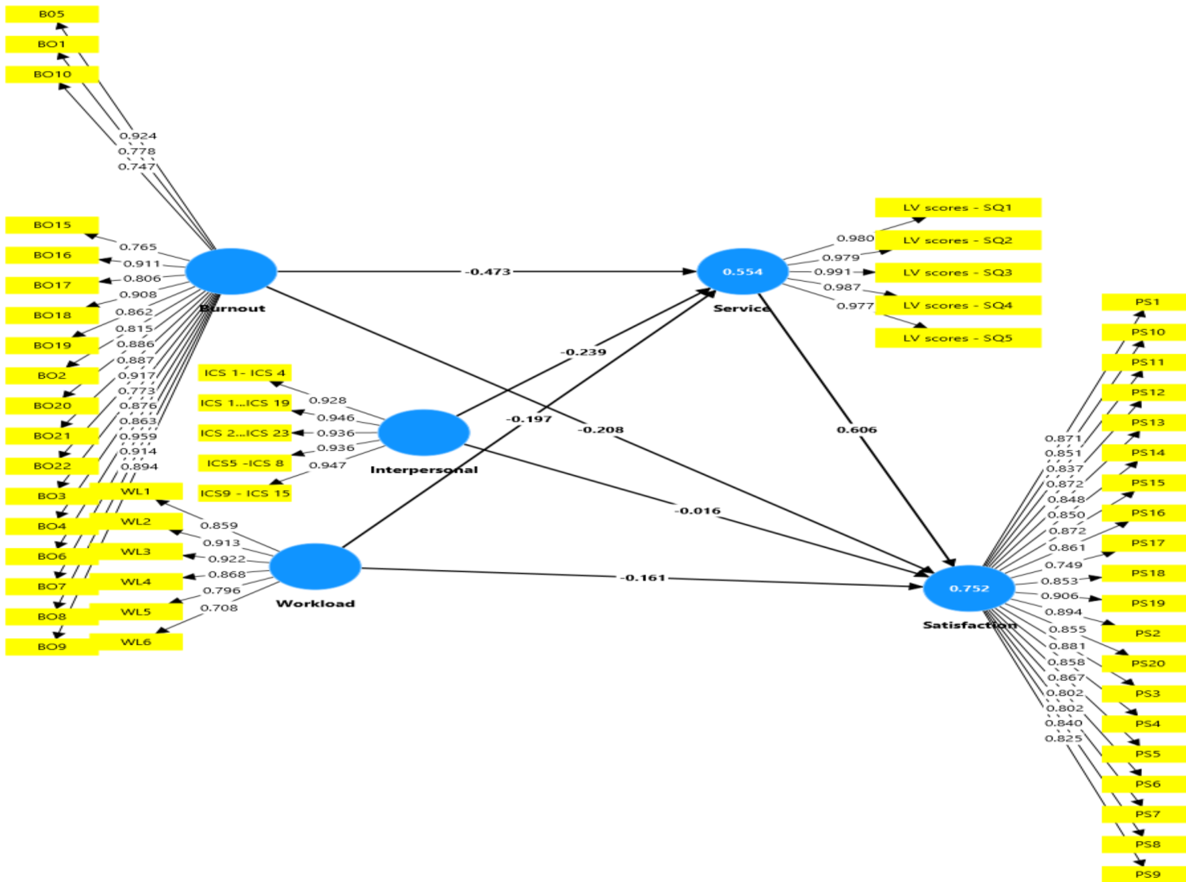

Figure 3. High order measurement model (Outer Model)
Source: Data Processing with PLS, 2025

Convergent validity: A loading factor value above 0.7 is said to be ideal and valid. However, a loading factor value above 0.5 is also acceptable as long as the value is not below 0.5. The following are presented the results of outer loading for each indicator owned by each exogenous and endogenous latent variable in 2 research models obtained from data processing using SmartPLS.

The value of the loading factor > 0.7 can be said to be valid, but the rule of thumb interpretation of the value of the loading factor > 0.5 can be said to be valid. From this table, it is known that all loading factor values of the Interpersonal Communication Skill (X1), Burnout (X2), Workload (X3), and Service Quality (Z) and Patient Satisfaction (Y) indicators are greater than 0.70. This shows that the indicators are valid.

Discriminant validity: Based on the cross loading value, it can be found that all the indicators that make up each variable in this study (bolded values) have met the discriminant validity because they have the largest outer loading value for the variables they form. Thus, all indicators in each variable in this study have met discriminant validity.

Table 2. The value of discriminant validity Fornell Larcker

	AVE	Burnout	Interpersonal	Satisfaction	Service	Workload
Burnout	0.744	0.863				
Interpersonal	0.881	0.506	0.938			
Satisfaction	0.723	-0.701	-0.519	0.851		
Service	0.966	-0.682	-0.555	0.837	0.983	
Workload	0.718	0.446	0.386	-0.563	-0.501	0.847

Source: Data Processing with PLS, 2025

Based on the calculation of the Fornell-Larcker Criterion, it was found that the correlation value between variables was below the square root value of AVE (bold print), thus all indicators in each variable in this study met discriminant validity. The AVE value for the three constructs is greater than 0.5 so it can be concluded that the evaluation of the model measurement has good discriminant validity.

HTMT discriminant validity value: Based on the HTMT calculation, it was found that the correlation value between variables was still below the value of 0.9, thus all indicators in each variable in this study had met the discriminant validity.

Reliability: The next test to analyze the outer model is to look at the reliability of the latent variable construct measured by two criteria, namely composite reliability and cronbach alpha of the indicator block that measures the construct. The construct is declared reliable if the composite reliability value or cronbach alpha value is above 0.70. The following are the results of the output composite reliability and cronbach alpha: It can be concluded that the construct has good reliability.

Structural model evaluation (Inner Model)

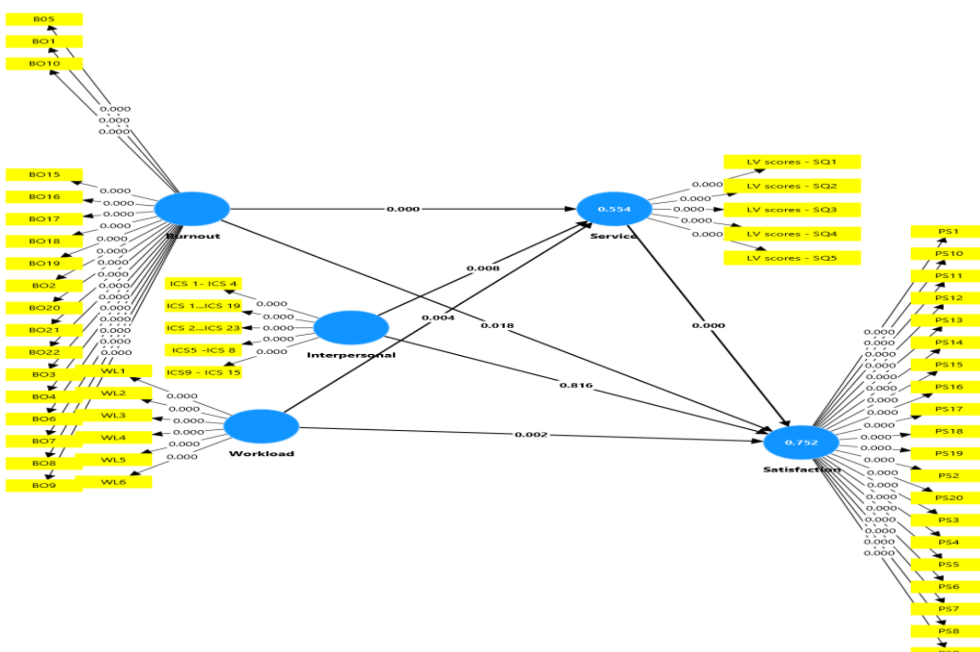

Figure 4. Structural model (Inner Model)

Internal model testing or structural model was carried out to see the relationship between the significance value construct and the R-square of the research model. The structural model is evaluated using R-square for the t-test-dependent construct as well as the significance of the coefficient of the structural path parameter.

R-Square (R2)

The test of the structural model was carried out by looking at the R-square value which is a goodness-fit test of the model.

Table 3. R-Square value

	R-square	R-square adjusted
Satisfaction	0.752	0.741
Service	0.554	0.541

Table 3 shows that the R-square value for the Service Quality variable is obtained as 0.554. The R-square value shows that 55.4% of the Service Quality variables can be influenced by the variables of Interpersonal Communication Skills, Burnout, Workload. While the remaining 44.6% are influenced by other variables outside the research.

Table 3 shows an R-square Patient Satisfaction value of 0.752 indicating that the Patient Satisfaction (Y) variable is influenced by the variables Interpersonal communicatin skill, Burnout, Workload, Service Quality, by 75.2% while the remaining 24.8% is influenced by other variables outside the studied.

Predictive relevance (q2)

Based on Table 3, the predictive relevance calculation is as follows.
Value Q2 = 1 – (1 – R2) x (1 – R2)
Qvalue 2 = 1 – (1 – 0.544) x (1 – 0.752)
= 0.8895

Description

Q2 : value Predictive Relevance
R12 : value R-Square Variable Service Quality
R22 : value R-Square Variable Patient Satisfaction

From the results of the calculation, it is known that the Q2 value is 0.8895, meaning that the amount of data diversity from the research that can be explained by the designed structural model is 88.95%, while the remaining 11.95% is explained by other factors outside the model. Based on these results, it can be concluded that the structural model in this study is quite good because it is closer to the value of 1.

Testing research hypotheses

Table 4. Path coefficient (Mean, STDEV, T-Values)

	Original Sample (O)	Sample red (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Burnout -> Service	-0.473	-0.473	0.086	5.503	0.000
Interpersonal -> Service	-0.239	-0.235	0.090	2.673	0.008
Workload -> Satisfaction	-0.161	-0.163	0.053	3.069	0.002
Burnout -> Satisfaction	-0.208	-0.206	0.088	2.360	0.018
Interpersonal -> Satisfaction	-0.016	-0.017	0.067	0.233	0.816
Workload -> Service	-0.197	-0.197	0.069	2.874	0.004
Service -> Satisfaction	0.606	0.604	0.074	8.155	0.000

Source: Data Processing with PLS, 2025

Hypothesis testing can be done by comparing t-statistics with t-tables. The T-table was obtained from 100 respondents who ultimately obtained a T-table of 1,960. Table 11 provides the estimated output for the structural model test.

Hypothesis 1

H1: Burnout has a direct and significant influence on Service Quality.

Burnout had a negative effect on Service Quality with a path coefficient of -0.473 and a statistical t of 5.503 greater than t table (1.960) and significant or $p < 0.05$. From the above results, it shows that H0 is rejected which shows that Burnout has a significant influence on Service Quality. This means that the first hypothesis is accepted.

Hypothesis 2

H2: Interpersonal communicatin skills have a direct and significant influence on Service Quality.

Interpersonal communication skills have a negative influence on Service Quality with a path coefficient of 0.239 and a statistical t of 2.673 greater than the t table (1.960) and significant or $p < 0.05$. From the above results show that H0 is rejected which shows that Interpersonal communication skills exert a significant influence on Service Quality. This means that the second hypothesis is accepted.

Hypothesis 3

H3: Workload has a direct and significant influence on Service Quality.

Workload has a negative influence on Service Quality with a path coefficient of -0.161 and a statistical t of 3.069 greater than the t table (1.960) and significant or $p < 0.05$. From the above results show that H0 is rejected which shows that Workload exert a significant influence on Service Quality. This means that the third hypothesis is accepted.

Hypothesis 4

H4: Burnout has a direct and significant influence on Patient Satisfaction.

Burnout has a negative influence on Patient Satisfaction with a path coefficient of -0.208 and a statistical t of 2.360 greater than the t table (1.960) and significant or $p < 0.05$. From the above results show that H0 is rejected which shows that Burnout exert a significant influence on Patient Satisfaction. This means that the fourth hypothesis is accepted.

Hypothesis 5

H5: Interpersonal communicatin skills have a direct and significant influence on Patient Satisfaction.

Interpersonal communication skills has a negative influence on Patient Satisfaction with a path coefficient of -0.016 and a statistical t of 0.233 smaller than the table t (1.960) and significant or $p < 0.05$. From the above results show that H0 is accepted which shows Interpersonal communication skills exerts an insignificant influence on Patient Satisfaction. This means that Hypothesis 6 is rejected.

Hypothesis 6

H6: Workload has a direct and significant influence on Patient Satisfaction.

Workload has a positive influence on Patient Satisfaction with a path coefficient of -0.197 and a statistical t of 2.874 greater than the t table (1.960) and significant or $p < 0.05$. From the above results show that H0 is rejected which shows that Workload exert a significant influence on Patient Satisfaction. This means that the sixth hypothesis is accepted.

Hypothesis 7

H7: Service Quality has a direct and significant influence on Patient Satisfaction.

Service Quality has a positive influence on Patient Satisfaction with a path coefficient of 0.606 and a statistical t of 8.155 greater than the t table (1.960) and a significance or $p < 0.05$. The above results show that H0 is rejected. What it means Service Quality has a direct and significant positive influence on Patient Satisfaction. This means that the seventh hypothesis is accepted.

To find out the indirect influence of the free variable on the Patient Satisfaction variable through Service Quality, you can see in Table 12 below:

Table 5. Indirect influence

	Original Sample (O)	Sample red (M)	T statistics (|O/STDEV|)	P values
Burnout -> Service -> Satisfaction	-0.287	-0.286	4.437	0.000
Interpersonal -> Service -> Satisfaction	-0.145	-0.142	2.602	0.009
Workload -> Service -> Satisfaction	-0.120	-0.120	2.616	0.009

Based on Table 5, the indirect effects can be obtained as follows:

Hypothesis 8

H8: Service Quality mediates the influence between interpersonal communication skillsand Patient Satisfaction.

The results of hypothesis eight testing showed that the variable relationship Interpersonal communication skillss with Patient Satisfaction (Y) through Service Quality showed an indirect path coefficient value of -0.287 with a statistical t-value of 4.437. The value is greater than t table (1.960) or $p < 0.05$. This result means that Service Quality has a significant influence in mediating Interpersonal communication skillss against Patient Satisfaction. The above results show that H8 is accepted.

Hypothesis 9

H9: Service Quality mediates the relationship between Burnout and Patient Satisfaction.

The results of the ninth hypothesis test show that the variable relationship Burnout with Patient Satisfaction (Y) through Service Quality shows the value of the indirect path coefficient of -0.145 with a statistical t-value of 2.602. The value is greater than t table (1.960) or $p< 0.05$. This result means that Service Quality has a significant influence in mediating Burnout against Patient Satisfaction. The above results show that H9 is accepted

Hypothesis 10

H10: Service Quality mediates the relationship between Workload and Patient Satisfaction.

The results of the tenth hypothesis test show that the relationship of the variables Workload with Patient Satisfaction (Y) through Service Quality showed an indirect path coefficient value of -0.120 with a statistical t-value of 2.616. The value is greater than t table (1.960) or $p < 0.05$. This result means that Service Quality has a significant influence in mediating Workload against Patient satisfaction

Conclusion

Burnout, interpersonal communication skills, workload have a negative influence and have a significant direct effect on Service Quality. Burnout, interpersonal communication skills, workload have a negative and directly significant influence on Patient Satisfaction. Service Quality has a direct and significant positive influence on Patient Satisfaction. Burnout, interpersonal communication skills and workload indirectly have a negative effect on patient satisfaction through service quality mediation and have significant results.

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