

# THE INFLUENCE OF ADMINISTRATIVE SERVICES, MEDICAL SERVICES AND DRUG AVAILABILITY ON PATIENT SATISFACTION AT PUSKESMAS WAISAI RAJA AMPAT, MODERATED BY PERCEIVED SERVICE QUALITY

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Received : 28 December 2024

Revised : 07 January 2025

Accepted : 29 January 2025

Published : 28 February 2025

DOI : <https://doi.org/10.54443/ijset.v4i3.682>

Publish Link : <https://www.ijset.org/index.php/ijset/index>

## Abstract

This study aims to analyze the influence of administrative services, medical services, and drug availability on patient satisfaction, as well as the moderating role of service quality perception in these relationships. The research employs a quantitative approach with a descriptive method. The results indicate that administrative services, medical services, and drug availability significantly affect patient satisfaction. Furthermore, service quality perception strengthens the relationship between administrative services, medical services, and drug availability with patient satisfaction. These findings emphasize the importance of improving healthcare service quality to optimize patient satisfaction.

**Keywords:** *Administrative Services, Medical Services, Drug Availability, Patient Satisfaction, Waisai Raja Ampat Health Center, Service Quality.*

## INTRODUCTION

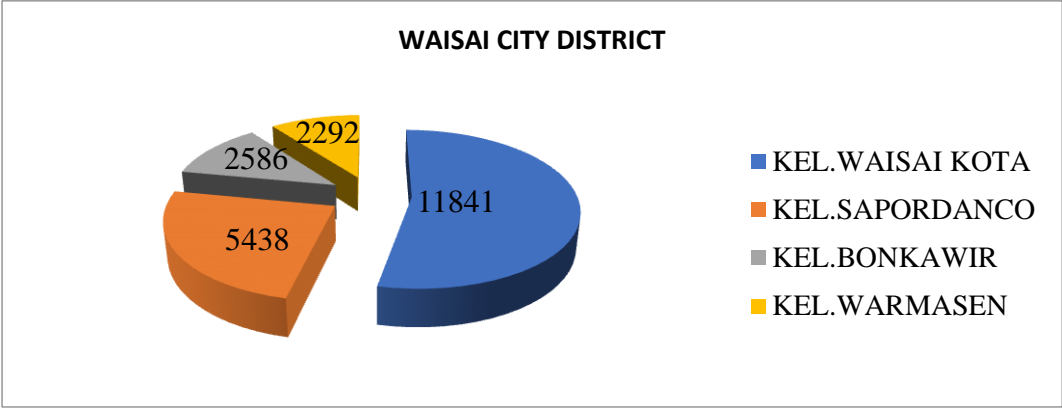
Health development is one of the national development goals aimed at improving the highest possible level of health to support high-quality human resources (HR). Health development in Indonesia is measured based on the Public Health Development Index (IPKM). The IPKM score provides an overview of the ranking of districts/cities in Indonesia in the health sector, allowing for an assessment of health development disparities. In 2013, Indonesia's IPKM was 0.5404, increasing to 0.6087 in 2018. This increase in IPKM indicates a reduction in the health development gap between districts/cities in Indonesia. The district/city with the lowest IPKM ranking is Paniai Regency, Central Papua, which had the lowest score of 0.3469. On Papua Island, there are two provinces, where the IPKM of West Papua Province is higher than that of Papua Province. However, over the last five years (2007–2013), the average ranking of its cities/regencies has declined, particularly in Raja Ampat Regency, which dropped from rank 261 to 417 in 2013. This indicates that within five years, there were still gaps in health development between districts/cities.

**Table 1.** Public Health Development Index

| Kode | Kabupaten/Kota      | Peringkat IPKM 2007 | Peringkat IPKM 2013 | Peringkat Pengembangan IPKM 2013 | Perubahan Peringkat IPKM 2013 | Perubahan Peringkat Pengembangan IPKM 2013 |
|------|---------------------|---------------------|---------------------|----------------------------------|-------------------------------|--|
| 9101 | KAB. FAKFAK         | 211                 | 343                 | 344                              | Turun                         | Turun                                      |
| 9102 | KAB. KAIMANA        | 402                 | 201                 | 277                              | Naik                          | Naik                                       |
| 9103 | KAB. TELUK WONDAMA  | 408                 | 339                 | 190                              | Naik                          | Naik                                       |
| 9104 | KAB. TELUK BINTUNI  | 293                 | 352                 | 283                              | Turun                         | Naik                                       |
| 9105 | KAB. MANOKWARI      | 255                 | 263                 | 289                              | Turun                         | Turun                                      |
| 9106 | KAB. SORONG SELATAN | 358                 | 429                 | 413                              | Turun                         | Turun                                      |
| 9107 | KAB. SORONG         | 222                 | 376                 | 342                              | Turun                         | Turun                                      |
| 9108 | KAB. RAJA AMPAT     | 261                 | 417                 | 412                              | Turun                         | Turun                                      |
| 9109 | KAB. TAMBRAUW       | -                   | -                   | -                                | -                             | -  |
| 9110 | KAB. MAYBRAT        | -                   | -                   | -                                | -                             | -  |
| 9171 | KOTA SORONG         | 156                 | 121                 | 210                              | Naik                          | Naik                                       |

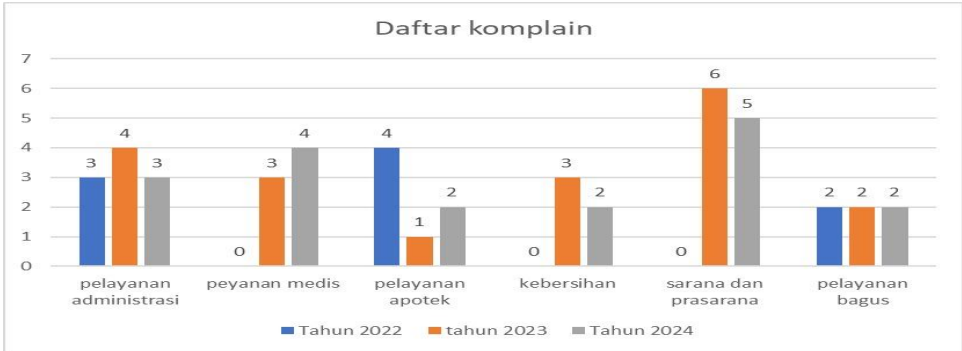
The low perception of service quality in West Papua, as reflected in the 2013 Public Health Development Index (IPKM) score of 0.2169, highlights significant challenges in improving healthcare services in the region. Puskesmas Waisai, located in Raja Ampat, West Papua, faces similar challenges. Limitations in infrastructure, the number and competency of healthcare workers, and access to medicines and quality medical services are key factors affecting public perception of service quality. Additionally, public perception is heavily influenced by direct interactions with service providers, facility conditions, and transparency in information delivery. If these aspects are not improved, efforts to enhance patient satisfaction will face significant obstacles.

Accessibility to community health centers (puskesmas) and other healthcare facilities depends on ease of access, including transportation type, travel time, and transportation costs. According to the 2023 SKI data, 49.9% of respondents reported easy access to puskesmas, while 21.3% found it difficult, and 28.9% reported extreme difficulty. This indicates that some areas still struggle to access puskesmas as primary healthcare facilities. Specifically, in Southwest Papua Province, 41.5% of the population still reported extreme difficulty in accessing puskesmas. In 2018, Raja Ampat Regency had 19 urban puskesmas and 55 auxiliary puskesmas. In terms of quality, none of the puskesmas in Raja Ampat had essential medicine and vaccine availability of  $\geq 80\%$ . Therefore, greater attention is needed to ensure the availability of medicines, as this directly impacts the quality of healthcare services at puskesmas. Puskesmas Waisai Kota serves more than half of the population in Waisai City. Below is a diagram showing the population distribution in Waisai City.



**Figure 1.** Population Chart

Puskesmas Waisai has the highest number of registered patients, even surpassing the total population of Waisai city, with 29,062 patients registered in November 2024 and an average of 1,631 visitors per month. In addition to the large number of patients, Waisai still faces various health issues, both communicable and non-communicable diseases. The five most common diseases reported between January and May 2024 are Acute Respiratory Tract Infections (964 cases), common cold (327 cases), dyspepsia (312 cases), primary hypertension (302 cases), and dermatitis (243 cases). Puskesmas Waisai still faces challenges related to its low achievement levels due to a lack of patient awareness, poor integration between programs and networks, and insufficient education and innovation from healthcare workers. Moreover, Puskesmas Waisai is also lacking in service delivery, including pharmaceutical services, which have been previously noted. Another issue related to administrative services that continues to be a complaint from patients and visitors concerns the friendliness and responsiveness of the administrative staff.



**Figure 2.** List of Complaints

Administrative services at healthcare facilities, including community health centers (puskesmas), serve as the starting point for patient interaction with the healthcare system. Based on complaint data from 2022 to 2024, administrative services at Puskesmas Waisai continue to be a primary source of patient dissatisfaction. The number of complaints related to administrative services increased from three in 2022 to four in 2023, and then decreased back to three in 2024. According to reports from the public regarding the quality at Puskesmas Waisai, one of the issues is administrative problems, such as long lines at the registration counter. Based on this data, inefficient administrative procedures can extend patient wait times and reduce patient trust in the services provided. Furthermore, uncertainty in administrative procedures can cause anxiety for patients and their families, ultimately worsening their experience of receiving healthcare services.

Medical services are at the core of the healthcare system and play a crucial role in determining patient satisfaction levels. The data shows that complaints related to medical services have remained steady at four from 2022 to 2024, indicating that there has been no significant improvement in the quality of medical services during this period. Some factors that may contribute to this stagnation include a lack of medical staff competence, insufficient ongoing training to improve medical skills and knowledge, and limitations in effective communication between healthcare providers and patients. Poor communication can hinder patients' understanding of their diagnosis and the treatment they are receiving, thus reducing their trust and satisfaction with the services provided. Additionally, long wait times due to an imbalance between the number of patients and the availability of medical personnel also present a significant issue. Long wait times can worsen patients' health conditions and create a negative experience, thereby lowering satisfaction with healthcare services.



**Figure 3.** Level of Healthcare Service Satisfaction

The availability of medication is a fundamental element of quality healthcare services. Based on patient visit data from January to April 2024, there has been an increase in the number of registered patients each month. However, this growth has not been matched by adequate pharmaceutical service quality. This is reflected in the number of complaints related to pharmacy services, which increased from one complaint in 2023 to two complaints in 2024. The rise in complaints regarding pharmaceutical services indicates issues in the availability and distribution of medications. These issues may include delays in drug procurement, lack of coordination in the pharmaceutical supply chain, and ineffective stock management.

The inability of patients to obtain necessary medications in a timely manner can reduce the effectiveness of medical interventions provided, as well as decrease patient trust and satisfaction with healthcare services overall. Furthermore, limited access to essential medications can worsen patients' health conditions, particularly for those requiring long-term treatment or suffering from chronic illnesses. Given that the Public Health Development Index (IPKM) in Papua remains the lowest nationwide and numerous health issues persist, this study aims to examine the coverage of community health centers (puskesmas) as the frontline providers of primary healthcare services. The researcher is also interested in analyzing the quality of puskesmas services—specifically administrative services, medical services, and pharmaceutical services—at Puskesmas Waisai, considering existing reports of deficiencies in these aspects, which could affect patient satisfaction and the overall quality of the puskesmas itself.

## **LITERATURE REVIEW**

### **Healthcare Service Quality and Patient Satisfaction**

Health development is one of the national development goals, undertaken as a multisectoral effort to raise public awareness and capacity in achieving the highest possible health standards. This is considered an investment in developing high-quality human resources (HR) capable of competing globally.

### **Puskesmas Administrative Services**

Administration is the process of organizing work to achieve common goals through management functions, including planning, organizing, implementation, and supervision. The administrative process, along with medical services and drug availability, plays a crucial role in managing the tasks and functions of Puskesmas, directly influencing the outcomes achieved.

### **Puskesmas Healthcare and Medical Personnel**

Healthcare personnel encompass a broad range of professionals dedicated to the health sector and/or skilled in healthcare through specialized education. There are 13 recognized categories of healthcare personnel: medical professionals, clinical psychologists, nursing, midwifery, pharmacy, public health, environmental health, nutrition, physical therapy, medical technicians, biomedical engineering, traditional health practitioners, and other healthcare workers.

### **Availability of Medicines in Puskesmas**

The availability of medicines in Puskesmas refers to ensuring that the supply of medicines meets the actual demand required for healthcare services. As primary healthcare facilities and the first point of contact for patients seeking medical attention, Puskesmas must implement rational drug use in accordance with established standards.

## **METHODS**

The research to be conducted falls under quantitative research and employs a cross-sectional research design or point time approach. This design is chosen because the researcher aims to analyze the relationship or correlation between risk factors and their effects by collecting data at a single point in time. This design offers several advantages, including ease of implementation, cost-effectiveness, and no requirement for follow-up. Through this method, the researcher seeks to obtain information on the relationship between administrative services, medical personnel, and drug availability as independent variables and patient satisfaction levels at Puskesmas Waisai in 2024.

The population in this study consists of all Puskesmas Waisai patients who received administrative services, medical services, and medications within a specific period, such as the last three months. This population includes patients from various age groups, genders, and socioeconomic backgrounds. The sample size is determined using the purposive sampling method with clearly defined inclusion and exclusion criteria. The sample size is calculated using Hair's (2017) formula, which suggests using 5-10 times the number of indicators. This sampling technique ensures that the selected sample is representative of the larger population, allowing for the generalization of research findings.

A sample is a subset of the population that possesses the same characteristics as the larger group. The sampling method used in this study is non-probability sampling with a purposive sampling technique. The data collection involves all patients who visited Puskesmas Waisai and were recorded in the administrative system. The questionnaire data collection will be conducted in January 2025, meaning the sampled patients will be those who visited the Puskesmas during that month. Using Hair's (2017) principle, the required sample size is 5-10 times the number of indicators. Since this study includes 28 indicators, the minimum sample size is  $5 \times 28 = 140$  respondents.

## **RESULT AND DISCUSSION**

### **Evaluation of Measurement Model (Outer Model)**

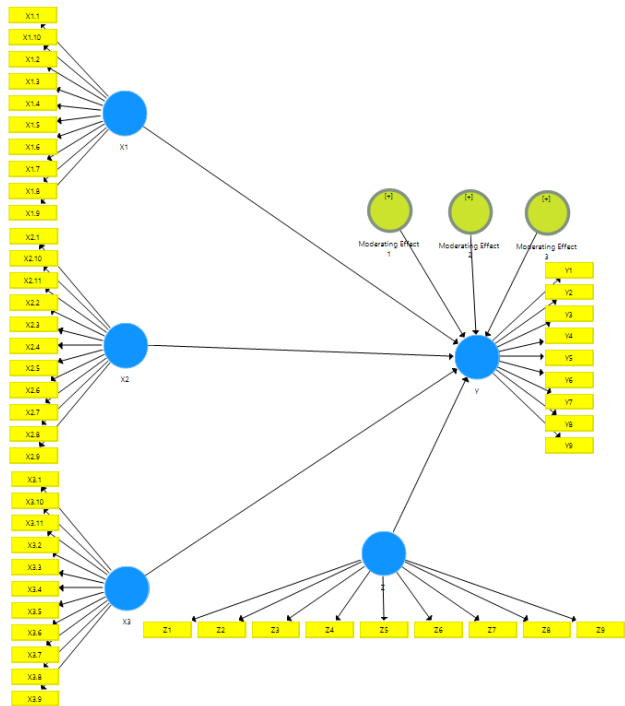
#### **Convergent Validity Test**

Convergent validity is used to determine the validity of each indicator in relation to its latent variable. In SmartPLS software, the results of validity can be observed in the outer loading table. The outer loading table contains numerical values that indicate the degree to which an indicator corresponds to its construct variable. An

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indicator is considered valid if it explains its construct variable with a value greater than 0.7, according to Hair, Hult, Ringle, & Sarstedt (2014). If the value is below 0.7, it is recommended to remove the indicator.



**Figure 4.** Factor Loading Model

From Figure 4, it can be seen that the loading values have met the required criteria, which is greater than 0.70, and it is stated that all indicators are considered valid. The next test is to evaluate discriminant validity. This test aims to determine whether a reflective indicator is a good measure for its construct, based on the principle that the indicator should have a high correlation with its construct. Table 2 below shows the cross-loading results from the discriminant validity test.

**Table 2.** Indicator Loading Values

|       | X1    | X2    | X3 | Y | Z |
|-------|-------|-------|----|---|---|
| X1.1  | 0.812 |       |    |   |   |
| X1.10 | 0.807 |       |    |   |   |
| X1.2  | 0.817 |       |    |   |   |
| X1.3  | 0.794 |       |    |   |   |
| X1.4  | 0.782 |       |    |   |   |
| X1.5  | 0.777 |       |    |   |   |
| X1.6  | 0.755 |       |    |   |   |
| X1.7  | 0.802 |       |    |   |   |
| X1.8  | 0.828 |       |    |   |   |
| X1.9  | 0.774 |       |    |   |   |
| X2.1  |       | 0.848 |    |   |   |
| X2.10 |       | 0.809 |    |   |   |
| X2.11 |       | 0.798 |    |   |   |
| X2.2  |       | 0.866 |    |   |   |
| X2.3  |       | 0.817 |    |   |   |
| X2.4  |       | 0.830 |    |   |   |
| X2.5  |       | 0.826 |    |   |   |
| X2.6  |       | 0.819 |    |   |   |
| X2.7  |       | 0.826 |    |   |   |
| X2.8  |       | 0.799 |    |   |   |

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|       |  |       |       |       |       |
|-------|--|-------|-------|-------|-------|
| X2.9  |  | 0.864 |       |       |       |
| X3.1  |  |       | 0.741 |       |       |
| X3.10 |  |       | 0.866 |       |       |
| X3.11 |  |       | 0.769 |       |       |
| X3.2  |  |       | 0.826 |       |       |
| X3.3  |  |       | 0.727 |       |       |
| X3.4  |  |       | 0.826 |       |       |
| X3.5  |  |       | 0.723 |       |       |
| X3.6  |  |       | 0.829 |       |       |
| X3.7  |  |       | 0.784 |       |       |
| X3.8  |  |       | 0.791 |       |       |
| X3.9  |  |       | 0.831 |       |       |
| Y1    |  |       |       | 0.790 |       |
| Y2    |  |       |       | 0.814 |       |
| Y3    |  |       |       | 0.829 |       |
| Y4    |  |       |       | 0.820 |       |
| Y5    |  |       |       | 0.831 |       |
| Y6    |  |       |       | 0.809 |       |
| Y7    |  |       |       | 0.779 |       |
| Y8    |  |       |       | 0.802 |       |
| Y9    |  |       |       | 0.848 |       |
| Z1    |  |       |       |       | 0,850 |
| Z2    |  |       |       |       | 0,877 |
| Z3    |  |       |       |       | 0,802 |
| Z4    |  |       |       |       | 0,852 |
| Z5    |  |       |       |       | 0,885 |
| Z6    |  |       |       |       | 0,799 |
| Z7    |  |       |       |       | 0,869 |
| Z8    |  |       |       |       | 0,835 |
| Z9    |  |       |       |       | 0,816 |

Source: Primary Data Processed with SmartPLS 3.0

Based on the outer loading output, it can be seen that the factor loading results for all indicators of each construct have met convergent validity, as all loading factor values for each indicator are above 0.70.

**Table 3.** Average Variance Extracted

| Variabel         | AVE          |
|------------------|--------------|
| X1               | 0,632        |
| X2               | 0,685        |
| X3               | 0,630        |
| Z                | 0,711        |
| Y                | 0,662        |
| <b>Rata-rata</b> | <b>0,664</b> |

Source: Primary Data Processed with SmartPLS 3.0

Based on the table, the AVE values for X1 (0.632), X2 (0.685), X3 (0.630), Z (0.711), and Y (0.662) are known. It can be concluded that the overall AVE values are above 0.5, which indicates good convergent validity, meaning the latent variables can explain more than half of the variance of their indicators. These values indicate the percentage of the construct's ability to explain the variation in the indicators.



Table 4. Cross Loading

|       | X1     | X2     | X3     | Y      | Z      |
|-------|--------|--------|--------|--------|--------|
| X1.1  | 0.812  | 0.230  | 0.006  | 0.473  | -0.003 |
| X1.10 | 0.807  | 0.075  | 0.086  | 0.401  | 0.085  |
| X1.2  | 0.817  | 0.200  | -0.085 | 0.421  | -0.064 |
| X1.3  | 0.794  | 0.106  | 0.094  | 0.333  | 0.072  |
| X1.4  | 0.782  | 0.169  | 0.059  | 0.356  | -0.001 |
| X1.5  | 0.777  | 0.145  | -0.039 | 0.357  | -0.046 |
| X1.6  | 0.755  | 0.199  | 0.081  | 0.328  | -0.050 |
| X1.7  | 0.802  | 0.150  | -0.001 | 0.335  | -0.036 |
| X1.8  | 0.828  | 0.130  | 0.093  | 0.440  | 0.082  |
| X1.9  | 0.774  | 0.182  | 0.056  | 0.367  | -0.031 |
| X2.1  | 0.118  | 0.848  | 0.016  | 0.308  | 0.013  |
| X2.10 | 0.153  | 0.809  | 0.016  | 0.219  | 0.074  |
| X2.11 | 0.209  | 0.798  | 0.053  | 0.429  | -0.008 |
| X2.2  | 0.228  | 0.866  | 0.071  | 0.357  | 0.062  |
| X2.3  | 0.160  | 0.817  | 0.004  | 0.234  | 0.046  |
| X2.4  | 0.190  | 0.830  | -0.042 | 0.289  | 0.116  |
| X2.5  | 0.164  | 0.826  | -0.076 | 0.259  | 0.032  |
| X2.6  | 0.045  | 0.819  | 0.004  | 0.201  | 0.002  |
| X2.7  | 0.202  | 0.826  | -0.018 | 0.261  | 0.034  |
| X2.8  | 0.133  | 0.799  | 0.033  | 0.241  | 0.083  |
| X2.9  | 0.148  | 0.864  | -0.049 | 0.248  | 0.035  |
| X3.1  | -0.042 | -0.009 | 0.741  | 0.076  | 0.043  |
| X3.10 | 0.086  | 0.003  | 0.866  | 0.237  | 0.102  |
| X3.11 | -0.047 | -0.040 | 0.769  | 0.077  | 0.113  |
| X3.2  | 0.050  | 0.020  | 0.826  | 0.145  | -0.003 |
| X3.3  | -0.009 | -0.058 | 0.727  | 0.003  | -0.017 |
| X3.4  | 0.001  | 0.029  | 0.826  | 0.144  | 0.051  |
| X3.5  | -0.108 | 0.012  | 0.723  | 0.037  | 0.017  |
| X3.6  | 0.098  | -0.003 | 0.829  | 0.172  | -0.044 |
| X3.7  | 0.012  | -0.050 | 0.784  | 0.055  | 0.046  |
| X3.8  | 0.023  | 0.019  | 0.791  | 0.060  | -0.042 |
| X3.9  | 0.027  | 0.032  | 0.831  | 0.133  | -0.026 |
| Y1    | 0.419  | 0.246  | 0.185  | 0.790  | 0.059  |
| Y2    | 0.379  | 0.307  | 0.153  | 0.814  | 0.158  |
| Y3    | 0.358  | 0.280  | 0.200  | 0.829  | 0.117  |
| Y4    | 0.448  | 0.363  | 0.097  | 0.820  | 0.105  |
| Y5    | 0.411  | 0.226  | 0.144  | 0.831  | 0.044  |
| Y6    | 0.414  | 0.267  | 0.118  | 0.809  | 0.105  |
| Y7    | 0.321  | 0.178  | 0.134  | 0.779  | 0.037  |
| Y8    | 0.384  | 0.323  | 0.148  | 0.802  | 0.139  |
| Y9    | 0.403  | 0.343  | 0.121  | 0.848  | 0.076  |
| Z1    | -0.093 | 0.038  | -0.015 | 0.088  | 0.850  |
| Z2    | -0.002 | 0.061  | -0.007 | 0.100  | 0.877  |
| Z3    | -0.089 | 0.023  | -0.028 | -0.002 | 0.802  |
| Z4    | 0.061  | 0.057  | 0.025  | 0.113  | 0.852  |
| Z5    | -0.001 | 0.083  | 0.053  | 0.124  | 0.885  |
| Z6    | -0.012 | 0.053  | 0.005  | 0.014  | 0.799  |
| Z7    | 0.013  | 0.014  | 0.056  | 0.123  | 0.869  |

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|           |        |        |       |       |       |
|-----------|--------|--------|-------|-------|-------|
| <b>Z8</b> | 0.043  | 0.036  | 0.032 | 0.046 | 0.835 |
| <b>Z9</b> | -0.002 | -0.008 | 0.065 | 0.070 | 0.816 |

Source: Primary Data Processed with SmartPLS 3.0

The results of the cross-loading values in Table 3 show that the cross-loading values for each indicator correlate more strongly with its respective construct compared to other constructs. Therefore, it can be said that the cross-loading values have good discriminant validity.

## Reliability Test

**Table 5.** Results of the Reliability Test

| Variabel | <i>Cronbach's Alpha</i> | <i>Composite Reliability</i> |
|----------|-------------------------|------------------------------|
| X1       | 0,935                   | 0,945                        |
| X2       | 0,954                   | 0,960                        |
| X3       | 0,945                   | 0,949                        |
| Z        | 0,952                   | 0,957                        |
| Y        | 0,936                   | 0,946                        |

Source: Primary Data Processed with SmartPLS 3.0

The Cronbach's Alpha values for X1 (0.935), X2 (0.954), X3 (0.945), Z (0.952), and Y (0.936) were obtained. Additionally, the Composite Reliability values listed in the table are X1 (0.945), X2 (0.960), X3 (0.949), Z (0.957), and Y (0.946).

These results indicate that all constructs have good Cronbach's Alpha and Composite Reliability values, as the Cronbach's Alpha and Composite Reliability values for all variables are greater than 0.7, which shows that the indicators used in this study can be considered reliable.

## Structural Model Evaluation (Inner Model)

### Coefficient of Determination ( $R^2$ ) Values

**Table 6.** Results of the Coefficient of Determination Test

| Variabel | <i>R Square</i> | <i>R Square Adjusted</i> |
|----------|-----------------|--------------------------|
| <b>Y</b> | 0,366           | 0,333                    |

Source: Primary Data Processed with SmartPLS 3.0

Based on Table 6, the  $R^2$  value for variable Y is 0.366, indicating a good or substantial model in the study, capable of explaining variability. The variables X1, X2, and X3 explain the variability of construct Y by 0.366 or 36.6%, while the remaining 63.4% is explained by other constructs not hypothesized in the research model.

### Predictive Relevance ( $Q^2$ ) Values

The  $Q^2$  predictive relevance is used to validate the predictive ability of the model. The interpretation of the  $Q^2$  predictive relevance result indicates that exogenous variables are considered good when the result is greater than 0 (zero), as they are explanatory variables capable of predicting endogenous variables. The  $Q^2$  value can be obtained by performing a blindfolding test on the SmartPLS software, with the following results:

**Table 7.** Predictive Relevance ( $Q^2$ )

|           | <b>SSO</b> | <b>SSE</b> | <b><math>Q^2 (=1-SSE/SSO)</math></b> |
|-----------|------------|------------|--------------------------------------|
| <b>X1</b> | 1400.000   | 1400.000   |                                      |
| <b>X2</b> | 1540.000   | 1540.000   |                                      |
| <b>X3</b> | 1540.000   | 1540.000   |                                      |
| <b>Y</b>  | 1260.000   | 990.807    | 0.214                                |
| <b>Z</b>  | 1260.000   | 1260.000   |                                      |

Based on the results of the blindfolding test in the table above, the  $Q^2$  for Y is 0.214. Based on this calculation, it can be said that the  $Q^2$  predictive relevance is considered good because it has a value above 0.



### Hypothesis Testing

Hypothesis testing can be assessed by the significance test in the total effect table, as shown through the t-statistic and p-values tables. The path coefficient score or inner model indicated by the t-statistic value should be above 1.96 for two-tailed hypotheses and above 1.64 for one-tailed hypotheses to test hypotheses at the 5% alpha level. This testing stage is then performed through bootstrapping in the SmartPLS software. Bootstrapping is a data resampling method applied to the sample used for iteration. Therefore,  $H_a$  is accepted, and  $H_0$  is rejected when the bootstrap iteration results in a t-statistic  $> 1.96$ . The following is the bootstrap analysis result in this study:

**Table 8.** Results of Direct Hypothesis Testing.

|         | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics ( O/STDEV ) | P Values |
|---------|---------------------|-----------------|----------------------------|--------------------------|----------|
| X1 -> Y | 0.390               | 0.369           | 0.067                      | 5.851                    | 0.000    |
| X2 -> Y | 0.230               | 0.231           | 0.067                      | 3.418                    | 0.001    |
| X3 -> Y | 0.153               | 0.149           | 0.083                      | 5.867                    | 0.006    |
| Z -> Y  | 0.091               | 0.097           | 0.091                      | 3.417                    | 0.000    |

a. Hypothesis 1

$H_{0_1}$ : X1 has no effect on Y

$H_{a_1}$ : X1 influence on Y

The t-statistic value for X1 on Y is 5.851 with a p-value of 0.000. This t-statistic value is greater than 1.96 (two-tailed). Therefore, it can be concluded that X1 has a significant effect on Y.

b. Hypothesis 2

$H_{0_2}$ : X2 has no effect on Y

$H_{a_2}$ : X2 influence on Y

The t-statistic value for X2 on Y is 3.418 with a p-value of 0.001. This t-statistic value is greater than 1.96 (two-tailed). Therefore, it can be concluded that X2 has a significant effect on Y.

c. Hypothesis 3

$H_{0_3}$ : X3 has no effect on Y

$H_{a_3}$ : X3 influence on Y

The t-statistic value for X3 on Y is 5.867 with a p-value of 0.006. This t-statistic value is greater than 1.96 (two-tailed). Therefore, it can be concluded that X3 has a significant effect on Y.

d. Hypothesis 4

$H_{0_4}$ : Z has no effect on Y

$H_{a_4}$ : Z influence on Y

The t-statistic value for Z on Y is 3.417 with a p-value of 0.000. This t-statistic value is greater than 1.96 (two-tailed). Therefore, it can be concluded that Z has a significant effect on Y.

**Table 9.** Direct Hypothesis Test Results.

|           | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics ( O/STDEV ) | P Values |
|-----------|---------------------|-----------------|----------------------------|--------------------------|----------|
| X1*Z -> Y | 0.076               | 0.060           | 0.065                      | 3.161                    | 0.006    |
| X2*Z -> Y | 0.029               | 0.076           | 0.107                      | 3.268                    | 0.009    |
| X3*Z -> Y | -0.149              | -0.016          | 0.219                      | 3.679                    | 0.007    |

e. Hypothesis 5

$H_{0_5}$ : Z cannot moderate X1 against Y

$H_{a_5}$ : Z can moderate X1 against Y

The t-statistic value for Z in moderating the effect of X1 on Y is 3.161 with a p-value of 0.006. This t-statistic value is greater than 1.96 (two-tailed). Therefore, it can be concluded that Z can moderate the effect of X1 on Y.

f. Hypothesis 6

$H_{0_6}$ : Z cannot moderate X1 against Y

$H_{a_6}$ : Z can moderate X1 against Y

The t-statistic value for Z in moderating the effect of X2 on Y is 3.268 with a p-value of 0.009. This t-statistic value is greater than 1.96 (two-tailed). Therefore, it can be concluded that Z can moderate the effect of X2 on Y.

g. Hypothesis 7

$H_{0_7}$ : Z cannot moderate X1 against Y

$H_{a_7}$ : Z can moderate X1 against Y

The t-statistic value for Z in moderating the effect of X3 on Y is 3.679 with a p-value of 0.007. This t-statistic value is greater than 1.96 (two-tailed). Therefore, it can be concluded that Z can moderate the effect of X3 on Y.

## Discussion

### The Influence of Patient Satisfaction and Administrative Services

The hypothesis test results indicate that administrative services have a significantly positive influence on patient satisfaction, with a p-value of 0.000, which is smaller than the significance level ( $\alpha = 0.05$ ). This confirms that administrative services affect patient satisfaction at Puskesmas Waisai Raja Ampat. The findings suggest that service quality indicators significantly impact administrative services, ultimately influencing patient satisfaction. In other words, the better the administrative services, the higher the patient satisfaction at Puskesmas Waisai Raja Ampat.

Patient satisfaction arises from the comparison between the received service performance and the expected performance. Patient satisfaction is crucial for evaluating the quality of healthcare services from both the patient and visitor perspectives. Administrative services are the first aspect patients and visitors experience and assess. Several factors influencing patient satisfaction in administrative services include expertise, physical evidence, empathy, responsiveness, and assurance.

A study by Dewi et al. (2018) found that responsiveness was the most significant factor affecting service quality and patient satisfaction. Other studies have also confirmed a meaningful relationship between administrative services and patient satisfaction. In this study, well-managed administrative services were 3.2 times more likely to result in higher patient satisfaction. Another study at Puskesmas Tanjung Redeb, Kabupaten Berau, found that a 1% improvement in administrative services led to a 60.3% increase in patient satisfaction. Comparing this research with previous studies confirms that service quality directly and significantly influences administrative services, which in turn affects patient satisfaction at Puskesmas Waisai Raja Ampat.

### The Influence of Trust, Patient Satisfaction, and Medical Services

The hypothesis test results indicate that medical services significantly impact patient satisfaction, with a p-value of 0.000, which is smaller than the significance level ( $\alpha = 0.05$ ). This confirms that medical services influence patient satisfaction at Puskesmas Waisai Raja Ampat. The findings suggest that the better the medical services, the higher the patient satisfaction. Previous research has established a relationship between medical services and patient satisfaction. A 1% improvement in medical services can increase patient satisfaction by 14.1%. Other studies have reported a moderate correlation between medical service quality and patient satisfaction. High-quality medical services enhance patient satisfaction and loyalty. Various service quality aspects, such as physical environment, customer-friendly atmosphere, responsiveness, communication, privacy, and security, have a positive relationship with patient loyalty, mediated by patient satisfaction. Comparing this study with previous research confirms that medical services significantly impact patient satisfaction at Puskesmas Waisai Raja Ampat.

### The Influence of Patient Satisfaction and Drug Availability

The hypothesis test results indicate that drug availability significantly influences patient satisfaction, with a p-value of 0.006, which is smaller than the significance level ( $\alpha = 0.05$ ). This confirms that drug availability affects patient satisfaction at Puskesmas Waisai Raja Ampat. The findings suggest that better drug availability leads to

higher patient satisfaction. Pharmaceutical services are the last stage of service experienced by patients. Key indicators of pharmaceutical services affecting patient satisfaction include drug availability, patient waiting time for medication, and pharmacist presence. Drug availability is part of the assurance aspect in healthcare service indicators. Various studies have shown a significant relationship between drug availability and patient satisfaction. Drug availability ensures that patients can easily obtain their prescribed medication without searching for alternative sources. Comparing this study with previous research confirms that drug availability significantly impacts patient satisfaction at Puskesmas Waisai Raja Ampat.

### **The Influence of Service Quality Perception on Patient Satisfaction**

The hypothesis test results indicate that service quality perception significantly influences patient satisfaction, with a p-value of 0.000, which is smaller than the significance level ( $\alpha = 0.05$ ). This confirms that service quality perception affects patient satisfaction at Puskesmas Waisai Raja Ampat. The findings suggest that better service quality perception leads to higher patient satisfaction. Service quality perception directly influences patient satisfaction levels. A study by Dewi et al. (2018) found that reliability, responsiveness, assurance, physical evidence, and empathy significantly impact administrative service quality, which in turn affects patient satisfaction. These findings indicate that patients' perception of the received service quality, influenced by both administrative and medical elements, directly contributes to patient satisfaction. Fang et al. (2019) also found that factors such as staff attitude, technical service capability, and hospital facility comfort significantly affect patient satisfaction. Friendly and responsive medical staff, along with comfortable facilities, greatly influence how patients perceive service quality and, ultimately, their satisfaction. Comparing this study with previous research confirms that service quality perception significantly affects patient satisfaction at Puskesmas Waisai Raja Ampat.

### **The Influence of Administrative Services on Patient Satisfaction, Moderated by Service Quality Perception**

The hypothesis test results indicate that administrative services significantly influence patient satisfaction, moderated by service quality perception, with a p-value of 0.006, which is smaller than the significance level ( $\alpha = 0.05$ ). This confirms that administrative services affect patient satisfaction, moderated by service quality perception, at Puskesmas Waisai Raja Ampat. The findings suggest that better administrative services improve service quality perception, which indirectly increases patient satisfaction. Previous studies have shown a significant relationship between administrative service quality and overall service quality perception. A meta-analysis examining the relationship between hospital administration and service quality found that well-managed administration improves service quality perception by 2.61 times compared to poor administration (Rokhmatus et al., 2023). These results highlight that efficient and high-quality administration plays a crucial role in shaping positive perceptions of healthcare service quality.

Administrative services that include reliability, responsiveness, assurance, physical evidence, and empathy significantly contribute to patient satisfaction (Herliani et al., 2022). Effective administration that meets patient needs, both physically and emotionally, establishes a strong foundation for positive service quality perception. Reliable and responsive administrative staff enhance service experience consistency, while physical evidence (facilities) improves patient comfort and trust. Comparing this study with previous research confirms that administrative services significantly affect patient satisfaction, moderated by service quality perception, at Puskesmas Waisai Raja Ampat.

### **The Influence of Medical Services on Patient Satisfaction, Moderated by Service Quality Perception**

The hypothesis test results indicate that medical services significantly influence patient satisfaction, moderated by service quality perception, with a p-value of 0.009, which is smaller than the significance level ( $\alpha = 0.05$ ). This confirms that medical services affect patient satisfaction, moderated by service quality perception, at Puskesmas Waisai Raja Ampat. The findings suggest that better medical services improve service quality perception, which indirectly increases patient satisfaction. Medical services are essential in shaping service quality perception. A study at Puskesmas Mehalaan found that medical service quality significantly correlates with patient satisfaction (Maarif et al., 2023). Patient satisfaction with medical services is measured through various dimensions, including medical staff competence, effective communication, and responsiveness to patient concerns. Positive perceptions of healthcare service quality are determined not only by medical outcomes but also by healthcare providers' ability to build good relationships with patients. Comparing this study with previous research confirms that medical services significantly affect patient satisfaction, moderated by service quality perception, at Puskesmas Waisai Raja Ampat.

## CONCLUSION

1. Administrative services influence patient satisfaction.
2. Medical services influence patient satisfaction.
3. Drug availability influences patient satisfaction.
4. Service quality perception influences patient satisfaction.
5. Administrative services have a positive influence on patient satisfaction, moderated by service quality perception.
6. Medical services have a positive influence on patient satisfaction, moderated by service quality perception.
7. Drug availability has a positive influence on patient satisfaction, moderated by service quality perception.

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