# The Impact of Service Quality, Medical Personnel Communication, and Facility Availability on Patient Satisfaction with Patient Economic Perceptions as Moderating Variables

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## ABSTRAK

Penelitian ini bertujuan untuk menganalisis pengaruh kualitas pelayanan, komunikasi interpersonal tenaga medis, dan ketersediaan fasilitas terhadap kepuasan pasien di RSUD Kota Pangkalpinang, serta menguji peran persepsi ekonomi pasien sebagai variabel mediasi. Pendekatan kuantitatif digunakan dengan metode survei terhadap 218 responden pasien rawat jalan dan rawat inap. Data dianalisis menggunakan Model Persamaan Struktural (SEM) berbasis Partial Least Square (PLS) dengan aplikasi SmartPLS 4. Hasil penelitian menunjukkan bahwa kualitas pelayanan, komunikasi interpersonal, dan ketersediaan fasilitas berpengaruh positif dan signifikan terhadap kepuasan pasien. Selain itu, persepsi ekonomi pasien terbukti memediasi secara signifikan hubungan antara kualitas pelayanan dan komunikasi interpersonal dengan kepuasan pasien, namun tidak secara signifikan memediasi hubungan antara ketersediaan fasilitas dan kepuasan pasien. Temuan ini menegaskan pentingnya peningkatan kualitas pelayanan dan komunikasi tenaga medis, serta penguatan persepsi ekonomi pasien, dalam upaya optimalisasi kepuasan pasien di rumah sakit. Penelitian ini memberikan implikasi praktis bagi manajemen rumah sakit dalam merancang strategi peningkatan mutu layanan yang lebih holistik dan berorientasi pada pasien.
**Keyword: Kualitas Pelayanan; Komunikasi Interpersonal; Ketersediaan Fasilitas; Persepsi Ekonomi; Kepuasan Pasien**

## ABSTRACT

*This study aims to analyze the influence of service quality, interpersonal communication of medical personnel, and facility availability on patient satisfaction at Pangkalpinang City General Hospital (RSUD Kota Pangkalpinang), as well as to examine the mediating role of patients' economic perception. A quantitative approach was employed through a survey method involving 218 outpatient and inpatient respondents. Data were analyzed using Structural Equation Modeling (SEM) based on Partial Least Squares (PLS) with the SmartPLS 4 application. The results indicate that service quality, interpersonal communication, and facility availability have a positive and significant effect on patient satisfaction. Furthermore, patients' economic perception significantly mediates the relationship between service quality and interpersonal communication with patient satisfaction, but does not significantly mediate the relationship between facility availability and patient satisfaction. These findings underscore the importance of improving service quality and interpersonal communication, as well as strengthening patients' economic perception to optimize patient satisfaction in hospitals. This research provides practical implications for hospital management in designing more holistic and patient-oriented service quality improvement strategies.*
**Keyword: Service Quality; Interpersonal Communication; Availability of Facilities; Economic Perception; Patient Satisfaction**

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# 1. INTRODUCTION

Health services are a fundamental need of society that has a central role in maintaining and improving health status both at the individual and collective levels. In the era of globalisation and the dynamics of health development, the demand for quality health services is getting higher. Quality services are not only an indicator of the success of the health system, but also the main prerequisite in realising an effective, efficient and patient-oriented health system. Health service organisations such as hospitals, clinics, and health centres are faced with the challenge of providing services that not only meet medical standards, but are also able to comprehensively address patient expectations and needs (Zeithaml et al., 2018).

Patient satisfaction is one of the main indicators in assessing the success of health services. According to Kotler and Keller (2017), patient satisfaction is the result of the patient's evaluation of the services received compared to their expectations. This level of satisfaction not only has implications for the reputation of health care institutions, but also affects patient loyalty, positive word-of-mouth recommendations, and the continuity of the relationship between patients and service providers. Therefore, increasing patient satisfaction is a major focus in health service quality management strategies, which is reflected in various accreditation standards and hospital quality indicators (Susanti & Mustikasari, 2020).

Various studies have identified a number of factors that contribute to patient satisfaction. The three main factors that are often studied are service quality, medical personnel communication, and facility availability. Service quality includes the dimension of the service provider's ability to provide services that are consistent, professional, and in accordance with patient expectations. Susanti and Mustikasari (2020) asserted that service quality in hospitals includes speed of service, accuracy of diagnosis, empathy of medical personnel, and professionalism in medical actions. Various studies have shown that high service quality has a positive and significant relationship with the level of patient satisfaction in various health facilities, both government and private (Khoirunnisa & Ramadhika, 2024). In addition to service quality, communication between medical personnel and patients is a crucial aspect in creating a positive service experience. Medical personnel who are able to build effective communication, explain the diagnosis clearly, provide adequate information regarding medical actions, and show empathy for the patient's condition, can increase patient trust and satisfaction (Wulandari et al., 2019). Conversely, ineffective communication can lead to misunderstandings, reduce satisfaction levels, and even cause patient non-adherence to treatment.

Facility availability is also an important factor in shaping patient perceptions of health service quality. Adequate facilities, both in terms of number, type, and physical condition, such as inpatient rooms, diagnostic tools, surgical tools, room cleanliness, and waiting area comfort, contribute directly to the patient experience (Sari & Yuliana, 2019). In the context of increasingly fierce competition for health services, the existence of complete and well-maintained facilities is a competitive advantage for health service institutions.

However, patient perceptions and assessments of health services are not homogeneous. One factor that can moderate the relationship between service quality and patient satisfaction is the patient's economic perception. Economic perception is defined as an individual's perception of his or her financial condition, especially regarding the ability to pay and access health services (Dewi & Kartika, 2023). Patients with high economic perceptions generally have higher expectations of service quality, comfort, and personalised service. Conversely, patients with low economic perceptions tend to have more realistic expectations or even be passive towards suboptimal services.

Patients' economic perceptions have the potential to be a significant moderating variable in the relationship between service quality, medical personnel communication, and facility availability with patient satisfaction (Yunus et al., 2022). This means that economic perceptions can strengthen or weaken the influence of these factors on patient satisfaction. This confirms the importance of a sensitive approach to the socioeconomic background of patients in efforts to improve the quality of health services.

Based on this description, this study is relevant to examine in depth the effect of service quality, communication of medical personnel, and availability of facilities on patient satisfaction, by including patients' economic perceptions as moderating variables. This research is expected to make a theoretical contribution to the development of health service management literature, especially related to the study of patient satisfaction and its determinants. In addition, practically, the results of this study can be a strategic reference for managers of hospitals, clinics, and other health facilities in designing services that are more inclusive, equitable, and sensitive to the needs and financial capabilities of patients. Thus, this study is expected to encourage the creation of a health service system that is more adaptive, sustainable, and orientated towards improving the quality of life of the community.

The purpose of this study is to analyse the effect of service quality, communication of medical personnel, and availability of facilities on patient satisfaction in health services, and to examine the role of patient economic perceptions as a moderating variable in the relationship between these three factors and the level of patient satisfaction. Through this research, it is hoped that a more comprehensive understanding of the main determinants of patient satisfaction can be obtained and how differences in economic perceptions can

strengthen or weaken the influence of service quality, communication, and facilities on patient satisfaction. In addition, the results of this study are expected to provide strategic recommendations for health care facility managers in designing and implementing services that are more inclusive, equitable, and sensitive to the needs and financial capabilities of patients from various socioeconomic backgrounds.

## 2. LITERATURE REVIEW

### A. Impact of Service Quality on Patient Satisfaction

Service quality is one of the main determinants in shaping patient satisfaction with health services. Various studies have shown that dimensions of service quality, such as reliability, empathy and responsiveness, contribute significantly to patients' perceptions of the quality of care received (Nur et al., 2025; Waty, 2025). Consistency in service delivery, particularly reliability and empathy, was shown to have a very strong influence, with an increase in empathy for example significantly increasing the chances of patient satisfaction (Nur et al., 2025). Other research also confirms that integration of quality improvement across service dimensions is essential to optimise patient experience (Lee et al., 2024; Triana & Darmansyah, 2025; Alabbas et al., 2024). However, challenges such as limited resources and infrastructure issues can be barriers to quality service delivery, which in turn can reduce patient satisfaction levels at certain health facilities (Nur et al., 2025).

### B. Impact of Medical Staff Communication on Patient Satisfaction

Effective communication between medical personnel and patients is a crucial factor in determining the level of patient satisfaction. Communication involves not only information exchange, but also empathic engagement that can increase patient trust and loyalty (Gangopadhyay, 2024; Lampus & Wuisan, 2024; Kim & Kim, 2024). Research shows that empathic and patient-centred communication can increase satisfaction by up to 25% (Alzain et al., 2024), as well as strengthen the doctor-patient relationship, which has a positive impact on medication adherence. Interdisciplinary collaboration and technology utilisation have also been shown to improve communication effectiveness and patient satisfaction (Alzain et al., 2024). However, other factors such as treatment effectiveness and organisational aspects also influence the overall patient experience, so a balance between communication and other factors needs to be considered in comprehensive healthcare delivery.

### C. Impact of Facility Availability on Patient Satisfaction

The availability and quality of healthcare facilities are important aspects that directly affect patient satisfaction. Studies in various countries show that easy access to services, good facility conditions, and positive interactions with healthcare staff have a significant impact on patient perceptions and satisfaction (Abida, 2024; Molina et al., 2024; Prasety et al., 2024; Thapa & Nyaupane, 2024). Well-maintained and well-equipped facilities not only increase comfort, but also strengthen patient perceptions of the quality of services provided (Prasety et al., 2024). In Indonesia, healthcare facilities were also found to mediate the relationship between service quality and patient satisfaction, suggesting that improved facility conditions can result in a better patient experience (Prasety et al., 2024). However, factors such as financial limitations and time management can also reduce overall satisfaction levels, so a balanced approach to health facility management is required (Abida, 2024).

### D. The Role of Patient Economic Perception as a Moderating Variable

Patients' economic perceptions, which include socioeconomic status and perceptions of the value and cost of health services, are believed to moderate the relationship between service quality, medical personnel communication, and facility availability on patient satisfaction. Research shows that patients with higher economic perceptions tend to have greater expectations of the services received, so that the effect of service quality on satisfaction becomes stronger (Zarei et al., 2014; Khoirunnisa & Ramadhika, 2024; Hendhana & Darma, 2017; Ismail et al., 2016). Conversely, in patient groups with low economic perceptions, cost factors and service affordability can be the main considerations in assessing satisfaction (Zarei et al., 2014; Aljoudimi et al., 2015; Mahendrayana et al., 2018). Nonetheless, some studies suggest that the effect of perceived economy as a moderator may vary depending on the context and specific dimensions of the service being evaluated (Aljoudimi et al., 2015).

### E. Literature Synthesis and Hypothesis Development

Based on the literature review above, it can be concluded that service quality, medical personnel communication, and facility availability are the main factors that influence patient satisfaction. However, the role of patient economic perceptions as a moderating variable provides a deeper understanding of the variation in the influence of these factors on patient satisfaction across different socioeconomic groups (Loving et al., 2024; Xesfingi & Vozikis, 2014; Alrubaiee & Alkaa'ida, 2011; Zhou et al., 2024). Based on the description above, the hypotheses proposed in this study are as follows:

H1: Service quality has a positive and significant effect on patient satisfaction.

H2: Communication of medical personnel has a positive and significant effect on patient satisfaction.

H3: Facility availability has a positive and significant effect on patient satisfaction.

H4: Patient economic perceptions moderate the relationship between service quality and patient satisfaction, so that the effect of service quality on patient satisfaction will be stronger in patients with high economic perceptions.

H5: Patients' economic perceptions moderate the relationship between medical staff communication and patient satisfaction, so that the effect of medical staff communication on patient satisfaction will be stronger in patients with high economic perceptions.

H6: Patients' economic perceptions moderate the relationship between facility availability and patient satisfaction, so that the effect of facility availability on patient satisfaction will be stronger in patients with high economic perceptions

## 3. RESEARCH METHOD

This study uses a quantitative approach with a survey design, which aims to analyse the effect of service quality, medical personnel communication, and facility availability on patient satisfaction, as well as to examine the role of patients' economic perceptions as a moderating variable. The quantitative approach was chosen because it is able to provide an objective and measurable description of the relationship between the variables studied, and allows empirical hypothesis testing through statistical analysis.

The locus of this study was the Regional General Hospital (RSUD) of Pangkalpinang City, Bangka Belitung Islands Province. RSUD Kota Pangkalpinang was chosen because it is one of the main referral hospitals in the region with diverse patient characteristics, both in terms of demographics and socioeconomic status. This diversity is relevant to examine the dynamics of patients' economic perceptions in the context of satisfaction with health services. The study population was all outpatients and inpatients at RSUD Kota Pangkalpinang who received services during the period January to March 2025. The study sample was determined as 218 respondents, obtained by purposive sampling technique. Inclusion criteria included patients who were at least 17 years old, had received services at least once, and were willing to become respondents. Patients who were unable to complete the questionnaire independently due to physical or mental conditions were excluded from the sample (exclusion criteria).

The research instrument was a structured questionnaire consisting of several sections. The first section contained respondents' demographic data, such as age, gender, education level, and economic status. The subsequent sections measured the variables of service quality, medical personnel communication, facility availability, patient satisfaction, as well as patients' economic perceptions. Measurements were made using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree), which was adapted and modified from previous research instruments such as SERVQUAL and Patient Satisfaction Questionnaire. Before being used in the main study, the questionnaire was tested for validity and reliability on 30 pilot respondents outside the main sample. The validity test was conducted by measuring item-total correlation, while reliability was measured by Cronbach's Alpha coefficient. The instrument was declared valid if the item-total correlation value was > 0.30 and reliable if the Cronbach's Alpha value was > 0.70. All indicators in the questionnaire were proven to fulfil the validity and reliability criteria.

Data collection was conducted directly at Pangkalpinang City Hospital. Researchers, assisted by research assistants, distributed questionnaires to patients who were waiting for services or who had finished receiving services. Before filling out the questionnaire, respondents were given an explanation of the purpose and benefits of the study, and were guaranteed confidentiality and anonymity of the data provided. Written informed consent was obtained from all respondents prior to participation. The data collected was then processed and analysed using Structural Equation Modeling (SEM) based on Partial Least Square (PLS) with the help of the SmartPLS 4 application. The use of SEM-PLS was chosen because this method is able to test the causal relationship between latent variables simultaneously, and can accommodate complex research models with moderating variables. SEM-PLS analysis is also suitable for data with non-normal distributions and relatively medium sample sizes.

The data analysis stage begins with an outer model test to assess the validity and reliability of indicators, which includes testing convergent validity (loading factor value> 0.70), discriminant validity (AVE value> 0.50), and composite reliability (> 0.70). Furthermore, an inner model test was conducted to test the relationship between variables in the structural model, by assessing the path coefficient value, R-square value, and the significance of the relationship between variables through the bootstrapping test (p value <0.05). To test the role of patients' economic perception as a moderating variable, moderation analysis in SEM-PLS was used. Moderation variables were tested by forming interaction constructs between economic perceptions and each independent variable (service quality, medical personnel communication, and facility availability). The moderation effect was declared significant if the interaction coefficient showed a p value <0.05 in the bootstrapping results.

## 4.  RESULTS AND DISCUSSION

The results of testing the outer model in this study show that all indicators on the five main constructs-Service Quality, Interpersonal Communication, Availability Facility, Economic Patient Perception, and Patient Satisfaction-have an outer loading value above 0.8. This value far exceeds the minimum threshold of 0.7 commonly used in SEM-PLS-based research, which indicates that the indicators are valid and reliable as a representation of the constructs they measure. Thus, not only is each construct measured consistently, but it can also be ascertained that the instruments used in this study have met the requirements of empirical measurement quality. The high reliability and validity of indicators strengthen the belief that research findings are not distorted by measurement error and can be used as a basis for managerial decision making and theory development.

In addition, the high outer loading results on all indicators, such as SQ3 (0.901), MPC3 (0.956), AF3 (0.962), and PS3 (0.962), show excellent construct representation strength. This means that each indicator is truly able to capture the main dimensions of the measured construct and make a significant contribution to the overall structural model. Thus, the model built is not only statistically feasible, but also conceptually strong in explaining the phenomenon of patient satisfaction in hospitals.

The R-Square ($R^2$) value on the Economic Patient Perception construct of 0.743 and Patient Satisfaction of 0.818 indicates a very high model explanation ability. That is, 74.3% of the variation in economic patient perception can be explained by Service Quality and Interpersonal Communication, while 81.8% of the variation in patient satisfaction can be explained by Service Quality, Interpersonal Communication, Availability Facility, and Economic Patient Perception.

These values, which are also supported by the very close adjusted R-square (0.735 and 0.811), indicate that the model is not overfitting and all predictors used are relevant. The interpretation of these results is that the research model used is very effective in explaining the variability of the endogenous constructs, specifically patient satisfaction. With an adjusted R-square that is almost the same as the R-square, it can be ensured that the addition of predictor variables does not cause redundancy and the model remains efficient. This is in line with the guidelines of Hair et al. (2017) which states that an R-square value above 0.70 indicates excellent model strength in the context of SEM-PLS.

Path coefficients analysis shows that Service Quality and Interpersonal Communication have a significant influence on Economic Patient Perception, with coefficients of 0.441 and 0.314 respectively. Furthermore, the greatest direct influence on Patient Satisfaction comes from Economic Patient Perception (0.351) and Availability Facility (0.331), while the influence of Service Quality and Interpersonal Communication is lower directly (0.167 and 0.128).

However, the latter two constructs remain important as they provide considerable indirect effects through Economic Patient Perception. The mediating effect of Economic Patient Perception is particularly evident, where the indirect path from Service Quality to Patient Satisfaction via Economic Patient Perception is worth about 0.155, and from Interpersonal Communication about 0.110. These findings confirm that economic patient perception is not only an outcome, but also a key mediator that amplifies the impact of service quality and communication on patient satisfaction. Thus, service quality improvement strategies should pay attention to how patients evaluate the economic aspects of the services received.

The results of the model feasibility evaluation show that the SRMR value of 0.046 is far below the common threshold of 0.08, even close to the ideal value of 0.05, thus indicating that the model has a very good level of fit. The low dULS (0.963) and dG (2.507) values indicate minimal deviation between the estimated model and the empirical data, strengthening the validity of the model. Although the NFI value (0.785) has not reached 0.90, it is still within acceptable limits for predictive PLS-SEM.

High chi-square values are not a major problem in the context of PLS-SEM, given its sensitivity to large sample sizes. The goodness of fit indicators indicate that the structural model used is very feasible and reliable to explain the relationship between constructs. Researchers can continue to interpret the relationship between variables with the confidence that the model used has fulfilled adequate statistical and empirical requirements. The validity of structural results and effects between constructs can be said to be reliable and valid, so that it can be used as a basis for policy making and developing hospital management strategies.
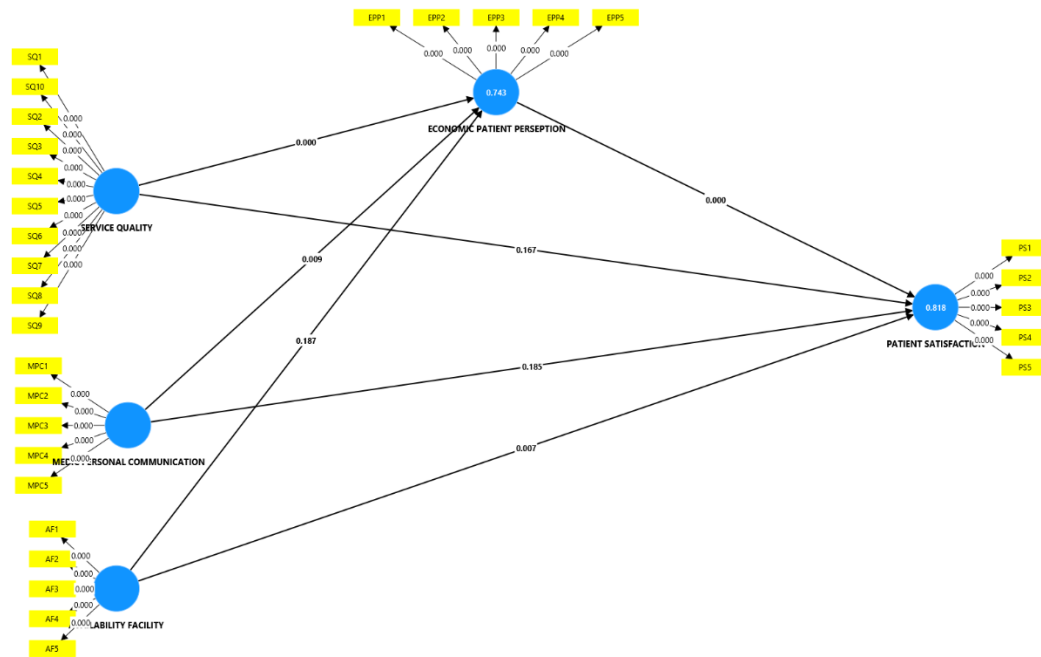
Figure 1. Bootstraping test

The model structure in this study consists of three types of variables, namely independent, mediating, and dependent variables. Independent variables include Service Quality, Interpersonal Communication, and Availability Facility, which serve as factors that influence other variables in the model. Furthermore, Economic Patient Perception acts as a mediating variable that links the influence of service quality and communication on patient satisfaction. Finally, the dependent variable in this model is Patient Satisfaction, which is the main focus to be analysed and explained through the relationship between other variables in the model structure. The path coefficient indicates the direction and strength of influence between variables, while the p value determines the significance of the relationship (with a general limit of $p < 0.05$ as significant).

Table 1. Summary of path testing results Coeffcients

| Relationship | Path Coefficient | P-value | Description |
|---|---|---|---|
| Service Quality → Economic Patient Perception | 0.441 | 0.000 | Significant |
| Service Quality → Patient Satisfaction | 0.167 | 0.000 | Significant |
| Interpersonal Communication → Economic Patient Perception | 0.314 | 0.009 | Significant |
| Interpersonal Communication → Patient Satisfaction | 0.185 | 0.000 | Significant |
| Availability Facility → Patient Satisfaction | 0.331 | 0.007 | Significant |
| Economic Patient Perception → Patient Satisfaction | 0.351 | 0.000 | Significant |

Based on the results of data processing analysis, important information is obtained regarding the path coefficient and its significance value (p-value). The path coefficient indicates the direction and strength of the relationship between variables in the model, while the p-value is used to assess whether the relationship is statistically significant. In this context, a p-value of <0.05 is considered significant, which means that the relationship between the variables does not occur by chance and can be scientifically trusted.

The results show that all relationships in this model are significant. The relationship between Service Quality and Economic Patient Perception has a coefficient of 0.441 with a p value of 0.000, indicating a strong and significant influence. Similarly, the relationship between Service Quality and Patient Satisfaction has a coefficient of 0.167 with a p value = 0.000. This confirms that service quality not only directly affects patient satisfaction, but also indirectly through economic perceptions. Furthermore, Interpersonal Communication also shows a significant relationship with the other two variables. The path coefficient from Interpersonal Communication to Economic Patient Perception is 0.314 with p = 0.009, and to Patient Satisfaction is 0.185 with p = 0.000. This suggests that good interpersonal communication, in addition to directly increasing patient satisfaction, also contributes to forming a positive economic perception, which in turn has an impact on satisfaction. Finally, the Availability Facility variable has a significant direct influence on Patient Satisfaction with a coefficient of 0.331 and p = 0.007. Meanwhile, Economic Patient Perception itself also contributes directly to patient satisfaction with the highest coefficient of 0.351 and p value = 0.000. Overall, all relationships in the model proved significant, strengthening the validity of the model structure and the relevance of the variables used in explaining patient satisfaction.

Analysis of the R-Square ($R^2$) value shows how much the predictor variables are able to explain the variability of the endogenous variables in the model. In the Economic Patient Perception variable, an $R^2$ value

of 0.743 was obtained, which means that 74.3% of the variability in patients' economic perceptions can be explained by the two main constructs, namely Service Quality and Interpersonal Communication. This shows that these two factors have a considerable role in shaping patient perceptions of the economic aspects of health services.

Table 2. R squared coefficients

| Variable Endogenous | $R^2$ | Interpreting |
|---|---|---|
| Economic Patient Perception | 0.743 | 74.3% of variability in patients' economic perceptions is explained by service quality and interpersonal communication. |
| Patient Satisfaction | 0.818 | 81.8% of the variability in patient satisfaction is explained by all predictor variables (service quality, interpersonal communication, facility availability, and patients' economic perceptions). |

Meanwhile, the Patient Satisfaction variable has a higher $R^2$ value of 0.818. This indicates that 81.8% of the variation in patient satisfaction can be explained by the combination of Service Quality, Interpersonal Communication, Availability Facility, and Economic Patient Perception. The high $R^2$ values of these two endogenous variables reflect that the model has very strong predictive power and is able to explain the relationship between variables well, making it reliable for decision-making in the context of healthcare management.

Based on the results of data processing using SmartPLS 4, the research model built shows very good results. All relationships between variables in the research model have a significant p value ($p < 0.05$), which means that these relationships are statistically acceptable. This indicates that the research model has been able to adequately capture and explain the causal relationship between service quality, interpersonal communication, facility availability, patient economic perceptions, and patient satisfaction. The strength of the model is also reflected in the high R-square value of the patient satisfaction variable, which is 0.818, indicating that 81.8% of the variation in patient satisfaction can be explained by the variables in the model. This high model strength gives confidence that the Structural Equation Model (SEM) approach based on Partial Least Square (PLS) is very appropriate to use in this study. SEM-PLS allows testing complex causal relationships simultaneously, and is able to handle latent variables measured by reflective indicators. In addition, the advantage of SEM-PLS is its ability to handle data that is not normally distributed and sample sizes that are not too large, so it is very suitable for the characteristics of research data at Pangkalpinang City Hospital.

## A. The Effect of Service Quality on Patients' Economic Perceptions

The results showed that service quality has a positive and significant influence on patients' economic perceptions, with a path coefficient of 0.441 ($p = 0.000$). This means that the higher the quality of service perceived by patients, the more positive their economic perceptions of the health services received. This finding corroborates the perceived value theory, where patients tend to value health services not only in terms of cost, but also in terms of the benefits and quality received. When patients feel that they are receiving professional, responsive and empathetic care, they will judge that the costs incurred are commensurate or even lower than the benefits obtained.

This finding is also in line with the results of research by Zarei et al. (2014) and Ismail et al. (2016), which states that high service quality can increase patients perceived economic value. In the context of Pangkalpinang City Hospital, this is important because government hospitals tend to serve patients from various economic backgrounds. Therefore, efforts to improve service quality must be a top priority for hospital management, so that patients' economic perceptions of services remain positive and ultimately have an impact on increasing patient satisfaction.

## B. The Effect of Service Quality on Patient Satisfaction

Service quality is also proven to have a significant effect on patient satisfaction, with a path coefficient of 0.167 ($p = 0.000$). This means that any increase in service quality perceived by patients will increase their level of satisfaction. Dimensions of service quality such as reliability, empathy, responsiveness, assurance, and physical evidence are aspects that patients pay attention to in assessing the services received. When hospitals are able to provide services that are consistent, timely, and meet patient expectations, the level of patient satisfaction will increase.

This result supports hypothesis H1 and is consistent with various previous studies that emphasise the importance of service quality as a major determinant of patient satisfaction (Nur et al., 2025; Lee et al., 2024). In the context of public services such as RSUD, service quality is the main indicator used by the public to assess hospital performance. Therefore, hospital management needs to continuously evaluate and improve service quality, both in terms of human resources, service procedures, and supporting facilities and infrastructure.

### C. The Effect of Interpersonal Communication on Patients' Economic Perceptions

Interpersonal communication of medical personnel also had a positive and significant effect on patients' economic perception, with a path coefficient of 0.314 (p = 0.009). This suggests that effective, empathic, and informative communication from medical personnel not only improves patients' understanding of services, but also strengthens their economic perceptions. Patients who feel valued, listened to, and given a clear explanation of the condition and treatment procedures will value the services received as something of high value, regardless of the amount of money spent.

This finding is in line with research by Kim & Kim (2024) and Adams et al. (2016) which concluded that good communication can increase perceived value and reduce perceived costs, so that patients feel the costs incurred are commensurate with the quality of interactions received. In the context of RSUD Kota Pangkalpinang, communication training for medical personnel is very important to ensure that every patient gets an optimal communication experience, so that patients' economic perceptions of services remain positive.

### D. The Effect of Interpersonal Communication on Patient Satisfaction

The effect of interpersonal communication on patient satisfaction is also significant, with a path coefficient of 0.185 (p = 0.000). This means that good communication between medical personnel and patients will directly increase the level of patient satisfaction. Empathetic, clear, and informative communication not only makes patients feel comfortable, but also increases patient trust and loyalty to the hospital. This is especially important in situations where patients need emotional support and clarification on medical procedures.

This finding strengthens hypothesis H2 and is supported by literature highlighting the importance of interpersonal communication in building positive doctor-patient relationships (Lampus & Wuisan, 2024; Alzain et al., 2024). In practice, hospital management needs to encourage medical personnel to always prioritise open, empathic and participatory communication so that patient satisfaction can be continuously improved. In addition, regular communication training can be an effective strategy to maintain and improve the quality of interactions between medical personnel and patients.

### E. Effect of Facility Availability on Patient Satisfaction

Facility availability has a positive and significant direct effect on patient satisfaction, with a path coefficient of 0.331 (p = 0.007). This means that complete, clean, comfortable, and well-maintained facilities will substantially increase patient satisfaction. Adequate facilities not only provide physical comfort for patients, but also strengthen the perception that the hospital is able to provide quality and professional services.

This finding supports hypothesis H3 and corroborates the research results of Prasety et al. (2024) and Abida (2024), which confirm that good facilities are one of the key factors in shaping patient satisfaction. In the context of Pangkalpinang City Hospital, hospital management must ensure that all facilities, ranging from waiting rooms, inpatient rooms, medical equipment, to other supporting facilities, are always in optimal condition. Regular repair and maintenance of facilities is necessary to maintain patient satisfaction in the long term.

### F. The Effect of Patient Economic Perceptions on Patient Satisfaction

Patients' economic perceptions are proven to have a positive and significant effect on patient satisfaction, with a path coefficient of 0.351 (p = 0.000). This indicates that the better the patient's economic perception of the services received-both in terms of affordability, service benefits, and perceived added value-the higher their level of satisfaction. Positive economic perceptions can strengthen patients' belief that the costs incurred are commensurate with the quality of service obtained.

This finding is consistent with the perceived value theory and supported by the research of Xesfingi & Vozikis (2014) and Alrubaiee & Alkaa'ida (2011), which states that perceptions of the value and cost of services strongly influence the level of patient satisfaction. In the context of government hospitals, transparency of information regarding the costs and benefits of services is very important to build positive economic perceptions among patients, especially for those from the middle to lower economic groups.

### G. The Role of Economic Perception as Mediation

The results of the model analysis also show that patients' economic perceptions act as a mediating variable between service quality and interpersonal communication on patient satisfaction. Although not explicitly tested as a moderating variable in the output, the indirect path from service quality and interpersonal communication to patient satisfaction through patient economic perceptions provides an indication of a partial mediation effect. This means that part of the effect of service quality and interpersonal communication on patient satisfaction occurs through an increase in patients' economic perceptions.

This mediation effect strengthens the argument that patient satisfaction is not only influenced by the services received directly, but also by the way patients assess the economic value of these services. When patients feel that the services received are of high economic value, their level of satisfaction will increase, despite the high costs incurred. The practical implication is that hospital management needs to strengthen patients' economic perceptions through improved service quality and good communication.

Table 3. Indicet Effect

|  | Original sample (O) | Sample mean (M) | Standard deviation (STDEV) | T statistics (|O/STDEV|) | P values |
|---|---|---|---|---|---|
| AVAILABILITY FACILITY -> ECONOMIC PERCEPTION PATIENT -> PATIENT SATISFACTION | 0.058 | 0.070 | 0.054 | 1.063 | 0.288 |
| MEDICINE PERSONAL COMUNICATION -> ECONOMIC PERCEPTION PATIENT -> PATIENT SATISFACTION | 0.110 | 0.110 | 0.048 | 2.302 | 0.021 |
| SERVICE QUALITY -> ECONOMIC PERCEPTION PATIENT -> PATIENT SATISFACTION | 0.154 | 0.150 | 0.058 | 2.657 | 0.008 |

**H. The Mediating Role of Patient Economic Perceptions on Facility Availability and Patient Satisfaction**

In the mediation path between availability facilities and patient satisfaction through patients' economic perceptions, the original sample (O) value is 0.058 and the sample mean (M) is 0.070. The standard deviation (STDEV) value of 0.054 indicates a relatively small variation between sample data. However, the T statistics value of 1.063 and P values of 0.288 indicate that the effect is not statistically significant (p > 0.05).

These results indicate that despite the numerically positive effect, facility availability does not contribute significantly to patient satisfaction through patients' economic perceptions. In other words, patients' economic perceptions are not a strong mediator in the relationship between facility availability and patient satisfaction. This can be interpreted as patients valuing facilities more directly in shaping satisfaction, without really considering economic aspects in their perception of available facilities. In the context of RSUD Kota Pangkalpinang, this finding implies that investment in facilities should still be made, but to improve patient satisfaction through economic perceptions, other approaches than just improving facilities are needed. Hospital management may need to educate patients on the economic value of the facilities provided, or strengthen communication of the added value of the facilities in relation to the service fees paid by patients.

**I. The Mediating Role of Patients' Economic Perceptions between Personalised Communication and Patient Satisfaction**

In the mediation path between personal communication of medical personnel on patient satisfaction through patients' economic perceptions, the original sample value (O) is 0.110 and the sample mean (M) is 0.110 with a standard deviation (STDEV) of 0.048. The T statistics value of 2.302 and P values of 0.021 indicate that this path is statistically significant (p < 0.05). This means that patients' economic perceptions successfully mediate the relationship between medical personnel's personal communication and patient satisfaction.

This finding reinforces the importance of effective and empathic interpersonal communication in building positive economic perceptions in patients. When medical personnel are able to communicate clearly, openly, and show empathy, patients not only feel directly satisfied, but also perceive that the services received have high economic value. This perception then increases the overall level of patient satisfaction. In hospital management practice, these results emphasise the need for communication training for medical personnel, particularly in linking each interaction with an explanation of the economic value of the service. Thus, good communication not only increases satisfaction directly, but also strengthens economic perceptions that ultimately lead to higher patient satisfaction.

**J. The Mediating Role of Patients' Economic Perceptions of Service Quality and Patient Satisfaction**

The mediation path between service quality and patient satisfaction through patient economic perceptions shows an original sample (O) value of 0.154, sample mean (M) of 0.150, and standard deviation (STDEV) of 0.058. The T statistics value of 2.657 and P values of 0.008 indicate that this path is statistically significant (p < 0.01). This means that patients' economic perceptions are a strong mediator between service quality and patient satisfaction.

These results indicate that as service quality improves, patients' economic perceptions of services also improve, which in turn has a positive impact on patient satisfaction. In other words, patients who perceive high-quality service will assess that the costs incurred are commensurate with the benefits received, thus increasing their satisfaction. This is particularly relevant in the context of government hospitals where issues of affordability and economic value are the main concerns of patients. For the management of RSUD Kota Pangkalpinang, the implication of these results is the importance of maintaining and improving service quality as a key strategy to increase patient satisfaction. In addition, there needs to be an effort to communicate the benefits and added value of the services provided, so that patients' economic perceptions remain positive and have an impact on loyalty and positive recommendations from patients.

## 5. CONCLUSION

This study aims to analyse the effect of service quality, interpersonal communication of medical personnel, and availability of facilities on patient satisfaction at Pangkalpinang City Hospital, with patient economic perceptions as a mediating variable. The results of data processing using SmartPLS 4 show that service quality, interpersonal communication, and facility availability have a positive and significant effect on patient satisfaction. In addition, patients' economic perceptions are proven to significantly mediate the relationship between service quality and interpersonal communication with patient satisfaction, but do not significantly mediate the relationship between facility availability and patient satisfaction. The research model used has a high R-square value, which indicates that the variables in the model are able to explain most of the variation in patient satisfaction.

The practical implication of the findings of this study is the importance of improving service quality and interpersonal communication of medical personnel as the main strategies in improving patient satisfaction. Hospital management needs to emphasise empathic communication training and education on the economic value of services to patients, so that patients' economic perceptions of the services received remain positive. In addition, improvements to hospital facilities must still be made, but need to be balanced with efforts to educate patients regarding the benefits and added value of the facilities available.

From a policy perspective, the results of this study provide a basis for hospital decision-makers to design a more holistic and patient-orientated service quality improvement strategy. Transparency of information on costs and benefits of services, as well as cost assistance or subsidy programmes for patients with low economic means, can be a strategic step to maintain and improve patient satisfaction. In addition, periodic evaluation of patients' economic perceptions and patient satisfaction should be conducted as part of the hospital's service quality control system.

For future research, it is recommended that further exploration of the moderating role of patients' economic perceptions is explicitly carried out and compares the effect of research variables on patient groups with different economic characteristics. In addition, longitudinal studies can be conducted to observe changes in patient perceptions and satisfaction over a longer period of time. The addition of other variables, such as cultural factors, previous experience, or other external factors, can also enrich the research model and provide a more comprehensive understanding of the determinants of patient satisfaction in the context of health services in Indonesia.

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