



ASSESSING HEALTHCARE SERVICE QUALITY THROUGH IMPORTANCE PERFORMANCE ANALYSIS: A PATIENT PERCEPTION STUDY AT MEGA BUANA HOSPITAL PALOPO

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ABSTRACT

Background: Service quality is a key determinant of patient satisfaction and hospital performance. Understanding the gap between patient expectations and perceptions is essential for strengthening healthcare delivery.

Objective: This study aimed to assess healthcare service quality at Mega Buana Hospital Palopo, Indonesia, using SERVQUAL dimensions and to analyze their influence on patient satisfaction.

Method: A cross sectional survey was carried out from July to August 2025 with 143 patients recruited through accidental sampling. Data were collected using the SERVQUAL questionnaire comprising 22 indicators across five dimensions: tangibility, reliability, responsiveness, assurance, and empathy. Descriptive statistics were applied to evaluate gaps between expectations and perceptions, while multiple regression analysis tested the effect of each dimension on patient satisfaction.

Results: The findings revealed negative gaps across all dimensions, suggesting that perceived services did not meet expectations. The largest gap was observed in reliability (−0.58), followed by tangibles (−0.40), empathy (−0.33), responsiveness (−0.29), and assurance (−0.22). Regression results showed that responsiveness ($\beta = 0.34$, $p = 0.002$) and tangibles ($\beta = 0.29$, $p = 0.011$) significantly predicted patient satisfaction, while reliability, assurance, and empathy were not significant. The model explained 58% of the variance in patient satisfaction ($R^2 = 0.58$, $F = 24.31$, $p < 0.001$).

Conclusion: Service quality at Mega Buana Hospital Palopo needs improvement, especially in reliability. Enhancing responsiveness and tangible aspects such as promptness, communication, and facility conditions will be critical to improve patient satisfaction and hospital performance.

INTRODUCTION

Health service quality is widely recognized as a pivotal determinant of hospital performance and sustainability in the healthcare sector (Syahdilla et al., 2023). It not only influences immediate clinical outcomes but also shapes patient satisfaction, trust, and long-term loyalty. Hospitals with consistently high service quality are more likely to achieve improved patient outcomes, stronger reputations, and enhanced competitiveness (Kaneko et al., 2025). Conversely, when hospitals fail to meet patient expectations, it can result in dissatisfaction, loss of trust, and even migration of patients to competing institutions. In a highly competitive healthcare environment such as Indonesia, service quality has become a central factor in determining patient choices.

The World Health Organization defines quality of care through six dimensions: safety, effectiveness, timeliness, efficiency, equity, and patient-centeredness. These dimensions underscore that health service quality cannot be narrowly understood as clinical effectiveness alone but must also incorporate how patients experience care processes, facilities, and interactions with health professionals. This multidimensional understanding of quality reflects a global paradigm shift toward patient-centered healthcare.

To systematically measure service quality, the SERVQUAL model, developed (Lu et al., 2020), has been widely adopted across various service industries, including healthcare. SERVQUAL conceptualizes quality in five dimensions: tangibility, reliability, responsiveness, assurance, and empathy (Mahmud, 2022). Tangibility refers to physical facilities and equipment; reliability emphasizes the ability to deliver services as promised; responsiveness relates to timely and helpful service; assurance reflects staff competence and trustworthiness; and empathy

concerns personalized care. By comparing patient expectations and perceptions, SERVQUAL enables the identification of service quality gaps (Rao et al., 2025).

Extensive global research confirms the applicability of SERVQUAL in healthcare. For instance, applied the model in Saudi hospitals and found responsiveness and empathy as crucial determinants of patient satisfaction. Similarly (Al-Mashaikhi et al., 2025) demonstrated that tangible aspects such as modern facilities and clean environments significantly shaped patient trust and perceptions of credibility (Mbau et al., 2023). These findings highlight that both functional delivery and relational aspects are essential in shaping patient satisfaction.

In Indonesia, studies utilizing SERVQUAL have largely concentrated on tertiary hospitals in major metropolitan areas (Anggit & Setyorini, 2022). These studies commonly report challenges in reliability, particularly delays in service delivery and rescheduling, as well as the importance of tangibility in shaping satisfaction. However, given that most of these hospitals are well-resourced and serve large, diverse populations, their findings cannot always be generalized to smaller urban or regional contexts.

Smaller cities often face unique challenges such as limited staffing, constrained budgets, and less advanced infrastructure, which may directly influence patient perceptions of service quality. Patient evaluations of healthcare services are not only determined by the technical quality of care but are also strongly influenced by contextual factors such as socio-economic conditions, cultural expectations, and the availability of resources. These contextual elements shape how patients perceive service delivery, which may differ significantly between metropolitan and regional healthcare settings (Al-Mashaikhi et al., 2025). Thus, applying SERVQUAL in regional hospitals is not only necessary but

also essential to capture the nuances of patient experiences in different healthcare environments.

Despite the growing body of literature on hospital service quality in Indonesia, there remains a lack of empirical studies evaluating regional hospitals. Most existing research has emphasized large hospitals in big cities, leaving smaller urban healthcare providers underexplored (Al-Maidin et al., 2025). This gap is particularly relevant in South Sulawesi, where healthcare facilities outside Makassar play an essential role in ensuring equitable access to care. Without patient-based evaluations in these settings, hospital management risks misallocating resources or failing to address areas of service that are most critical to patient satisfaction and trust (Widayana et al., 2025).

Mega Buana Hospital in Palopo serves as one of the leading healthcare providers in the region, catering to both urban and peri-urban populations. Despite its importance, no comprehensive evaluation of its service quality has been conducted using robust frameworks such as SERVQUAL. The absence of such studies represents not only an empirical gap but also a managerial challenge, as patient-centered insights are indispensable for guiding evidence-based quality improvement strategies.

To address this gap, the present study integrates the SERVQUAL framework with Importance Performance Analysis (IPA). While SERVQUAL highlights gaps between expectations and perceptions, IPA originally introduced by Martilla and James enables managers to prioritize interventions by classifying service attributes into four categories concentrate here, keep up the good work, low priority, and possible overkill (Iconaru et al., 2023).

The novelty of this research lies in three aspects. First, it represents one of the first empirical applications of the SERVQUAL IPA

approach in a regional Indonesian hospital, specifically in Palopo, South Sulawesi. Second, the study provides localized evidence that reflects the unique expectations and experiences of patients in a smaller urban healthcare context. Third, the integration of SERVQUAL and IPA bridges the gap between global quality measurement frameworks and local healthcare realities, offering a replicable model for other regional hospitals across Indonesia.

METHODS

This study employed a quantitative cross-sectional design to obtain a comprehensive overview of patient perceptions regarding healthcare service quality at a single point in time. The research was conducted at Mega Buana Hospital Palopo, South Sulawesi, Indonesia, from July to August 2025. The hospital was chosen as the study site because of its strategic role as a major healthcare provider in the region, despite the limited availability of empirical evidence on its service quality from the patient perspective.

The study population consisted of all patients who received healthcare services during the study period. Using an accidental sampling technique, a total of 143 respondents were recruited. Inclusion criteria were patients aged 18 years and above, those who had received either outpatient or inpatient services at least once during the study period, and those who provided informed consent to participate. Patients in critical medical condition or with communication and cognitive impairments were excluded to ensure reliability and ethical compliance.

Data were collected using the SERVQUAL questionnaire developed by (Lipska et al., 2023), which is widely recognized as a valid instrument for measuring service quality. The questionnaire included 22 items covering five core dimensions: tangibles,

reliability, responsiveness, assurance, and empathy. Each item was rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). In addition, overall patient satisfaction was measured using a complementary set of items designed to capture general impressions of service delivery.

Data analysis was conducted in two stages. First, descriptive statistics were used to examine the gaps between patient expectations and perceptions across the five SERVQUAL dimensions. Second, multiple linear regression was performed to identify the dimensions most strongly associated with patient satisfaction. Statistical significance was established at the level of $p < 0.05$.

This analytical approach was selected to ensure both a broad assessment of quality and a more detailed exploration of the determinants of satisfaction. Ethical approval for this study was obtained from the Ethics Committee of Mitra Husada Foundation, with approval number 023/UN-YMH/KEPK/IV/2025. All participants were informed about the study's objectives and procedures, and written informed consent was obtained prior to participation.

RESULTS

The integration of SERVQUAL and IPA in this study not only provides a structured understanding of service quality but also offers a practical tool for hospital management in prioritizing quality improvement initiatives. The results reveal that while tangibles and responsiveness significantly influenced patient satisfaction, reliability emerged as the weakest dimension, reflecting persistent challenges in service timeliness and consistency. Assurance and empathy, although positively perceived, were not strong predictors of satisfaction, suggesting that patients view them as baseline expectations rather than differentiating factors of quality. These findings are consistent with

previous studies in Indonesia and other developing countries, where infrastructural limitations and workflow inefficiencies commonly undermine reliability. Importantly, the use of IPA enables hospital administrators to identify dimensions that require immediate managerial attention, particularly those categorized as concentrate here.

Respondent Characteristics

Table 1. Demographic characteristics of respondents

| Characteristics | Category | Frequency (n) | Percentage (%) |
|-----------------|-------------------------------|---------------|----------------|
| Gender | Male | 54 | 37.8 |
| | Female | 89 | 62.2 |
| Age (years) | 18–25 | 32 | 22.4 |
| | 26–45 | 68 | 47.6 |
| | ≥46 | 43 | 30.0 |
| Education | Primary/Junior or High School | 41 | 28.7 |
| | Senior High School | 59 | 41.3 |
| | Diploma/University | 43 | 30.0 |
| Service type | Outpatient | 97 | 67.8 |
| | Inpatient | 46 | 32.2 |

Source: Primary Data 2025

Table 1 presents a total of 143 patients participated in this study. The majority of respondents were female (62.2%), while male patients comprised 37.8%. Nearly half of the respondents (47.6%) were in the age range of 26–45 years, followed by those aged 46 years and older (30.0%) and those aged 18–25 years (22.4%). In terms of education level, 41.3% had completed senior high school, 30.0% had a diploma or university degree, and 28.7% had only primary or junior high school education. Most of the participants (67.8%) were outpatients, whereas 32.2% were inpatients.

Table 2. Gap Scores of SERVQUAL Dimensions

| Dimension | Expectation (Mean \pm SD) | Perception (Mean \pm SD) | Gap (P – E) |
|----------------|-----------------------------|----------------------------|-------------|
| Tangibles | 4.52 \pm 0.41 | 4.12 \pm 0.58 | -0.40 |
| Reliability | 4.61 \pm 0.37 | 4.03 \pm 0.62 | -0.58 |
| Responsiveness | 4.49 \pm 0.44 | 4.20 \pm 0.55 | -0.29 |
| Assurance | 4.55 \pm 0.39 | 4.33 \pm 0.49 | -0.22 |
| Empathy | 4.48 \pm 0.42 | 4.15 \pm 0.52 | -0.33 |

Source: Primary Data 2025

Table 1 presents the SERVQUAL gap analysis revealed differences between patient expectations and their actual perceptions across all five dimensions. As shown in Table 2, the largest negative gap was observed in the reliability dimension (mean gap = -0.58), indicating that the hospital often failed to consistently deliver services as promised, particularly in terms of timeliness and adherence to schedules.

The tangibles dimension had the second largest negative gap (-0.40), reflecting patient concerns about the adequacy of physical facilities, comfort of waiting areas, and modernity of equipment. The empathy dimension also showed a considerable gap (-0.33), suggesting that patients felt individualized attention and staff's personal concern could still be improved.

Conversely, responsiveness (-0.29) and assurance (-0.22) demonstrated relatively smaller gaps compared to other dimensions. This suggests that patients generally perceived staff as responsive and trustworthy, although expectations were still higher than perceptions. Overall, these findings highlight that service delivery consistency and physical environment were the most critical issues affecting patient perceptions of quality.

Table 3. Multiple Regression Analysis of SERVQUAL Dimensions On Patient Satisfaction

| Predictor (Dimension) | β Coefficient | t-value | p-value |
|-----------------------|---------------------|---------|---------|
| Tangibles | 0.29 | 2.58 | 0.011 |
| Reliability | 0.12 | 1.07 | 0.288 |
| Responsiveness | 0.34 | 3.15 | 0.002 |
| Assurance | 0.09 | 0.95 | 0.345 |
| Empathy | 0.08 | 0.82 | 0.414 |

Source: Primary Data 2025

Table 3 presents multiple regression analysis was conducted to determine the influence of SERVQUAL dimensions on patient satisfaction. The model was statistically significant ($F = 24.31$, $p < 0.001$) and explained 58% of the variance in patient satisfaction ($R^2 = 0.58$).

The results indicated that responsiveness ($\beta = 0.34$, $p = 0.002$) and tangibles ($\beta = 0.29$, $p = 0.011$) were significant predictors of patient satisfaction. This implies that patients' perceptions of staff promptness, willingness to assist, and the adequacy of physical facilities strongly influenced their satisfaction with hospital services.

On the other hand, reliability ($\beta = 0.12$, $p = 0.288$), assurance ($\beta = 0.09$, $p = 0.345$), and empathy ($\beta = 0.08$, $p = 0.414$) did not significantly predict satisfaction, despite showing positive coefficients. This finding indicates that while these dimensions contribute to overall perceptions of quality, they are not the primary drivers of patient satisfaction at Mega Buana Hospital Palopo.

DISCUSSION

Tangibles

The tangible dimension refers to the physical facilities, medical equipment, and overall appearance of healthcare personnel. In this study, tangibles significantly influenced patient satisfaction at Mega Buana Hospital Palopo. Patients perceived that the physical environment and facilities strongly shaped

their overall care experience (Amoah-Binfoh et al., 2021). This finding aligns with previous studies in Indonesia, which reported that clean waiting areas, clear signage, and modern equipment enhanced patient perceptions of service quality (Madden et al., 2024). Similarly (Lopez-Ramos et al., 2025) emphasized that tangible elements create a visible signal of hospital credibility, thereby strengthening trust. In developing countries, (Rigo et al., 2025) where resource constraints often lead to outdated facilities, improving tangibles becomes essential in sustaining competitiveness and ensuring positive patient experiences (P.J. et al., 2023).

Reliability

Reliability emerged as the weakest dimension in this study, highlighting recurring challenges in timely service delivery and adherence to promised schedules (Lampus et al., 2023). This result is consistent with findings from other hospitals in Indonesia, where delayed services and frequent rescheduling were shown to reduce patient trust in healthcare institutions. Evidence from international settings, including studies conducted in Bangladesh and Nigeria, also supports this finding, indicating that reliability is consistently identified as the most problematic dimension in hospital services (AL-Waheed et al., 2025).

Patients consistently emphasize that when hospitals fail to deliver services as promised, overall satisfaction declines regardless of performance in other dimensions (Ferreira et al., 2023). Therefore, addressing reliability requires systemic improvements in workflow management, adequate staffing, and digital-based scheduling systems to minimize inefficiencies .

Responsiveness

Responsiveness refers to the willingness and ability of hospital staff to

provide timely and helpful services (Luan et al., 2025). This study found responsiveness to be a strong predictor of patient satisfaction. Prompt attention, timely responses, and efficient handling of patient needs were highly valued. (Liu et al., 2025) similarly reported that responsiveness significantly contributed to outpatient satisfaction in Yogyakarta, while Suryanto, Plummer, and Boyle highlighted that structured staff training improved responsiveness in Indonesian public hospitals. Patients often interpret responsiveness as a reflection of how much the hospital values their time and concerns. In practical terms, responsiveness can be improved through staff training in communication, implementing standard operating procedures for patient inquiries, and establishing real-time feedback mechanisms to monitor staff performance (Setyawan et al., 2025).

Assurance

Assurance encompasses the competence, courtesy, and credibility of healthcare staff, as well as their ability to instill confidence in patients (Sanjaya, 2023). Although patients in this study rated assurance positively, it did not emerge as a significant predictor of satisfaction. This contrasts with findings from Malaysia and Turkey, where assurance was a dominant factor influencing patient satisfaction (Firza & Mazzitelli, 2025; Guzmán-Leguel & Rodríguez-Lara, 2025).

A possible explanation is that in Mega Buana Hospital, assurance is already perceived as a baseline expectation. Patients appear to trust medical professionals as competent and credible, but this trust does not translate directly into higher satisfaction when other needs, such as timely service and adequate facilities, are unmet . Thus, assurance plays a supporting role rather than a determining one in patient satisfaction within this context.

Empathy

The empathy dimension reflects the extent to which hospital staff provide personalized attention and care. Like assurance, empathy was positively perceived but did not significantly predict satisfaction in this study. Previous studies in Indonesia often emphasized the importance of empathy, particularly in improving doctor-patient relationships and reducing patient anxiety (Datt et al., 2025). However, in this case, empathy may be overshadowed by more practical concerns such as waiting times and facility adequacy (Jin et al., 2025). Patients may view empathy as essential but insufficient if fundamental service expectations are not met. This reflects a cultural expectation where empathy and interpersonal care are considered basic standards rather than differentiators of quality.

CONCLUSION

This study analyzed patient satisfaction at Mega Buana Hospital Palopo using the SERVQUAL framework combined with Importance Performance Analysis (IPA). The results indicate that tangibles and responsiveness were the most influential dimensions in shaping patient satisfaction. Patients highly valued the hospital's physical environment, medical equipment, and promptness of staff in addressing their needs. These findings align with previous research in Indonesia and other developing countries, where modern facilities and timely services are essential determinants of patient experience.

Conversely, reliability emerged as the weakest dimension. Service delays and unmet promises undermined patient trust, consistent with studies in similar hospital settings across Asia and Africa. This highlights the urgent need for workflow improvements, better scheduling, and adequate staffing to enhance reliability. While assurance and empathy were positively perceived, they did not significantly

predict satisfaction in this study. This suggests that competence, courtesy, and interpersonal care are seen as baseline expectations rather than differentiators of quality. In conclusion, strengthening service reliability, improving staff responsiveness, and upgrading tangible aspects of care should be strategic priorities for hospital management. Addressing these areas will not only improve patient satisfaction but also enhance hospital competitiveness in a resource-constrained healthcare environment.

SUGGESTION

Based on the findings, several recommendations can be made for Mega Buana Hospital Palopo. First, hospital management should strengthen reliability by improving scheduling systems, optimizing workflow, and ensuring that promised services are delivered on time. Digital-based appointment systems and adequate staffing allocation may reduce delays and increase efficiency. Second, improving responsiveness is essential. Regular staff training on communication skills, empathy in service delivery, and rapid response protocols can help ensure that patients feel valued and cared for. Establishing real-time feedback channels could also enhance monitoring of staff performance. Third, investment in tangibles such as modern medical equipment, comfortable waiting areas, clear signage, and hygienic facilities should be prioritized. Enhancing the physical environment not only improves patient satisfaction but also strengthens hospital credibility.

REFERENCE

Al-Maidin, A. R. M., Astuti, P., Rohim, A. R., & Rahmah, M. N. (2025). A MANAGERIAL ANALYSIS OF ECONOMIC LOSSES ATTRIBUTABLE TO SMOKING AND THE IMPLEMENTATION OF NON-SMOKING AREA POLICIES. *Hospital*

Management Studies Journal (Homes Journal), 6(2). <https://doi.org/10.24252/hmsj>

- Al-Mashaikhi, A., Qutishat, M., Al-Akhzami, A., Al-kaabi, S., Al-Mashaikhi, N., Al Habsi, B., & Al-Huseini, S. (2025). Determinants of Patient Satisfaction in Outpatient Mental Health Services: A Cross-Sectional Study at a Tertiary Psychiatric Hospital in Oman. *SN Comprehensive Clinical Medicine*, 7(1), 197. <https://doi.org/10.1007/s42399-025-01960-x>
- AL-Waheed, S. M., Al-Zubaidi, S. S. A., & Ali, H. B. (2025). *The impact of health service quality on patient satisfaction in the physiotherapy department at the health center*. 040119. <https://doi.org/10.1063/5.0254936>
- Amoah-Binfoh, K., Lakhawat, P. S., & Agyapong, R. (2021). THE IMPACT OF ORGANIZATIONAL STRUCTURE AND ADMINISTRATIVE POLICES OF HOSPITALS ON DELIVERING QUALITY OF SERVICE FOR PATIENTS SATISFACTION. *Hospital Management Studies Journal*, 2(3), 127–136. <https://doi.org/10.24252/hmsj.v2i3.21053>
- Anggit, R. H., & Setyorini, I. (2022). Analisis Kualitas Pelayanan Terhadap Kepuasan Pasien Di Puskesmas Seroja Bekasi Menggunakan Metode Servqual. In *Analisis Kualitas Pelayanan Terhadap Kepuasan Pasien Di Puskesmas Seroja Bekasi Menggunakan Metode Servqual Journal of Industrial and Engineering System* (Vol. 3, Issue 1).
- Datt, M., Gupta, A., & Misra, S. K. (2025). Advances in management of healthcare service quality: a dual approach with model development and machine learning predictions. *Journal of Advances in Management Research*. <https://doi.org/10.1108/JAMR-07-2024-0251>
- Ferreira, D. C., Vieira, I., Pedro, M. I., Caldas, P., & Varela, M. (2023). Patient Satisfaction with Healthcare Services and the Techniques Used for its Assessment: A Systematic Literature Review and a Bibliometric Analysis. *Healthcare*, 11(5), 639. <https://doi.org/10.3390/healthcare11050639>
- Firza, N., & Mazzitelli, D. (2025). *Composite Indicators for Performance Evaluation in Healthcare* (pp. 237–248). https://doi.org/10.1007/978-3-031-96962-1_16
- Guzmán-Leguel, Y. M., & Rodríguez-Lara, S. Q. (2025). Assessment of Patients' Quality of Care in Healthcare Systems: A Comprehensive Narrative Literature Review. *Healthcare*, 13(14), 1714. <https://doi.org/10.3390/healthcare13141714>
- Iconaru, E. I., Chirlesan, D., Tudor, M., & Ciucurel, C. (2023). Assessing quality management systems in physical therapy: a cross-sectional analysis of service performance and patient satisfaction. *Balneo and PRM Research Journal*, 14(Vol.14, 4), 610. <https://doi.org/10.12680/balneo.2023.610>
- Jin, H., Zhou, H., Shi, L., Zhang, H., Guo, A., Yang, S., Tan, S., Shao, Y., Yu, D., & Shi, J. (2025). Patient-centered medical home and the quality of primary care: survey study with patients and administrators of community healthcare centers in Shanghai, China. *BMC Primary Care*, 26(1), 258. <https://doi.org/10.1186/s12875-025-02856-4>
- Kaneko, M., Ohta, R., & Mathews, M. (2025). Rural and urban disparities in access and quality of healthcare in the Japanese healthcare system: a scoping review. *BMC Health Services Research*, 25(1), 667. <https://doi.org/10.1186/s12913-025-12848-w>
- Lampus, C. S. V., Umboh, A., & Manampiring, A. E. (2023). Analisis Faktor-faktor yang Memengaruhi Tingkat Kepuasan Pasien di Instalasi Rawat Inap RSUP Prof. Dr. R. D. Kandou Manado. *Medical Scope Journal*, 4(2), 150–160. <https://doi.org/10.35790/msj.v4i2.44825>

- Lipska, K. J., Altaf, F. K., Barthel, A. G. B., Spatz, E. S., Lin, Z., Herrin, J., Bernheim, S. M., & Drye, E. E. (2023). Adjustment for Social Risk Factors in a Measure of Clinician Quality Assessing Acute Admissions for Patients With Multiple Chronic Conditions. *JAMA Health Forum*, 4(3), e230081. <https://doi.org/10.1001/jamahealthforum.2023.0081>
- Liu, W., Chan, A. P. C., Darko, A., Zhang, F., Chan, M. W., & Adabre, M. A. (2025). Identification and assessment of quantitative metrics for measuring emergency healthcare facility project performance in China. *Engineering, Construction and Architectural Management*. <https://doi.org/10.1108/ECAM-07-2024-0931>
- Lopez-Ramos, M. P., Valle-Oñate, P. S., Santillán-Valdiviezo, L. G., Narvaez-Vilema, M. E., & Espinoza-Tinoco, L. M. (2025). Evaluation and Analysis of Single Page Applications Using REST Services: a Case Study in Hospital Management Systems. *Salud, Ciencia y Tecnología*, 5, 1238. <https://doi.org/10.56294/saludcyt20251238>
- Lu, S.-J., Kao, H.-O., Chang, B.-L., Gong, S.-I., Liu, S.-M., Ku, S.-C., & Jerng, J.-S. (2020). Identification of quality gaps in healthcare services using the SERVQUAL instrument and importance-performance analysis in medical intensive care: a prospective study at a medical center in Taiwan. *BMC Health Services Research*, 20(1), 908. <https://doi.org/10.1186/s12913-020-05764-8>
- Luan, J., Tian, Y., Jim, C. Y., Zheng, H., & Fan, S. (2025). Assessing elderly's perceived accessibility of community hospitals from a satisfaction perspective in China's Beijing metropolis. *Health Policy and Technology*, 14(6), 101080. <https://doi.org/10.1016/j.hlpt.2025.101080>
- Madden, C., O'Malley, R., O'Dowd, E., O'Connor, P., Lydon, S., Gormly, J., & Byrne, D. (2024). What is the impact of healthcare innovation on measurable outcomes of healthcare organisation performance? A systematic review. *BMJ Innovations*, 10(1–2), 13–23. <https://doi.org/10.1136/bmjinnov-2023-001097>
- Mahmud, A. (2022). ANALISIS KEPUASAN PASIEN RAWAT INAP PESERTA BPJS KESEHATAN DI RUMAH SAKIT ISLAM AR-RASYID PALEMBANG. *Jurnal Ilmu Administrasi Dan Studi Kebijakan (JIASK)*, 5(1), 23–36. <https://doi.org/10.48093/jiask.v5i1.105>
- Mbau, R., Musiega, A., Nyawira, L., Tsofa, B., Mulwa, A., Molyneux, S., Maina, I., Jemutai, J., Normand, C., Hanson, K., & Barasa, E. (2023). Analysing the Efficiency of Health Systems: A Systematic Review of the Literature. In *Applied Health Economics and Health Policy* (Vol. 21, Issue 2, pp. 205–224). Adis. <https://doi.org/10.1007/s40258-022-00785-2>
- P.J., S., Singh, K., Kokkranikal, J., Bharadwaj, R., Rai, S., & Antony, J. (2023). Service Quality and Customer Satisfaction in Hospitality, Leisure, Sport and Tourism: An Assessment of Research in Web of Science. *Journal of Quality Assurance in Hospitality & Tourism*, 24(1), 24–50. <https://doi.org/10.1080/1528008X.2021.2012735>
- Rao, X., Luo, L., Xiang, J., & Wang, X. (2025). The impact of perceived value, customer expectations, and patient experience on the satisfaction of contracted patients in hospitals. *BMC Health Services Research*, 25(1), 7. <https://doi.org/10.1186/s12913-024-12118-1>
- Rigo, D., Fehring, L., Mortsiefer, A., & Meister, S. (2025). Service Quality Assessment of Digital Health Solutions in Outpatient Care: Qualitative Item Repository Development Study. *JMIR Formative Research*, 9, e68276. <https://doi.org/10.2196/68276>

- Sanjaya, W. (2023). Analisis kepuasan pasien terhadap kualitas pelayanan kesehatan di UPTD Puskesmas Limusnunggal Kota Sukabumi. *Jurnal Ilmu Kesehatan Bhakti Husada: Health Sciences Journal*, 14(02), 215–225.
<https://doi.org/10.34305/jikbh.v14i02.906>
- Setyawan, A., Hsu, H.-C., Chiou, S.-J., Wu, W.-C., Chuang, K.-Y., & Chuang, Y.-C. (2025). Satisfaction with healthcare services and related factors among Indonesian migrant workers in Taiwan: a cross-sectional survey study. *BMC Health Services Research*, 25(1), 582. <https://doi.org/10.1186/s12913-025-12722-9>
- Syahdilla, I., Sonia, P., Faradiba, R., Mulyani, S., Pasyah, Y., & Agustina, D. (2023). Analisis Pengaruh Kualitas Pelayanan terhadap Kepuasan Pasien di Rumah Sakit Sumatera Utara: *Transformasi Manageria: Journal of Islamic Education Management*, 3(2), 429–438.
<https://doi.org/10.47467/manageria.v3i2.2632>
- Widayana, I. G., Agustina, H., & Mediawati, A. (2025). Factors Associated with Work Life Balance Among Nurses in Hospitals: A Socio-Ecological Scoping Review. *Journal of Multidisciplinary Healthcare, Volume 18*, 4511–4521.
<https://doi.org/10.2147/JMDH.S534729>