



The Influence of Online Registration Service Quality Using the WhatsApp Application on Patient Satisfaction in Outpatient Services at Icare Dental

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Received: March 6, 2026

Revised: April 11, 2026

Accepted: October 12, 2026

Published: October 31, 2026

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DOI: [10.29303/jppipa.v12i10.14762](https://doi.org/10.29303/jppipa.v12i10.14762)

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Abstract: Patient waiting time refers to the duration a patient spends obtaining healthcare services, beginning at registration and ending when the patient enters the doctor's examination room. All healthcare facilities are required to adhere to minimum service standards related to waiting times. The comparison between the length of waiting and the time of examination determines whether the service is perceived as satisfactory or unsatisfactory. These measurements are categorized from the moment the patient arrives, including the registration process, waiting in the waiting area, and waiting to be called into the examination room. Waiting times of more than 90 minutes are classified as long, while waiting times of 30 minutes or less are considered fast. The online registration system at Icare Dental uses the WhatsApp application for all outpatients. Patient satisfaction is an indicator concerning the success belonging to the service along with the sustainability related to the service over an extended period. The results indicate that the quality of Whatsapp based online registration has a significant positive effect on service timeliness, with a regression coefficient of 0.895, suggesting that improvements in registration quality strongly enhance service punctuality. This investigation adopted a quantitative cross-sectional design. Through a questionnaire method with a sample using a purposive sampling technique, 47 respondents were sampled in this current study. Data were collected using modified SERQUAL and based on five dimensions. The correlation coefficient of 0.627 reflects a strong positive relationship between the two variables. Practically, the finding suggests that healthcare providers can optimize Whatsapp based registration systems by improving response speed, clarity of information and scheduling coordination to reduce patient waiting time and enhance satisfaction.

Keywords: Online registration; Outpatient satisfaction; Patient waiting time; Service quality; WhatsApp application

Introduction

Health services are service facilities, namely the tools and facilities used to manage health services. Health services function to improve, prevent, cure, and restore health by local governments and the community (Wildani, 2024). The development of technology is increasingly rapid nowadays, so that most people, whether they are from households in the lower- and upper-middle income brackets, have cell

phones or mobile phone. This communication tool has become a necessity for everyone, where it can increase access for the public to obtain public services by making confirm booking electronically in the hope of speeding up services and increasing patient satisfaction as well intended to improve healthcare service quality standards (Muvira et al., 2021). One dimension of the quality of health services is access to services, which is indicated by patient waiting time (Bustani et al., 2015).

Patient waiting time refers to the duration required for a patient to obtain healthcare services,

How to Cite:

Watri, D., Halim, S., & Alamsyah. (2026). The Influence of Online Registration Service Quality Using the WhatsApp Application on Patient Satisfaction in Outpatient Services at Icare Dental. *Jurnal Penelitian Pendidikan IPA*, 12(10), 226-233. <https://doi.org/10.29303/jppipa.v12i10.14762>

beginning at the registration stage and ending upon entry into the physician's examination room. Length of the wait is recognized as a primary contributor to patient dissatisfaction. Moreover, the length of this interval reflects how effectively healthcare providers organize and manage service components in alignment with patients' conditions, needs, and expectations (Esti P et al., 2003; Guzmán-Leguel et al., 2025; Schneider et al., 2011).

All healthcare providers are obligated to follow minimum service standards related to patient waiting times. The analysis of differences between the period of waiting and the time of clinical treatment is utilized to find out whether the service is perceived as satisfactory or not. The assessment covers several stages, including patient arrival, the registration process, waiting in the waiting area, and the time spent waiting to be called into the examination room. Waiting periods exceeding 90 minutes are categorized as long, whereas waiting times of less than 30 minutes are considered fast. In Indonesia, standards for patient waiting time are established. Patient waiting time standards in Indonesia are established by the Ministry of Health of Indonesia through the framework of minimum service standards. Referring to the national health authority Regulation Number. 129/Menkes/SK/II/ 2008, the maximum allowable waiting time for outpatient services is set at 60 minutes or less (Lee, 2019; Levesque et al., 2020; Maulana et al., 2019; Milton et al., 2022).

Patient satisfaction constitutes an evaluative indicator reflecting patients' appraisal of the quality of healthcare services delivered to them (Randika et al., 2024). Patient satisfaction is measured from the moment a patient arrives until they leave the healthcare facility. Achieving patient satisfaction requires efforts to provide quality healthcare services in healthcare institutions. Staff and institutions provide good, effective, and efficient services. Patient appraisal of healthcare can be impacted by several aspects, including the type of the service received, the attitude of the staff providing the healthcare services, combined with the communication and service provided.

Ensuring patient satisfaction has become a major challenge in today's healthcare delivery. In a broader context, comprehensive healthcare services encompass promotive interventions aimed at health improvement, preventive strategies focused on disease prevention, curative management involving medical treatment, and rehabilitative care directed toward recovery and functional restoration (Beda et al., 2024; Gutenbrunner et al., 2023; Herguedas, 2021).

The standard of healthcare services has a strong connection with patient satisfaction and serves as an important indicator of service success. The level of satisfaction experienced by patients reflects the quality

of care provided. A healthcare service can be regarded as effective when it meets patient expectations, whereas dissatisfaction signals issues that must be addressed to enhance overall service quality (Mahmuda et al., 2024).

An online outpatient registration system is one way to prevent long queues at service locations. Research by Tami et al. (2021) found that registration staff still face several challenges during implementation. This is attributed to the absence of dedicated online registration staff, which requires a combination of online and offline registration. In the research of Zulfah et al. (2022) it was stated that a considerable number of patients still register directly and there is still a buildup of patients, namely queues at the registration counter due to disruptions in online registration (Zulfa et al., 2022).

Icare Dental's online registration system uses WhatsApp for all outpatients. Patient satisfaction serves as a marker of service effectiveness and the ongoing viability of a healthcare facility. Consequently, it is essential to examine how well the services delivered align with patients' expectations and requirements.

This evaluation is intended to evaluate the determinants influencing satisfaction with the performance of care with the electronic registration system as well as the timeliness concerning outpatient service delivery at Icare Dental. The observations of this literature review are anticipated to function as a conceptual basis for future research and to contribute valuable insights into healthcare quality management that may be implemented across other healthcare institutions.

Method

This observation implemented a quantitative approach with a descriptive design - analytical approach. The research design consisted of a survey conducted through the use of questionnaires. The study took place at Icare Dental, Binjai, Indonesia. The instruments and materials utilized in this research are described as follows:

Research Instruments

- Stationery and administration tools in the form of pens, paper, folders and writing boards.
- Laptop/Computer for data processing and report preparation.
- Statistical software in the form of SPSS/ Excel/ JASP: for descriptive and inferential data analysis and word processor (MS Word or Google Docs) for compiling thesis documents.
- Printer and scanner to print and/or digitize the completed questionnaires.

Material

- The SERVQUAL Questionnaire Form consists of questions based on five dimensions of service quality, a Likert scale (1–5) to analyze the extent of satisfaction.
- The Informed Consent Form focus on describing the objective of the study and request the respondent's consent.
- Patient List/ Demographic Data (if permitted by the clinic), used to assist in sample selection and subgroup analysis.
- Literature and prior research sources including textbooks, peer-reviewed scientific journals, and relevant official documents are utilized as theoretical foundations and comparative references.

Sampling technique using technique purposive sampling. The sample in this study consisted of 47 respondents. Data examination used descriptive analysis, namely measuring the average level,

frequency distribution, and percentage per SERVQUAL dimension, and inferential analysis, namely using a correlation test between service quality and patient satisfaction. And regression tests (if used) to see which SERVQUAL dimension was the most influential.

Result and Discussion

Descriptive Analysis

The descriptive distribution for each SERVQUAL dimension regarding the service quality and patient satisfaction variables is presented in Table 1. Relying on table 1, the average results for the physical evidence dimension were 4.35 included in the very satisfied group, the average responsiveness dimension was 4.52 included classified as very satisfied level and average empathy dimension was 4.45 with a very satisfied category.

Table 1. Descriptive Distribution of SERVQUAL Service Quality Dimensions

Variables	Average	Standard Deviation	Minimum	Maximum
Physical Evidence	4.35	0.572	2.5	5.00
Responsiveness	4.52	0.638	2.83	5.00
Empathy	4.45	0.667	2.33	5.00

Based on Table 2, the mean scores for each dimension indicate a consistently high level of satisfaction. The empathy dimension obtained an average score of 4.42, the control dimension 4.48, the

trust dimension 4.50, the self-disclosure dimension 4.47, and the confirmation dimension 4.51; all of these values fall within the —very satisfied category.

Table 2. Descriptive Distribution of Patient Satisfaction Dimensions

Variables	Average	Standard Deviation	Minimum	Maximum
Empathy	4.42	0.639	2.60	5.00
Control	4.48	0.612	3.00	5.00
Sense of trust	4.5	0.576	3.00	5.00
Self- disclosure	4.47	0.602	3.00	5.00
Confirmation	4.51	0.637	3.00	5.00

Normality Test

Derived from the study findings focused on analyzing the contribution of online registration quality through the WhatsApp application on the timeliness of outpatient services at Icare Dental, the Spearman's rho correlation test was employed. This non-parametric test was selected because the data distribution was found to be non-normal, as indicated by The Shapiro-Wilk normality test was implemented. The observations from the normality assessment analysis are presented in Table 3. As reported by table 3, the measured outcomes of the normality test were identified. Shapiro-Wilk it was found that the patient satisfaction variable had a sig value <0.05 as well as the service quality aspect had a sig value <0.05 . This demonstrates that the overall data distribution was not normal, so to see the effect of registration quality on linewith the

application WhatsApp on the timeliness of outpatient services at Icare Dental using a testSpearman rho correlations.

Table 3. Normality Test

Test Shapiro-wilk	Sig	Limit	Information
Patient Satisfaction	0.000	0.05	Abnormal
Quality of Service	0.000	0.05	Abnormal

Inferential Analysis Correlation Test

The influence of online registration quality via WhatsApp on the timeliness of outpatient services at Icare Dental is presented in Table 4. As presented in Table 4, There exists a statistically a meaningful and statistically significant positive relationship was observed between the two variables indicated by a correlation coefficient of 0.627, indicating a strong

degree of association. This relationship is confirmed to be statistically significant, which was statistically significant ($p < 0.05$). These findings imply that

enhancements in service quality are directly associated with increased levels of patient satisfaction in outpatient services at Icare Dental.

Table 4. The Influence of Registration Quality On line With Application Whatsapp Regarding Accuracy Outpatient Service Hours at Icare Dental

			Satisfaction inpatient Road (Y)	Quality of Service (X)
Spearman's rho	Satisfaction outpatient Road (Y)	Correlation coefficient	1.000	0.627**
		Sig. (2-tailed)	.	0.000
		N	47	47
	Quality of Service (X)	Correlation coefficient	0.627**	1.000
		Sig. (2-tailed)	0.000	.
		N	47	47

** . Correlation is significant at the 0.01 level (2-tailed).

Simple Linear Regression Analysis

The influence of online registration quality via WhatsApp on the timeliness of outpatient services at Icare Dental is presented in Table 5. Relying on table 5, a simple linear regression equation can be expressed as follows:

$$Y = 40.457 + 0.895X \quad (1)$$

According to the preceding equation, it is apparent that the value constant. This means that without quality

service, outpatient satisfaction at Icare Dental is valued at 40,457 units.

The regression parameter for service quality (X1) is 0.895. This indicates that a one-unit improvement in service quality, while other independent variables are held constant, will lead to an increase of 0.895 units in outpatient satisfaction at Icare Dental. Furthermore, the Student's t-test shows yielding a statistically significant result ($p < 0.05$), which demonstrates that the quality of online registration through the WhatsApp application has a significant effect on the timeliness of outpatient services at the same facility.

Table 5. The Influence of Registration Quality On line With Application Whatsapp Regarding Accuracy Outpatient Service Hours at Icare Dental Coefficientsa

Model			Std. Error	Standardized coefficients Beta	t	Sig.
1	(Constant)	40,457	10,764		3,759	0.00
	Quality of Service (X)	0.895	0.133	0.707	6,706	0.00

Discussion

Quality of Online Registration Service with the W Application WhatsApp

From the research conducted, it was discovered that respondents' satisfaction service performance was in the highly satisfactory category. This is reflected in the average scores for several key service dimensions, namely tangibles, responsiveness, and empathy, all of which scored in the excellent category very satisfied.

Within the tangible (physical evidence) dimension, the mean score recorded was 4.35, which falls within the —very satisfied category. This indicates that the participants showed an advanced level of satisfaction regarding the operational condition of the facilities, infrastructure, and physical attributes that strengthen the service delivery process. These results indicate that physical aspects such as environmental cleanliness, room tidiness, completeness of equipment, and comfort of the facilities met or even exceeded user expectations. Good physical evidence conveys a professional impression and increases respondents' confidence in the overall service quality.

Next, in the dimensions responsiveness obtained the highest typical value, namely 4.52, in the very satisfied category. This indicates that officers or service providers are considered very responsive and quick in responding to respondents' needs, requests, and complaints. Speed of service, willingness to help, and the ability to provide appropriate solutions are key factors contributing to high levels of satisfaction in this dimension. Good responsiveness reflects an organization's commitment to providing effective and efficient service.

Meanwhile, the dimensions empathy get an average value of 4.45, which also fell into the very satisfied category. These results indicate that respondents perceived attention, care, and friendliness from service providers. Staff were deemed capable of understanding individual needs, providing fair treatment, and establishing good communication. The display of empathy throughout the service delivery process contributed to respondents feeling respected and genuinely attended to, thereby exerting a positive influence on their overall satisfaction perceptions.

The current research is aligned with prior research undertaken by Setiawan et al. (2024), which investigated the association between the quality of online registration services provided through the Jaksehat application and patient satisfaction at Puskesmas Kecamatan Tambora. The findings indicated that most respondents rated the responsiveness aspect positively. However, data presented in the table show that, among 170 respondents, 76 individuals (44.7%) provided a good rating, while 94 individuals (55.3%) expressed a less favorable evaluation. Therefore, the results imply that the bulk of respondents assessed the assurance dimension as inadequate.

There is a high score on physical evidence reflects that the facilities, infrastructure, and other physical aspects accompanying the service are assessed as meeting or even exceeding customer expectations. Meanwhile, the score responsiveness very high level indicates that the service provider demonstrates a fast, accurate and satisfactory level of responsiveness to customer needs, including the ability to respond to requests, questions, and complaints in a timely manner. Moreover, the empathy dimension, which is categorized at a very high level, reflects the provision of strong individualized attention by service personnel, characterized by an understanding of each customer's specific needs and the delivery of warm, attentive communication (Jonathan et al., 2021).

Generally, the empirical findings obtained in this observations suggest that the excellence of services provided delivered is at an excellent level. The consistently high mean scores across these three dimensions indicate that service performance is strong not only in physical aspects and timeliness but also in interpersonal interactions. Accordingly, the level of service quality achieved should be sustained and subject to continuous improvement efforts to ensure the maintenance of optimal respondent satisfaction in the future.

Outpatient Satisfaction Level Regarding the Quality of Online Registration Services Via the WhatsApp Platform

Based on the study findings, all assessed dimensions were categorized as —very satisfied, as reflected by consistently high mean scores. Specifically, the empathy aspect yielded a mean of 4.42, the control dimension 4.48, the trust dimension 4.50, the self-disclosure dimension 4.47, and the confirmation dimension recorded the highest mean score of 4.51. These results suggest that respondents hold highly favorable perceptions regarding the quality of interactions and relational dynamics established within the framework of this study.

The empathy dimension, which obtained a mean score of 4.42, suggests that respondents perceived the involved parties as demonstrating attentiveness, concern, and the capacity to understand their needs, emotions, and viewpoints. In line with interpersonal communication theory articulated by Rogers (1980), empathy refers to the ability to accurately comprehend another individual's experiences from their internal frame of reference while maintaining one's own sense of self. High empathy will create a supportive communication climate, so that individuals feel valued and treated humanely. In an organizational or service context, empathy plays a significant role in increasing respondents' satisfaction, loyalty, and emotional attachment.

Furthermore, the control dimension obtained an average score of 4.48, categorized as very satisfied. This indicates that respondents felt they had space for participation, the opportunity to express their opinions, and fair and directed interaction management. According to the control theory in interpersonal communication (control theory), control relates to the ability of an individual or system to regulate the flow of communication so that it remains balanced and is not dominated by one party. Effective control creates a state of security and comfort, allowing communication to proceed in a two-way, constructive manner.

The trust dimension recorded an average score of 4.50, indicating a very high level of trust among respondents. Trust is a fundamental element in building long-term relationships. Trust is formed through perceptions of ability, integrity, and benevolence. High levels of trust indicate that respondents believe the parties involved are competent, honest, and act in the mutual interest.

Strong trust facilitates communication, reduces conflict, and increases the effectiveness of relationships. The self-disclosure dimension, with an average score of 4.47, indicates that respondents feel comfortable expressing their thoughts, feelings, and experiences. Self-disclosure is the process of sharing personal information with others, which can strengthen interpersonal relationships. High levels of openness reflect a sense of psychological safety (psychological safety), where individuals do not fear negative judgment or adverse consequences. This is an important indicator of healthy and respectful communication.

Meanwhile, the confirmation dimension obtained the highest average value of 4.51, indicating that respondents felt recognized, valued, and accepted in every interaction. According to confirmation theory in interpersonal communication, confirmatory behavior includes acknowledging an individual's existence, value, and contribution. Confirmatory behavior can be

demonstrated through positive feedback, appreciation, and caring responses. A strong score in this area indicates that the interaction effectively fostered a sense of recognition and positive reinforcement, which in turn contributed to an increased level of respondent satisfaction.

Overall, the high average scores across all dimensions indicate that the quality of the relationships and communication established have been very good. This finding aligns with theories of interpersonal communication and organizational behavior, which state that empathy, balanced control, trust, self-disclosure, and confirmation are key factors in creating relationship satisfaction and effectiveness. Therefore, the research findings may serve as an empirical foundation for the advancement of communication approaches and the improvement of interaction quality that are more humanistic, participatory, and oriented toward optimizing respondent satisfaction.

Relationship between Quality of Registration Services on Line with the Application Whatsapp with Outpatient Satisfaction

The outcomes of the research revealed a strong association the link between service quality and outpatient satisfaction at Icare Dental. Analysis showed a correlation coefficient of 0.627, which is categorized as a strong relationship and has a positive direction. The statistical significance indicating statistical significance ($p < 0.05$), demonstrates that the relationship is statistically strongly considerable. Therefore, the hypothesis stating that outpatient satisfaction is positively associated with the quality of services provided at Icare Dental is accepted. The positive correlation suggests that improvements in the quality of services delivered by Icare Dental are associated with correspondingly higher levels of outpatient satisfaction.

Conversely, if service quality declines, patient satisfaction tends to decline as well. This finding confirms that service performance quality is a significant factor that directly influences patient perceptions and satisfaction regarding the dental services received.

Theoretically, the observations of this research are consistent with the conceptual perspective advanced by Parasuraman, Zeithaml, and Berry, who Characterize quality of services as the process of evaluating comparison compared with customer expectations and perceived service performance. When the performance of services fulfills or surpasses patients' expectations, satisfaction is consequently generated. In the context of healthcare services, particularly outpatient services, service quality encompasses not only technical medical aspects but

also the attitude of healthcare workers, timeliness of service, clarity of information, comfort of facilities, and the ability of staff to Ensure patients experience security alongside empathetic support.

Moreover, Philip Kotler and Kevin Lane Keller describe customer satisfaction as an emotional response—either pleasure or disappointment—that emerges after individuals compare the actual performance of a product or service evaluated by how well it meets their expectations. When patients perceive that the healthcare services delivered by Icare Dental meet their expectations, their level of satisfaction will rise, which in turn can help build patient loyalty and trust toward the healthcare facility.

The relatively strong correlation (0.627) indicates that service quality significantly influences outpatient satisfaction at Icare Dental. This indicates that efforts to optimize the excellence of service delivery, in relation to both medical professionalism, speed and accuracy of service, and facility comfort, will positively impact patient satisfaction levels. Satisfied patients generally demonstrate a positive assessment of the service they receive and are more likely to return to healthcare services in forthcoming studies.

The findings of this observations are further reinforced by the Service Quality (SERVQUAL) framework, which highlights that aspects of quality of services namely tangibles, reliability, responsiveness, assurance, and empathy jointly influence level of patient satisfaction. Effective application of these components in outpatient services at Icare Dental can strengthen patients' favorable perceptions of service quality and, consequently, optimize overall patient fulfillment.

Accordingly, the findings suggest that service quality is crucial for raising outpatient satisfaction at Icare Dental. Therefore, Icare Dental management needs to consistently maintain and optimize service quality provided to maintain and further increase patient satisfaction. These efforts are crucial not only for retaining existing patients but also for enhancing the image and public trust in Icare Dental's dental services.

The Contribution of the Quality of Registration Services Online with the Application Whatsapp on Outpatient Satisfaction

In accordance with the outcomes of the linear regression analysis yielded the following regression equation shows a constant value of 40.457. This constant value contains the meaning that if the service quality variable does not experience changes or is considered non-existent, the level of outpatient satisfaction at Icare Dental remains at 40.457 units. This indicates indicating patient satisfaction is not

exclusively dependent on influenced by service quality alone, but also by other factors outside the variables studied, such as patient personal factors, previous experiences, the image of the health facility, and patient psychological factors.

Furthermore, the service quality regression coefficient (X_1) was 0.895. A positive regression coefficient provides statistical evidence of a direct and proportional relationship between service quality and outpatient satisfaction. This suggests that each additional unit of service quality, assuming other independent variables remain constant, will increase outpatient satisfaction at Icare Dental by 0.895 units. This large coefficient value indicates that service quality plays a very strong role in increasing patient satisfaction.

Theoretically, this observation is in agreement with with concept of customer satisfaction proposed by Kotler and Keller, which states that Satisfaction is achieved as a result.

The comparison between customer expectations and perceived performance. If the quality of service received by patients exceeds their expectations, satisfaction levels will increase. In the context of healthcare, service quality includes timeliness, clarity of information, friendly staff, ease of procedures, and the use of technology to support patient comfort.

The t-test outcomes showed a statistically significant value of 0.000 ($p < 0.05$), which means that service quality significantly influences outpatient satisfaction at Icare Dental. Thus, the hypothesis that quality of service provision influences patient satisfaction is accepted. This finding confirms that improving quality of service provision is a key factor in creating patient- perceived satisfaction, especially in outpatient services that demand speed and accuracy of service.

Furthermore, this study also linked online registration via WhatsApp to the timeliness of outpatient services. Utilizing online registration via WhatsApp provides patients with easy access to register without having to visit the healthcare facility in person. This directly contributes to service efficiency, reduces patient waiting times, and improves patient perceptions of the professionalism and readiness of Icare Dental services.

Theoretically, the use of digital technology in health services is in line with the theory service innovation, which states that technology-based service innovation can improve operational efficiency and user satisfaction. Online registration via WhatsApp is a simple yet effective form of service innovation because it utilizes a platform that is familiar to the wider population and easy to operate for various age groups.

Thus, the observations of this study reinforce the view that services of high quality supported by an effective and responsive online registration system can improve the timeliness of service and outpatient satisfaction. Therefore, Icare Dental needs to continue to maintain and improve service quality, particularly in the utilization of information technology, to continuously improve patient satisfaction and maintain patient loyalty.

Conclusion

Based on the research results and discussions processed using SPSS, the subsequent research the following conclusions may be derived presented: (a) The average service quality variable for the physical evidence dimension is 4.35 with a very satisfied category, the average responsiveness dimension is 4.52 with a very satisfied category and the average empathy dimension is 4.45 with a very satisfied category. (b) Patient satisfaction variables average empathy dimension is 4.42 with a very satisfied category, the average control dimension is 4.48 with a very satisfied category, the average trust dimension is 4.50 with a very satisfied category, the average self- disclosure dimension is 4.47 with a very satisfied category and the average confirmation dimension is 4.51 with a very satisfied category. (c) There exists a strong association among the two variables and has a a favorable correlation the link between service quality and outpatient satisfaction at Icare Dental with a coefficient value of 0.627 with a strong relationship strength. (d) An influence exists on the quality of registration online with the applicationWhatsApp on the timeliness of outpatient services at Icare Dental with a coefficient of 0.895 units.

Acknowledgments

Thank you to all parties who have helped in this research so that this article can be published.

Author Contributions

All authors contributed to writing this article.

Funding

No external funding.

Conflicts of Interest

No conflict interest.

References

- Beda, B. Y., Madiistriyatno, H., & Panjaitan, E. H. H. (2024). Analisis Tingkat Kepuasan Pasien Bpjs Di Poli Penyakit Dalam Rsud Lewoleba Di Nusa Tenggara Timur. *Fakultas Manajemen Dan Bisnis*

- Universitas Mitra Bangsa*, 29(2), 1–24.
<https://doi.org/10.29040/jie.v8i2.14474>
- Bustani, N. M., Rattu, A. J., & Saerang, J. S. M. (2015). Analisis Lama Waktu Tunggu Pelayanan Pasien Rawat Jalan Di Balai Kesehatan Mata Masyarakat Propinsi Sulawesi Utara. *Jurnal E-Biomedik*, 3(3).
<https://doi.org/10.35790/ebm.3.3.2015.10456>
- Esti P, A., Husada, Y. P., & Rusmawati, A. (2003). Pengaruh waktu tunggu dan waktu sentuh pasien terhadap tingkat kepuasan pasien poli umum di puskesmas sukorame kota kediri. *Jurnal Ilmiah Kesehatan*, 2(1), 1–8. Retrieved from <https://sjik.org/index.php/sjik/article/view/44>
- Gutenbrunner, C., Nugraha, B., & Meyer, T. (2023). Prevention Aiming at Functioning—Describing Prevention in the Context of Rehabilitation: A Discussion Paper. *International Journal of Environmental Research and Public Health*, 20(7), 5399. <https://doi.org/10.3390/ijerph20075399>
- 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>
- Herguedas, A. J. U. (2021). Non-Pharmacological Interventions in Preventive, Rehabilitative and Restorative Medicine. *Alternative Medicine*. <https://doi.org/10.5772/intechopen.94187>
- Jonathan, G., & Iriani, A. (2021). Evaluasi Kualitas Jasa Sekolah Dasar Dengan Model Servqual Untuk Menangani Penurunan Jumlah Peserta Didik. *Jurnal Administrasi Dan Manajemen Pendidikan*, 4(1), 51. <https://doi.org/10.17977/um027v4i12021p51>
- Lee, D. (2019). A model for designing healthcare service based on the patient experience. *International Journal of Healthcare Management*, 3(12), 180–188. <https://doi.org/10.1080/20479700.2017.1359956>
- Levesque, J. F., & Sutherland, K. (2020). Combining patient, clinical and system perspectives in assessing performance in healthcare: An integrated measurement framework. *BMC Health Services Research*, 20(1). <https://doi.org/10.1186/s12913-019-4807-5>
- Mahmuda, D. A., Yusran, S., & Hartoyo, A. M. (2024). Hubungan Antara Mutu Pelayanan Terhadap Tingkat Kepuasan Pasien Poli KIA Puskesmas Poasia Kota Kendari Tahun 2023. *Jurnal Administrasi Dan Kebijakan Kesehatan (Jakk-Uho)*, 5(1), 111. Retrieved from <http://ojs.uho.ac.id/index.php/jakk->
- Maulana, D., Tamrin, R., Alim, A., & Imran, A. (2019). Analisis Hubungan Waktu Tunggu Terhadap Kepuasan Pasien Pada Puskesmas Maccini Sombala. *Jurnal Kesehatan*, 12(2), 99. <https://doi.org/10.24252/kesehatan.v12i2.10483>
- Milton, J., Erichsen Andersson, A., Åberg, N. D., Gillespie, B. M., & Oxelmark, L. (2022). Healthcare professionals' perceptions of interprofessional teamwork in the emergency department: a critical incident study. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine*, 30(1), 46. <https://doi.org/10.1186/s13049-022-01034-0>
- Muvira, M. Y., Syarifah, W. N., Sonia, D., Medis, R., Kesehatan, I., Piksi, P., & Bandung, G. (2021). Standar Pelayanan Minimal Penyediaan Rekam Medis Di Pusat Mata Nasional Rumah Sakit Mata Cicendo Bandung. *Jurnal Wiyata*, 8(2), 124–130. Retrieved from www.cicendoeyehospital.org.
- Randika, R., Saputro, A. H., & Hasrianto, N. (2024). Tingkat Kepuasan Pasien Terhadap Pelayanan Kesehatan di Puskesmas. *HOPE (The Journal of Health Promotion and Education)*, 1(2), 60–66. <https://doi.org/10.36049/hope.v1i2.309>
- Rogers, C. (1980). *A way of being*. Houghton Mifflin.
- Schneider, E., Burgers, J., Friedberg, M., Rosenthal, M. B., Leape, L., & Schneider, E. (2011). Defining and Measuring Integrated Patient Care: Promoting the Next Frontier in Health Care Delivery. *Medical Care Research and Review*, 68(1), 112–127. <https://doi.org/10.1177/1077558710371485>
- Setiawan, D. R., Harahap, S. G., & Ludovikus, L. (2024). Hubungan Kualitas Pelayanan Pendaftaran Online pada Aplikasi Jaksehat dengan Kepuasan Pasien di Puskesmas Kecamatan Tambora Tahun 2024. *MAHESA : Malahayati Health Student Journal*, 4(11), 5192–5206. <https://doi.org/10.33024/mahesa.v4i11.17348>
- Tami, Y., Sumarni, S., & Sarwadhamana, R. J. (2021). Implementasi Pendaftaran online Pasien Rawat Jalan terhadap Kepuasan Pasien di Rumah Sakit Nur Hidayah Bantul. *Indonesian Journal of Hospital Administration*, 4(2), 43. [https://doi.org/10.21927/ijhaa.2021.4\(2\).43-51](https://doi.org/10.21927/ijhaa.2021.4(2).43-51)
- Wildani, M. (2024). Pengaruh Waktu Tunggu Terhadap Kepuasan Pasien Di Unit Rawat. *Jurnal Kesehatan Vokasional*, 27(03), 98–102. <https://doi.org/10.66294/njms.v1i6.34>
- Zulfa, & Hasanah, N. (2022). Pengaruh Kualitas Pendaftaran Online (Berbasis Web dan Aplikasi) terhadap Kepuasan Pasien Rawat Jalan di Rumah Sakit Islam Ibnu Sina Bukittinggi. *'Afiyah1*, 9(2), 14–18. Retrieved from <https://ejournal.umnyarsi.ac.id/index.php/JAV1N1/article/view/232>