

The Effects of Doctor-Patient Consultation Applications on Treatment Adherence, Recovery Duration, and Patient Satisfaction: A Systematic Review

Dewi Susilowati¹, Ayun Sriatmi², Septo Pawelas Arso³, Martha Irene Kartasurya⁴

^{1,2,3,4}Universitas Diponegoro, Semarang, Indonesia

Email: dewisusiobgyn@gmail.com

Abstract

Doctor patient consultation services play a crucial role in improving healthcare delivery and patient outcomes. With the increasing adoption of telemedicine and mobile health applications, understanding the impact of these consultation services on patient adherence, recovery, and satisfaction has become essential. This study aims to evaluate the effectiveness of various consultation methods, including telemedicine and mobile apps, in enhancing treatment adherence and patient experience, particularly in managing chronic diseases such as tuberculosis and diabetes. A comprehensive literature review was conducted, analyzing empirical studies focused on doctor-patient consultations delivered through traditional, telemedicine, and mobile health platforms. Key variables examined included service quality dimensions (reliability, responsiveness, empathy), educational interventions, and the use of digital reminder systems. Studies from diverse healthcare settings and patient populations were considered to assess the influence of consultation quality and technology-assisted interventions on patient adherence and health outcomes. Findings consistently demonstrate that high-quality consultation services significantly improve patient adherence and satisfaction. Telemedicine and mobile applications contribute positively by facilitating continuous engagement and medication reminders. Educational efforts integrated into consultation processes further enhance patient knowledge and compliance. However, adherence is multifactorial, influenced by socio-economic status, health literacy, and systemic healthcare barriers. While telemedicine shows promise, challenges such as infrastructure limitations and regulatory hurdles remain. The study recommends integrating technology with empathetic, patient-centered communication and tailored educational support to optimize treatment adherence and clinical outcomes.

Keywords: Doctor-Patient Consultation, Telemedicine, Patient Adherence, Mobile Health Applications, Healthcare Service Quality.

----- ◆ -----

A. INTRODUCTION

One of the fundamental needs that every human must fulfill is the need for health. However, in Indonesia, access to healthcare services remains a complex issue. Several factors contribute to the difficulty in accessing healthcare services, such as the limited number of healthcare facilities, a shortage of medical personnel, and poor accessibility to peripheral regions. According to data from the Indonesian Ministry of Health, in 2019 there were 9,774 community health centers (PUSKESMAS) and 2,406 hospitals across the country. Nevertheless, there are still areas, such as remote regions in Papua and Maluku, that are difficult to reach with these healthcare facilities. In addition, there is a disparity in the quality of healthcare services between urban and

rural areas. Furthermore, healthcare is still considered expensive by a significant portion of the Indonesian population (Damayanti, et al., 2024)

Healthcare services refer to all efforts carried out individually or collectively within an organization to maintain and improve health, prevent and treat diseases, and restore the health of individuals, families, groups, or communities. Good healthcare services must meet at least thirteen essential criteria: availability, comprehensiveness, integration, continuity, equity, sustainability, appropriateness, acceptability, accessibility, affordability, effectiveness, efficiency, and quality (Vanchapo et al., 2022).

This systematic review aims to explore the impact of doctor–patient consultation applications on patient adherence, recovery duration, and overall satisfaction. It investigates how the use of digital health platforms influences the quality and effectiveness of healthcare delivery, particularly in terms of improving treatment compliance, reducing recovery time, and enhancing patient experiences.

B. METHOD

This review was conducted using a systematic approach guided by the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta Analyses) protocol. The objective of this review was to identify relevant studies that examine the impact of doctor patient consultation applications on patient adherence, recovery duration, and satisfaction. Research articles were retrieved from three electronic databases: Google Scholar, PubMed, and Scopus. The search focused on publications from 2019 to 2024, using keywords such as *doctor patient consultation*, *digital health*, *telemedicine*, *mobile health applications*, *treatment adherence*, *recovery time*, and *patient satisfaction*.

Studies were selected based on predefined inclusion and exclusion criteria. The inclusion criteria were: original research articles written in English; employing quantitative, qualitative, or mixed-method approaches; peer-reviewed; published between 2019 and 2024; and available in full text. The studies must specifically examine the role, use, or effectiveness of doctor patient consultation applications (e.g., mobile apps, teleconsultation platforms) in relation to at least one of the following outcomes: patient adherence, recovery time, or patient satisfaction.

The exclusion criteria included: review articles, editorials, or commentaries; studies not focused on doctor–patient consultation or digital health applications; articles using only secondary data; non-peer-reviewed publications; or articles that were not accessible in full text. Additionally, studies that did not clearly address at least one of the three primary outcomes (adherence, recovery time, or satisfaction), or lacked a focus on digital or app-based consultation tools, were excluded from this review.

C. RESULT AND DISCUSSION

Based on the literature review conducted, a total of 25 relevant articles were identified, with the selection process illustrated in Figure 1. The review followed the

PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines, consisting of four main stages. In the Identification stage, studies were retrieved using specific keywords across scholarly databases including Google Scholar, Scopus, and PubMed, to capture a wide range of discussions on doctor–patient consultation applications and their effects on treatment adherence, recovery duration, and patient satisfaction.

The Screening stage involved a preliminary review of article titles and abstracts to remove duplicates, non-relevant studies, and publications that did not focus on the role of digital health or mobile consultation platforms. Only studies that investigated digital doctor–patient interactions and their influence on treatment outcomes were retained. In the Eligibility stage, full-text articles that passed the screening were assessed in detail based on the predetermined inclusion and exclusion criteria. Studies were excluded if they focused on different health technology contexts, did not evaluate the outcomes of interest (adherence, recovery time, or satisfaction), or lacked methodological rigor. Finally, in the Inclusion stage, 20 articles that met all criteria were selected for final analysis. These articles enabled a qualitative synthesis to identify prevailing patterns, highlight research gaps, and explore the most effective features and impacts of doctor–patient consultation applications on patient care outcomes. This rigorous selection process ensured that only relevant and high-quality studies were included, providing a robust foundation for understanding how digital consultation tools contribute to improved healthcare delivery and patient experience.

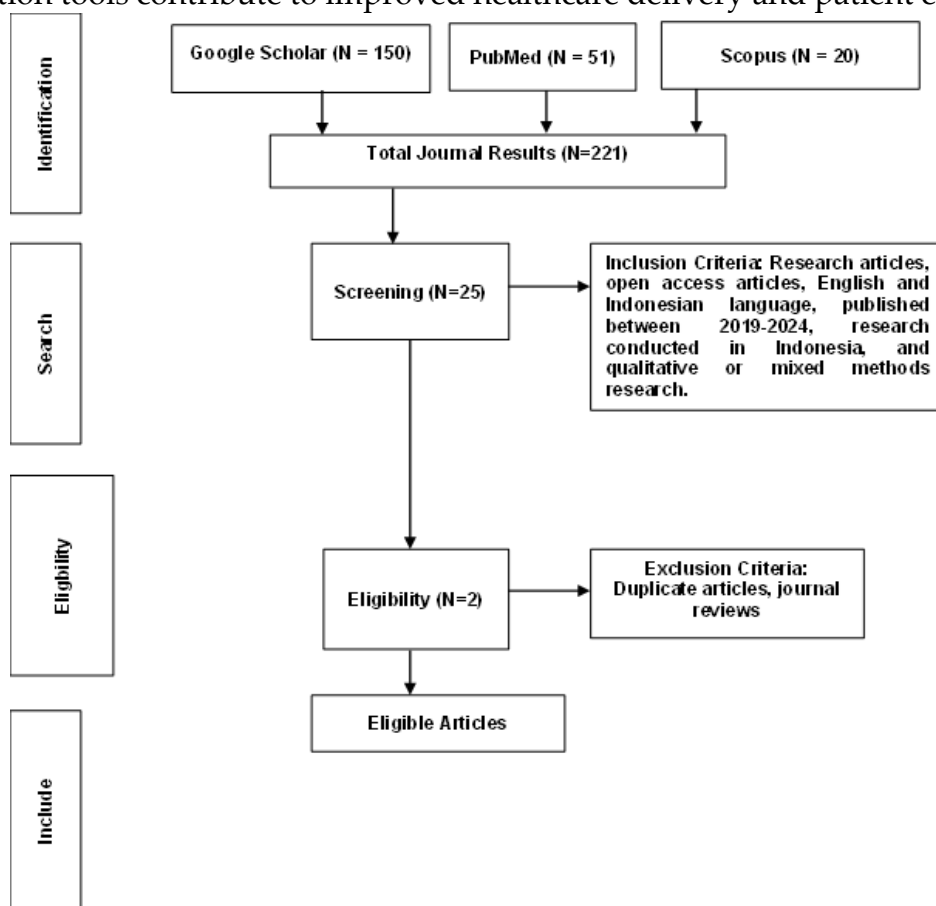


Figure 1. Stages of Article Search and Selection Leading to Reviewed Articles

Table 1. Doctor–Patient Consultation Applications and Their Impact on Patient Adherence, Recovery Time, and Satisfaction: A Systematic Review

No.	Researcher(s), Year	Objective	Population	Methodology	Findings
1.	(Tampiasih & Karno, 2023)	To analyze the relationship between hospital service quality and patient satisfaction.	Hospital patients (general population, not specified by demographic detail).	Library research using documentation method for data collection and content analysis for data interpretation. Accuracy was ensured through cross-checking sources and considering reviewers' feedback.	Improved hospital service quality significantly increases patient satisfaction. Satisfaction is shaped by whether services meet or exceed patient expectations. Dissatisfaction occurs when expectations are not met.
2.	(Irawan et al., 2020)	To measure the level of patient satisfaction as an indicator of hospital service performance	98 inpatients from a total population of 129 patients at Grandmed Hospital during March 2020	Purposive sampling (non-probability sampling) and analysis using the SERVQUAL method, which assesses five service quality dimensions.	To improve service quality, special attention is needed for reliability and responsiveness, where gaps are most critical
3.	(Reyaan et al., 2023)	To evaluate the effect of education and a medication reminder application on the knowledge and compliance of pulmonary tuberculosis (TB) patients.	29 pulmonary TB patients at two community health centers in Bandung, Indonesia; 16 subjects completed the study.	Experimental design with randomized assignment into two groups: <ul style="list-style-type: none"> Intervention group: received education plus a mobile medication reminder app ("Jadwal Minum Obat"). Control group: received only counseling. Data collected using KATUB-Q for knowledge, MARS-5 questionnaire, and 	<ul style="list-style-type: none"> No significant improvement in knowledge and compliance in the intervention group ($p > 0.05$). However, medication adherence was higher in the intervention group (87.4% \pm

				pill count for compliance assessment	<p>4.8) compared to the control group (78.8% ± 8.3%).</p> <ul style="list-style-type: none"> • Participants found the app useful despite some shortcomings. • Recommendation for further research with larger sample size and improved app.
4.	(Aji Saputra & Kumala Dewi, n.d.)	To determine the relationship between service quality and customer satisfaction in the doctor consultation feature of the Halodoc telemedicine platform.	100 users of the Halodoc platform in Semarang and surrounding areas, mostly female (66%), employed (88%), with education ≥D3 (56%), and aged around 35 years	Quantitative explanatory research using a cross-sectional approach. Variables analyzed include dimensions of service quality (reliability, responsiveness, assurance, empathy, tangibles) and dimensions of satisfaction (application service, attitude and response, price, and consultation convenience). Data analyzed with statistical tests.	<p>53% of users were satisfied with the service quality; 47% dissatisfied.</p> <ul style="list-style-type: none"> • Only 33% were satisfied with the consultation service; 67% dissatisfied. • Significant relationship found between service quality and satisfaction (p = 0.000). • If service quality was rated good, 81.8% of

					<p>users were satisfied; if poor, only 38.8% were satisfied.</p> <ul style="list-style-type: none"> • Recommendation: expand future research beyond just the consultation feature.
5.	(Kesehatan Bhakti Pertiwi Husada et al., n.d.)	To determine the effect of access, quality, service process, and health system aspects on outpatient satisfaction with the use of a teleconsultation application during the COVID-19 pandemic at Stella Maris Hospital, Makassar.	150 teleconsultation patients at Stella Maris Hospital, Makassar in 2021	Quantitative study with a cross-sectional design. Sampling technique used was probability sampling with accidental sampling method. Data analysis included univariate and bivariate analysis.	Access, service process, and health system aspects influence outpatient satisfaction and teleconsultation usage. It is recommended that the hospital improve the teleconsultation system to enhance user-friendliness for patients and their families.
6.	(Akbar et al., n.d.)	To determine the association between sociodemographic factors and medication adherence in hypertensive patients.	125 hypertensive patients from 10 health centers in Yogyakarta, Indonesia, surveyed from January to April 2023.	Non-experimental, cross-sectional quantitative study. Medication adherence measured using the Probabilistic Medication Adherence Scale (ProMAS).	Most hypertensive patients in Yogyakarta showed good adherence to medication. However, non-adherence may still occur across all age groups. Continuous attention to adherence is essential in hypertension management.

7.	(Samudra Putra et al., 2023)	To identify the level of understanding and the factors influencing adherence to antiretroviral (ARV) medication among patients with HIV/AIDS.	7 relevant Indonesian journals (2017–2022) on HIV/AIDS and ARV adherence.	Literature review, cross-sectional, correlative analytic studies from Google Scholar.	Improving adherence to ARV therapy requires more than individual knowledge support from family and the social environment is essential. Health programs should include counseling strategies that involve both patients and their support systems.
8.	(Informasi Kesehatan et al., 2021)	To determine the relationship between drug adherence and recovery in adult pulmonary TB patients.	50 adult pulmonary TB patients at Puskesmas Kemang, Bogor Regency (on therapy for 5–6 months).	Correlational study with cross-sectional design using total sampling and questionnaires.	There is a weak relationship between medication adherence and recovery ($p = 0.072$; coefficient = 0.246).
9.	(Widodo & Prayoga, 2022)	To determine factors influencing patient satisfaction and loyalty in primary health facilities through a literature review.	Literature sources from SCOPUS, SAGE, and Web of Science databases.	Narrative literature review focusing on patient satisfaction and loyalty factors in primary health care.	Factors affecting patient satisfaction and loyalty include doctor-patient relationship, patient trust, meeting social needs, and personalized preventive services. Improving these factors can increase patient loyalty and utilization of primary health services in Indonesia.
10.	(Pratiwi et al., n.d.)	Pulmonary tuberculosis	To identify the effectiveness	Quasi-experimental	No correlation between age,

		(TB) is a major global health problem. Indonesia ranks second in TB cases worldwide. Mobile phones and electronic media can influence health behaviors positively.	of DOTS (Directly Observed Treatment Short-Course) delivered via Android apps in promoting adherence to TB treatment among pulmonary TB patients at Pamulang Public Health Centre, South Tangerang City.	quantitative study with 40 pulmonary TB patients divided into control (20) and experimental groups (20). Sampling used accidental purposive technique.	gender, weight with adherence and recovery in both groups. Significant correlation between medication adherence and recovery in both groups. Significant differences in adherence (p=0.04) and recovery (p=0.019) between control and experimental groups.
11.	(Manyering et al., 2023)	To analyze the correlation between waiting time duration and satisfaction among outpatients in the general surgery polyclinic at dr. Mohammad Soewandhie Regional Public Hospital, Surabaya.	62 outpatient participants of BPJS (Indonesia's National Health Insurance program) at the general surgery clinic of dr. Mohammad Soewandhie Regional Public Hospital, Surabaya.	A quantitative study with an analytical observational design. Data were collected through observation and questionnaires. Sampling was done using systematic random sampling. Waiting time was categorized into fast service (≤ 60 minutes) and long service (> 60 minutes). Patient satisfaction was measured using five indicators: reliability, responsiveness, assurance, empathy, and physical evidence. Analysis was performed using the Spearman correlation test.	Most respondents (93.5%) experienced long waiting times. Patient satisfaction levels were: 11.3% fairly satisfied, 66.1% satisfied, and 22.6% very satisfied. There was no significant correlation between waiting time duration and patient satisfaction (p = 0.626).

12.	(Bashir et al., 2019)	To gain in-depth information about patients' understanding of ARV treatment and the challenges affecting adherence to ARV therapy in HIV/AIDS patients.	Nine HIV/AIDS patients selected through purposive sampling.	Descriptive qualitative research using purposive sampling with nine participants.	Patients' understanding of antiretroviral treatment varied, and factors causing non-adherence included irregular physician consultation schedules, treatment costs, lack of family support, and side effects of the medication.
13.	(Agus Tiar et al., 2022)	To determine the correlation between adherence to hemodialysis and quality of life in patients undergoing hemodialysis.	37 chronic kidney disease (CKD) patients receiving hemodialysis at the Malahayati Hemodialysis Room, RSUD Dr. Saiful Anwar Malang.	Descriptive analytic study with a correlational design using a cross-sectional approach	There is a significant positive relationship between adherence to hemodialysis and quality of life among CKD patients ($p = 0.005$, correlation coefficient = 0.451). Higher adherence is associated with better quality of life.
14.	(Aji Wibowo et al., 2021)	To measure the medication adherence level of type 2 diabetes mellitus (DM) patients, validate the adherence scale used, and analyze the correlation between adherence and clinical outcomes.	Type 2 DM patients enrolled in the Prolanis program at four health centers in Banyumas district from January to April 2020.	A cross-sectional study design. Medication adherence was measured using the MARS-10 questionnaire, translated using a backward-forward method, with content and internal validity testing. Clinical outcomes were assessed via fasting blood glucose	<ul style="list-style-type: none"> The MARS-10 showed high content validity (IG ≥ 0.8) and good reliability (Cronbach's Alpha = 0.747). 80.3% of patients were categorized as adherent,

				<p>levels. Statistical analyses included validity tests (Gregory index, item correlation), reliability (Cronbach's Alpha), and correlation between adherence and clinical outcomes.</p>	<p>while 19.7% were non-adherent.</p> <ul style="list-style-type: none"> • No significant correlation was found between adherence and fasting blood glucose levels ($p > 0.05$). • The lack of correlation may be due to multiple influencing factors on clinical outcomes, including general, individual, and unpredictable factors.
15.	(Wibowo et al., 2021)	To systematically review and identify the factors influencing medication adherence among diabetes patients in Indonesia.	The review analyzed studies related to diabetes medication adherence among Indonesian patients. Out of 370 initial articles retrieved (Garuda = 36, Science Direct = 108, PubMed = 18, Sinta = 208), 16 articles met the inclusion criteria for analysis after screening.	A systematic literature review was conducted using national databases (Garuda and Sinta) and international databases (PubMed and Science Direct). Articles published between January 2011 and December 2020 were included. Study quality was assessed using the SQAT guidelines, and the review process followed PRISMA guidelines. Factors	Multiple factors influence medication adherence in Indonesian diabetes patients, including socioeconomic status, healthcare system, therapy regimen, disease characteristics, patient demographics and emotions, as well as disease management practices.

				affecting adherence were categorized according to the World Health Organization's domains of compliance factors.	Addressing these factors through tailored interventions, such as adjusting medication frequency and providing social support, can improve adherence.
16.	(Sidik, n.d.)	To review the implementation of telemedicine services in Indonesian hospitals and identify challenges faced.	Various Indonesian hospitals that have adopted telemedicine services	Systematic review of articles collected from multiple online databases, selected based on relevance to telemedicine implementation in Indonesia.	Telemedicine services in Indonesian hospitals include online consultations and medication/care recommendations. Challenges identified are unequal access across regions, lack of clear regulations and procedures, and poor coordination among stakeholders. Improved planning and stakeholder collaboration are needed for effective telemedicine implementation.
17.	(Hutomo & Wira Pria Suhartana, n.d.)	To analyze the implementation of online doctor consultations in Indonesia, focusing on legal compliance and	Online health service providers, partnering doctors, and patients using digital consultation	Normative legal study reviewing relevant Indonesian laws, including the Health Law, Medical Practice Law, and Information and	Online doctor consultations in Indonesia must comply with multiple legal frameworks. Patient protection as consumers and

		patient protection.	platforms in Indonesia.	Electronic Transactions Law, as well as regulations governing online healthcare.	the responsibilities of both doctors and application providers must be clearly regulated under therapeutic contract principles. Accountability of platform owners and affiliated doctors for any harm to patients needs to be enforced to ensure ethical and safe healthcare delivery
18.	(Manajemen et al., n.d.)	To evaluate medication adherence and identify factors associated with non-adherence in patients with type 2 diabetes mellitus (DM) in South Kalimantan.	48 outpatient type 2 DM patients from December 2014 to March 2015	Descriptive analytic study using the 8-item Morisky Medication Adherence Scale (MMAS-8) and Medication Possession Ratio (MPR). Chi-square and binary logistic regression were used to assess associations between patient characteristics and medication adherence.	Only 39.6% of patients were adherent to their medication. A significant correlation was found between MMAS-8 and MPR scores ($p = 0.004$). Gender was a significant predictor of adherence ($p = 0.011$); males were 5.7 times more likely to adhere than females (aOR 5.7; 95% CI: 1.3–25.7), after adjusting for confounding factors. The main reasons for non-adherence were failure to refill

					medications (86.4%) and forgetting to take medications (77.3%).
19.	(Pratama et al., 2021)	To evaluate the effect of Medication Therapy Management (MTM) on clinical outcomes and quality of life in patients with hypertension.	70 hypertensive patients (67.1% female), mostly aged 55–64 years (51.4%), with high school education (42.8%), non-civil servant occupations (45.7%), duration of diagnosis 1–10 years (77.1%), and comorbid diabetes mellitus (10%).	Quasi-experimental one-group pretest-posttest design. Quality of life and blood pressure (systolic and diastolic) were measured before and after MTM intervention. Analysis used paired sample t-test and Wilcoxon test, with significance at $p < 0.05$.	<ul style="list-style-type: none"> • Quality of Life: Increased significantly from 54.4 ± 8.9 to 60.4 ± 6.6 ($p < 0.001$). • Systolic BP: Decreased from 159.2 ± 8.9 mmHg to 144.1 ± 14.4 mmHg ($p < 0.001$). • Diastolic BP: Decreased from 103.8 ± 8.0 mmHg to 89.7 ± 8.8 mmHg ($p = 0.016$). MTM significantly improved both clinical outcomes and patient quality of life.
20.	(Meylani et al., n.d.)	To determine the influence of Halodoc application usage on fulfilling health information needs during the COVID-19 pandemic in Paniki Subdistrict, Mapanget	122 Halodoc users in Paniki Subdistrict, with a sample of 55 respondents selected using simple random sampling.	Quantitative study using questionnaires. Analysis was based on Rosengren's media use theory and Guha's four indicators of complete information. Data were analyzed using descriptive	There is a very strong positive relationship ($r = 0.850$) between Halodoc usage and the fulfillment of health information needs. The significance value was 0.000 ($p < 0.05$),

		District, Manado City.		statistics and Pearson Product-Moment correlation.	indicating a statistically significant relationship.
21.	<i>(Analisis_Pengaruh_Keputusan_Penggunaan_Telemedicin, n.d.)</i>	To examine the effect of Marketing 4.0 strategies on the usage of Halodoc's Telemedicine services in Bogor City.	270 Halodoc users in Bogor City selected through accidental sampling	Quantitative cross-sectional study using a validated and reliable questionnaire. Data were analyzed using logistic regression.	<ul style="list-style-type: none"> • Co-creation (Sig. = 0.016) and Conversation (Sig. = 0.028) strategies significantly influenced Halodoc usage. • Currency (Sig. = 0.216) and Communal Activation (Sig. = 0.152) strategies showed no significant effect. <p>Conclusion: Marketing strategies focused on engagement and dialogue (co-creation and conversation) positively impact Telemedicine service usage. Evaluation and enhancement of these strategies are recommended for</p>

					sustainability.
22.	(Dopades et al., 2023)	To determine the relationship between User Interface (UI) and User Experience (UX) quality and users' motivation to use the Halodoc health service application	Halodoc application users (exact number not specified) participating in user surveys.	Mixed-method approach: <ul style="list-style-type: none"> Quantitative: User surveys to collect measurable data on UI/UX experience. Qualitative: Analysis of design principles and visual elements relevant to UI/UX. 	There is a positive relationship between UI & UX quality and user motivation. Better UI/UX design increases the likelihood of users engaging with the Halodoc application for health services
23.	(Hapsari, n.d.)	To analyze the influence of user experience in using the Halodoc application on customer purchase intention during the Covid-19 pandemic.	100 respondents aged 20–24 years in Sidoarjo, selected using a non-probability purposive sampling technique.	Quantitative research using questionnaires and statistical data analysis to measure the effect of user experience on customer purchase intention through the Halodoc application.	User experience has a significant simultaneous influence on customer purchase intention in using Halodoc's services during the Covid-19 pandemic.
24.	(Azrumi El Ghazali & Sarah Samaria, 2024)	To determine the effect of using Instagram content from @halodoc on fulfilling the health information needs of Generation Z in Indonesia.	100 Halodoc Instagram followers aged 15–23 years (Generation Z).	Quantitative research using surveys to measure the influence of Halodoc's Instagram content on Gen Z's health information needs.	There is a positive influence of Halodoc's Instagram content on fulfilling the health information needs of Generation Z.
25.	(Ariadanang & Chusumastuti, 2022)	To examine the effect of system quality and information quality of the Halodoc application on	Followers of the Twitter account @HalodocID who used the Halodoc application as	Quantitative study using the Information Systems Success model by DeLone and McLean. Data were collected via	Both system quality and information quality have a positive and significant effect on user

		user satisfaction.	of August 10, 2021.	questionnaires distributed between August 19–30, 2021. Multiple linear regression analysis was used after confirming data validity and reliability, as well as passing tests for normality, linearity, multicollinearity, autocorrelation, and heteroscedasticity. Hypothesis testing was performed with simultaneous (F test) and partial (t test) tests.	satisfaction with the Halodoc application
--	--	--------------------	---------------------	--	---

Table 1 presents a systematic review of various studies on doctor patient consultation applications and their impact on patient adherence, recovery time, and satisfaction. The studies cover a broad range of healthcare settings, populations, and methodologies, providing a comprehensive overview of how consultation services both in-person and via telemedicine or mobile applications affect key patient outcomes. Many studies emphasize the crucial role of service quality in shaping patient satisfaction, with factors such as reliability, responsiveness, empathy, and ease of access proving significant. For example, research by Tampiasih & Karno (2023) and Irawan et al. (2020) found that improved hospital service quality strongly correlates with higher patient satisfaction. Other studies investigate specific patient populations, such as tuberculosis, hypertension, diabetes, and HIV/AIDS patients, exploring how educational interventions, reminder applications, and medication therapy management influence medication adherence and clinical outcomes. Reyaan et al. (2023) found that mobile medication reminder apps can enhance adherence despite no significant knowledge improvement, while Pratiwi et al. showed that directly observed treatment via mobile apps improves adherence and recovery rates among pulmonary TB patients. Several studies also identify factors that impact adherence beyond patient knowledge alone, such as family support, socioeconomic status, and health system factors (Samudra Putra et al., 2023; Wibowo et al., 2021). Additionally, the implementation of telemedicine platforms in Indonesia faces challenges related to unequal access, regulatory compliance, and stakeholder coordination (Sidik; Hutomo & Suhartana). Some research highlights that long waiting times do not necessarily reduce patient satisfaction, suggesting other dimensions of service quality may compensate for delays (Manyering et al., 2023). Overall, the review highlights that

effective consultation services, supported by technology and quality healthcare processes, can improve patient adherence, speed recovery, and increase satisfaction, but continuous efforts are needed to address systemic barriers and tailor interventions to patient needs.

D. CONCLUSION

The studies reviewed indicate that doctor–patient consultation services, including those delivered through telemedicine and mobile applications, significantly improve patient adherence, recovery outcomes, and satisfaction. Service quality factors such as reliability, responsiveness, and empathy are critical in enhancing patient experiences. Educational interventions and medication reminder apps help boost adherence, particularly in chronic conditions like tuberculosis and diabetes. However, patient adherence is influenced not only by knowledge but also by social support, economic factors, and health system accessibility. Challenges remain in implementing telemedicine widely due to infrastructure, regulatory, and coordination issues. Overall, leveraging technology alongside high-quality healthcare processes holds promise for better patient outcomes, but tailored approaches and systemic improvements are essential to maximize benefits.

REFERENCES

- Ariadanang, A. K., & Chusumastuti, D. (2022). Pengaruh Kualitas Sistem dan Kualitas Informasi Aplikasi Telemedicine Halodoc Terhadap Kepuasan Pengguna Pada Follower Akun Twitter @Halodocid. *Jurnal Ilmiah Manajemen Informasi dan Komunikasi*, 6(2), 119–136.
- Bashir, A., Dewi, A., & Khoiriyati, A. (2019). Pengaruh teknik relaksasi nafas dalam dan terapi murottal Al-Qur'an terhadap tekanan darah dan respirasi pada pasien pre operasi. *JHeS (Journal of Health Studies)*, 3(2), 10–17.
- Damayanti, F., & Gani, A. (2024). Hubungan Pemanfaatan Telemedicine Dengan Peningkatan Kepuasan Pasien, Kepatuhan Pasien Berobat dan Loyalitas Pasien di Rumah Sakit. *Syntax Idea*, 6(3), 1085-1100.
- Dopades, M., Sumarlin, R., & Deanda, T. R. (2023). Analisis Ui Dan Ux Aplikasi Halodoc Terhadap Pengguna Layanan Kesehatan. *Demandia: Jurnal Desain Komunikasi Visual, Manajemen Desain, dan Periklanan*, 8(1), 1-20.
- Ekawaty, D., Zulkifli, Z., Amalia, M., & Asthan, R. T. S. (2021). Analisis Pengaruh Kepuasan Pasien Rawat Jalan terhadap Penggunaan Aplikasi Telekonsultasi pada Masa Pandemi Covid-19. *Jurnal Kesehatan Pertiwi*, 3(2), 1-11.
- El Ghazali, A., & Samaria, S. (2024). Pengaruh Konten Instagram Halodoc Terhadap Pemenuhan Kebutuhan Informasi Kesehatan Gen Z. *TUTURAN: Jurnal Ilmu Komunikasi, Sosial dan Humaniora*, 2(2), 333-346.
- Thufailah & Hapsari, O. E. (2021). Pengaruh User Experience Pada Aplikasi Telemedicine "Halodoc" Terhadap Customer Purchase Intention Selama Masa Pandemi Covid-19. https://www.researchgate.net/publication/359092021_Pengaruh_User_Experi

[ence Pada Aplikasi Telemedicine 'Halodoc' Terhadap Customer Purchase Intention Selama Masa Pandemi Covid-19](#)

- Hutomo, M., & Suhartana, L. W. P. (2020). Perlindungan Hukum Terhadap Pasien Pengguna Jasa Layanan Kesehatan Online. *Jurnal Education and development*, 8(3), 967-967.
- Irawan, B., & Sitanggang, E. D. (2020). Analisis tingkat kepuasan pasien terhadap mutu pelayanan rumah sakit berdasarkan metode service quality (servqual). *Jurnal Keperawatan dan Fisioterapi (JKF)*, 3(1), 58-64.
- Kalumata, E. M., Waleleng, G. J., & Kalangi, J. S. (2021). Pengaruh Penggunaan Aplikasi Halodoc Terhadap Pemenuhan Kebutuhan Informasi Kesehatan di Kelurahan Paniki Bawah Kecamatan Mapanget Kota Manado. *Acta Diurna Komunikasi*, 3(4).
- Karno, D. (2023). Hubungan Kualitas Pelayanan Kesehatan dengan Tingkat Kepuasan Pasien di Rumah Sakit. *Jurnal Tampiasih*, 1(2), 22-32.
- Manyering, G. G., Wartiningih, M., Messakh, B. D., & Silitonga, H. T. H. (2023). Hubungan waktu tunggu pelayanan dengan tingkat kepuasan pasien. *Holistik Jurnal Kesehatan*, 17(2), 93-101.
- Pratama, T. D. S., Yasin, N. M., & Kristina, S. A. (2021). Pengaruh medication therapy management (mtm) terhadap outcome klinik dan kualitas hidup pasien hipertensi di Puskesmas Kota Yogyakarta. *JMPF*, 10, 261-275.
- Pratiwi, R. D., Fitriani, D., & Betty, B. (2020). Penggunaan media komunikasi android apps dalam optimalisasi pengawas minum obat (PMO) terhadap tingkat kepatuhan dan kesembuhan penderita tuberkulosis paru. *Holistik Jurnal Kesehatan*, 14(4), 624-641.
- Putra, A. S., Saepuddin, S., & Hanifah, S. (2023). Tingkat Pemahaman dan Faktor Kepatuhan Minum Obat ARV pada Pasien HIV/AIDS. *Parapemikir: Jurnal Ilmiah Farmasi*, 12(3), 290-298.
- Putra, J. A. K., Wiedyaningsih, C., & Widayanti, A. W. (2023). Pengukuran Perilaku Kepatuhan Penggunaan Obat pada Pasien Hipertensi dengan Probabilistic Medication Adherence Scale (ProMAS). *Majalah Farmaseutik*, 19(3), 377-384.
- Reyaan, I. B. M., Faustincia, I., & Zazuli, Z. (2023). Dampak Intervensi Edukasi dan Aplikasi Pengingat Minum Obat terhadap Pengetahuan dan Kepatuhan Pasien Tuberkulosis Paru di Puskesmas di Kota Bandung. *Jurnal Manajemen Dan Pelayanan Farmasi (Journal of Management and Pharmacy Practice)*, 13(4), 256-265.
- Saputra, D. A., & Dewi, R. K. (2022). Hubungan Kualitas Pelayanan Terhadap Kepuasan Pengguna Platform Telemedicine Halodoc Tahun 2022. *Jurnal Rekam Medis & Manajemen Infomasi Kesehatan*, 2(2), 1-16.
- Sidik, Z. N. (2022). Evaluasi Layanan Telemedicine Rumah Sakit di Indonesia: Systematic Review. *Research Gate*, 1-14.
- Srikartika, V. M., Cahya, A. D., & Hardiati, R. S. W. (2016). Analisis faktor yang memengaruhi kepatuhan penggunaan obat pasien diabetes melitus tipe 2. *Jurnal Manajemen dan Pelayanan Farmasi*, 6(3), 205-212.

- Tampoliu, M. K. K., Kartika, Y., & Heryani, G. P. (2021). Hubungan kepatuhan minum obat terhadap kesembuhan pada pasien dewasa tuberkulosis paru di Puskesmas Kemang Kabupaten Bogor. *Riset Informasi Kesehatan*, 10(1), 25-33.
- Tiar, M. A., Agustina, W., & Firdaus, A. D. (2022). Hubungan antara kepatuhan terhadap terapi hemodialisis dengan kualitas hidup pasien gagal ginjal kronik. *Media Husada J Nurs Sci*, 3(2), 143-52.
- Vanchapo, A. R., & Magfiroh. (2022). Mutu pelayanan kesehatan dan kepuasan pasien. Tulungagung: Tata Mutiara Hidup Indonesia.
- Wibowo, M. I. N. A., Fitri, F. M., Yasin, N. M., Kristina, S. A., & Prabandari, Y. S. (2021). Kepatuhan minum obat pada pasien diabetes melitus tipe 2 di beberapa Puskesmas Kabupaten Banyumas. *Jurnal Kefarmasian Indonesia*, 98-108.
- Wibowo, M. I. N. A., Yasin, N. M., Kristina, S. A., & Prabandari, Y. S. (2021). Systematic Review: Determinan Faktor yang Memengaruhi Kepatuhan Pengobatan Pasien Diabetes Tipe 2 di Indonesia. *Media Penelitian dan Pengembangan Kesehatan*, 31(4), 281–300.
- Widodo, M. R., & Prayoga, D. (2022). Kepuasan dan Loyalitas Pasien terhadap Pelayanan di Fasilitas Kesehatan Primer: Sebuah Tinjauan Literatur. *JIIP-Jurnal Ilmiah Ilmu Pendidikan*, 5(2), 568–572.