

Patient Satisfaction Perception Towards Doctor Services Using Electronic Medical Record in The Internal Polyclinic of Waled Cirebon Regional Hospital

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Abstract

The implementation of Electronic Medical Records (EMRs) aims to enhance efficiency, data security, and improve the quality of healthcare services. Despite these benefits, transitioning from manual to electronic systems may affect doctor–patient interactions, potentially influencing patient satisfaction. This study aims to patient satisfaction with physicians' services using EMRs at the Internal Medicine Clinic of Waled Regional General Hospital (RSUD Waled), Cirebon. Conducted from February to April 2025, this observational descriptive study used purposive sampling, involving 89 respondents. Data were collected via questionnaire and analyzed using univariate methods with computer-based statistical software. The results showed that 96.63% of patients were satisfied with physician services using EMRs. Moreover, 97.76% of patients expressed satisfaction with the attention and attentiveness of the physicians; 93.26% were satisfied with the clarity of explanations; 96.63% were satisfied with the comfort and consultation time; and 95.51% were satisfied with the physicians' listening skills. Based on the results and discussion, it can be concluded that, overall, patients were highly satisfied with physician services using EMRs at the Internal Medicine Clinic of RSUD Waled Cirebon.

Keywords : Patient satisfaction; physician services and electronic medical records.

I. INTRODUCTION

Satisfaction is a person's feeling of pleasure that comes from comparing the pleasure of an activity and a product with their expectations. (Simbolon P et al., 2024). According to Agustina Dewi et al., 2023 Patient satisfaction is the level of assessment that emerges in response to the performance of healthcare professionals, after patients compare the service they received with their perceived experience. Patient satisfaction is highly subjective and can be influenced by both internal and external factors. Internal factors include gender, age, occupation, education, and income. External factors include initial care, waiting time, healthcare facility facilities and infrastructure, cleanliness, doctor communication, and the friendliness and reliability of staff or systems.

Medical records are documents containing patient identity data, examinations, treatment, actions and other services that have been provided to the patient (Ministry of Health Regulation, 2022). In 2022, the Minister of Health updated regulations regarding the transition from conventional medical records to electronic ones, with a deadline of December 31, 2023. A March 2022 PERSI survey showed that of 3,000 hospitals in Indonesia, 50% had implemented electronic medical records, but only 16% were in good condition. In terms of technology and infrastructure readiness, only 40% of hospitals felt their condition was good (Suryani Orangbio et al., nd). Waled Cirebon Regional Hospital began implementing Electronic Medical Records (ER) on June 19, 2023.

Electronic Medical Records (EMR) offer various advantages, such as ease and speed of access, greater data security, and efficiency in time and space. With electronic medical records, doctors and other healthcare professionals can also access patient health histories more efficiently, enabling faster diagnoses, more appropriate treatment, increased patient comfort, and a reduced risk of medical errors caused by manual recording.

With the advent of Electronic Medical Records (EMR), doctors are required to focus on their computers while listening to patients' complaints. The effect of this system is that eye contact and the doctor's focus on the patient are reduced. Lubis IK et al., 2023 stated that there is a perception that shifting eye contact is often interpreted by patients as a lack of interest in communicating. In the study

Lubis IK et al., 2023 showed that 76.7% of patients were satisfied with the use of RME. According to research Wali et al., 2020 showed that patient satisfaction during clinical consultations and overall satisfaction with services increased with the implementation of electronic medical records. Meanwhile, in the research North et al., 2020 There was a decline in patient satisfaction following the transition from conventional to electronic medical records. As previously explained, patient satisfaction is highly subjective and can influence research results.

Therefore, this study aims to analyze how patients perceive the services of doctors who use electronic medical records at the Waled Regional General Hospital in Cirebon as a referral hospital, especially for internal polyclinic patients as a referral polyclinic from other polyclinics and with the implementation of Integrated Patient Management which is more complex than other polyclinics, the internal polyclinic also becomes a referral for other polyclinics.

II. MATERIALS AND METHODS

This research is a descriptive study with an observational approach. The study was conducted from February to April 2025 at Waled Regional General Hospital, Cirebon. The data collected were primary data in the form of questionnaires. The population in this study were patients of the Internal Medicine Clinic at Waled Regional General Hospital, Cirebon, with a sample size of 89 respondents. The sampling technique used non-probability sampling with a purposive sampling approach. The inclusion criteria for this study included patients of the internal medicine clinic who were adults or able to provide informed consent or over 18 years of age and cooperative, outpatients, and willing to be research samples. Meanwhile, those with psychological limitations were excluded from the study.

The instrument used in this study was a patient satisfaction questionnaire regarding electronic medical records, adapted and modified from previous research, with appropriate validity and reliability tests. The questionnaire consisted of a number of identity items and 17 open-ended questions with response options including very satisfied, satisfied, somewhat satisfied, dissatisfied, and very dissatisfied, as well as a column for suggestions regarding the patient's medical records. The questionnaire was divided into two categories: satisfaction and dissatisfaction. The total score ranged from 17 to 85, with scores of 17-50 categorized as dissatisfaction and scores of 51-85 as satisfaction. The questionnaire was divided into four sub-questionnaires: doctor's attention and care, doctor's explanation, comfort and time during the consultation, and the doctor's ability to listen.

Data collection was conducted directly by administering questionnaires to respondents and first providing an explanation of the research's purpose and objectives. Respondents were encouraged to complete the questionnaires independently, and the researcher ensured the completeness of their answers during collection. The collected data were analyzed univariately. First, a univariate analysis was conducted to describe the respondents' characteristics, including gender, age, highest education, occupation, and income. Second, a univariate analysis covered four sub-questionnaires. The results of the analysis were presented in narrative form, tables, and pie charts.

This research was carried out while still paying attention to research ethics, *informed consent*, confidentiality of respondents' identities, and the principle of voluntary participation or withdrawal without consequence. All respondents were provided with an explanation of the research and the procedures to be carried out. This research also received ethical clearance from the institution hosting the study.

III. RESULTS AND DISCUSSION

Respondent Characteristics

Table 1. Distribution of Respondent Characteristics

Characteristics	Frequency (n)	Percentage (%)
Gender		

Man	35	39.32%
Woman	54	60.67%
Age		
18-25 Years	16	17.97%
26-35 Years	15	16.85%
36-45 Years	24	26.96%
46-55 Years	19	21.34%
56-55 Years	15	16.85%
Educational background		
Did not finish elementary school	3	3.37%
Elementary School/Equivalent	24	26.96%
Junior High School/Equivalent	11	12.35%
High School	41	46.06%
Diploma/Bachelor's Degree	10	11.23%
Work		
civil servant	2	2.24%
Indonesian National Armed Forces/Indonesian National Police	0	0%
Private	9	10.11%
Businessman	13	14.60%
Other	65	73.07
Income		
<Rp1,500,000	47	52.8
Rp1,500,000-Rp2,500,000	22	24.71
Rp2,500,000-Rp3,500,000	12	13.48
>Rp3,500,000	8	8.98

Based on Table 1, the majority of respondents were female (60.67%), while the majority were male (39.32%). In terms of age, the largest group was in the 36–45 years range (26.96%), followed by 46–55 years (21.34%), 18–25 years (17.97%), 26–35 years (16.85%), and 56–65 years (16.85%). The education level was dominated by high school graduates/equivalent (46.06%), followed by elementary school/equivalent (26.96%), junior high school/equivalent (12.35%), diploma/bachelor's degree (11.23%), and not graduated from elementary school (3.37%). The majority of occupations were in the "other" category (73.07%), followed by entrepreneurs (14.60%), private sector (10.11%), civil servants (2.24%), and no respondents from the Indonesian National Armed Forces/Indonesian National Police. In terms of income, more than half of respondents (52.8%) earned less than Rp1,500,000, followed by Rp1,500,000–Rp2,500,000 (24.71%), Rp2,500,000–Rp3,500,000 (13.48%), and above Rp3,500,000 (8.98%). These data demonstrate the diversity of respondent characteristics, including variations in gender, age, education, occupation, and income level. However, it can be concluded that the characteristics of respondents are dominated by the productive age group with secondary education and low income.

Univariate Analysis

1. Patient Satisfaction with Doctors' Services Using Electronic Medical Records

Table 1. Overview of Patient Satisfaction with Physician Services Using Electronic Medical Records

Characteristics	Frequency (n)	Percentage (%)
Respondents		
Satisfied	86	96.63
Not satisfied	3	3.37
Total	89	100

2. Patient Satisfaction Based on Doctor's Attention and Care

Table 2. Overview of Patient Satisfaction Based on Doctors' Attention and Care

Sub Questionnaire		Frequency (n)	Percentage (%)
Doctor's Attention and Care	Satisfied	87	97.76
	Not satisfied	2	2.24
	Total	89	100

3. Patient Satisfaction Based on Doctor's Explanation

Table 3. Overview of Patient Satisfaction Based on Doctors' Explanations

Sub Questionnaire		Frequency (n)	Percentage (%)
Doctor's Explanation	Satisfied	83	93.26
	Not satisfied	6	6.74
	Total	89	100

4. Patient Satisfaction Based on Convenience and Consultation Time

Table 4. Overview of Patient Satisfaction Based on Convenience and Consultation Time

Sub Questionnaire		Frequency (n)	Percentage (%)
Convenience and Consultation Time	Satisfied	86	96.63
	Not satisfied	3	3.37
	Total	89	100

5. Patient Satisfaction Based on the Doctor's Ability as a Listener

Table 5. Overview of Patient Satisfaction Based on Doctors' Ability as Listeners

Sub Questionnaire		Frequency (n)	Percentage (%)
The Doctor's Ability as a Listener	Satisfied	85	95.51
	Not satisfied	4	4.49
	Total	89	100

DISCUSSION

Univariate

1. Patient Satisfaction with Doctors' Services Using Electronic Medical Records

Based on research conducted on 89 respondents, 96.63% of internal medicine patients were satisfied with the overall medical care. Meanwhile, 3.37% were dissatisfied.

This high level of satisfaction indicates that the transition from conventional medical records to electronic medical records has increased patient satisfaction. This is because EMR offers benefits such as ease and speed of access, greater data security, time and space efficiency, and a reduced risk of recording errors. Patients will feel more at ease during follow-up consultations, as they no longer have to repeat their medical complaints from the beginning (Rwigema et al., 2023). In research Lestari et al., 2024 At Budhi Asih Regional General Hospital in Jakarta, it was found that the implementation of Electronic Medical Records (EMR) plays a crucial role in strengthening communication between doctors and patients. Systematically documented communication through EMR allows doctors to convey medical information more consistently and clearly. This has a direct impact on increasing patient trust and comfort during the consultation process, which ultimately becomes a key determinant of patient satisfaction with the services received.

However, it's worth noting that a small percentage of patients (3.37%) still feel dissatisfied. This could be due to technical issues and system instability, which can slow down the service process.

Patients with low levels of technological literacy may feel uncomfortable with digitalization, although this satisfaction is highly subjective from patient to patient.

2. Patient Satisfaction Based on Doctor's Attention and Care

Based on research conducted on 89 respondents, 97.76% of internal medicine patients were satisfied with the care and attention provided by doctors. Meanwhile, 2.24% were dissatisfied.

A doctor's care and attention significantly impact patient satisfaction. When a doctor shows concern and listens attentively to a patient's concerns, the patient feels more valued and understood. This builds trust and effective communication between the doctor and the patient. This research confirms this. Handayani et al., 2024 Empathy influences patient satisfaction. Empathy reflects the provision of comprehensive and personalized attention to patients and their families. When medical services are tailored to the patient's specific needs, patient satisfaction with treatment outcomes significantly increases.

In line with this, the use of EMR substantially impacts patient perceptions of the quality of interactions with physicians, particularly in terms of personal attention, communication effectiveness, and empathy. In terms of physician attention, EMR facilitates quick and comprehensive access to a patient's medical history, both before and during the consultation. This capability reinforces the impression that the physician understands the patient's condition holistically and treats each individual individually. As a result, patients tend to feel more valued and listened to, which in turn improves the quality of the patient-physician relationship. According to research, Agus A et al., 2024 who found that RME performance was positively correlated with patient satisfaction indicating that the physician's ability to record and review patient history reflects attention and care.

3. Patient Satisfaction Based on Doctor's Explanation

Based on research conducted on 89 respondents, 93.26% of internal medicine patients were satisfied with the doctor's care and explanations. Meanwhile, 6.74% were dissatisfied.

Effective communication between doctors and patients not only plays a crucial role in conveying information regarding diagnoses and medical procedures, but also contributes to increasing patient trust in the doctor. Effective communication can reduce patient anxiety, encourage active participation in the medical decision-making process, and increase satisfaction with the services provided. A good communication relationship helps build mutual respect between both parties, ultimately strengthening trust and reducing the uncertainty that often occurs during the treatment process (Bernadette & Loisa, 2025).

In the research Makahiking et al., 2020 also found that good communication between doctors and patients was strongly linked to increased patient satisfaction during hospitalization. The ability to adapt in communication has a positive impact on the creation of a mutually respectful relationship. In the context of this study, emphasis is placed on the importance of communicating between doctors and patients with empathy and clarity, as this can strengthen trust and increase patient satisfaction. These findings confirm that the principle of adaptable communication remains relevant and effective in various forms of interaction, both in cross-cultural education and healthcare (Deswita & Loisa, 2024).

In line with these findings, the use of Electronic Medical Records (EMR) plays a crucial role in improving the accuracy and personalization of communication between healthcare providers and patients. By providing direct access to a patient's health status, laboratory test results, and previous medical records, physicians can provide more detailed and relevant explanations tailored to their specific circumstances. This approach helps patients understand their health situation more clearly. At the same time, it also builds trust in the honesty and professional expertise of the healthcare providers.

4. Patient Satisfaction Based on Convenience and Consultation Time

Based on research conducted on 89 respondents, 96.63% of internal medicine patients were satisfied with the doctor's service, regarding comfort and consultation time. Meanwhile, 3.37% were dissatisfied.

Doctors are expected to listen carefully to patients' complaints, pay attention, and avoid rushing. This is crucial for establishing good communication between the doctor and the patient. If a doctor displays a hasty attitude, such as during the history taking and examination, or appears reluctant to communicate, the patient will be reluctant to communicate effectively with the doctor (Hasna et al., 2022)

In research Zakaria et al., 2024 It has been stated that longer consultations play a crucial role in creating a personalized conversation. This allows for a more comprehensive understanding of the patient's condition and helps in designing more appropriate treatment. Consultations lasting between 10 and 20 minutes have been shown to contribute to increased examination completion rates and diagnostic accuracy. This indirectly contributes to increased patient satisfaction and improved overall treatment outcomes.

Similarly, in terms of convenience and efficiency of consultation time, the implementation of Electronic Medical Records (EMR) significantly contributes to the acceleration of administrative processes and medical record-keeping. EMR allows for more optimal time allocation for direct interaction between medical personnel and patients. This effectiveness creates a calmer and less rushed consultation atmosphere, allowing patients to feel more relaxed and have sufficient opportunity to fully express their complaints and questions as directed by the medical service provider.

5. Patient Satisfaction Based on the Doctor's Ability as a Listener

A study of 89 respondents showed that 95.51% of internal medicine patients were satisfied with the doctors' ability to listen. Meanwhile, 4.49% were dissatisfied.

A doctor's ability to be a good listener is closely linked to effective communication. A good listener will influence communication between the doctor and the patient, including increasing patient trust, improving diagnostic accuracy, improving patient adherence to treatment, and reducing misunderstandings between the doctor and the patient. This is confirmed in research. Świątoniowska-Lonc et al., 2020 that patients are satisfied with the clarity of communication, speaking skills and attention they receive from doctors and patients value doctors who are good listeners more.

In line with this, regarding the doctor's ability to act as a listener, the use of Electronic Medical Records (EMR) plays a crucial role as a tool for recording and storing important information from previous consultations. When doctors refer to these notes and relate them to current conversations, patients feel that their statements and concerns are being taken seriously. This contributes to improving the quality of the interpersonal relationship between doctor and patient and has a direct positive impact on patient satisfaction with the overall care provided by the medical provider.

IV. CONCLUSION AND SUGGESTIONS

Based on the results of this study, it can be concluded that the use of electronic medical records (EMR) in medical services at the Internal Medicine Clinic of Waled Hospital, Cirebon, generally received a very positive response from patients. The overall satisfaction level reached 96.63%, indicating that the majority of patients were satisfied with the quality of the services provided. This satisfaction was reflected in various aspects of patient-doctor interactions, including the doctor's attention and care (97.76%), the doctor's explanations (93.26%), the doctor's comfort and time during consultations (96.63%), and the doctor's ability to listen (95.51%). These data show that the implementation of EMR not only supports administrative efficiency but also maintains and even improves the quality of communication and interpersonal relationships between doctors and patients. Thus, EMR can be an instrument that aligns with the goal of healthcare services that are oriented towards patient satisfaction and well-being.

Researchers hope that further research will be conducted linking technology adaptation with patient satisfaction and further studies on how medical technology integration can influence non-technical aspects of services and expand variables and linking patient satisfaction variables with patient characteristics that can be factors influencing patient satisfaction.

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