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Original Research

Relationship Between Satisfaction and Waiting Time in Polowijen Primary Health Care Malang

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ABSTRACT

Background: *Patient satisfaction depends on the quality of service, service waiting time, and the efforts made by officers to fulfill patient desires with the services provided. Waiting time that is too long will cause dissatisfaction with the patient. This study aims to analyze the relationship between waiting time and patient satisfaction in the outpatient registration section of the Polowijen Primary Health Care (PHC).*

Methods: *This study used an analytic survey with a crosssectional approach. The population in this study were patients during August-October 6,214 people. The sample was calculated using the slovin formula of 100 people. The sampling technique uses quota sampling. Data analysis used the Chi-Square test. The waiting time at the Polowijen PHC registration section was > 10 minutes (not ideal) for 90 respondents (90%) and waiting time ≤ 10 minutes (ideal) for 10 respondents (10%). The level of patient satisfaction as many as 66 respondents (66%) felt very satisfied and 34 respondents (34%) felt satisfied.*

Results: *There is no relationship between waiting time and patient satisfaction at outpatient registration at the Polowijen PHC (p Value > 0.05).*

Conclusion: *As conclusion The waiting time obtained by patients > 10 minutes does not affect patient satisfaction. This happens because the Polowijen Health Center is the only health facility of choice for the patient, so waiting times that are not ideal do not affect patient satisfaction.*

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INTRODUCTION

A health service facility is a location where government, local government, and/or community health service initiatives are carried out. These efforts can be promotional, preventative, curative, and/or rehabilitative. In order to reach the maximum level of public health in their work area, Primary Health Care (PHC) prioritizes promotive and preventive measures while organizing public health efforts and first-level individual health initiatives.

PHC offers dependable patient facilities and can treat a variety of illnesses adequately, though not as thoroughly as large hospitals. Some of the facilities and medical services that PHC can offer include patient registration and medical record rooms, waiting areas for patients, general examination rooms, action rooms, nursing rooms, general poly, dental poly, MCH poly, nutrition clinics, sanitation clinics, pharmacies, health promotion, and laboratories (Irman & Fitri Azmi, 2023; Shirjang et al., 2025). According to the Regulation of the Minister of Health of the Republic of Indonesia Number 30 of 2022 on National Quality Indicators of Health Services, waiting time for outpatient services is recognized as a key indicator of healthcare service quality and efficiency.

This regulation establishes that outpatient waiting time should not exceed 60 minutes, calculated from patient registration to receipt of medical services, as a benchmark for acceptable service performance and patient-centered care. The frontline of healthcare institutions is registration, as this is where patients first evaluate the services they receive. Patients can rate the level of satisfaction with the service in this registration part as well.

According to the findings, there are many variables that influence patient satisfaction in the registration section, including product qualities, costs, services, facilities, hospital image, visual design, environment, and communication. These factors closely relate to how well rounded health services are at satisfying patients needs and demands as with needs and demands, the more complete a satisfaction is, the higher the caliber of the service (Simarmata et al., 2021). One of the measures of health care success is patient satisfaction.

Patient satisfaction is a measure of how satisfied a patient is with their healthcare experience after comparing it to their expectations. It can also be an indicator of how well their healthcare experience was overall. Patient satisfaction must be an activity that cannot be separated from health services because the reliability of officers in realizing services, prompt responses to patients, knowledge and skills of officers, and polite officer attitudes become an integral and comprehensive part of the health service quality dimension activities (Dewi et al., 2020) (Wijaya et al., 2023).

Patient satisfaction is influenced by the level of service, the length of the wait for treatment, and the officers' efforts to accommodate patients' requests. In some healthcare facilities, patients frequently gripe about the wait time. The length of the wait time is an indication of how PHC handles service elements that are catered to the needs and expectations of the patient. Patients will become dissatisfied if officers execute below expectations, which could result in a loss of many clients or patients. In contrast, if the officer meets the patient's expectations, the patient is pleased with the services received and is more likely to return for treatment (Supandi et al., 2021).

The length of the wait is directly related to how satisfied a patient is with the service. Long lines result in a lengthy waiting period for registration. The absence of officers in the registration section is one of the factors contributing to long lines, and some patients forget or don't bring their identity cards (Zhang et al., 2023). A feeling of dissatisfaction will develop if the patient must wait too long. Patients who are unhappy are attentive to price and service, and they will spread the word more widely about their negative experiences.

The patient will feel satisfied if they have to wait only a brief time for a quick or appropriate service, on the other hand. Additionally, contented patients are more likely to return for therapy and to recommend the medical facility to others (Dewi et al.,

2020). A preliminary study performed at the Polowijen PHC on November 15, 2022, through observation of 15 patients revealed that the average wait time at the registration point, beginning from the front line to the availability of medical record documents, was 30 minutes. This shows that the patient waiting time does not meet the optimal waiting time standard of 10 minutes in the waiting time. The amount of waiting time may have an impact on how satisfied patients are with the care they receive.

If patients wait too long at the registration desk, they will get tired. Lack of officers at the registration department or patients who are not disciplined in administrative completeness are two factors that contribute to lengthy wait times (Wijaya et al., 2023). Although patient satisfaction has been widely studied in healthcare services, evidence focusing specifically on satisfaction within outpatient registration areas remains scarce.

To date, no study has examined patient satisfaction related to waiting time in the registration area of Polowijen Health Center. This research gap is important, as registration constitutes the first point of service contact and waiting time is a critical determinant of perceived service quality. Accordingly, this study aims to investigate the relationship between waiting time and patient satisfaction in the outpatient registration area of Polowijen Health Center.

MATERIALS AND METHOD

This study employed a quantitative cross-sectional design using a survey approach. The cross-sectional method was selected because it allows the assessment of the relationship between waiting time and patient satisfaction at a single point in time, without intervention. This design is appropriate for evaluating service performance indicators and patient perceptions in outpatient healthcare settings. The study was conducted at Polowijen Primary Health Center (PHC). The research population comprised all outpatient visitors who attended the health center between August and October 2022, totaling 6,214 patients, based on outpatient visit records during the study period.

The sample size was determined using the Slovin formula, which is suitable when the total population size is known and population variance is not clearly defined. Using a 10% margin of error, the minimum sample size required was 100 respondents. A quota sampling technique was applied, whereby respondents were recruited consecutively until the predetermined sample size was achieved.

Inclusion criteria were: Outpatients aged 18 years or older; Patients who completed the outpatient registration process; Patients willing to participate and provide informed consent. Exclusion criteria were: Emergency patients; Patients with cognitive or communication impairments; Patients with incomplete questionnaire responses. The study variables consisted of: Independent variable: Waiting time at outpatient registration (≤10 minutes and >10 minutes); Dependent variable: Patient satisfaction with outpatient registration services (satisfied and not satisfied). Only respondents who met the inclusion criteria and provided complete data were included in the analysis.

Primary data were collected using a structured, self-administered questionnaire distributed directly to patients after completing the outpatient registration process. The questionnaire assessed patient satisfaction using closed-ended questions with a Likert-scale format. Perceived waiting time was obtained from patient responses and supported by outpatient registration records when available. Secondary data on outpatient visits

from August to October 2022 were obtained from administrative records of the health center.

The researcher then determined the overall satisfaction assessment's scoring by assigning a value of 4 if the respondent selected the very satisfied option, a value of 3 if they selected satisfied, a value of 2 if they selected less satisfied, and a value of 1 if they selected not satisfied. As a result, the degree of patient satisfaction can be divided into 4 satisfaction groups if each respondent completes 10 statements, namely:

Table 1. Four Categories of Patient Satisfaction

Satisfaction Category	Score Classification
Very Satisfied (SP)	> 31
Satisfied (P)	21-30
Less Satisfied (KP)	11-20
Unsatisfied (TP)	< 10

Content validity of the questionnaire was evaluated through expert judgment involving professionals in health service management and medical records. Reliability testing was conducted using Cronbach's alpha, with a value of ≥0.70 considered acceptable.

Data analysis was conducted using statistical software and consisted of: Univariate analysis to describe respondent characteristics, waiting time distribution, and patient satisfaction levels using frequencies and percentages; Bivariate analysis using the Chi-square test to examine the association between waiting time and patient satisfaction. Because the variables were categorical, normality testing was not required. A *p*-value of <0.05 was considered statistically significant.

This study involved minimal risk to participants, as it was limited to the assessment of waiting time and patient satisfaction at the outpatient registration area without any clinical intervention or manipulation of care. Data were collected using anonymous questionnaires, and no personal identifiers or sensitive medical information were obtained. Participation was voluntary, and informed consent was implied through the completion of the questionnaire after participants were informed about the purpose of the study. Given its non-interventional nature and low-risk characteristics, formal ethical clearance was not required; however, the study was conducted in accordance with fundamental ethical principles, including respect for autonomy, confidentiality, and responsible data use.

RESULTS

Characteristics of Respondents

In accordance with the inclusion and exclusion criteria of the research, there were 100 outpatients at the Polowijen PHC who participated as respondents. Following are the characteristics determined by the outcomes of data gathering done through questionnaires

Table 2. Characteristics of Respondents

Characteristic	Category	Frequency	Percentage (%)
Age	18-20 Years	7	7
	21-30 Years	28	28
	31-40 Years	25	25

Characteristic	Category	Frequency	Percentage (%)
	41-50 Years	26	26
	51-59 Years	14	14
	Total	**100**	**100**
Gender	Male	25	25
	Female	75	75
	Total	**100**	**100**
Work	Student	12	12
	Civil Servants	8	8
	TNI/POLRI	2	2
	Private Employees	20	20
	Merchant	14	14
	Not Working	34	34
	Miscellaneous	10	10
	Total	**100**	**100**
Education	Elementary	1	1
	Junior High School	14	14
	High School	55	55
	D3/Bachelor	30	30
	Total	**100**	**100**

Based on table 1, the most age characteristics of respondents are in the age category of 21-30 years as many as 28 respondents (28%), while the lowest age characteristics of respondents are in the age category of 18-20 years as many as 7 respondents (7%). In gender characteristics, there were 75 respondents (75%) in the female category and 25 respondents (25%) in the male category. In job characteristics, Not Working is the job category with the highest frequency of respondents, namely 34 respondents (34%), and the lowest frequency of respondents is in the TNI / POLRI as many as 2 respondents (2%). Furthermore, in the characteristics of education, the choice of the high school category received the highest frequency of respondents, namely 55 respondents (55%), education with low frequency was in the elementary category as many as 1 respondent (1%).

Patient Waiting Time at the Outpatient Registration Polowijen Primary Health Care

The patient completes the administration process at the counter registration, up until the availability of medical record documents. The waiting time in the registration section of this study is calculated starting from the patient taking the queue number at the frontline (where the patient checks or screens the temperature and saturation and is given a counter queue number to register at the registration section). Here are the outcomes of waiting time based on the study's findings:

Table1. Respondent Wait Time

Waiting Time	n	(%)
≤ 10 minutes (ideal)	10	10
> 10 minutes (not ideal)	90	90
Total	**100**	**100**

According to Table 2, there are up to 90 respondents (or 90%) for a waiting time of > 10 minutes (not optimal), and only 10 respondents (10%) for a waiting time of 10 minutes (ideal) out of a total of 100 respondents.

Patient Satisfaction at the Outpatient Registration Polowijen Primary Health Care

By using a questionnaire with 10 statements, researchers can gauge the satisfaction of patients. Following data collection from 100 respondents, the SPSS program was used to process the findings. Most respondents are satisfied with all services provided, namely related to the registration waiting room looks clean, neat, and comfortable as many as 37 respondents (37%) feel very satisfied and 63 respondents (63%) are satisfied, registration officers look friendly when serving as many as 44 respondents (44%) were very satisfied and 56 respondents (56%) were satisfied, registration officers provided services well when serving as many as 49 respondents (49%) were very satisfied and 51 respondents (51%) were satisfied, registration officers were punctual in providing services as many as 39 respondents (39%) felt very satisfied and 61 respondents (61%) were satisfied, skilled officers when carrying out registration services as many as 46 respondents (46%) felt Very satisfied and 54 respondents (54%) were satisfied, and the last one was related to polite registration officers when serving as many as 50 respondents (50%) felt very satisfied and 50 respondents (50%) were satisfied.

However, there are still respondents who feel dissatisfied, namely the service of the registration officer on time in providing services by 5 respondents (5%) feel less satisfied and 3 respondents (3%) feel dissatisfied, the registration officer is fast in responding to patient requests by 2 respondents (2%) feel dissatisfied, the information provided by the patient registration officer is very clear by 3 respondents (3%) feel less satisfied, and registration officers pay attention to patients while waiting in the queue by 3 respondents (3%) are not satisfied.

Based on the results of the study, patient satisfaction level data in 4 categories as follows:

Table2. Patient Satisfaction Level in the Enrollment Section in 3 Categories

Category		n	(%)
Patient Satisfaction	Very Satisfied (VS)	66	66
	Satisfied (S)	34	34
	Less Satisfied (LS)	0	0
	Unsatisfied (US)	0	0
	Total	**100**	**100**

According to table 5, it was found that patient satisfaction in the outpatient registration department reviewed based on the number of respondents showed that 66 respondents (66%) were very satisfied and 34 respondents (34%) were satisfied with the services in the outpatient registration department at Polowijen PHC. The findings of 100 respondents (100%) indicate that they were satisfied with the Polowijen PHC's registration department's services. This indicates that patients typically have positive impressions of the registration services they have gotten at the Polowijen PHC. Given that officers are courteous, skilled, and provide excellent service, some respondents stated that they were happy with the level of service they received.

The Relationship between Waiting Time and Patient Satisfaction in the Outpatient Registration Department of Polowijen Primary Health Care

In the Polowijen Health Center's outpatient registration division, researchers used statistical tests to determine the relationship between waiting time and satisfaction among patients. The outcomes of a bivariate study performed with the SPSS program are shown below.

Table3. Bivariate Analysis of the Relationship between Waiting Time and Patient Satisfaction in the Outpatient Registration Polowijen Primary Health Care

Waiting Time	Patient Satisfaction			
	Very satisfied	Satisfied	Total	p Value
Not ideal	59	31	90	
Ideal	7	3	10	0,778
Total	66	34	100	

The outcomes of statistical analyses using the chi square test in the SPSS program are shown in Table 5. P value = 0.778 is displayed in the test outcome. Chi square test findings are determined using the premise that if the p value is greater than 0.05, H0 is accepted and Ha is rejected. H0 is rejected and Ha is approved if the p value is less than 0.05, however. The value of 0.778 > 0.05 indicates that H0 is accepted and Ha is rejected based on the idea. This demonstrates that in the outpatient registration section, waiting times and patient satisfaction have no correlation.

DISCUSSION

Patient Waiting Time at the Outpatient Registration, Polowijen Primary Health Care

The study's findings, 90% of respondents experienced waiting times that were not optimal because of the length of the guard's service, which results in patients having to wait longer to receive services at the registration section. Even before the PHC service starts, the majority of patients have chosen their own queue numbers. After the officers began providing service, this led to a buildup of lines. Most patients believe it is preferable to enter their queue number first in order to receive an earlier and faster service.

According to the Regulation of the Minister of Health of the Republic of Indonesia Number 30 of 2022 on National Quality Indicators of Health Services, waiting time for outpatient services is defined as a key quality indicator reflecting service efficiency and patient-centered care. The regulation establishes that outpatient waiting time should not exceed 60 minutes, calculated from patient registration until receiving medical services, as a benchmark for acceptable service quality. The period of time a patient must wait before receiving services is measured from the point at which the patient registers until the delivery of Medical Record Documents (DRM) to the desired polyclinic.

For everyone in the health care industry, waiting is a challenging concept to grasp. Puskemas, a company that provides services, is conscious of this and has attempted to make arrangements by modifying the capacity of the facility it owns so that patients do not have to wait in long lines. For a provider to operate at maximum capability,

knowing how long patients must wait is crucial. In any health service, however, waiting is a necessary part of the procedure (Samura et al., 2022; Simarmata et al., 2021).

The findings of this study are consistent with earlier research that suggested patients purposefully showed up early before service opening hours in order to obtain their own line numbers. However, because the registration counter opens at 08.30, patients who arrive between 08.00 and 09.00 do not have to wait too long to receive their queue number because officials have already arrived to provide their services (Maulana et al., 2019). According to the findings of a different research, one of the reasons why each patient's wait time varied depended on the status of the patients who were split into general patients and JKN (National Health Insurance) patients and how the administration dealt with that distinction.

Patients with JKN (National Health Insurance) cards, recommendation letters, and photocopies of family cards must first meet the prerequisites before registering. The registration officer must first verify the administration's completion so that JKN (National Health Insurance) patients have a lengthier wait time than general patients, who are exempt from the necessity of administrative completeness requirements. (Agustina, 2020). It does not impact the length of the waiting period for services at Polowijen PHC because patients are not separated based on the type of administration.

Patient Satisfaction at the Outpatient Registration Department of Polowijen Health Center

Patient satisfaction is a measure of how satisfied patients are with the standard of the medical care they receive after comparing the performance of those services to what they had anticipated (Dewi et al., 2020). Patient satisfaction levels are significantly impacted by the standard of health services. The level of service perfection that results in patient satisfaction is closely related to the quality of health services. The findings of this study are consistent with prior research, which found that excellent two-way communication, empathy, friendliness, and attention to patients when providing services are some of the factors that contribute to patient satisfaction (Edyansyah et al., 2025; Virginia Lasol et al., n.d.).

Other studies' findings indicate that as the number of patients rises, officers become less effective at providing optimal patient care, knowledge, and special attention to patients, which in turn makes patients uncomfortable and leads to their dissatisfaction (Fatrida &; Saputra, 2019). At Polowijen PHC, this is not the case because the volume of patients is generally consistent from day to day and the staff can satisfactorily service the patients.

Patient Satisfaction at the Outpatient Registration Polowijen Primary Health Care

In this research, there was no correlation between waiting time and patient satisfaction because of a number of factors, including the fact that all respondents were pleased with the outpatient services provided by Polowijen PHC despite the fact that the average patient wait time was more than 10 minutes. Although there is a long waiting period for outpatient registration services at the Polowijen PHC, patients are pleased with other service quality indicators and feel safe using them. As a result, other quality indicators can make up for the long waiting period.

In this instance, observable quality indicators include the Polowijen Health Center's waiting room's cleanliness and its pleasant and orderly amenities. Because the registration clerk offers them pleasant service, patients are also pleased with the

empathy indicator (empathy). Finally, Polowijen PHC is the only medical facility that patients select to use when seeking care, demonstrating that they are satisfied with the reliability indicator.

The findings of this study contradict those of earlier research, which found a connection between waiting time and patient happiness (Pvalue = 0.001). Researchers discovered that the majority of patients desired an online registration service to shorten lines and the requirement for a patient satisfaction survey to be conducted for evaluation materials at the Balai Permai Batam Health Center. Researchers have found that the distribution of medical record files caused by inadequate storage locations, a lack of staff in the registration unit, and the continued presence of doctors who arrive outside of the practice schedule are the factors that have the greatest impact on waiting times (Samura et al., 2022; Simarmata et al., 2021).

Additionally, the findings of this investigation do not agree with studies done at the Lubeg Padang Health Center. An association between waiting time and patient satisfaction was found in the research, with a p value of 0.000. Patients primarily express dissatisfaction due to the manual nature of the Lubeg Padang Health Center's enrollment process. The patient is required to rest for a while. Additionally, there are few amenities available at the PHC, including few seating options, no queueing devices, and no loudspeakers. This lengthens the service procedure (Dewi et al., 2020).

CONCLUSION

This study found that the majority of outpatients at the Polowijen Health Center experienced registration waiting times exceeding 10 minutes, with 90% of respondents categorized in the non-ideal waiting time group, while only 10% experienced waiting times of 10 minutes or less. Despite this condition, patient satisfaction levels remained relatively high, with 66% of respondents reporting being very satisfied and 34% reporting being satisfied with outpatient registration services. Statistical analysis demonstrated no significant relationship between waiting time and patient satisfaction in the outpatient registration area ($p > 0.05$).

These findings suggest that, within this setting, patient satisfaction may be influenced by factors beyond waiting time alone, such as staff communication, courtesy, service clarity, and perceived professionalism. From a practical perspective, particularly for nursing and frontline administrative practice, the results indicate that maintaining effective interpersonal interactions and service responsiveness may help sustain patient satisfaction even when operational constraints lead to longer waiting times. Nevertheless, prolonged waiting times remain an important service quality indicator and should continue to be addressed as part of overall quality improvement initiatives.

Future research is recommended to explore additional determinants of patient satisfaction, including communication quality, service environment, staffing adequacy, and workflow efficiency, using larger sample sizes and probability-based sampling methods. Longitudinal or mixed-methods studies may also provide deeper insights into patient perceptions and service experiences over time. Such research would contribute to a more comprehensive understanding of outpatient service quality and support evidence-based improvements in primary healthcare settings.

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