

The Relationship Between Registration Time and Outpatient Satisfaction at Dr. Tengku Mansyur Tanjungbalai Hospital

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ABSTRACT

The registration unit serves as the initial point of contact in healthcare services, shaping patients' first impressions of a hospital's service quality. This study aimed to examine the correlation between registration service time and outpatient satisfaction at RSUD Dr. Tengku Mansyur Tanjung Balai. A quantitative research approach was utilized with a cross-sectional design and correlation analysis. A total of 105 respondents were selected through a random sampling method. Data were collected using a questionnaire adapted from prior studies and validated for reliability. The results of the Pearson correlation test showed a significant relationship between registration service time and patient satisfaction ($p = 0.000$). The correlation coefficient was -0.806 , indicating a strong negative association. Additionally, the coefficient of determination (R^2) was 0.646 , which means that 64.6% of patient satisfaction was influenced by registration waiting time—categorized as a strong correlation. These findings indicate that longer registration times are associated with lower levels of patient satisfaction. The study emphasizes the importance of optimizing the registration process as a strategic step to improve overall hospital service quality.

Keywords: Patient Satisfaction, Outpatient Services, Registration Waiting Time

Introduction

The quality of healthcare services is a key indicator used to assess how well patient expectations and needs are fulfilled during hospital visits. As patients' expectations continue to rise, healthcare service standards must also adapt and improve to meet these evolving demands (Wowor et al., 2019). Healthcare quality encompasses the provision of services for individuals and populations with the goal of improving health results, are conducted according to established standards,

are aligned with scientific advancements, and respect patients' rights and obligations. (Ministry of Health of the Republic of Indonesia, 2022).

Basically, good service quality will produce satisfaction, because satisfaction is closely related to improving service quality. The better the service quality received, the more satisfied the patient is likely to be. The patient's direct experience while receiving services is the basis for assessing the level of satisfaction with the health service (Kartika et al., 2022). Patient satisfaction is an emotional response that arises after the patient evaluates the results of the health services they receive, by comparing their initial satisfaction of service users is also the main parameter in measuring quality and health services. To achieve high satisfaction rates, healthcare providers must establish a well-integrated system that attracts new patients and retains the loyalty of existing ones (Sitepu, 2024).

One aspect of healthcare provision that helps determine patient satisfaction is outpatient services. This service covers various stages that patients experience from arrival to receiving a medical examination. Outpatient services are a type of health service provided to patients including observation, examination, treatment, medical rehabilitation, and various other medical procedures without requiring the patient to undergo inpatient treatment in hospital. (Mahadewi et al. 2019). This outpatient service process involves various stages that can influence patient experience and satisfaction, one of which is the registration process. The hospital registration process is a series of administrative steps carried out by patients or their representatives to obtain health services at hospital facilities. Regional public hospitals tend to experience longer queues, especially because they serve larger patient populations (Dunn et al., 2011)

In addition to waiting time, other factors influence overall satisfaction. In the context of satisfaction, there are five key elements that affect the degree of patient satisfaction. These include responsiveness, reliability, assurance, empathy, and physical infrastructure. One aspect of the quality of health services is ease of access to services, which can be measured through the length of patient waiting time. (Agustina, 2020). Patient satisfaction in healthcare services is not solely determined by the length of waiting time. Several previous studies have emphasized that waiting time plays a crucial role in shaping patients' perceptions. Studies conducted in outpatient services indicate that the longer patients wait, the lower their satisfaction levels tend to be (Agustina, 2020; Supriyanto, 2020). In addition, perceptions of hospital professionalism and efficiency are also shaped during the initial interaction, particularly when services are delivered promptly and in an orderly manner (Nursyam, 2023).

Registration service time refers to the interval from the patient's arrival, queue number collection, and administrative processing before proceeding to the polyclinic. Regional hospitals that still operate with manual systems typically wait longer than patients at hospitals that have adopted electronic service systems, as shown in previous research (Mahadewi et al., 2019). Similar findings also indicate that electronic systems are positively associated with greater efficiency and improved patient satisfaction (Hasibuan, 2025). International research also supports these

findings. A study conducted in Ethiopia found that extended waiting times at the registration stage are strongly associated with a decrease in outpatient satisfaction (Biya et al., 2022). Similarly, research conducted in China indicated that both the actual length of waiting time and the way patients' expectations are managed during the registration process can positively influence their overall satisfaction with healthcare services (Zhang et al., 2023).

The registration process is a very important initial stage in health service facilities, because it is through this stage that patients first give their impression and evaluate the standard of care they are about to obtain (Lestari et al., 2020). The ability of healthcare staff to deliver services promptly and providing services with precision greatly influences patient satisfaction. Although service systems and conditions may vary across hospitals, numerous studies have shown that the speed and accuracy of service during the initial stage of a patient's visit strongly shape their perception of service quality. A study by Supriyanto (2020) revealed that delays and inaccuracies in registration services clearly reduce patient satisfaction in outpatient care. Similarly, Kartika et al. (2022) found that the responsiveness dimension of the SERVQUAL model which reflects the speed and readiness of staff in addressing patients' needs is one of the most influential factors in determining patient satisfaction. (Supriyanto, 2020; Kartika et al., 2022)

One measure to improve the registration process serves as an essential indicator of hospital service quality. According to the Decree of the Minister of Health No. 129 of 2008, the standard queue time at the counter is 10 minutes. Registration services are categorized as fast if the waiting time is less than 10 minutes, while it is said to be long if the waiting time exceeds 10 minutes (Ministry of Health of the Republic Indonesia, 2022). Tengku Mansyur Regional Hospital is a regional hospital that was founded in 1930 and acts as a referral hospital in Tanjungbalai City. With a fairly high number of outpatient visits, this hospital has developed into a class C hospital serving the community in Tanjungbalai City and the surrounding area.

In order to improve service quality, various hospitals have developed online registration systems as an innovation in digitizing health services. However, the implementation of this system has not fully run optimally. There are still many patients who experience problems in accessing online registration services due to limited access to technology, skills in using applications, as well as unsupportive socio-economic conditions, such as not having a smartphone or stable internet network. As a result, most patients still choose to register manually which is considered easier and more direct.

This also happens at Tengku Mansyur Tanjungbalai Regional Hospital, which has implemented an online registration system. However, in practice, registration is still predominantly carried out manually by the majority of outpatients. Therefore, problems that arise in manual registration systems, such as long waiting times, are an important issue that needs to be studied because they have the potential to influencing perceptions in terms regarding patients' satisfaction with the service quality in the healthcare facility. In accordance with information obtained by researchers, patient satisfaction data at RSUD dr. Tengku Mansyur reached 77.5%,

this figure reflects that there is still room to improve service quality in order to attain optimal degree of satisfaction. The initial survey showed that the total time required for the manual registration process reached around 23 minutes, consisting of 5 minutes queuing to get a queue number, 15 minutes waiting in line before being called, and around 3 minutes for the registration process. This waiting time is above healthcare standards defined by the Ministry of Health, namely a maximum of 10 minutes for outpatient registration services. Based on data from outpatient visits at Dr. Tengku Mansyur, the average daily visits reached around 213 patients per day. A high volume of visits has the potential to cause queues at the registration section.

This situation encourages researchers to further explore the correlation between how long registration takes and the satisfaction of patients, considering that the duration of waiting plays a significant role indicator in assessing service quality and can directly influence patient perceptions and levels of satisfaction with hospital services.

Methodology

This study adopts a quantitative method combined with a correlational research type, which aims for the purpose of identifying the correlation involving the relationship between registration duration and outpatient satisfaction at RSUD Dr. Tengku Mansyur Tanjungbalai. Sampling was carried out randomly (random sampling) of outpatients who registered during the research implementation period. Every patient who comes on the day of the research has the same opportunity to become a respondent, regardless of participation status (General/JKN).

In February 2025, data were gathered through the direct distribution of questionnaires to outpatient participants. Data was collected using the Parasuraman (1988) questionnaire which was modified from previous research by (Yulia & Andriani, 2017) which was relevant and was evaluated to ensure its validity and reliability in previous research. This research involved a sample of 105 respondents, which was determined through calculations using the Lemeshow formula (1990). Methodology contains analysis about Data, Source of Data, Research Model, and Hypothesis Formulation (if quantitative research). Also state the hypothetical relationships (hypothesis creation starts from the variables that influence the variables that are influenced).

This research different from previous studies by focusing specifically on registration service time, rather than the overall patient waiting time until receiving medical care. Thus, registration time is treated as a separate component, whose relationship with patient satisfaction is independently analyzed. The innovative aspect of this research is its implementation of the pearson correlation method to determine the strength and direction concerning the connection between the duration of the registration process and patient satisfaction levels. The study is conducted in a hospital that provides an online registration system, yet is still predominantly used by patients who register manually. This reflects a real-world challenge in implementing efficient services—particularly in regional hospitals that continue to face challenges in enhancing the overall effectiveness of registration services.

This research intends to contribute by the evaluation of service quality during the initial interaction phase between patients and the hospital, and to serve as a reference for public service improvement efforts. The urgency of this study is based on the growing public demand for high-quality healthcare services, particularly in terms of efficiency, speed, and convenience at the registration unit.

Result and Discussion

Table. 1 Description of Respondent Characteristics

Characteristics	F	%
Age Group		
21-25 Years	3	2.9
26 - 45 Years	26	24.8
46 - 59 Years	35	33.3
60-81 Years	41	39
Patient Type		
Manual	105	100
Gender		
Male	47	44.8
Female	58	55.2
Education Level		
Eelementry School	9	8.6
Junior High School	25	23.8
High School	61	58.1
Bachelor	10	9.5
Occupation		
Teacher	7	6.7
Houswife	37	35.2
Student	1	1.0
Fisherman	24	22.9
Trader	9	8.6
Farmer	3	2.9
Government Employees	3	2.9
Self Employed	21	20
Total	105	100

Based on manual patient characteristics data of 105 people, the majority belonging to the age group 60 years and over (39%) and 46–59 years old (33.3%), while the youngest age (under 25 years) is only 2.9%. Gender is dominated by women (55.2%) compared to men (44.8%). In terms of education, most had a high school education (58.1%), followed by a junior high school (23.8%), and only a few had a bachelor's degree (9.5%). In terms of employment, the majority consist of housewives (35.2%), followed by fishermen (22.9%), and entrepreneurs (20%).

Table.2 Univariate Test

Variables	F	%	Max	Min	Mean	Stad. Deviasi
Registration Waiting Time						
Fast	68	64,8	21	9	14.41	3.447
Slow	37	38,2				
Total	105	100				
Patient Satisfaction						
Satisfie	68	64,8	100	77	87,96	6.266
Don't Satisfied	37	38,2				

Total	105	100
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From this data, 64.8% of respondents considered the waiting time for registration to be fast, while 38.2% considered it slow. The average waiting time is 14.41 minutes with a standard deviation of 3.447 indicating relatively small variations in waiting time. In terms of patient satisfaction, the majority of respondents 64.8% were satisfied with the services received, and only 38.2% were dissatisfied. The average satisfaction level reached 87.96 with a standard deviation of 6,266, which reflects a generally positive perception of registration services.

Table.3 Bivariate Test

Registration Waiting Time	Perason Corelation	Patient Satisfaction
	-0.806	
	Sig.2	
	0.000	
	R ²	
	0,646	

According to the findings obtained through Pearson correlation test revealed a significance level of the Pearson correlation test, a significance value (Sig.) of 0.000 was obtained, which is below the threshold of 0.05. This showing that a statistically significant connection is found between the duration of registration services and outpatient satisfaction. Apart from that, the Pearson correlation value is -0.806, indicating that the correlation between the two variables is strong and negative. Apart from that which the coefficient of determination (R²) is 0.646, which indicates the relationship between how long patients wait to register and their level of satisfaction at RSUD dr. Tengku Mansyur Tanjung Balai was 64.6% and was in the strong category.

Waiting Time for Outpatient Registration

Registration waiting time refers to the duration interval based on the patient's perspective arrival at the registration unit until the administration process is complete. In healthcare facilities, waiting time is a very important performance indicator. The Indonesian Ministry of Health stated that the queue time limit at the counter is 10 minutes. Registration service is considered fast when the wait time does not exceed 10 minutes and is categorized as long if the queue duration exceeds 10 minutes. According to the study's results, it can be evident that the duration of waiting for outpatient registration at RSUD dr. Tengku Mansyur is above the optimal benchmarks established by Indonesia's Ministry of Health. The waiting time experienced by patients in this study averaged 20 minutes. This shows that the registration service is not fully efficient and has the potential to give rise to negative perceptions from patients regarding the quality of service.

Factors that influence the length of waiting time include a limited number of officers, a registration system that is still manual, the comfort of hospital facilities, and dense queues of patients during peak hours. Waiting times that exceed patient expectations can reduce comfort and increase the risk of dissatisfaction from the start

of service. This condition is in accordance with research results (Herlina et al.2021) which mentions that manual systems have longer waiting times than electronic systems.

Patient Satisfaction

Patient satisfaction is the final result (*outcome*) in healthcare services that reflect the quality of services provided. In general, patient satisfaction can be interpreted as an emotional response or assessment that arises after the patient compares the service excellence received with previous expectations (Soumokil et al., 2021). Service quality starts with good performance so that people get what they need and achieve a level of community satisfaction and a positive perception of the service quality of local government and related agencies (Prakoso et al., 2021).

The findings of the study indicate that patients' satisfaction level regarding registration services is in the medium category. Some patients feel that the staff service is still not fast and responsive enough in the administration process. This gap shows that the service received is not fully in line with patient expectations. Parasuraman, Zeithmal and Berry (Parasuraman, A.; Zeithaml, V. A.; Berry 1998), concluded that Service quality is measured across five key dimensions which are called SERVQUAL. The concept of service quality comprises the following five aspects

1. Physical evidence (*Tangibles*) which reflects the organization's ability to present its existence to the outside community. This includes conditions physical facilities such as buildings, the use of technology, and the appearance of staff, which clearly demonstrate the standard of service delivered by the provider
2. Reliability, which refers to the institution's ability to provide services consistently as promised, with high accuracy and can be trusted. This includes timeliness, equal service to all customers without discrimination, as well as the delivery of appropriate information so as to increase patient confidence in the services received.
3. Responsiveness. This dimension relates to the readiness and willingness of service providers to help customers and provide services quickly and precisely. Providing clear information is an important part of responsiveness, as leaving customers waiting without explanation can trigger negative perceptions of service quality.
4. Guarantee (Assurance), which includes the knowledge and ability of staff to provide a sense of security and trust to customers. Elements include good communication, credibility, security, competence and courtesy in interacting with customers.
5. Empathy, which refers to the personal attention and care given to each customer. This involves efforts to understand individual customer needs and provide personalized and attentive service.

Based on the results of interviews, several patients provided input regarding aspects of physical factors, namely hospital facilities in the registration area. Some of them said that they felt that the comfort of the available waiting room still needed to be improved, especially in terms of seating capacity and availability. Apart from that, the number of staff at the registration counter is also a factor to pay attention to,

where several patients suggested adjusting the number of staff during peak hours so that services can be smoother and more efficient. In this research, dimensions *tangible* And *responsiveness* This is quite a concern because there is still input from patients regarding the comfort of the facilities as well as the speed and responsiveness of the registration service. This shows the need for continuous improvement efforts to optimally meet patient expectations.

Connection between registration queue time and patients perceived satisfaction

There exists a significant connection between how long patients wait during registration and their satisfaction levels. Patients who experienced shorter waiting times tended to give more positive assessments of service quality. In contrast, those who waited longer often expressed dissatisfaction, although other elements including staff responsiveness and the medical institution physical facilities had an influence as well

These findings are consistent with Supriyanto (2020), who reported that prolonged waiting times can negatively affect perceptions of hospital service efficiency. Similarly, Nursyam (2023) argued that patients' perceptions of hospital professionalism are influenced by the speed of initial services, including the registration process. Furthermore, Mahadewi et al. (2019) found that patients felt uncomfortable when waiting times exceeded their tolerance, even when the medical care received afterward remained satisfactory. (Supriyanto, 2020; Nursyam, 2023; Mahadewi et al., 2019).

Thus, the findings of this research reinforce the perspective that registration waiting time is a critical early experience that shapes patients' overall perception of hospital services. This outcome supports previous studies that position the initial stage of service as an essential element in fostering patient satisfaction and loyalty

Conclusion

The Pearson test it was found that a strong negative correlation between the duration of registration services and patient satisfaction ($r = -0.806$; Sig. = 0.000) with an influence level of 64.6%. The more time patients have to wait, the lower the patients perceived satisfaction tends to be. Therefore, service time is an important factor influencing patient satisfaction. It is recommended that hospitals increase the number of registration officers during peak hours and conduct routine evaluations of the manual registration flow to identify obstacles and make continuous improvements that are adjusted to the conditions and service needs in the hospital.

Declaration of Competing Interest

There have no competing interest

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