

## Original Article

# Patient Family Satisfaction Reviewed from The Waiting Time of Emergency Services at The Emergency Department of Sumberglagah Mojokerto Regional Hospital

Siti Rachmah<sup>1\*</sup>, Nurul Mawaddah<sup>1</sup>, and Nukianti Alvi<sup>1</sup>

### Authors Information:

<sup>1</sup>Program Pendidikan Ners STIKES Majapahit Mojokerto, Indonesia

### Corresponding Author:

<sup>1</sup>Program Pendidikan Ners STIKES Majapahit Mojokerto, Indonesia  
Email: [rachmah64@gmail.com](mailto:rachmah64@gmail.com)

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### Abstract

**Background:** Family satisfaction reflects the performance of emergency services in hospitals. Dissatisfaction indicates poor service quality, often marked by complaints from patients and families. One key cause of dissatisfaction is prolonged service waiting time, which leads to delays in care. This study aimed to examine the relationship between emergency service waiting time and family satisfaction in the Emergency Department of Sumberglagah Regional Hospital, Mojokerto. **Methods:** This study employed an analytical observational design. A total of 147 respondents met the inclusion and exclusion criteria and were selected through simple random sampling. Data were collected using emergency service waiting time and family satisfaction questionnaires based on a community health survey. Data analysis was conducted using the Fisher Exact Test. **Results:** 85% of respondents experienced waiting times compliant with the national service standard. A total of 77.6% expressed high satisfaction with emergency services. The results showed that the majority of emergency service waiting times at the hospital met the established standards, and family satisfaction was in the "very good" category. Bivariate analysis revealed a significant relationship ( $p = 0.000$ ,  $p < 0.05$ ) between waiting time and family satisfaction. **Conclusion:** Efficient and effective emergency services can improve family satisfaction, ultimately enhancing the overall quality of hospital service performance. Therefore, improving the capacity of health workers through effective communication is essential for quality service delivery.

## Introduction

Customer or service user satisfaction (patients and their families) in hospital services, including emergency services, is one of the indicators of the minimum service standards in hospitals, as stipulated in the Regulation of the Minister of Health of the Republic of Indonesia No. 129/Menkes/SK/II/2008 concerning minimum service standards in hospitals. Service satisfaction can affect the number of hospital visits,<sup>1,2</sup> as well as the effectiveness of services for patients.<sup>3</sup> The level of family satisfaction tends to increase after receiving health services that meet expectations, which can lead to repeated use of services and the dissemination of information to family, friends, or those around them. Dissatisfaction indicates poor service performance, often marked by complaints from patients and their families regarding hospital services.<sup>3</sup>

National standards for customer satisfaction in health services are set through the minimum service standards at above 95%.<sup>4</sup> Meanwhile, according to the Regulation of the Minister of Health of the Republic of Indonesia No. 129/Menkes/SK/II/2008 on minimum service standards in hospitals, the satisfaction standard for emergency services is  $\geq 70\%$ . These serve as guidelines indicating that the implementation of emergency services must pay attention to customer satisfaction indicators as a measure of the success of achieving quality service standards.

The application of quality nursing services in patient care will have an impact on the satisfaction of the patient's family. Factors that influence family satisfaction include patient satisfaction, service provider performance, expectations and perceptions of received services,<sup>5</sup> nurse response time,<sup>2</sup> and emergency department waiting time.<sup>6,7</sup>

Emergency department waiting time is defined as the duration the patient is managed, starting from arrival until being discharged or transferred to another room or unit.<sup>6</sup> Waiting time can be used as an indicator to measure the satisfaction of emergency services, helping to identify causes of service delays or prolonged service times.<sup>7</sup>

Prolonged service times have become a global issue in hospitals around the world. In the United States, 47.7% of emergency department patients experienced a waiting time of 6 hours, and 24.5% waited for 4 hours.<sup>8</sup> In Indonesia, the Emergency Department of RSPAU Dr. S. Hardjo Lukito reported an average waiting time of 67.15 minutes,<sup>9</sup> while at the Emergency Department of Universitas Airlangga Hospital, the average waiting time exceeded 2 hours.<sup>6</sup>

Sumberglagah Regional Hospital, a provincial government hospital located in Tanjung Kenongo Village, Pacet District, Mojokerto Regency, has established service delay guidelines as its emergency department service time standards, namely: 1) no more than 1 hour for new patients with stable conditions who do not require observation, 2) no more than 2 hours for patients to be transferred to another room with stable conditions and not requiring observation, 3) no more than 15 minutes for patients to be referred to another hospital with stable conditions and not requiring observation, and 4) no more than 8 hours for patients requiring observation in the emergency department.<sup>7</sup> Prolonged service times may affect patient care, increase the workload of health workers, and lead to dissatisfaction among patients and their families.<sup>6</sup> Based on these considerations, the researchers are interested in conducting a study on the relationship between emergency service

waiting time and family satisfaction in the Emergency Department of RSUD Sumberglagah Mojokerto.

## Methods

This study employed an analytical observational design with a cross-sectional approach. The purpose of this study was to determine the relationship between emergency service waiting time and patient family satisfaction in the Emergency Department of Sumberglagah Regional Hospital, Mojokerto. The study population consisted of all family members of patients at the hospital's emergency department. Minimal sample size was calculated using Slovin's formula with a 5% margin of error. A total of 147 respondents were selected using simple random sampling. The independent variable in this study was the waiting time for emergency services, while the dependent variable was family satisfaction. The research instruments included a waiting time questionnaire and a family satisfaction questionnaire, adapted from the community satisfaction survey of Sumberglagah Regional Hospital. The instrument used was pass validation and reliability test. Data were analyzed using univariate and bivariate analytical techniques. This study was approved by the Health Research Ethics Committee (KEPK) of Sumberglagah Regional Hospital under approval number 000.9/1974/102.15/2024. Prior to data collection, all participants were provided with detailed information about the study's purpose, procedures, potential risks, and benefits. Those who agreed to participate signed a written informed consent form. This process ensured that participation was fully voluntary and based on a clear understanding of the research. Confidentiality and anonymity were maintained throughout the study, and

participants were assured that they could withdraw at any time without any consequence.

## Results

**Table 1.** Frequency Distribution of Respondents Based on Emergency Service Waiting Time at the Emergency Department of Sumberglagah Regional Hospital

No.	Waiting Time	Frequency (f)	Percentage (%)
1	Not Meeting the Standard	22	15.0
2	Meeting the Standard	125	85.0
Total		147	100

The findings of this study demonstrate a high level of service compliance and satisfaction in the Emergency Department of Sumberglagah Regional Hospital. As shown in Table 1, 85% of respondents reported experiencing waiting times that met the national standard, indicating good timeliness in emergency triage and care delivery. Meanwhile, Table 2 reveals that 77.6% of respondents rated their satisfaction as "very good", suggesting that both the quality and responsiveness of emergency services were perceived positively by patient families.

**Table 2.** Frequency Distribution of Respondents Based on Family Satisfaction in the Emergency Department of Sumberglagah Regional Hospital

No.	Family Satisfaction Category	Frequency (f)	Percentage (%)
1	Good	33	22.4
2	Very Good	114	77.6
Total		147	100

Further analysis using the Public Satisfaction Index (IKM), presented in Table 3, reinforces this conclusion. The overall IKM score for the emergency department was 93.86, calculated from nine weighted service elements. These include critical dimensions such as service requirements, procedures, staff competence, behavior, and complaint

handling. The high average scores across all components, particularly for completion time (3.82), staff behavior (3.78), and complaint handling (3.81), reflect a well-functioning emergency care environment that prioritizes efficiency, professionalism, and user responsiveness.

**Table 3.** Satisfaction Measurement Based on the Public Satisfaction Index (IKM) Using 9 Service Elements in the Emergency Department of Sumberglagah Regional Hospital

No.	IKM Component Elements	Average Score (NRR)	Service Component Index Score (Weighted Score/ NRRT) = $NRR \times 0.11$
1	Requirements	3.69	0.40967
2	System, Mechanism, and Procedures	3.70	0.41119
3	Completion Time	3.82	0.42479
4	Cost/Tariffs	3.69	0.41043
5	Service Type Specifications	3.77	0.41875
6	Staff Competency	3.75	0.41648
7	Staff Behavior	3.78	0.41950
8	Complaint and Feedback Handling	3.81	0.42299
9	Facilities and Infrastructure	3.82	0.42404
Total Score for			3.7542
Emergency Department IKM Score			$3.7542 \times 25 = 93.86$

## Discussion

### Emergency Service Waiting Time at the Emergency Department of Sumberglagah Regional Hospital

The results of this study show that the majority of respondents experienced emergency service waiting times at the Emergency Department (ED) of Sumberglagah Regional Hospital that were in accordance with service standards. Specifically, the response time for newly

arrived stable patients averaged 25 minutes (less than 1 hour). Patients awaiting transfer to inpatient care had an average waiting time of 59 minutes (less than 2 hours), patients referred to another hospital waited approximately 12 minutes (less than 15 minutes), and patients under observation prior to transfer waited an average of 4 hours and 43 minutes (less than 8 hours).

This adherence to service time standards can be attributed to several factors, including the availability of service guidelines at the Emergency Department and clearly defined standards for service delays, which serve as references for healthcare staff to maintain and improve service quality. Purbobinuko et al. (2021) emphasized the importance of established regulations such as medical record service guidelines and standard operating procedures (SOPs), which are formally authorized by hospital leadership.<sup>10</sup> These regulations may include policies, director's regulations or decrees, guidelines, procedures, or hospital-issued programs. The study also revealed that the average waiting time from patient arrival to initial assessment was 25 minutes, and the average waiting time for patient transfer was 59 minutes. These findings are consistent with those of Habibi et al. (2023), who found that in the ED, assessment, consultation, and inpatient transfer waiting times were all under 60 minutes.<sup>11</sup>

For unstable patients who required observation before transfer, the average waiting time was 4 hours and 43 minutes, aligning with the Ministry of Health Decree No. 129/MENKES/SK/II/2008, which mandates 24-hour emergency services with waiting times of less than 6–8 hours and a patient satisfaction rate above 90%. All hospitals are expected to comply with these minimum service standards.

However, the study also found that 15% of respondents (22 individuals) experienced waiting times that did not meet the standards. This may be attributed to the type of respondent, particularly those classified as newly arrived patients—9 of the 22 respondents (40.9%) were in this category. Delays in care for these patients may have been caused by increased patient volume and simultaneous arrivals, as well as the presence of critical cases requiring immediate attention (triage category red), without neglecting the triage-based prioritization of other patients. Patients in triage category I (red) must receive immediate treatment as their condition requires emergency resuscitation and stabilization; they should not wait more than 5 minutes. Priority 2 (yellow) patients may wait up to 15 minutes, while Priority 3 (green) patients may wait up to 30 minutes or a maximum of 60 minutes.<sup>12</sup>

In the event of mass patient arrivals at the ED of Sumberglagah Hospital, mitigation strategies include: (1) modifying triage procedures by eliminating the triage room and sending patients directly to treatment areas, and (2) assigning additional nurses from other units to assist in the ED. Another contributing factor to extended waiting times is the condition of patients upon arrival—particularly unstable patients or those requiring extended observation. Of the 22 respondents with non-standard waiting times, 14 (63.6%) were musculoskeletal emergency cases such as fractures, dislocations, compartment syndrome, or septic arthritis. According to Ministry of Health Regulation No. 10/2015 concerning nursing service standards in specialty hospitals, patients in emergency conditions require a series of immediate examinations including surgery and inpatient preparations.

### **Patient Family Satisfaction at the Emergency Department of Sumberglagah Regional Hospital**

The study results show that most respondents (77.6%) reported very high satisfaction with services provided in the ED of Sumberglagah Regional Hospital. Satisfaction levels were influenced by several factors, including age, educational level, and familial relationship to the patient.

A total of 72 out of 114 very satisfied respondents (63.2%) were in early adulthood (aged 18–40 years). Age is an internal factor affecting patient satisfaction. Younger patients or family members tend to have higher expectations and demands for optimal service, whereas older individuals are generally more emotionally open and have lower expectations. This explains why older patients or families are often more easily satisfied than younger ones. Furthermore, older individuals typically require comprehensive health facilities to support care.<sup>13</sup>

Another factor contributing to high satisfaction was education level. Thirty-nine of the 114 very satisfied respondents (34.2%) had a college-level education. According to Azzahra et al. (2023), there is a relationship between education level and satisfaction in ED services.<sup>13</sup> Education equips individuals with problem-solving and attitude-adjusting skills, especially when dealing with complex healthcare services. Higher education is also associated with greater knowledge and perception, allowing individuals to better evaluate the services they receive.

The third factor influencing satisfaction was the relationship between the respondent and the patient. Thirty-nine out of 114 very satisfied respondents (34.2%) were the patient's spouse. High-quality care not only directly impacts the patient but also affects the satisfaction of close family members.

According to the Minister of Health Regulation No. 129/Menkes/SK/II/2008 on minimum hospital service standards, one of the indicators for evaluating performance in each unit is customer satisfaction—both patients and their families. This highlights the importance of considering family satisfaction as a benchmark for service quality.

Measurements based on the Public Satisfaction Index (IKM), using nine service elements, confirmed that the Emergency Department of Sumberlagah Regional Hospital is classified as having excellent service performance. The highest-scoring elements were "service completion time" and "facilities and infrastructure," supporting the finding that rapid and efficient service contributes to high satisfaction levels. The majority (85%) of ED patients experienced waiting times that were fast and within the service standard. These findings are consistent with those of Rismanwadi et al. (2024), who concluded that short waiting times and adequate facilities contribute significantly to satisfaction and service quality.<sup>13</sup>

### **The Relationship Between Emergency Service Waiting Time and Patient Family Satisfaction**

The results of this study demonstrate a relationship between emergency service waiting time and family satisfaction in the Emergency Department of Sumberlagah Regional Hospital. These findings are consistent with Wulandari et al. (2020), who also found that shorter waiting times are associated with higher satisfaction in hospital ED services. In their study, 165 out of 186 respondents (88.7%) who reported very high satisfaction also experienced waiting times of less than 120 minutes. The principle of "time saving is lifesaving" underscores the importance of prompt, effective, and efficient

emergency care. This necessitates improvements in facilities, human resources, and ED management in accordance with established standards. This study further revealed that 106 of 114 respondents (92.98%) who experienced standard-compliant waiting times also reported very high satisfaction.

Respondents' very high satisfaction was primarily due to the fact that waiting times were within the established standards: less than 1 hour for new patients, under 2 hours for room transfers, less than 15 minutes for referrals, and under 8 hours for observation cases. According to Habibi et al. (2023), time is a critical metric for evaluating emergency service quality—long waiting times can overwhelm the system and hinder care delivery, ultimately affecting patient satisfaction.<sup>11</sup> Patient satisfaction is the emotional response resulting from comparing received healthcare service performance with personal expectations.

These international findings underscore the universal impact of wait time on perceived care quality and reinforce the relevance of evaluating waiting time as a global ED performance indicator—not only in Indonesia but across diverse healthcare settings. This study's findings demonstrate a significant relationship between ED waiting time and family satisfaction. Using Donabedian's model, the structure (staffing and triage system), process (timeliness of care), and outcome (satisfaction) are interrelated components of quality care. Quick response times reflect the ED's ability to prioritize urgent care effectively, which influences satisfaction levels.

The results align with Horwitz et al. (2011), who found that patient satisfaction is highly sensitive to delays in triage and care delivery.<sup>14</sup> Similarly, Al Nhdi et al. (2021) showed that operational efficiency in the ED

improves public trust and perceived care quality.<sup>15</sup> In this study, compliance with waiting time standards appears to be a proxy for service quality from the family's perspective.

Nevertheless, this study has limitations. It was conducted in a single hospital, which may limit the generalizability of the findings. The use of self-reported questionnaires could also introduce social desirability bias. Future studies should consider a multi-center design and include additional qualitative components to better understand the patient-family experience in ED settings.

## Conclusion

The results of this study indicate that the majority of emergency service waiting times at the Emergency Department of Sumberglagah Regional Hospital, Mojokerto, were in accordance with established standards. Furthermore, patient family satisfaction, as measured by the Public Satisfaction Index, was classified in the "very good" category. There is a significant relationship between emergency service waiting time and patient family satisfaction in the Emergency Department of Sumberglagah Regional Hospital. The findings of this study are expected to provide useful insights for the hospital to maintain and enhance service elements that are already categorized as good or very good, and to regularly evaluate the implementation of public satisfaction surveys. Effective and efficient service delivery can improve patient and family satisfaction, which in turn can positively impact the overall quality of hospital service performance. However, it is important to emphasize that these results are context-specific, reflecting the operational environment, resources, and service culture unique to Sumberglagah Mojokerto Hospital. Therefore,

strengthening the capacity of healthcare workers—particularly through effective communication—can significantly enhance the quality of healthcare services provided in the hospital.

## Declaration of Interest

The authors declare that they have no conflict of interest regarding the publication of this article. This research was conducted independently, and no financial or commercial relationships were involved that could be interpreted as a potential conflict of interest.

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