



**ANALYSIS OF DETERMINANT FACTORS ON PATIENT SATISFACTION IN THE EMERGENCY DEPARTMENT**

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**ABSTRACT**

Patient satisfaction is a crucial indicator of healthcare quality, particularly in the Emergency Department (ED), where services must be rapid, accurate, and compassionate. This study aimed to analyze determinant factors influencing patient satisfaction in the Emergency Department of Bhayangkara Hospital Tulungagung. A quantitative cross-sectional design was applied to 110 ED patients selected through systematic random sampling. Data were collected from November 24–30, 2025, using a SERVQUAL-based questionnaire measuring responsiveness, assurance, tangibles, empathy, reliability, and response time. Instrument testing showed that all items were valid ( $r$  count  $> 0.413$ ) and reliable (Cronbach's Alpha  $> 0.70$ ). Data analysis using Spearman's rho correlation and logistic regression revealed that all service quality dimensions were positively and significantly associated with patient satisfaction ( $p < 0.05$ ). Responsiveness had the strongest correlation ( $r = 0.748$ ), followed by empathy ( $r = 0.710$ ). Logistic regression identified empathy as the most dominant determinant ( $\beta = 0.458$ ). These findings indicate that empathetic care and interpersonal interactions play a central role in improving patient satisfaction in the ED.

Keywords: empathy; emergency department; patient services; satisfaction

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**INTRODUCTION**

Healthcare services are one of the fundamental needs of society that must be delivered with high quality, safety, and equity. Hospitals, as referral healthcare facilities, play a strategic role in the national health system, particularly in providing emergency medical services. The Emergency Department (ED) serves as the frontline unit of the hospital, operating 24 hours a day to provide care for patients with emergency, critical, and life-threatening conditions. The success of emergency services is determined not only by the clinical competence of healthcare professionals and the sophistication of medical technology but also by the quality of services directly perceived by patients and their families.

Patient satisfaction is a primary indicator for evaluating the quality of healthcare services. Satisfaction reflects the extent to which the services provided meet or exceed patient expectations. In the context of emergency services, patient satisfaction is a complex issue, as patients generally arrive at the ED in unstable physical and psychological conditions, accompanied by pain, anxiety, and uncertainty regarding their health status. This situation makes patients and their families highly

sensitive to every aspect of care, including the speed of service delivery, staff attitudes and empathy, clarity of information, and the comfort of healthcare facilities.

The scale of challenges faced by emergency departments is extensive and occurs globally. Various international studies report that ED overcrowding, limited human resources, and high workloads among healthcare providers are major challenges in emergency care delivery. Based on interviews with the Head of Medical Services at Bhayangkara Hospital Tulungagung, approximately 18.7% of ED patients experienced dissatisfaction, primarily due to delays in staff response time during emergency care. This condition is exacerbated by the increasing number of patient visits resulting from population growth, changes in disease patterns, and rising public demands for fast and high-quality healthcare services. In Indonesia, these challenges are also strongly evident, particularly in referral hospitals that serve a large number of patients daily (Ministry of Health of the Republic of Indonesia, 2022).

Common problems in emergency department services include long waiting times, delayed response times, suboptimal triage processes, and limitations in physical facilities and treatment spaces. Response time is a critical issue because delays in managing emergency patients can directly affect patient safety. The principle of *time saving is life saving* emphasizes that every minute of delay can increase the risk of morbidity and mortality. In addition to clinical issues, non-clinical factors such as ineffective communication, perceived lack of empathy among healthcare providers, and insufficient attention to patient comfort and privacy often trigger patient dissatisfaction, even when medical interventions are performed according to established standards.

Chronologically, emergency department services begin when patients arrive at the hospital and complete the registration process, followed by triage to determine the severity and priority of care. The triage stage is crucial, as it determines the urgency of patient management. Errors or delays in triage may result in critically ill patients not receiving timely and appropriate treatment.

The high volume of ED visits requires hospitals to maintain consistent service quality. Based on data and findings from this study, patient complaints remain related to service speed, staff attitudes and communication, as well as the comfort of ED facilities and infrastructure. These conditions indicate that improving the quality of emergency services remains an urgent need to enhance patient satisfaction and the hospital's image. In evaluating healthcare service quality, the SERVQUAL model is widely used because it effectively measures the gap between patient expectations and perceptions of the services received. This model includes five main dimensions: responsiveness, assurance, tangibles, empathy, and reliability.

Solutions to patient satisfaction issues in emergency departments should not focus solely on improving technical aspects of care but must also strengthen non-technical aspects. Enhancing healthcare workers' competencies through training in effective communication and empathy, improving service flow systems, optimizing triage processes, and providing adequate facilities and infrastructure are strategic steps that can be implemented. In addition, regular evaluation of response time and patient satisfaction should be conducted as part of the hospital's quality assurance system. Based on the identified problems, incidents, and service chronology in the emergency department, this study is essential to analyze the determinant factors influencing patient satisfaction in the Emergency Department of Bhayangkara Hospital Tulungagung.

## **METHOD**

This study employed a quantitative cross-sectional design. The research was conducted in the Emergency Department of Bhayangkara Hospital Tulungagung from 24 to 30 November 2025. The population comprised all patients receiving emergency services during the study period. A total of 110 respondents were selected using systematic random sampling based on predefined inclusion criteria. Data were collected using a structured questionnaire adapted from the SERVQUAL model,

covering six dimensions: responsiveness, assurance, tangibles, empathy, reliability, and response time.

Validity tests using Pearson correlation showed that all items in the variables tangible, responsiveness, reliability, assurance, empathy, and patient satisfaction had correlation coefficients (r-count) greater than the table r-value of 0.413 at a 5% significance level. Reliability tests using Cronbach's Alpha showed that all variables had alpha values greater than 0.70. The Cronbach's Alpha values for each variable ranged from 0.765 to 0.838, while the overall patient satisfaction variable demonstrated excellent reliability. Patient satisfaction was measured as the dependent variable. Data analysis included descriptive statistics, Spearman's rho correlation for bivariate analysis, and multiple regression analysis to determine the dominant influencing factor. The study received ethical approval from the The health research ethics committee STRADA Indonesia University number 1023427/EC/KEPK/1/10/2025, and all respondents provided written informed consent prior to participation

## RESULT

Table 1.  
Respondent characteristics (n= 110)

Variable	Category	f	%
Age	17–25 years	14	12.7
	26–35 years	17	15.5
	36–45 years	1	0.9
	46–55 years	72	65.5
	56–65 years	6	5.5
Gender	Male	60	54.5
	Female	50	45.5
Education Level	Primary School	2	1.8
	Junior High School	25	22.7
	Senior High School	54	49.1
	Higher Education	29	26.4
Occupation	Daily Worker	16	14.5
	Private Sector Employee	34	30.9
	Entrepreneur	41	37.3
	Civil Servant	19	17.3
Religion	Islam	92	83.6
	Christianity	18	16.4
Monthly Income	< IDR 2 million	10	9.1
	IDR 2–3 million	50	45.5
	> IDR 3 million	50	45.5
Payment Method	National Health Insurance (JKN)	80	72.7
	General (Out-of-pocket)	20	18.2
	Other Insurance	10	9.1
Patient Category	Police (POLRI)	39	35.5
	Non-Police	72	64.5

Based on Table 1, this study involved 110 respondents. The majority of respondents were aged 46–55 years, totaling 72 individuals (65.5%). Most respondents were male (60 respondents; 54.5%). The highest education level was senior high school, reported by 54 respondents (49.1%). Most respondents were entrepreneurs, accounting for 41 respondents (37.3%). The majority of respondents were Muslim (92 respondents; 83.6%). Regarding monthly income, most respondents earned IDR 2–3 million and more than IDR 3 million, each category comprising 50 respondents (45.5%). The most commonly used payment method was the National Health Insurance (JKN), used by 80 respondents (72.7%). Most respondents were non-police personnel, totaling 72 respondents (64.5%).

Tabel 2.

Spearman Rho Correlation between Service Quality Dimensions and Patient Satisfaction

Service Quality Dimension	Correlation Coefficient (r)	p-value	Interpretation
Responsiveness	0.748	0.000	Strong positive correlation
Assurance	0.658	0.000	Strong positive correlation
Tangibles	0.426	0.000	Moderate positive correlation
Empathy	0.710	0.000	Strong positive correlation
Reliability	0.572	0.000	Moderate to strong positive correlation
Response Time	0.213	0.026	Weak positive correlation

Based on Table 2, the results indicate a strong and statistically significant correlation between responsiveness and patient satisfaction, with a Spearman correlation coefficient of 0.748 and a significance value of  $p = 0.000$ . Assurance also showed a strong and significant correlation with patient satisfaction, with a correlation coefficient of 0.658 ( $p = 0.000$ ). Tangibles demonstrated a positive and significant correlation with patient satisfaction, with a correlation coefficient of 0.426 ( $p = 0.000$ ). A very strong and significant correlation was found between empathy and patient satisfaction, with a correlation coefficient of 0.710 ( $p = 0.000$ ). Reliability was also positively and significantly correlated with patient satisfaction, with a correlation coefficient of 0.572 ( $p = 0.000$ ). Response time showed a weak but significant positive correlation with patient satisfaction, with a correlation coefficient of 0.213 and a significance value of  $p = 0.026$ . Based on the beta coefficient ( $\beta$ ), empathy was identified as the most dominant factor influencing patient satisfaction ( $\beta = 0.458$ ;  $p = 0.002$ ).

## DISCUSSION

Emergency Department (ED) services represent a critical form of healthcare delivery that requires speed, accuracy, precision, and a humane approach toward patients and their families. The results of this study indicate that, in bivariate analysis, all dimensions of service quality—namely responsiveness, assurance, tangibles, empathy, reliability, and response time—have positive and statistically significant relationships with patient satisfaction. These findings reinforce the concept of healthcare service quality proposed by Parasuraman et al. through the SERVQUAL model, which posits that patient satisfaction is the result of a comprehensive evaluation of the services received in comparison with patients' initial expectations. In the context of the ED, where patients are often in physically and psychologically vulnerable conditions, perceptions of service quality become more sensitive and have a direct impact on satisfaction levels.

Responsiveness demonstrates a strong positive relationship with patient satisfaction. This finding confirms that the ability of healthcare professionals to respond quickly and appropriately to patient needs is a crucial factor in emergency care services. This result is consistent with studies by Jaber-Chehayeb (2023) and Buky et al. (2024), which report that staff responsiveness significantly influences patient satisfaction, particularly in high-urgency service units such as emergency departments. However, multivariate analysis revealed that responsiveness did not have a significant partial effect. This condition may be explained by the potential overlap among variables, in which responsiveness is implicitly integrated into other dimensions such as empathy and response time, thereby reducing its direct influence when analyzed simultaneously.

Assurance also showed a positive and significant relationship with patient satisfaction in bivariate analysis. Assurance reflects the competence, courtesy, and ability of healthcare providers to foster a sense of safety and trust among patients. This finding is in line with studies conducted by Faridasari et al. (2021) and Rahayuningtyas et al. (2023), which emphasize the role of assurance in building patient trust in hospital services. Nevertheless, assurance did not demonstrate a significant effect in multivariate analysis. This may be attributed to the characteristics of ED patients, who tend to prioritize rapid actions and empathetic attitudes over technical assurances, as patients in emergency

situations often place full trust in healthcare professionals without conducting in-depth evaluations of their competence.

The tangibles dimension, which represents the physical evidence of services, was found to have a positive and significant partial effect on patient satisfaction. The physical environment of the ED, including cleanliness, adequacy of facilities and infrastructure, and the appearance of healthcare staff, contributes to shaping patients' perceptions of service quality. This finding is consistent with studies by Ratnawati et al. (2020) and Velandia et al. (2024), which indicate that adequate physical facilities and a comfortable service environment can enhance patient satisfaction. In emergency care settings, tangibles play an important role because patients and their families often assess service quality based on visible first impressions, particularly during high-pressure emergency situations.

Empathy exhibited a very strong relationship with patient satisfaction and emerged as the most dominant factor based on multiple linear regression analysis. This finding underscores that empathetic attitudes among healthcare providers—such as attentiveness, concern, effective communication, and humane treatment of patients and their families—have the greatest influence on patient satisfaction in the ED. This result is consistent with studies by Safuranti et al. (2021) and Auschra et al. (2022), which highlight empathy as a key element in healthcare services, especially in emergency situations. Under conditions of uncertainty and heightened anxiety, patients tend to value empathetic behavior more than technical aspects of care, making empathy the primary determinant of satisfaction.

Reliability showed a positive and significant relationship with patient satisfaction in bivariate analysis but did not have a significant partial effect. Reliability reflects consistency in service delivery, procedural accuracy, and clarity of information provided to patients. This finding aligns with the study by Baldini et al. (2025), which reported that unreliable services can reduce patient trust. The lack of a significant partial effect may be explained by the tendency of ED patients to focus more on final outcomes and patient safety rather than on administrative processes or procedural consistency, which are considered technical aspects of service delivery.

Response time demonstrated a weak but significant positive relationship with patient satisfaction and showed a significant partial effect with a negative direction. This finding indicates that longer response times are associated with lower levels of patient satisfaction. This result is consistent with the principle of *time saving is life saving* proposed by Hoxhai et al. (2023) and supported by Prahmawati et al. (2021), which emphasize that rapid response is a critical factor in emergency care services. Delays in response time not only affect patient safety but also trigger dissatisfaction, anxiety, and negative perceptions of hospital service quality.

Overall, the results of this study indicate that the six service quality variables simultaneously have a significant effect on patient satisfaction, with a contribution of 57.2%. Empathy emerged as the most dominant factor, followed by tangibles and response time. These findings confirm that improving patient satisfaction in the Emergency Department depends not only on technical medical aspects but is also strongly influenced by the quality of interpersonal interactions and the service environment. Therefore, hospital management should prioritize strengthening empathetic competencies among healthcare providers, improving physical facilities, and optimizing response time as key strategies for enhancing the quality of emergency department services.

## CONCLUSION

Patient satisfaction in the Emergency Department of Bhayangkara Hospital Tulungagung is significantly influenced by service quality dimensions, particularly empathy. Strengthening empathetic communication, improving physical facilities, and optimizing response time are

essential strategies to enhance patient satisfaction. Continuous evaluation and training programs focusing on both technical and interpersonal competencies are recommended.

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