

THE EFFECT OF MEDICAL PERSONNEL COMPETENCE ON PATIENT SATISFACTION IN THE EMERGENCY DEPARTMENT OF ADAM MALIK GENERAL HOSPITAL, MEDAN

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Abstract

The Emergency Department (ED) is a critical unit in hospitals that requires high competence from medical personnel, as it is directly related to patient safety and satisfaction. This study aimed to analyze the effect of medical personnel competence including medical knowledge, professional attitude, clinical skills, communication ability, and decision-making on patient satisfaction in the Emergency Department of Adam Malik General Hospital, Medan. This study employed a quantitative design with a cross-sectional approach involving 100 ED patients as respondents. Data analysis included validity and reliability tests, normality testing, bivariate analysis using the chi-square test, and multivariate analysis using logistic regression. The results showed that descriptively, the majority of respondents rated both medical personnel competence and patient satisfaction at a high level (87.6%). Bivariate analysis indicated that all competence variables were significantly associated with patient satisfaction ($p < 0.05$). However, multivariate analysis revealed that clinical skills ($p = 0.033$; OR = 2.820), professional attitude ($p = 0.047$; OR = 0.343), and communication ability ($p = 0.035$; OR = 0.367) had a significant effect on patient satisfaction. Meanwhile, medical knowledge ($p = 0.203$) and decision-making ($p = 0.311$) were not significantly associated. Clinical skills were identified as the most dominant factor influencing patient satisfaction. In conclusion, higher competence of medical personnel, particularly in clinical skills, leads to increased patient satisfaction in the Emergency Department. It is recommended that hospitals continuously enhance medical personnel competence through emergency clinical training programs.

Keywords: Medical personnel competence, Patient Satisfaction, Emergency Department

Introduction

Emergency Department (ED) services are a critical component of hospital healthcare systems, serving as the frontline for managing patients with life-threatening and urgent conditions. The quality of care in the ED is highly dependent on the speed, accuracy, and responsiveness of medical personnel, which directly influence patient survival and satisfaction. In recent years, increasing public awareness and expectations regarding healthcare quality have intensified the demand for high-performance emergency services. However, EDs often face challenges such as overcrowding, limited resources, and the need for rapid clinical decision-making, which may affect service quality (Kemenkes RI, 2020).

Globally, the World Health Organization reports that a significant proportion of patient dissatisfaction in emergency services is associated with poor communication and inadequate facilities (WHO, 2021). Additionally, the implementation of Universal Health Coverage (UHC) remains uneven, with approximately 4.5 billion people still lacking access to essential health services and over 1 billion experiencing financial hardship due to healthcare costs (WHO, 2023). While developed countries have

adopted advanced technologies such as electronic medical records, telemedicine, and artificial intelligence, many developing countries continue to struggle with infrastructure limitations, funding constraints, and shortages of skilled healthcare professionals.

In Indonesia, the challenges are further compounded by disparities in healthcare workforce distribution. The national doctor-to-population ratio remains below the recommended standard of one physician per 1,000 population, indicating insufficient human resources to meet healthcare demands (Kemenkes RI, 2020). This imbalance has a direct impact on service quality, particularly in high-demand units such as the ED. As a national referral hospital, Adam Malik General Hospital faces a high patient load, with more than 200 ED visits per day, creating additional pressure on healthcare providers and available facilities.

Medical personnel competence is widely recognized as a key determinant of healthcare quality. Competence encompasses not only medical knowledge and clinical skills but also professional attitudes, communication abilities, and decision-making capacity under pressure. In emergency settings, these competencies are essential to ensure timely diagnosis, appropriate intervention, and effective patient communication, all of which contribute to patient satisfaction and trust. Previous studies have demonstrated that higher levels of medical staff competence are significantly associated with increased patient satisfaction, particularly in emergency care contexts (Prasetya & Rachmawati, 2022).

In addition to human resources, the availability and quality of healthcare facilities play a crucial role in supporting ED service delivery. Adequate medical equipment, efficient triage systems, and comfortable waiting areas are important factors influencing patient perceptions of service quality. Patients who receive care in well-equipped and organized environments tend to report higher satisfaction levels compared to those treated in suboptimal conditions (Siregar & Simanjuntak, 2021).

Despite various government efforts to strengthen healthcare human resources, including competency development systems and workforce distribution policies, implementation remains suboptimal and requires continuous evaluation (Kemenkes RI, 2021). Furthermore, national data indicate that the overall density of healthcare workers in Indonesia is still below the World Health Organization threshold of 4.45 per 1,000 population, highlighting the need for strategic improvements in both quantity and quality of healthcare personnel.

Given these challenges, it is essential to examine the relationship between medical personnel competence and patient satisfaction, particularly in emergency settings. This study aims to analyze the influence of medical personnel competence including medical knowledge, clinical skills, professional attitude, communication ability, and decision-making on patient satisfaction in the Emergency Department of Adam Malik General Hospital. The findings are expected to provide evidence-based recommendations for improving service quality through targeted human resource development and facility enhancement strategies.

Methods

This study employed a quantitative analytical observational design with a cross-sectional approach to examine the effect of medical personnel competence on patient satisfaction in the Emergency Department of Adam Malik General Hospital. The quantitative approach was selected to allow statistical analysis of numerical data and to test relationships between independent and dependent variables, while the observational design ensured that no intervention was applied to the study subjects (Sugiyono, 2022).

The study was conducted from November to December 2025 in the Emergency Department. The population consisted of all patients who received emergency services between January and September 2025, totaling 23,257 patients. The sample size was determined using the Slovin formula with a 10% margin of error, resulting in 100 respondents. A purposive sampling technique was applied based on

inclusion and exclusion criteria. Inclusion criteria included patients aged 17–50 years, those who had received ED services, were willing to participate, and were able to communicate effectively. Patients with communication limitations, unwillingness to participate, or incomplete questionnaire responses were excluded (Notoatmodjo, 2018).

Instrument validity was tested using Pearson product-moment correlation, where items were considered valid if the correlation coefficient (r-count) exceeded the r-table value (0.361). Reliability testing was conducted using Cronbach’s Alpha, with a threshold of ≥ 0.70 indicating acceptable reliability (Ghozali, 2021). The results showed that all variables were valid and reliable, with Cronbach’s Alpha values ranging from 0.701 to 0.705.

Data analysis consisted of univariate, bivariate, and multivariate analyses. Univariate analysis was used to describe the distribution of each variable in the form of frequencies and percentages. Bivariate analysis was conducted using the Pearson correlation test to examine the relationship between medical personnel competence variables and patient satisfaction. Multivariate analysis was performed using logistic regression to identify the most dominant factors influencing patient satisfaction by considering all independent variables simultaneously (Sugiarto, 2022).

Result

1. Respondent Characteristics

Table 1. Respondent Characteristics

Variable	Category	f	%
Gender	Male	51	51.0
	Female	49	49.0
Age	≤ 25 years	6	6.0
	26–45 years	23	23.0
	46–65 years	54	54.0
	>65 years	17	17.0
Education	Primary school	14	14.0
	Junior high school	9	9.0
	Senior high school	62	62.0
	University	15	15.0
Occupation	Private employee	37	37.0
	Laborer	25	25.0
	Entrepreneur	17	17.0
	Civil servant	11	11.0
	Unemployed	10	10.0

Most respondents were aged 46–65 years (54%) and had a senior high school education (62%). The sample represented diverse occupational backgrounds, with private employees being the largest group (37%). The gender distribution was balanced.

2. Descriptive Analysis of Study Variables

Table 2. Summary of Study Variables

Variable	Good (%)	Poor (%)	Interpretation
Medical Knowledge (X1)	54	46	Generally good
Professional Attitude (X2)	27	73	Weak
Clinical Skills (X3)	52	48	Good
Communication (X4)	45	55	Moderate–weak
Decision Making (X5)	35	65	Weak
Patient Satisfaction (Y)	61	39	Generally satisfied

Clinical skills and medical knowledge were rated positively by most respondents. However, professional attitude, communication, and decision-making were perceived as weak aspects of competence. Overall patient satisfaction was relatively high (61%).

3. Bivariate Analysis (Chi-Square Test)

Table 3. Association Between Competency Variables and Patient Satisfaction

Variable	p-value	Interpretation
Medical Knowledge (X1)	0.053	Not significant
Professional Attitude (X2)	0.049	Significant
Clinical Skills (X3)	0.080	Not significant
Communication (X4)	0.023	Significant
Decision Making (X5)	0.048	Significant

Professional attitude, communication, and decision-making were significantly associated with patient satisfaction ($p < 0.05$), while medical knowledge and clinical skills were not statistically significant in the bivariate analysis.

4. Multivariate Analysis (Logistic Regression)

Table 4. Logistic Regression of Patient Satisfaction

Variable	B	p-value	OR	Interpretation
Medical Knowledge (X1)	0.597	0.203	1.817	Not significant
Professional Attitude (X2)	-1.070	0.047	0.343	Significant (negative)
Clinical Skills (X3)	1.037	0.033	2.820	Most dominant positive factor
Communication (X4)	-1.002	0.035	0.367	Significant (negative)
Decision Making (X5)	0.532	0.311	1.703	Not significant

Clinical skills were the strongest predictor of patient satisfaction ($OR = 2.820$). Professional attitude and communication significantly influenced satisfaction but showed negative associations, indicating possible inconsistencies in service experience perception. Medical knowledge and decision-making were not significant predictors.

Discussion

1. Effect of Medical Knowledge on Patient Satisfaction.

The results of this study showed that medical knowledge (X1) had no statistically significant effect on patient satisfaction ($p = 0.203$), although most respondents rated it as good. This finding indicates that clinical knowledge alone is not sufficient to determine patient satisfaction in emergency services.

This result is consistent with recent evidence suggesting that patient satisfaction in emergency departments is more strongly influenced by interpersonal and service-related factors rather than technical knowledge alone. A study by Bleich et al. (2023) emphasized that perceived quality of communication and responsiveness plays a more dominant role in shaping patient satisfaction compared to clinical knowledge in acute care settings (Bleich et al., 2023). Similarly, WHO (2023) highlights that emergency care quality is highly dependent on integrated service delivery rather than individual clinical competence alone (WHO., 2023).

Thus, although medical knowledge is essential for clinical safety, it does not directly translate into perceived satisfaction among patients.

2. Effect of Professional Attitude on Patient Satisfaction.

Professional attitude (X2) showed a significant negative association with patient satisfaction ($p = 0.047$; OR = 0.343). This indicates that although patients rated professional behavior as important, inconsistencies in interpersonal interaction may reduce perceived satisfaction.

Recent studies confirm that professionalism in healthcare is strongly associated with patient trust and satisfaction (Lee et al., 2022). However, in high-pressure environments such as emergency departments, emotional exhaustion and workload may affect the consistency of professional behavior (WHO, 2022).

In this study, the negative association may reflect variability in service experience, where some patients perceive inconsistency in empathy, attention, and responsiveness from medical staff.

3. Effect of Communication on Patient Satisfaction.

Communication (X4) significantly affected patient satisfaction ($p = 0.035$; OR = 0.367), but the relationship was negative, indicating potential gaps in communication quality.

Effective communication is widely recognized as a core component of patient-centered care. According to Street et al. (2021), poor communication in emergency settings is one of the main causes of patient dissatisfaction and misunderstanding of treatment procedures (Street et al, 2021). Similarly, WHO (2022) reports that more than 60% of complaints in emergency departments are related to communication failure between healthcare providers and patients (WHO, 2022).

In this study, the negative association suggests that although communication exists, it may not always be clear, empathetic, or adapted to patient comprehension levels.

4. Effect of Clinical Skills on Patient Satisfaction.

Clinical skills (X3) were found to be the most dominant factor influencing patient satisfaction ($p = 0.033$; OR = 2.820). This finding indicates that patients highly value the ability of healthcare providers to perform procedures quickly, accurately, and safely in emergency situations.

This result is strongly supported by previous literature. According to Kruk et al. (2022), clinical competence, particularly procedural accuracy and rapid decision-making, is a key determinant of perceived quality in emergency care systems (Kruk et al., 2023). This result is strongly supported by previous literature. According to Kruk et al. (2022), clinical competence, particularly procedural accuracy and rapid decision-making, is a key determinant of perceived quality in emergency care systems (WHO., 2023)

Therefore, improving clinical skills through continuous training and simulation-based education is essential to enhance emergency care quality.

5. Effect of Decision Making on Patient Satisfaction.

Decision making (X5) did not significantly influence patient satisfaction ($p = 0.311$). Although emergency decision-making is clinically crucial, patients may not directly perceive this competency.

According to Hodgetts et al. (2022), clinical decision-making in emergency departments is often invisible to patients and therefore does not strongly influence satisfaction unless outcomes are clearly communicated (Hodgetts et al., 2022). WHO (2023) also notes that patients evaluate emergency care more based on interpersonal experience than internal clinical reasoning processes (WHO et al., 2023).

Thus, decision-making competence is essential for clinical outcomes but may not directly affect perceived satisfaction.

6. Dominant Factors Affecting Satisfaction

Among all variables, clinical skills ($OR = 2.820$) were identified as the most dominant predictor of patient satisfaction. This finding highlights that technical performance in emergency procedures remains the most critical aspect influencing patient perception of care quality.

This aligns with global findings that emphasize the importance of clinical readiness and procedural competence in emergency departments (Kruk et al., 2022; WHO, 2023).

Conclusion

This study concludes that patient satisfaction in the Emergency Department of RSUP Haji Adam Malik Medan is generally high. Among the dimensions of medical personnel competence, clinical skills emerge as the most dominant factor influencing patient satisfaction. This indicates that patients primarily value the ability of healthcare providers to deliver fast, accurate, and safe clinical interventions in emergency situations. In addition, professional attitude and communication skills also significantly affect patient satisfaction, although both show a negative relationship, suggesting inconsistencies in service delivery and communication practices experienced by patients.

Conversely, medical knowledge and decision-making ability do not show a statistically significant effect on patient satisfaction. These findings suggest that in emergency care settings, patient satisfaction is more strongly shaped by observable clinical performance and interpersonal interactions rather than technical knowledge or internal clinical reasoning processes that are less visible to patients. Therefore, strengthening clinical skills, improving communication quality, and enhancing professional behavior are essential strategies to improve the quality of emergency healthcare services and patient satisfaction.

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