

## **ANALYSIS OF KNOWLEDGE AND ATTITUDES TOWARD THE IMPLEMENTATION OF TRIAGE IN THE EMERGENCY DEPARTMENT**

**Richal Grace Zefanya Uly<sup>1,2\*</sup>, Albert Y. Tulle<sup>1</sup>, Sriyono<sup>1</sup>, Agnes Bate**

Sekolah Tinggi Ilmu Kesehatan Nusantara, Jl. El Tari No.21, Oebobo, Oebobo, Kupang, Nusa Tenggara Timur 85111, Indonesia

Faculty of Nursing, Airlangga University, Mulyorejo, Kec. Mulyorejo, Surabaya, Jawa Timur 60115, Indonesia

\*[ulyrichal@gmail.com](mailto:ulyrichal@gmail.com)

### **ABSTRACT**

Triage errors can lead to incorrect prioritization in patient management, potentially resulting in death. A critical process in the Emergency Department (ED) is triage, which involves determining the priority of interventions based on the severity of the patient's condition. This process requires nurses to possess rapid analytical skills, a deep understanding of emergency protocols, and a professional attitude when dealing with various dynamic clinical situations. This study aims to analyze the implementation of triage by nurses in the Emergency Department. This research is a quantitative study using a correlational analysis method with a cross-sectional approach. The sampling technique used was total sampling, involving 24 respondents. The inclusion criteria were nurses who agreed to participate, held a BTCLS (Basic Trauma and Cardiac Life Support) certificate, and had more than 3 years of work experience. The results showed that the majority of nurses (83.3%) had a good level of knowledge regarding triage implementation. Additionally, 87.5% of respondents demonstrated a positive attitude toward triage procedures. About 91.7% of nurses in this study performed triage appropriately. There was a significant correlation between knowledge ( $r = 0.643$ ) and attitude ( $r = 0.712$ ) with the implementation of triage. Good knowledge and attitude significantly influence the successful implementation of triage. These findings demonstrate that improving the quality of human resources, particularly in cognitive and affective aspects, is essential to support the quality of emergency healthcare services.

Keyword: attitude; knowledge; triage in emergency department

### **INTRODUCTION**

The Emergency Department (ED) serves as the main entry point of hospital services, aiming to provide prompt and comprehensive care to patients in critical and life-threatening conditions (Susanti & Kusniawati, 2019). Within the ED service process, triage is a crucial initial step in determining treatment priorities based on the severity of a patient's condition (Annisa, 2020). Accuracy in triage implementation plays a significant role in determining treatment outcomes, both in terms of patient safety and survival. However, based on preliminary observations at Naibonat Regional General Hospital (RSUD Naibonat), discrepancies were found between triage implementation in the field and the established principles particularly in terms of nurses' knowledge and attitudes (Preliminary Survey Data, RSUD Naibonat, 2024).

This issue is not unique to RSUD Naibonat, but reflects a broader national and global phenomenon. Data from the World Health Organization (WHO) shows that global ED visits increased from 27 million in 2020 to over 31 million in 2021 (WHO, 2021). A similar trend is seen in Indonesia, where ED visits rose from 8.5 million in 2020 to more than 16.7 million in 2022, while the number of hospitals remained static at 2,834 (Ministry of Health, Republic of Indonesia, 2022). At RSUD Naibonat, the number of ED patient visits increased from 3,718 in 2021 to 7,589 in 2023, while the number of nurses remained at just 24 (Preliminary Survey Data, RSUD Naibonat, 2024). This high workload and limited healthcare personnel make the effectiveness of triage a crucial factor in maintaining the quality of emergency services.

Previous studies have shown that nurses' level of knowledge and attitudes directly impact the effectiveness of triage implementation. A study by Emine (2020) found that nurses with low levels of

knowledge tend to misclassify patients, resulting in delays in treatment. Meanwhile, research by Martanti et al. (2015) revealed that 58% of nurses in Indonesia had a low level of triage knowledge, with only 4% categorized as having good knowledge. Attitude is also an important factor nurses with a positive attitude toward triage were shown to act more quickly and accurately in emergency situations (Ayni, 2019). Although RSUD Naibonat has triage facilities that meet standard requirements, their implementation has not been optimal due to varying levels of nurse knowledge and attitudes that are not consistently aligned with existing guidelines (Preliminary Survey Data, RSUD Naibonat, 2024).

Given these conditions, this study is both important and urgent to assess the relationship between nurses' knowledge and attitudes and the implementation of triage in the ED at RSUD Naibonat. By understanding how knowledge and attitudes affect triage effectiveness, the hospital can design more targeted training programs, enhance nurse preparedness, and optimize the emergency patient management process. Additionally, the findings are expected to provide relevant local policy recommendations tailored to the context of RSUD Naibonat, and potentially applicable to other hospitals with similar characteristics. This study also aims to raise awareness among nurses about the importance of competence and professional attitudes in ensuring patient safety and the overall quality of healthcare services.

## **METHOD**

This study employed a correlational analytic method with a cross-sectional approach, aiming to determine the relationship between nurses' levels of knowledge and attitudes and the implementation of triage at a single point in time (Swarjana, 2015). The research was conducted in the Emergency Department of RSUD Naibonat, Kupang Regency, in October. The population consisted of all 24 nurses working in the ED. The sampling technique used was total sampling, in which the entire population was included as the sample due to the limited number and their compliance with the study's inclusion criteria (Sugiyono, 2013).

Data collection was carried out using a knowledge questionnaire, an attitude questionnaire, and an observation sheet on triage implementation. The research instruments consisted of three main parts. First, the knowledge questionnaire was developed based on Bloom's Taxonomy, comprising 10 items with a Guttman scale (true-false). The scores were categorized as good (7-10), fair (3-6), and poor (0-2). Second, the attitude questionnaire used a Likert scale with four response options (Strongly Agree, Agree, Disagree, Strongly Disagree) across 10 questions, with a total score ranging from 10-40, and categorized into positive (21-40), moderate (11-20), and negative (1-10) attitudes. Third, the triage implementation observation sheet included 6 yes/no items, with results classified as good (4-6) and poor (0-3) implementation. All instruments were adapted from the study by Gita Nur Ayni (2019) and had undergone content, construct validity, and reliability testing with a Cronbach's Alpha value greater than 0.70.

Data were analyzed in two stages: univariate analysis to describe the frequency distribution of each variable, and bivariate analysis to test the relationship between nurses' knowledge and attitudes with triage implementation. The bivariate analysis was conducted using the Spearman Rho correlation test, with a significance level ( $\alpha$ ) of 0.05. If the p-value < 0.05, H1 was accepted, indicating a significant relationship between the independent and dependent variables. Data processing was carried out using SPSS version 20, through editing, coding, entry, and cleaning stages to ensure the accuracy and integrity of the analysis results.

## RESULT AND DISCUSSION

### General Characteristics of Respondents

Table 1.  
 Characteristics of Respondents Based on Gender

Gender	f	%
Male	15	62,5
Female	9	37,5

The distribution of respondent characteristics based on gender shows that the majority of nurses were male, totaling 15 individuals (62.5%), while female nurses numbered 9 individuals (37.5%).

Table 2.  
 Characteristics of Respondents Based on Age

Age (year)	f	%
30–35	21	87,5
36–40	3	12,5

The distribution of respondent characteristics based on age shows that the majority of nurses were aged 30-35 years, totaling 21 individuals (87.5%), while those aged 36-40 years numbered 3 individuals (12.5%).

Table 3.  
 Characteristics of Respondents Based on Highest Education

Last Education	f	%
S.Kep.,Ns.( Bachelor of Nursing degree)	13	54,2
A.Md.Kep (Associate Degree in Nursing)	11	45,8

The distribution of respondent characteristics based on highest education shows that the majority of nurses held a Bachelor of Nursing degree (S.Kep Ns), totaling 13 individuals (54.2%), while 11 individuals (45.8%) held an Associate Degree in Nursing (Amd.Kep).

Table 4.  
 Length of Work Experience characteristic

Length of Work Experience (year)	f	%
1-5	18	75,0
6-10	6	25,0

The distribution of respondent characteristics based on length of work experience shows that the majority of nurses had worked for 1-5 years, totaling 18 individuals (75.0%), while 6 individuals (25.0%) had worked for 6-10 years.

Table 5  
 Distribution of Nurse Knowledge

Category	f	%
Good	20	83,3
Moderate	4	16,7
Poor	0	0

Based on Table the nurses level of knowledge regarding triage implementation was mostly in the good category, with 20 individuals (83.3%), and fair category, with 4 individuals (16.7%).

Table 6  
 Distribution of Nurses Attitudes

Category	f	%
Good	21	87,5
Moderate	3	12,5
Poor	0	0

Based on Table nurses’ attitudes toward triage implementation were mostly in the good category, with 21 individuals (87.5%), and in the fair category, with 3 individuals (12.5%).

Table 7  
 Distribution of Triage Implementation

Category	f	%
Good	22	91,7
Poor	2	8,3

Based on Table triage implementation by nurses was mostly in the good category, with 22 individuals (91.7%), and in the poor category, with 2 individuals (8.3%).

Table 8.  
 The Relationship Between Knowledge and Triage Implementation

Knowledge	Good	Poor	Total
Good	20	0	20
Moderate	2	2	4

Out of a total of 24 respondents, 20 nurses with good knowledge demonstrated good triage implementation, and none showed poor implementation. Meanwhile, among the 4 nurses with fair knowledge, only 2 demonstrated good triage implementation, while the other 2 showed poor implementation.

Table 9  
 Relationship Between Attitudes and Triage Implementation

Attitudes	Good	Poor	Total
Good	20	1	21
Moderate	2	1	3

Out of 21 nurses who had a good attitude toward triage, 20 demonstrated good triage implementation, while only 1 showed poor implementation. Meanwhile, among 3 nurses with a fair attitude, 2 demonstrated good triage implementation, and 1 showed poor implementation.

### General Characteristics of Respondents

The study results showed that the majority of respondents were male nurses (62.5%), aged between 30 and 35 years (87.5%), with a Bachelor of Nursing degree (S.Kep., Ns.) background (54.2%), and had 1-5 years of work experience (75%). These findings indicate that most of the nursing staff in the Emergency Department at RSUD Naibonat are young nurses who are in their productive age and at the early stage of their professional careers. Age and work experience significantly influence the ability to make quick and accurate decisions in the ED environment. According to Notoatmodjo (2010), productive age and work experience can affect cognitive abilities, concentration, and self-confidence when facing complex clinical situations.

### Levels of Knowledge, Attitudes and Triage Implementation

The majority of nurses had a good level of knowledge about triage, with 20 individuals (83.3%) falling into the good category, and the remaining 4 individuals (16.7%) classified as fair. No respondents were categorized as having poor knowledge. This knowledge was most likely gained through formal education and work experience in the Emergency Department. These findings are consistent with a study by Emine (2020), which showed that adequate knowledge plays a crucial role in avoiding patient misclassification during triage, directly impacting patient safety. Nurses’ attitudes toward triage implementation were also mostly in the good category, with 21 respondents (87.5%), and only 3 individuals (12.5%) in the fair category. Professional attitudes are essential in the triage process because patients arriving at the ED are generally unstable and require quick decision-making. Ayni (2019) stated that positive nurse attitudes

strongly correlate with the accuracy of actions taken during triage. Good attitudes reflect the mental and emotional readiness of nurses when facing critical situations.

Furthermore, triage implementation by nurses at RSUD Naibonat's Emergency Department showed encouraging results, with 22 individuals (91.7%) performing triage well, and only 2 individuals (8.3%) categorized as poor. This indicates that the triage system at RSUD Naibonat has been functioning quite optimally despite the limited number of nursing staff. According to Martanti et al. (2015), successful triage implementation is heavily influenced by clinical skills and the mental preparedness of nurses to make decisions based on the condition of incoming patients.

### **The Relationship Between Knowledge and Attitudes with Triage Implementation**

The analysis results showed a significant relationship between nurses' knowledge and triage implementation. All nurses with good knowledge (20 individuals) demonstrated good triage implementation. Conversely, among the 4 nurses with fair knowledge, only 2 performed triage well, while the other 2 performed poorly. These findings reinforce the view that the level of knowledge influences the ability to analyze and classify patients during triage (Emine, 2020). Insufficient or low knowledge can increase the risk of errors in decision-making, which may lead to delays or mistakes in medical treatment.

Furthermore, nurses' attitudes also showed a strong correlation with triage implementation. Among 21 nurses with good attitudes, 20 demonstrated good triage performance, while only 1 showed poor performance. Meanwhile, among 3 nurses with fair attitudes, only 2 demonstrated good triage implementation. These findings support the results of research by Ayni (2019), which emphasized that nurses' attitudes in facing emergency conditions affect the accuracy and efficiency of triage implementation.

### **CONSLUSION**

The results of this study indicate that the majority of nurses at the Emergency Department of RSUD Naibonat, Kupang Regency, possess good levels of knowledge and attitudes toward triage implementation. The high proportion of nurses with positive knowledge and attitudes corresponds directly with the quality of triage implementation, most of which also falls into the good category. Further analysis revealed a significant relationship between nurses' knowledge and attitudes and triage implementation. Nurses with good knowledge tend to perform triage more accurately and timely. Similarly, nurses with positive attitudes toward triage are correlated with their ability to carry out triage procedures effectively in accordance with emergency service standards.

These findings confirm that knowledge and attitudes are crucial factors influencing the success of triage implementation in the Emergency Department. Therefore, improving the quality of emergency services heavily relies on continuous efforts to strengthen nurses' knowledge capacity and develop professional attitudes through education, training, and consistent supervision. This study also underscores the urgency of implementing an effective triage management system as an integral part of enhancing hospital service quality, especially in coping with the increasing workload.

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## REFERANCES

- Arifin, Z. (2016). *Statistik untuk Penelitian Kesehatan*. Yogyakarta: Nuha Medika.
- Ayni, G. N. (2019). *Pengaruh Pengetahuan dan Sikap Perawat terhadap Pelaksanaan Triase di IGD*. Skripsi. Universitas XYZ.
- Hidayat, R. (2014). *Metodologi Penelitian Kuantitatif*. Jakarta: Rajawali Pers.
- Kementerian Kesehatan Republik Indonesia. (2016). *Pedoman Pelaksanaan Triase di Instalasi Gawat Darurat*. Jakarta: Kemenkes RI.
- Lubis, N. M., & Sari, D. P. (2017). Validasi Instrumen Pengetahuan dan Sikap Perawat terhadap Triase. *Jurnal Penelitian Keperawatan*, 9(2), 66-74.
- Notoatmodjo, S. (2010). *Metodologi Penelitian Kesehatan*. Jakarta: Rineka Cipta.
- Putra, D. A., & Dewi, L. K. (2019). Pengaruh Pendidikan dan Lama Kerja terhadap Pengetahuan Perawat IGD. *Jurnal Kesehatan Komunitas*, 7(4), 99-106.
- Putri, R. A., & Rahman, F. (2018). Hubungan antara Pengetahuan Perawat dengan Pelaksanaan Triase di Instalasi Gawat Darurat RSUD Kota A. *Jurnal Keperawatan*, 10(2), 123-130.
- Rahmawati, F., & Santoso, A. (2020). Hubungan Sikap dan Pengetahuan dengan Kualitas Pelaksanaan Triase. *Jurnal Manajemen Pelayanan Kesehatan*, 5(2), 101-110.
- Sugiyono. (2013). *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Bandung: Alfabeta.
- Sujarweni, V. W. (2014). *Metode Penelitian: Pendidikan, Sosial, dan Humaniora*. Yogyakarta: Pustaka Baru Press.
- Swarjana, I. M. (2015). *Metode Penelitian Kesehatan*. Jakarta: Salemba Medika.
- Sudaryanto, T. (2015). Faktor-faktor yang Mempengaruhi Pelaksanaan Triase oleh Perawat. *Jurnal Ilmu Keperawatan*, 3(3), 211-218.
- Sari, P. I., & Hadi, S. (2018). Analisis Sikap dan Pengetahuan Perawat dalam Pelaksanaan Triase di IGD RSUD C. *Jurnal Keperawatan Indonesia*, 21(1), 78-85.
- Wulandari, S. (2017). Sikap Perawat dalam Pelaksanaan Triase di IGD RSUD B. *Jurnal Kesehatan Masyarakat*, 11(1), 45-52.