



# The Correlation between the Emergency (Triage) and Anxiety Levels of Nurses in the Emergency Room at Royal Prima General Hospital Medan

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**Abstract:** Urgent and emergency can be stated to be a situation of body health that requires immediate medical treatment to save life. The Emergency Room is a very important entry point for healthcare services for the patients who need urgent treatment and care. both urgently and emergency. Patients who enter the ER in emergency conditions will be triaged and it aims to classify the patient's emergency condition. This condition can cause anxiety experienced by nurses when they are in the ER. This research aims to determine the correlation between the emergency (Triage) and anxiety levels of nurses in the Emergency Room of Royal Prima General Hospital Medan. This type of research used an analytical design association with a cross sectional approach. The sample in this study involved thirty-seven nurses. Data analysis used univariate and bivariate analysis. The results of the study revealed that the majority of nurses handled patients with a red emergency (triage) level of 19 (5.40%). The majority of nurses handled patients with a red emergency (triage) level of 19 (51.40%). The majority of nurses experienced a level of anxiety in the emergency room at Royal Prima General Hospital Medan with thirteen (35.10%) nurses in the very severe anxiety category. There is a correlation between the emergency (Triage) and anxiety levels of nurses in the Emergency Room at Royal Prima General Hospital Medan with the p-value is < 0.05.

**Keywords:** Anxiety; Emergency; ER. Nurse

## Introduction

A hospital is a healthcare service organization that provides complete individual health services for inpatient, outpatient, and emergency services (Ministry of Health, 2015). The emergency department (IGD) is part of the hospital's main 24-hour service facilities. Meanwhile, according to the Republic of Indonesia Minister of Health Regulation Number 47 of 2018, the ER is a service unit in a hospital that provides initial treatment, for patients who come directly to the hospital, and/or follow-up for patients referred from other health service facilities, suffering from illness or injury that could threaten their survival. The main purpose of the ER is to receive, stabilize, and provide acute health services for patients, including patients who require resuscitation and patients with a certain level of emergency (Mulyanto et al., 2022).

Urgent and emergency care can be stated to be a situation of body health that requires immediate medical treatment to save life and prevention of body defects (Ministry of Health, 2015). The Emergency Room (IGD) is a very important entry point for healthcare services for the patients who need urgent treatment and care, both acute and emergency (Improta et al., 2022; Sartini et al., 2022; Souza et al., 2021). It can be a serious condition where the victim must be assisted as soon as possible, if not helped immediately, they will experience disability or even death (Sanjaya et al., 2022).

Timeliness in emergency services is an important concern in countries around the world. The results of studies from the National Health Service in England, Australia, America and Canada show that care services influence the level of patient satisfaction (Harigustian, 2021).

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In 2014, data on patient visits to emergency rooms throughout Indonesia have reached 14.402.250 people (13.5% of all visits to general hospitals) with 12% of emergency room visits coming from referrals with the number of general hospitals being 1.033 out of 1.319 in the existing public hospitals. Meanwhile, in 2016, the number of visits to the ER was 18.250.250 people (13.1% of the total number of visits). This significant number then requires considerable attention to emergency patient services (Ministry of Health, 2015).

Service standards in providing assistance quickly and appropriately are provided to patients in the ER in accordance with competence and ability, so that a fast and appropriate response time can guarantee emergency treatment. Fast and precise response time can be achieved by improving human resources, facilities, infrastructure and hospital emergency room management according to standards (Silvitasari et al., 2019). Patients who enter the ER in emergency conditions will be triaged. It is a way of sorting patients based on therapy needs and available resources. The therapy is based on the ABCs' conditions (Airway, Breathing and Circulation). Triage applies to sorting patients both in the field and in the hospital (Purwacaraka et al., 2022). Triage is a system used to select or sort patients according to the level of their therapeutic needs to ensure that no patient that does not receive medical treatment (Huzaifah et al., 2022).

Triage aims to classify patients' emergency conditions into four categories, namely critical and emergency conditions (Red), critical and non-emergency conditions (yellow), non-emergency and non-emergency conditions (green), and death (black) (Zahroh et al., 2020). The implementation of triage is very important in emergency conditions, so that factors related to the implementation of triage need to be identified (Dadashzadeh et al., 2020; Fekonja et al., 2023; Napi et al., 2019). Moreover, follow-up actions need to be recommended to improve this condition, particularly the issue of increasing knowledge, ability or skills in carrying out triage as well as completing and optimizing the use of triage equipment (Harigustian, 2021).

Emergency conditions can cause anxiety experienced by nurses when they are in the ER. This condition is something that threatens life, including cases of severe trauma, infarction acute myocarditis, airway obstruction, and burns accompanied by inhalation trauma. Meanwhile, emergencies require Elalouf et al. (2022) immediate treatment or action to eliminate threats for the victim's life, such as vertebral injuries, open fractures, closed capitis trauma, and acute appendicitis (Indimeilia, 2021).

Emergency has the emergency term, which is a serious condition that requires immediate assistance.

Emergency installations have several main targets, including accommodating, carrying out triage, stabilizing, and providing acute health services to patients, such as the patients who require resuscitation and patients with certain emergencies (Mamalelala et al., 2023; Phillips et al., 2022; Theobald et al., 2021). Emergency nursing is a comprehensive nursing service allocated to patients with acute injury or life-threatening illness. Initial treatment (Primary Survey) is carried out based on airway standards, breathing, circulation, disability, and exposure (Lei et al., 2021). Then, the secondary survey was carried out with a complete physical examination and anamnesis for the patient (Marlisa, 2019). Emergency management often causes fear and anxiety for both patients and nurses. Anxiety means a psychological condition of a person who is full of fear, worry, and unease accompanied by various physical complaints (Wirawan, 2017).

Anxiety has the function as a sign of danger to the ego, so that if this sign appears in consciousness, the ego can take appropriate action to face the danger. If someone experiences mild anxiety, it will make that person more alert and increase their perception space. A moderate level of anxiety causes a person to focus on things that are felt to be important to the exclusion of other aspects, so that a person enters a state of selective attention but can still do certain things in a more focused manner. Severe anxiety can feel so intense that the sufferer can't do anything, can't think about anything else and will need a lot of direction to focus on other areas. Signs of anxiety that are often seen in the Emergency Room are tense, restless, easily startled, irritable and restless (Huzaifah et al., 2022).

In handling emergencies in the ER, anxiety is not only felt by the patient and the patient's family only, but it is also felt by nurses where they are staff who work professionally and have the ability, authority, and responsibility in carrying out nursing care (Rumampuk et al., 2019). If the anxiety experienced by nurses cannot be handled properly, it will result in increased anxiety felt by the patient and also the patient's family because nurses are an important element in dealing with emergency situations in the ER (Kim et al., 2019).

From the explanation of the background above, the researchers are interested in conducting research entitled the correlation between emergency (triage) and nurse anxiety levels in the emergency room at Royal Prima General Hospital Medan.

## Method

This type of research used an analytical design association with a cross sectional approach to determine the correlation between the emergency (triage) and

anxiety levels of nurses in the emergency room at Royal Prima General Hospital Medan. The research was conducted at Royal Prima General Hospital Medan, which is located at Jl. Ayahanda No. 68A, Sei Putih Tengah, Kec. Medan Petisah, Kota Medan, North Sumatra 20118. Research was conducted in December 2022 starting with making a proposal and continuing with research in January 2023 until data collection followed by a results seminar. The population in this study involved thirty-seven nurses in the emergency room at the Royal Prima General Hospital Medan. According to Suharsimi (2010) if there are less than 100 subjects, then the entire population became the research sample. However, if the subject is more than 100 then 10-15% or 15-25%, so it can be taken. Based on the definition above, the sample for this study is defined as the entire population of thirty-seven nurses.

In collecting data in the field, the author used questionnaire guidelines and documentation tools. This research was carried out to make it easier to retrieve and collect data. The anxiety questionnaire in this study used the HARS questionnaire. In this study, research data sources were divided into two types, namely primary and secondary data. The data was obtained by distributing questionnaires and documentation. The analysis data in this study employed univariate and bivariate analysis using the SPSS 25 Version statistical application. After the data was processed, data analysis was then carried out by calculating the proportion of respondents' characteristics based on the variables used (Sugiyono, 2018).

Univariate analysis aims to explain or describe the characteristics of each research variable. Univariate form of analysis depends on the type of data. In general, univariate analysis only produces frequency and percentage distributions of each variable (Notoatmodjo, 2018). Bivariate analysis is an analysis carried out on two variables that are thought to be related or correlated (Notoatmodjo, 2018). This analysis was carried out to determine the influence of the independent variable on the dependent variable. Bivariate analysis in this research was statistical analysis using cross tabulation followed by statistical tests using the Chi-square test.

## Results and Discussion

The following are the results of the distribution of respondents' characteristics in this study, which include age, education level, gender, and length of work. The table 1 explains the distribution of characteristics by age of twenty-one respondents aged 20-30 years with a percentage of 56.80%, twelve respondents aged 31-40 years with a percentage of 32.40%, and four respondents aged > 40 with a percentage of 10.08% of the total of 37

respondents. From these results, it can be seen that the majority of respondents are aged 20-30 years.

**Table 1.** Distribution of Respondent Characteristics Based on Age

| Age           | n  | %      |
|---------------|----|--------|
| 20 - 30 Years | 21 | 56.80  |
| 31 - 40 Years | 12 | 32.40  |
| > 40 Years    | 4  | 10.80  |
| Total         | 37 | 100.00 |

Source: Primary data processed in 2023

### *Distribution of Respondent Characteristics Based on Education Level*

Table 2 explains about twenty-five respondents with a DIII Nursing education level with a percentage of 67.60%, and twelve respondents with a Bachelor of Nursing education level with a percentage of 32.40% of the total respondents as many as 37 respondents. From these results, it can be seen that the majority of respondents' education level is DIII on Nursing program.

**Table 2.** Distribution of Respondent Characteristics Based on Education Level

| Level of Education           | n  | %     |
|------------------------------|----|-------|
| D III Nursing                | 25 | 67.60 |
| Bachelor's Degree in Nursing | 12 | 32.40 |
| Total                        | 37 | 100   |

Source: Primary data processed in 2023

**Table 3.** Distribution of Respondent Characteristics Based on Gender

| Gender | n  | %   |
|--------|----|-----|
| Man    | 10 | 27  |
| Woman  | 27 | 73  |
| Total  | 37 | 100 |

Source: Primary data processed in 2023

3 explains the distribution of respondents' characteristics based on gender, which are ten men respondents with a percentage of 27%, and twenty-seven women respondents with a percentage of 73% of the total of 37 respondents. From these results, it can be seen that the majority of respondents are women.

**Table 4.** Distribution of Respondent Characteristics Based on Length of Work

| Length of work | n  | %      |
|----------------|----|--------|
| 1-2 Years      | 13 | 35.10  |
| > 2 Years      | 24 | 64.90  |
| Total          | 37 | 100.00 |

Source: Primary data processed in 2023

Table 4 explains the distribution of respondents' characteristics based on length of work. Thirteen

respondents show a work experience of 1-2 years with a percentage of 35.1%, and twenty-four respondents with a work experience of >2 years with a percentage of 64.9%. The total number of respondents was 37 respondents. From these results. it can be seen that the majority of respondents have worked for >2 years.

**Table 5.** Distribution of Emergency Levels (Triage)

| Emergency (Triage) | n  | %    |
|--------------------|----|------|
| Red                | 19 | 51.4 |
| Yellow             | 11 | 29.7 |
| Green              | 7  | 18.9 |
| Total              | 37 | 100  |

Source: Primary data processed in 2023

Table 5 explains the emergency level (Triage) which shows the number of nurses who handle patients with an emergency level (Triage) in red level is nineteen with a percentage of 51.4%, the number of nurses who handle patients with an emergency level (Triage) in yellow level is eleven with a percentage of 29.7%, and the number of nurses who handle patients with a green emergency level (Triage) is seven with a percentage of 18.9%.

**Table 7.** The Correlation between the Emergency (Triage) and Anxiety Levels of Nurse in the Emergency Room at Royal Prima General Hospital Medan

| Emergency     | Anxiety                  |       |              |       |                  |      |                |       |                     |       | Total | Description |       |
|---------------|--------------------------|-------|--------------|-------|------------------|------|----------------|-------|---------------------|-------|-------|-------------|-------|
|               | Not experiencing anxiety |       | Mild anxiety |       | Moderate anxiety |      | Severe anxiety |       | Very Severe Anxiety |       |       |             |       |
|               | n                        | %     | n            | %     | n                | %    | n              | %     | n                   | %     |       |             |       |
| Red Triage    | 1                        | 2.70  | 0            | 0     | 0                | 0    | 6              | 16.20 | 12                  | 32.40 | 19    | 51.40       | 0.000 |
| Yellow Triage | 4                        | 10.80 | 2            | 5.40  | 3                | 8.10 | 1              | 2.70  | 1                   | 2.70  | 11    | 29.70       |       |
| Green Triage  | 4                        | 10.80 | 2            | 5.40  | 0                | 0    | 1              | 2.70  | 0                   | 0     | 7     | 18.90       |       |
| Total         | 9                        | 24.30 | 4            | 10.80 | 3                | 8.10 | 8              | 21.60 | 13                  | 35.10 | 37    | 100         |       |

Source: Primary data processed in 2023

Table 7 explains Bivariate analysis using Chi-square test to determine the correlation between the emergency (Triage) and anxiety levels of nurses in the emergency room at Royal Prima General Hospital Medan. The results of this research show that if nurses handle patients with red triage status in the emergency room at Royal Prima General Hospital Medan. there is a nurse who did not experience anxiety (2.70%), no nurse who experienced mild and moderate anxiety. Then, six nurses (16.20%) experienced severe anxiety. and twelve nurses (32.40%) experienced very severe anxiety.

If nurses handle patients with yellow triage status in the emergency room at Royal Prima General Hospital Medan. there are four nurses who did not experience anxiety (10.80%), two nurses who experienced mild anxiety (5.40%), three nurses who experienced moderate anxiety (8.10%), a nurse experienced severe anxiety (2.70%), and a nurse also experienced very severe anxiety (2.70%).

**Table 6** Distribution of Nurses' Anxiety Levels in the Emergency Room at Royal Prima General Hospital Medan

| Nurse Anxiety in the ER  | n  | %      |
|--------------------------|----|--------|
| Not Experiencing Anxiety | 9  | 24.30  |
| Mild Anxiety             | 4  | 10.80  |
| Moderate Anxiety         | 3  | 8.10   |
| Severe Anxiety           | 8  | 21.60  |
| Very Severe Anxiety      | 13 | 35.10  |
| Total                    | 37 | 100.00 |

Source: Primary data processed in 2023

Table 6 explains the level of nurse anxiety in the Emergency Room at Royal Prima General Hospital Medan. nine nurses did not experience anxiety with a percentage of 24.3%, then four nurses with a mild level of anxiety with a percentage of 10.8%, three nurses with a moderate level of anxiety with a percentage of 8.1%, eight nurses with a severe level of anxiety with a percentage of 21.6%, and thirteen nurses with a very severe level of anxiety and a percentage of 35.1%.

If nurses handle patients with green triage status in the emergency room at Royal Prima General Hospital Medan. there are four nurses who did not experience anxiety (10.8%), two nurses who experienced mild anxiety (5.40%), a nurse who experienced moderate anxiety. a nurse experienced severe anxiety (2.70%), and no nurse experienced very severe anxiety.

P-value in the bivariate test is  $0.000 < 0.05$ . which shows that there is a correlation between the emergency (Triage) and the anxiety levels of nurses in the emergency room at Royal Prima General Hospital Medan.

*Discussion*

The results of research show that the number of nurses who handle patients with a red emergency level (Triage) is nineteen with a percentage of 51.40%, the number of nurses who handle patients with a yellow emergency level (Triage) is eleven with a percentage of 29.70%, and the number of nurses handling patients

with a green emergency level (Triage) is seven with a percentage of 18.90%.

There are nine nurses who did not experience anxiety with a percentage of 24.30%, four nurses with a mild level of anxiety with a percentage of 10.8%, three nurses with a moderate level of anxiety with a percentage of 8.1%, eight nurses with a severe level of anxiety with a percentage of 21.6%, and thirteen nurses with very severe levels of anxiety with a percentage of 35.10%.

From the results of the cross table above. it shows that if nurses handle patients with red triage status in the emergency room at Royal Prima General Hospital Medan. there is a nurse who did not experience anxiety (2.70%), no nurse who experienced mild and moderate anxiety. There were six nurses who experienced severe anxiety (16.2%) and twelve nurses who experienced very severe anxiety (32.4%).

If nurses handle patients with yellow triage status in the emergency room at Royal Prima General Hospital Medan. there are four nurses who do not experience anxiety (10.8%), two nurses who experience mild anxiety (5.40%). three nurses who experience moderate anxiety (8.1%), a nurse experienced severe anxiety (2.70%), and a nurse experienced very severe anxiety (2.70%).

If nurses handle patients with green triage status. there are four nurses who do not experience anxiety (10.8%), two nurses who experience mild anxiety (5.40%), nurses who experience moderate anxiety, 0.1 nurse experienced severe anxiety (2.70%) and 0 nurses experienced very severe anxiety.

*P-value* in the bivariate test using *Chi-square* is 0.000 < 0.05, which indicates that there is a relationship between the level of emergency (triage) and the level of anxiety of nurses in the emergency installation of RSU Royal Prima Medan.

Triage aims to classify patients' emergency conditions. which are divided into four categories. namely critical and emergency conditions (red), critical and non-emergency conditions (yellow), non-emergency and non-emergency conditions (green), as well as death (black) (Zahroh et al., 2020). Anxiety is a person's psychological condition which is full of fear, worry, and unease accompanied by various physical complaints (Saraswati, 2019).

According to research by Mbaloto (2020), an emergency of the patient's condition can worsen or become more serious. even causing complications and death. If it is not treated immediately. the patient will experience anxiety. It is very important to prioritize patient emergencies according to the triage process because it will make it easier to take further action according to the patient's needs (Mbaloto, 2020). Therefore. it is necessary to prepare and play the role of

emergency room nurses in handling emergency conditions. Success in emergency treatment cannot be separated from the nurse's level of anxiety in handling patients in an emergency situation. particularly in making clinical decisions in the ER. so nurses must be able to control their feelings of anxiety in carrying out care for emergency patients in the ER.

## Conclusion

There is a correlation between the emergency (Triage) and anxiety levels of nurses in the Emergency Room at Royal Prima General Hospital Medan.

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## Author Contributions

Conceptualization : AL. data curation AL. funding acquisition : AL methodology : AL. visualization : AL. writing - original draft : AL, BR, MASN. writing - review & editing: AL, BR, MASN

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## Conflicts of Interest

No Conflicts of interest.

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