

THE RELATIONSHIP BETWEEN TRIAGE ACCURACY AND SERVICE RESPONSE TIME IN THE EMERGENCY ROOM (IGD) AT RSIA BUNDA JAKARTA IN 2023

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Abstract

Background: RSIA Bunda Jakarta's medical record data in 2022 saw an average of 60% of emergency room visits, and in 2023 it will increase to 84%. Emergency Room (ER) nurses and doctors have a very big role and responsibility, namely carrying out triage of patients who will be admitted to the ER. Apart from that, the speed and accuracy of response time in providing assistance to patients greatly determines patient treatment. **Purpose:** Knowing the relationship between triage accuracy and service response time in the Emergency Room. **Methods:** Analytical with cross sectional design. The sample in this study was all 30 health workers working in the emergency room at RSIA Bunda Jakarta in January 2024. The sampling technique uses total sampling. **Results:** The frequency distribution of triage accuracy is mostly appropriate (76,6%) and the response time of nurses and doctors in the ER is mostly correct (80,0%). There is a relationship between the accuracy of triage and the response time of emergency services at RSIA Bunda Jakarta (p value 0,001). **Conclusion:** There is a relationship between the accuracy of triage and the response time of emergency services. It is hoped that health workers on duty in the emergency room can improve services in accordance with hospital standards so that triage accuracy and fast response time can be created.

Keywords: Triage Accuracy; Response Time

Introduction

One of the human rights is to get emergency services. Emergency Services are medical measures needed by emergency patients in an immediate time to save lives and prevent disability (Permenkes RI No. 47 of 2018). The Emergency Department is a hospital service unit that provides the first service to patients with the threat of death and disability in an integrated manner involving various multidisciplines. (Maulana Antoni Eka Fajar, et al. (2017). This was then reaffirmed by Perceka (2020) which said that the Emergency Department (IGD) is the largest part of the unit besides other units in the hospital which has an important role in providing emergency nursing services for all patients who want to get services with various sick conditions, injuries or conditions that endanger their survival.

The World Health Organization (WHO) has explained how important the implementation of first aid in emergency cases is contained in the concept of Basic Life Support, where emergency medical services must have the principle of effective and efficient assistance in dealing with diseases and injuries and can provide quality medical services for patient safety. Emergency response time is fundamental in the treatment factor so that control is needed to increase the chances of survival and reduce the increasing severity of a disease (Cabral et al., 2018). The emergency room is also the spearhead in hospital nursing services, where the emergency room must serve all cases that enter the hospital with 24-hour operating

hours. With such complexity of work, nurses and doctors on duty in the emergency room are required to have more competence skills.

According to research by U Leonardo Davinci (2022) where data from the Ministry of Health of the Republic of Indonesia in 2018 states that patient visits in the Emergency Department (IGD) increase every year, an increase of around 30% in all Emergency Installations (IGD) of world hospitals. Based on data on patient visits to the Emergency Department (IGD) in Indonesia, there were 4,402,205 patients (13,3% of total visits in the Emergency Department (RSU) with 12% of visits to the Emergency Department (IGD) coming from referrals (Ministry of Health RI, 2018). Meanwhile, according to medical record data at RSIA Bunda Jakarta, there are 2,519 patients who come to the emergency room in 2022, where the average monthly visit is 210 patients and around 61% of patients must be hospitalized for emergency treatment, then in 2023 there is a considerable increase in the number of emergency room patient visits of around 84% compared to emergency room visits in the previous year, namely from January to October 2023 the number of emergency room patient visits is 7,164 patients, where the average monthly visit is 716 patients and around 30% of emergency room patients must be hospitalized.

Triage is a special process of sorting patients based on the severity of injury or illness to determine the type of emergency treatment or intervention. (Permenkes RI No. 47 of 2018). Triage is important in treating and conducting initial assessment of patients in the emergency room (Khairina, et al. 2018). Every hospital must have triage standards set by the head / director of the hospital (Permenkes RI No. 47 of 2018). Inaccurate triage will extend the treatment time that should be received by patients according to their clinical conditions and will then risk reducing patient safety and quality of health services (Khairina, Marini & Huriani, 2018). This is in accordance with the principle of emergency management in Permenkes RI Number 47 (2018) is to save life and limb which means that the faster the time to respond to emergency events, the greater the chance to save the patient's life. And based on the Decree of the Minister of Health of the Republic of Indonesia Number 856 / MENKES / SK / IX / 2009 concerning Standards for the Implementation of Emergency Installations (IGD) in Hospitals, patients in emergency cases who are in the ER must receive medical help in less than 5 minutes.

Nurses and doctors have a very large role and responsibility in hospitals, one of the duties or roles of nurses and emergency room doctors is to triage patients who will enter the emergency room, besides that the speed and timeliness of response time in providing assistance to patients greatly determines patient handling. Based on the above phenomenon, it is necessary to assess whether the accuracy of triage greatly determines the chance to save the patient's life, because no research has ever been conducted on the relationship between the accuracy of triage and the response time of the Emergency Department (IGD) service at RSIA Bunda Jakarta. Therefore, researchers are interested in conducting research on how the accuracy of triage relates to the response time of Emergency Department (IGD) services at RSIA Bunda Jakarta.

Methods

1.1 Research Design

This research is a quantitative research with a cross sectional study approach, which is a study to study the dynamics of correlation between risk factors and effects through an approach, by approaching, observing and collecting data at once at a time (point time approach), so that the object of research is only observed once (Notoatmodjo, 2018).

1.2 Setting and Samples

This research will be carried out at RSIA Bunda Jakarta in Januari 2024. Sampling must be carried out in such a way that a sample that can truly represent (representative) and can describe the actual state of the population is obtained, then in determining the sample must have inclusion criteria. Inclusion

criteria are the general characteristics of the research subjects of a target population that are reachable and to be studied. The following are the sample inclusion criteria in this study: willing to be a respondent, all health workers on duty in the emergency room at RSIA Bunda Jakarta, and fill out questionnaires completely

Sampling in this study used total sampling techniques, which was as many as 30 respondents. Due to the population under 100 people, according to (Sugiyono, 2018) census or total sampling is a sampling technique where all members of the population are sampled all. Research conducted on a population of under 100 people should be conducted by census, so that all members of the population are sampled as all subjects studied or as informing respondents.

1.3 Measurement and Data Collection

The method of data collection in this study uses primary data that has been adjusted to the purpose of the study taken directly from respondents by filling out observation sheets.

1.4 Data Analysis

The data were analyzed and interpreted by testing hypotheses using the IBM SPSS Statistics 23 computer program corresponding to the following stages of analysis: univariate analysis to find out and analyze the characteristics of the research subjects, and bivariate analysis to determine the relationship between two variables, namely, the independent variable and the dependent variable by testing the chi square statistical test with a limit of meaning is said to be meaningful when it has a p value of $\leq 0,05$.

1.5 Ethical Considerations

This research is conducted by providing an explanation to prospective respondents about the purpose and objectives of the research, if prospective respondents agree to participate in the research, prospective respondents are required to sign informed consent. This research has obtained a research permit from the head of the Nursing Study Program, Abdi Nusantara Institute of Health Sciences, which was shown to RSIA Bunda Jakarta. The study used 20 references from 2016 to 2023.

Results

1.1. Triage Accuracy

Table 1. Frequency Distribution of Triage Accuracy

Triage Accuracy	Amount	Percentage
Appropriate	23	76.7%
Inappropriate	7	23.3%
Total	30	100%

Based on table 1, it can be seen that of the 30 respondents, most of them with the accuracy of triage appropriate is 23 people (76,7%) and respondents with the accuracy of triage inappropriate as many as 7 people (23,3%).

1.2. Response Time

Table 2. Frequency Distribution of Response Time

Response Time	Amount	Percentage
Correct	24	80,0%
Incorrect	6	20,0%
Total	30	100%

Based on table 2, it can be seen that of the 30 respondents, most of them had the correct response time as many as 24 people (80,0%), and respondents whose response time was incorrect as many as 6 people (20,0%).

1.3. The Relationship Between Triage Accuracy and Response Time

Table 3. The Relationship Between Triage Accuracy and Response Time

		Response Time		Total	<i>p</i> value
		Correct	Incorrect		
Triage Accuracy	Appropriate	22 (95,7%)	1 (4,3%)	23 (100%)	0,001
	Inappropriate	2 (28,6%)	5 (71,4%)	7 (100%)	
Total		24 (80,0%)	6 (20,0%)	30 (100%)	

Based on table 3, it can be seen that of the 23 respondents with triage accuracy according to most of the appropriate response time as many as 22 people (95,7%), and of 7 respondents with incorrect triage accuracy most of the incorrect response time as many as 5 people (71,4%). The results showed that the Chi-Square statistical test obtained a p value of 0,001 (p value $< 0,05$), so it can be concluded that there is a significant relationship between the accuracy of triage and response time.

Discussion

From the results of the study showed that the Chi-Square statistical test obtained a p value of 0,001 (p value $< 0,05$), then based on the basis of decision making above, it can be concluded that H_0 was rejected and H_a was accepted. Thus, it can be interpreted that there is a meaningful relationship between the accuracy of triage and the response time of the emergency room.

The results of this study are also supported by the results of Jimmy F. Rumampuk (2019), who said that the results of the hypothesis test conducted using the fisher's exact test showed a p value = 0,003 $< \alpha = 0,05$. Thus, it can be concluded that there is a significant relationship between the accuracy of triage and the response time of nurses in the hospital emergency room.

Accuracy triage is the ability to provide an action according to the priority of the problem, ER or Emergency Department is a service provided to meet the needs of patients in emergency conditions who must be immediately under the hospital to get quick treatment. Serious a condition where the victim must be helped immediately, if not immediately helped it will experience disability or death (Santi, 2019).

Response time is the speed at which the patient is handled from the time the patient arrives until the treatment is carried out. Service response time can be calculated in minutes and is greatly influenced

by various things, both regarding the amount of energy and other supporting components. Response Time is the speed at which patients are handled, calculated from the time the patient arrives until the treatment is carried out. Service response time is a combination of response time when the patient arrives at the door of the hospital until the patient gets initial treatment or response from the emergency department with the time used until the patient is given help (Sutriningsih, 2016).

According to the researchers' assumptions, the results of the study show that there is a relationship between triage delay and response time, this is because the nurse's response time in emergency management that is fast and appropriate will increase the level of suitability to patients. Response time is highly dependent on the speed and accuracy available as well as the quality of life-saving assistance for patients who come with emergencies. It can be seen from the results of the study that the faster the nurse's response time to patients, the level of suitability will increase and vice versa.

The implementation of triage greatly affects the response time, if triage is not done properly it will slow down the response time that will be received by the patient so that it will increase the risk of organ damage or disability, and even to the death of the patient. In addition, it will also affect the quality of hospital health services and will increase the cost of patient care. The alertness or response time of health workers in handling emergency patients must be handled immediately in order to achieve one of the indicators of service quality in the emergency room.

Implication and Limitations

In conducting this study, the author encountered several obstacles, including limitations of control activities that can affect response time.

Conclusion

The frequency distribution of triage accuracy was mostly appropriate (76,6%) and the response time of nurses and doctors in the emergency room was mostly appropriate (80,0%). There is a relationship between the accuracy of triage and the response time of emergency room services at RSIA Bunda Jakarta (p value 0,001).

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Author Contribution

Author 1 and Author 2 contributed to the design and implementation of the research, to the analysis of the results and to the writing of the manuscript.

Conflict of Interest

The results of this research can be used as an additional literature for the development of nursing science, and to meet the requirements of obtaining Bachelor of Nursing Degree for Author 1.

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