

Analysis of factors that affect the ability in the initial treatment of injured patients with the approach of the airway, breathing, circulation, disability, exposure to the community

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ABSTRACT

Introduction: The global injury death rate is 1.2 million in the world. Airway, breathing, circulation, disability, and exposure can be used for all emergencies with a systematic approach for critical and injured patients. However, not many people understand and are not skilled in doing initial aid handling injured patients. This study aims to analyze the factors that influence the ability in the initial treatment of injured patients with the airway, breathing, circulation, disability, and exposure approach to the community.

Methods: This study used an observational analytic design with a cross-sectional approach. The population is all ordinary people, with a sample size of 110 people taken by simple random sampling. The independent variables are the factors that affect the ability, namely age, education, and experience factors. The dependent variable is ability. Data analysis used linear regression $p\text{-value} = 0.001$.

Results: Research shows that age, gender, and knowledge affect the ability to handle injured patients, so all factors have a significant effect on ability. In general, research was conducted to analyze the factors that affect the skill level in handling injured patients with the airway, breathing, circulation, disability, and exposure approach to the community. The airway, breathing, circulation, disability, and exposure approach proves an ability in the initial treatment of injured patients.

Conclusion: The factors of age, gender, and knowledge affect the ability to handle injured patients. Following that, the BLS guideline 2020 effectively improves the ability for daily emergency management. For health workers, this method is very helpful in reducing morbidity and mortality.

Keywords: Ability, airway, breathing, circulation, disability, exposure.

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INTRODUCTION

An emergency is a situation where a person needs immediate treatment or help. If he does not get first aid quickly, it will threaten his life or cause permanent disability.¹ Emergency can happen anytime, anyone, and anywhere. This condition requires the readiness of health workers to anticipate the incident. If we look at deaths, deaths occur due to heart disease, traffic accidents, head injuries, burns, shock, pneumothorax, and airway obstruction.²

Emergency nursing is a comprehensive nursing service provided to emergency patients or life-threatening illnesses. The medical team demonstrates expertise in patient assessment such as airway, breathing, circulation, disability and

exposure, priority setting, and priority interventions. Emergency nurses are skilled at handling patient responses such as respiratory and cardiac arrest, head trauma, airway obstruction, and pneumothorax.² Abroad BLS/BHD has been taught a lot to ordinary people or special laypeople, but it seems that this is still very rarely known by the people of Indonesia.^{2,3}

Patients experiencing an emergency need emergency treatment. There is a philosophy that is Time Saving it's Live Saving. All actions taken during an emergency patient condition must be truly effective and efficient. This is reminiscent of the condition of these patients who can lose their lives in just a matter of minutes. Stopping breathing for 2-3 minutes in humans can cause fatal death

or permanent disability.²

Airway, Breathing, Circulation, Disability, and Exposure can be used for all emergencies with a systematic approach for critical and injured patients. However, not many people understand and are not skilled in doing initial aid handling injured patients. This study aims to analyze the factors that influence the ability in the initial treatment of injured patients with the airway, breathing, circulation, disability, and exposure approach to the community.

METHODS

Study Design

This research method is a quasi-experimental design. The experimental design used in this study used a one-group

pre and post-test design.

Sample of Research

The sample in this study was taken with a simple random sampling technique. The data collection method uses primary data by providing learning in presentations. The data collection technique in this study was a test in the form of questions.

Instrument and Procedures

Interventions in the form of a self-care model are given with Standard Operational Procedures, carried out seven times for seven consecutive days, conducted routinely every one hour before activity.

Data Analysis

The data that has been collected is analyzed using the SPSS computer program. The data analysis used the statistical test T-Test.

RESULTS

This research method is a quasi-experimental design. This study obtained 30 samples with characteristics and distributions, as shown in the following table.

From [table 1](#), it can be seen that most of the respondents are 20-40 years old (of childbearing age), most of the respondents are not working/not working, and most of the respondents have secondary education.

In general, research was conducted to analyze the factors that affect the skill level in handling injured patients with the airway, breathing, circulation, disability, and exposure approach to the community. Research shows that age, gender, and knowledge affect the ability to handle injured patients, so all factors have a significant effect on ability. The airway, breathing, circulation, disability, and exposure approach proves an ability in the initial treatment of injured patients.

DISCUSSION

Basic life support (BLS) is an action taken to someone in an emergency, and if not done BLS immediately can cause death.⁴ One of the basic life support components is cardiopulmonary resuscitation or cardiac massage. Basic Life Support (BLS), or in Indonesian known as Basic Life Support

Table 1. Distribution of respondents based on age, work, education.

Characteristics	Category	Amount	%
Age	<20 years	3	10
	20-40 years	25	83
	>40 years	2	7
Work	Employee	14	47
	Unemployee	16	53
Education	Basic	12	40
	Middle	15	50
	High	3	10

(BLS) is an effort made to maintain life when the patient or victim experiences a life-threatening condition.⁵ Abroad BLS has been taught a lot to ordinary people or special laypeople, but it seems that this is still very rarely known by the people of Indonesia.

The National Disaster Management Authority Team is a team assigned following their authority to carry out rapid disaster and disaster impact assessment activities and assist in handling disaster emergencies.⁶ From the initial incident information obtained, National Disaster Management Authority assigned a Disaster Emergency Response Rapid Response Team (TRC) to accurately assess the impact of the disaster and provide mentoring support in handling disaster emergencies.⁷

Basic Life Support attempts to maintain life when the patient experiences life-threatening conditions and/or mobility. When breathing and heart rate stop, blood circulation and oxygen transport stop. In a short time the organs of the body, especially the vital organs, will experience a lack of oxygen which can be fatal for the victim and damage.⁸

Brain death means the death of the victim. Therefore, the golden period for victims who experience respiratory and cardiac arrest is less than 10 minutes. In less than 10 minutes, patients who experience respiratory and cardiac arrest must have started getting help. If not, then the life expectancy of the victim is very small. The help that must be done in patients who experience respiratory arrest and cardiac arrest is to perform cardiopulmonary resuscitation (CPR).⁹

CONCLUSION

The factors of age, gender, and knowledge affect the ability to handle injured patients. Following that, the BLS guideline 2020 effectively improves the ability for daily emergency management. For health workers, this method is very helpful in reducing morbidity and mortality. Also, further research with different study designs needs to be done to identify the relationship between factors that influence the ability in the initial treatment of injured patients.

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AUTHOR CONTRIBUTION

All authors contributed to this study's conception and design, data collection, data analysis and interpretation, article drafting, critical revision, final approval of the article, and publication of the article.

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CONFLICT OF INTEREST

There is no conflict of interest in this manuscript.

ETHICAL CONSIDERATION

This research has been passed the ethics test by the Ethics Commission of Universitas Nahdlatul Ulama Surabaya.

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