Original Research Paper

Cardiopulmonary resuscitation knowledge toward motivation of anesthesiology students in providing emergency assistance

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Abstract
Emergency conditions can occur in areas far from the presence of health workers. The role of the community or event students to help victims in emergencies becomes very important before being handled by health workers. This study aimed to determine the relationship between knowledge about cardiopulmonary resuscitation and the motivation of anesthesiology students to provide emergency assistance. This research was cross-sectional research at Aisyiyah University, Yogyakarta. The sample in this study was students of anesthesiology of 54 students. There was a relationship between knowledge of cardiopulmonary resuscitation and anesthesiology students' motivation to provide emergency assistance.

Keywords: CPR; knowledge; motivation

1. Introduction

An emergency is an event that cannot be predicted and is very urgent to the point of threatening life so that prompt and appropriate treatment or help is needed. First aid helps avoid disability and death when a person is in an emergency. Emergency cases that do not receive immediate treatment will permanently damage the central nervous, cardiovascular, and respiratory systems, leading to disability and even death (Pigoga et al., 2017).

Emergencies occur quickly, and it is not known when they will appear. The right step in an emergency is to be alert and the need to take action to prevent it. Emergency handling aims to prevent the victim's condition from worsening, save lives and accelerate the victim's recovery. Management of someone experiencing an emergency is carried out as an integrated and not fragmented system, starting from the pre-hospital stage, hospital stage, and rehabilitation stage, to reduce the risk of death (Azwar, 2015). One of the emergency cases that can threaten and cause death is cardiac arrest. Cardiac arrest is a sudden loss of heart function in someone who has or has never been diagnosed with heart disease, which can be fatal if not treated immediately (Cave et al., 2017). Cardiac arrest causes blood flow to the brain and other organs to stop, so people with a cardiac arrest can suddenly faint, lose consciousness, have no pulse, and not breathe (Nazario, 2022).

Cardiac arrest is one of the leading causes of death in the United States, with an incidence rate of about 250,000 people per year, and an estimated 95 percent died before arriving home (Nazario, 2022; Suhartono, 2010). Prevalence in Indonesia has not been obtained through actual data regarding the incidence of cardiac arrest in daily life or outside the hospital. Still, it is estimated that around 10,000 people per day experience cardiac arrest—most of the events experienced by patients with coronary heart disease. Deaths caused by coronary heart disease and stroke are expected to continue to increase to 23.3 million deaths in 2030 (Widyawati, 2021). The exact data of cardiac arrest in West Java is still

undefined, but the incidence of a person suffering from coronary heart disease based on a doctor's diagnosis is 120,447 cases. Based on the diagnosis and symptoms, the estimated number of patients with coronary heart disease is 337,252 cases (Widyawati, 2021).

The role of health workers and the community is essential in these cases. The medical team and health workers are responsible for emergency incidence because of can occur anywhere and anytime. Emergency conditions can occur in areas far from the presence of health workers. So, the community's role in helping emergency victims becomes essential before being handled by health workers (Drury et al., 2019). Factors that cause the success of emergency managing our knowledge, experience, and motivation. Common knowledge about troubles causes a person not to know how to handle victims. Experienced anesthesiology students will increase their motivation and ability to help emergency victims. Knowledge of anesthesiology students needs to be improved in dealing with victims who need emergency assistance, such as cardiac arrest at school. Students who carry out the first treatment first know the basic methods in an emergency, such as doing Cardiopulmonary Resuscitation (CPR) and asking for help from those around them (Tsai et al., 2019)

According to Rodr et al. (2022), the Simulation of Cardiopulmonary Resuscitation (CPR) is one of the most valuable and important things a person needs to know to help the victim during an emergency. Learning CPR can provide insight and increase students' knowledge so they are motivated to take CPR actions when an unknown emergency occurs and requires help as soon as possible. The CPR simulation aims to increase students' knowledge so they can perform Cardiopulmonary Resuscitation (CPR) correctly in an emergency.

Cardiopulmonary Resuscitation (CPR) is urgently needed for people who are found unconscious, namely people whose pulse is not palpable, to restore and maintain vital organ functions in respiratory arrest and cardiac arrest victims. Cardiac arrest can be caused by heart disease (Bentz, 2021). Knowledge is tied to motivation, yet strong coercion related to specific situations and evaluation of an activity motivates a person (Lakerveld et al., 2020). Anesthesiology students as first aiders must be highly motivated to optimize first aid at the scene. Students can collaborate with other staff in handling while waiting for the ambulance officers to arrive (Forsgärde et al., 2021). This study aims to determine the relationship between knowledge about cardiopulmonary resuscitation and anesthesiology students' motivation to provide emergency assistance at the University of "Aisyiyah Yogyakarta.

2. Research Methods

This research was cross-sectional research. This study analyzed the relationship between knowledge of cardiopulmonary resuscitation and anesthesiology students' motivation in providing emergency assistance at Aisyiyah University, Yogyakarta. The population in this study were anesthesiology students at Aisyiyah University Yogyakarta, the final batch of 113 people with a total sample of 54 people that were calculated using STATA 14.0 following the population-based approach using 90% power and alpha 5%. Then, sampling in this study was carried out using a purposive sampling technique, namely a sampling technique that is not based on strata, random, or regional but is based on several considerations, namely sample criteria (Arikunto, 2011). The instrument used to collect data is a questionnaire, defined as a list of questions. Because the data type was ordinal, the data analysis uses the chi-square test (Arikunto, 2011).

3. Results and Discussion

Table 1. Respondent characteristics (N=54)

Characteristic	Frequency (n)	Percentage (%)
Gender		
Male	25	46.3
Female	29	56.3
Age		
20 years old	3	5.6
21 years old	14	25.9
22 years old	37	68.5

Table 1 shows that the majority of respondents are female, with as many as 29 respondents (56.3%), while respondents with the male sex were 25 respondents (32.5%). In addition, the majority of respondents have the age of 22 years, as many as 37 respondents (68.5%), and at the age of 21 years, as many as 14 respondents (25.9%). Respondents over the age of 20 years were three respondents (5.6%).

Table 2. Correlation between CPR knowledge and motivation to perform emergency assistance

Knowledge	Motivation			Total	p
	Strong	Moderate	Less		
Good	24 (77.4%)	4 (12.9%)	3 (9.7%)	31 (100%)	0.015
Sufficient	11 (68.75%)	3 (18.75%)	2 (12.5%)	16 (100%)	
Less	1 (14.2%)	2 (28.5%)	4 (57.3%)	7 (100%)	
Total	36 (66.7%)	9 (16.7%)	9 (16.6%)	54 (100%)	

In table 2, most respondents with good knowledge have a strong motivation, as many as 24 respondents (77.4%). Respondents with sufficient knowledge have a reasonable basis, as many as 11 respondents (68.75%). At the same time, respondents with less knowledge have less motivation. As many as one respondents (14.2%) has less reason.

Based on the Chi-Square test results between the knowledge and motivation variables, a p-value of 0.015 (<0.05) was obtained, which means that there is a relationship between knowledge and motivation in anesthesiology students at Aisyiyah University Yogyakarta. So, the hypothesis in this study is accepted and supported by the theory that ability is tied to cause. Yet, strong coercion related to specific situations and activity evaluation motivates a person (Lakerveld et al., 2020).

In the study, the chi-square result was 0.015 (P<0.05), which means that there was a relationship between knowledge of cardiopulmonary resuscitation and motivation to provide emergency assistance. This is supported by (Herlina, 2019) research entitled The Effect of Simulation of Basic Life Training Support (BTLS).

Study of Cardiopulmonary Resuscitation (CPR) Motivation and Skills at Karang Taruna Rw 06 Kampung Utan, Krukut Depok Village, the results obtained a p-value of 0.000 and r value = 0.761. The p-value < 0.05 indicates that knowledge affects one's motivation. If viewed from the value of r, it can be concluded that the knowledge and inspiration are positive, i.e., the higher the respondent's knowledge, the higher the motivation to do BTLS.

The study by Anggeini & Amaliyah (2020), obtained a p-value of 0.005, which showed a relationship between BTLS knowledge and motivation. The higher the knowledge, the higher the basis. According to Drury et al. (2019), everyone has different internal and external drives in doing something so that it cannot be equalized between one another. Nazario (2022) says that knowledge results from the five senses.

This is also supported by research from Lumbanraja & Julia (2022). The results of the variable correlation analysis with the Spearman rank (rho) statistical test obtained from computerization is 0.997, which states a solid relationship between the independent variable, namely knowledge of essential life support, and the dependent, namely the level of motivation. 3rd-grade student of STIKes Santa Elisabeth Medan study program, so the hypothesis was rejected, which means there is a relationship between basic life support knowledge and student motivation level in helping cardiac arrest patients at level III STIKes Santa Elisabeth Medan study program, student.

Knowledge gained in increasing motivation can be obtained from the learning process using the media used by respondents. Develops because of someone's curiosity in the learning process. A person's knowledge will affect how he is motivated to behave according to what he has learned. The more a person understands or knows something, the more motivated he will be to apply what he has learned. This study found that knowledge of something will affect one's motivation to take action to overcome specific problems. Thus, the level of motivation is always used as an indicator of the good and bad of one's knowledge and learning achievement. Therefore, it can be concluded that there is a relationship between knowledge about cardiopulmonary resuscitation and motivation to provide emergency assistance to Anesthesiology students in class 2018.

4. Conclusion

There was a relationship between knowledge of cardiopulmonary resuscitation and anesthesiology students' motivation to provide emergency assistance with a p-value of 0.015 (<0.05). The limitation of this study is that the researcher could not make direct observations of all respondents when filling out the questionnaire, thus allowing respondents to copy each other in answering questions. It is suggested that CPR training be included in the university curriculum to enhance the motivation to act in the community.

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