Original Research Article: Quantitative Research

RELATIONSHIP OF MOTIVATION AND AWARENESS WITH SELF-EFFICACY OF UNDERGRADUATE NURSING STUDENTS IN CARDIOPULMONARY RESUSCITATION

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Abstract

Background: Cardiac arrest is an unpredictable incident where the heart stops working very quickly, becoming a major health concern globally, especially during the COVID-19 pandemic. Death occurs when the victim is delayed in obtaining cardiopulmonary resuscitation (CPR). All levels of society, especially undergraduate nursing students, must be able to perform CPR by increasing their ability to become qualified CPR bystanders.

Objectives: This research aims to analyze factors related to the self-efficacy of undergraduate nursing students (motivation and awareness) in performing CPR on undergraduate nursing students in Indonesia.

Methods: This is quantitative research with a cross-sectional approach, using a purposive sampling technique. Sample in this research 290 students. Data collection was carried out from January 2021 to February 2021 through google form online questionnaire containing: demographic data, the dependent variable which is motivation and awareness, and the dependent variable which is nurse efficacy. Statistical test for bivariate using spearmen rho and multivariate using logistic regression.

Results: The results showed that most undergraduate nursing students had good efficacy when facing cardiac arrests, with 166 (57.2%). The results of the binary logistic regression showed that the factors associated with nursing undergraduate efficacy were motivation (OR=1.106 95% CI = 0.497-2,458 p-value 0.000) and awareness (OR = 18.575 95% CI = 7,798-44,245 p-value 0.000).

Conclusion: Good efficacy of nursing undergraduate students can be attained through collaboration between student motivation and awareness in performing CPR on victims with cardiac arrest.

Keywords: *CPR, Motivation, Awareness, Self-Efficacy, Students.*

INTRODUCTION

The COVID-19 pandemic has become a great concern from late 2019 until now. The increasing confirmed positive cases had caused unprecedented changes in society, both in education, public services, banking, tourism and also in the world of health in particular (AHA, 2020). Cardiac arrest incidents during a

pandemic are higher, starting with shortness of breath after being infected COVID-19. Indonesia's Out-of-hospital cardiac arrest (OHCA) incidence rate is estimated to be 10,000 cases per year, equalling 30 OHCA incidents every day(Randhawa et al., 2015).The high incidence of OHCA is also followed by the small survival rate of OHCA patients, which is only 12% (AHA, 2020). Several factors may delay a person from doing CPR: fear of doing CPR incorrectly, being physically unable to perform CPR, fear of harming the individual being helped, fear of contracting an infectious disease, belief that the person has died (Moore et al., 2016).

Nursing undergraduate students are crucial to understand the management of cardiac arrest fully; therefore, they should be taught the theoretical and practical applications as early as possible to treat cardiac arrest (Australian Commission on Safety and Quality in Health Care, 2014). It is hoped that as undergraduate nursing students have the training in handling cardiac arrest, they can later become the next generation of medical front liners in providing professional services to handle emergency cases, especially during this COVID-19 pandemic (Rodgers & Green, 2001).

Several factors that influence students in performing CPR are: lack of self-confidence, fear of not following the order of CPR, fear of contracting covid 19 from the victim, physically unable to perform CPR, fear of harming the individual being helped, and believing that people who have cardiac arrest do not need help because they have already died. This has peaked the researchers to determine factors related to the efficacy of students in assisting victims with cardiac arrest (Sionis et al., 2016). The motivational factor is an important concern in increasing the efficacy of undergraduate nursing students. Motivation is a person's desire that stems from within to do activities that are useful for others. Awareness is a feeling that stems from within to make someone aware of the importance of taking actions that can benefit others. Thus, the

researchers wanted to look at the factors related to the efficacy of undergraduate nursing students (motivation and awareness) in carrying out the 2020 AHA cardiopulmonary resuscitation in the era of the COVID-19 pandemic.

METHODS

Study Design

This study used a descriptive-analytic correlation with a cross-sectional approach.

Setting

The data was collected from January 2021 to February 2021. This research was conducted throughout Indonesia on students of the nursing study program.

Research Subject

The data was first collected by providing informed consent to prospective respondents through a google form. Researchers also adhered to the ethical research principles, namely beneficence (providing benefits), respect (respondents can answer questions and resign from this study if they are not comfortable), justice (equal treatment for all respondents), anonymity (no name on the respondent's questionnaire) and confidentiality.

It used a purposive sampling technique with the inclusion criteria of undergraduate nursing students throughout Indonesia who have attended basic life support (BLS) training, are willing to fill out a complete google form, and are registered as active students. The exclusion criteria were refusing to be research respondents and students on leave when the research was conducted. The population in this study were all nursing students. Sample in this study amounted to 290 respondents.

Instruments

The instrument in this study was a questionnaire consisting of: age categorized into 19 years, 20 years, 21 years, and 22 years; gender divided into male and female; education level divided into level 2, level 3, and level 3

and 4; and the experience of performing CPR was categorized into never done it and have done it; motivation variable was categorized into 10 questions with low, adequate, and good; awareness variable was also categorized into 10 questions with low, adequate, and good, and efficacy variables were also categorized into 10 questions with low, adequate, and good. The validity test on the motivation, awareness and efficacy variables has been carried out using the person product moment with the test results of 10 questions obtaining that r results > r table (0,90>0,632), which means this questionnaire is valid. The reliability test on motivation, awareness and efficacy was carried out using Cronbach Alpha with a result of 0.74, which means that the questionnaire is reliable to use.

RESULTS
Demographic of Respondents

Table 1. Characteristics Respondent by Age, Gender, Education Level, Experience of Performing CPR on Students of the Nursing Study Program in Indonesia from January until February 2021 (n = 290).

Variable		**N**	**%**
Age	19 years	82	28.3
	20 years	85	29.3
	21 years	78	26.9
	22 years	45	15.5
Sex	Male	39	13.4
	Female	251	86.6
Education Level	Level 1	82	28.3
	Level 2	85	29.3
	Level 3	78	26.9
	Level 4	45	15.5
Experience of performing CPR	Have done it	127	43.8
	Never done it	163	56.2
Involved in the Indonesian Red Cross Student Voluntary Corps (UKM KSR PMI)	Yes	157	56.2
	No	133	43.8

Sources: Primary Data of Questionnaires, 2021.

The result of this study on the table 1 showed that the majority of the groups based on categories were aged on 20 years old with 85 respondents (29.3%), female with 251 respondents (86.6%), education level 2 with 85 respondents (29.3%), and the majority never perform CPR with 163 respondents (56.2%).

Data Analysis

Data analysis in this study was carried out in three ways, namely univariate analysis by distributing data on demographic characteristics, bivariate analysis with spearmen rho, and multivariate analysis in this study using logistic regression.

Ethical Consideration

This research has received a letter of ethics from the ethics committee of the Institute of Technology and Health (ITEKES) Bali with the ethical number No. 04.0050-KEPITEKES-BALI/VII/2020.

Table 2. Relationship between Self-Efficacy, Motivation and Awareness in CPR of Students of the Nursing Study Program in Indonesia from January until February 2021 (n = 290).

Variable		Self-efficacy				OR	95%CI	p-value
		Adequate		Good				
		N	%	N	%			
Motivation	Adequate	99	34.1	64	22.1	1.106	0.497-2.458	0.000
	Good	25	8.6	102	35.2			
Awareness	Adequate	112	38.6	53	18.3	18.575	7.798-44.245	0.000
	Good	12	4.1	113	39			

Sources: Primary Data of Questionnaires, 2021.

The data on the table 2 showed the bivariate analysis of the relationship between motivation and self-efficacy of undergraduate nursing students resulted in OR=1.106 95% CI = 0.497-2.458 p-value 0.000, and the relationship of awareness with nursing undergraduate self-efficacy resulted in OR = 18.575 95% CI = 7.798-44.245 p value 0.000.

Table 3. The Results of Binary Logistic Regression Analysis for the Variables.

	Variable								
		B	S.E.	Wald	df	p-value	Exp B/OR	95% CI	
Step 1a	Motivation	0.101	0.408	0.061	1	0.000	1.106	0.497	2.458
	Awareness	2.922	0.443	43.535	1	0.000	18.575	7.798	44.345

Sources: Primary Data of Questionnaire, 2021.

Table 3 showed the results of the multivariate test of motivation and awareness with the self-efficacy of undergraduate nursing students; the binary logistic statistical test found that nurse self-efficacy was dominantly associated with student awareness in performing CPR with OR = 18,575 95% CI = 7,798-44,245 p-value 0.000.

DISCUSSION

Bugiardini & Badimon, (2016) explained that respondent's motivation and awareness could influence their decision to perform CPR. Students with basic knowledge and skills about BLS can help improve their self-efficacy in recognizing and understanding cardiopulmonary resuscitation. BLS information obtained by students through theory, lab activities and BLS training becomes their basis of learning, understanding and being skilled in performing CPR (Damkliang et al., 2015; Sionis et al., 2016). Student activity units in the form of KSR PMI can also help students continue to review BLS material, ensuring that when cardiac arrest incidents occur, students will have the motivation and awareness to perform CPR properly and correctly (Protty et al., 2017; Yusniawati, 2018). Learning in educational institutions is crucial in shaping students' knowledge, attitudes, motivation and awareness of BLS's importance, ensuring that when undergraduate nursing students graduate, they will become professional nurses and can provide services to all patients and become educators for the community in BLS training for the general society (Agustini et al., 2009; Yusniawati et al., 2018)

Research conducted by (Haedar, 2015) explained that knowledge is crucial in reducing delays in providing help during cardiac arrest. Increasing student motivation is done by providing health education for students to increase student motivation and ultimately increase student awareness in performing CPR assistance for patients with cardiac arrest

wherever they are (Desnani et al., 2019; O'Gara et al., 2013b).

Montilla Padilla et al. (2017) conducted research explaining that increasing awareness is essential. When one has good awareness and are facing a cardiac arrest emergency, they will automatically be able to apply their BLS knowledge. Good awareness, along with good motivation, can increase the efficacy of undergraduate nursing students to conduct CPR properly.

Awareness is the dominant component associated with self-efficacy; the higher the students' awareness of CPR importance, the higher their self-efficacy. The limitation of this research is that it does not research student skills directly. In the future, it is necessary to conduct research related to the ability of students to provide BLS directly (Nikolaou et al., 2015; O'Gara et al., 2013a).

CONCLUSION

There is a relationship between motivation and awareness with the self-efficacy of undergraduate nursing students in conducting the BLS AHA 2020 during the covid 19 pandemic. The majority of the respondents were 20 years old and female, most are at Level 2 education, and the majority have never performed CPR on patients/victims of cardiac arrest but are involved in the Indonesian Red Cross Student Voluntary Corps. Awareness is the dominant variable that can increase efficacy 17 times greater than motivation.

The integrity of undergraduate nursing education institutions in Indonesia can maintain and improve their theoretical education, practice and training by following the development of updates of BLS AHA to produce professional nurses. Further research can develop experimental designs related to student skill training in the field of BLS.

ACKNOWLEDGMENT

DECLARATION OF CONFLICTING INTEREST

There is no conflict of interest in this research.

FUNDING

AUTHOR CONTRIBUTION

Yustina Ni Putu Yusniawati: Have the main idea, make a proposal, arrange permission and research ethics, data collection, and data analysis.

Ida Rahmawati: Conduct data analysis and make research manuscripts.

I Nyoman Arya Mahaputra: Conduct data analysis and make research manuscripts.

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