



OVERVIEW OF KNOWLEDGE ABOUT BASIC LIFE SUPPORT (BLS) FOR NATURE LOVERS STUDENTS

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ABSTRACT

Basic life support (BLS), comprising cardiovascular resuscitation and automated external defibrillator use, is not exclusively taught to health care workers but also to layman. BLS could save the lives of trauma and/or other emergency patients, particularly where health care facility is unreachable. Students' mountaineering club members particularly are under constant risks of these conditions. There has been no study regarding BLS knowledge profile in North Maluku, especially among students' mountaineering club members. Objective: To describe the level of knowledge about BLS among students' mountaineering club members at Khairun University. Methods: This observational, descriptive, cross-sectional descriptive study was conducted on all students' mountaineering club members at Khairun University in 2022. Analysis was performed using univariate analysis. Results: Among 123 respondents from 14 study programs, most were male (57,7%), were civil engineering students (22,2%), and had previous BLS training (87,8%). Regarding the level of BLS knowledge, 6,5% had good knowledge, 50,4% mediocre, and 43,1% had low level of knowledge. Conclusion: Most students' mountaineering club members at Khairun University had mediocre level of knowledge regarding BLS. Further study is required to confirm this finding.

Keywords: basic life support; knowledge; nature lover student

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INTRODUCTION

The human respiratory system and circulation can stop suddenly, as a result of which oxygenated blood cannot reach the brain and other body tissues. This can result in death if not immediately helped. Based on various studies, the cessation of oxygenation to the brain can cause damage to the brain from the 4th minute, and brain death occurs from the 6th minute. Therefore, Basic Life Support (BHD) or Basic Life Support (BLS) must be carried out as soon as possible to prevent further damage. Quick and appropriate action is essential in emergency situations like this to ensure the survival of individuals with respiratory or blood circulation disorders. The main procedure of BHD, better known as CPR (Cardiopulmonary Resuscitation), is a combination of chest compressions or cardiac massage, artificial breathing, and the use of Automated External Defibrillators (AED). Chest compressions aim to maintain blood flow, while artificial breathing helps to get oxygen into the body. The use of AEDs can provide electric shocks to restore normal heart rhythms. Each of these components is critical in life-saving efforts and must be done correctly.

BHD can be taught to the general public, not only by medical personnel. Currently, everyone is expected to have the ability to give BHD, especially in emergency situations. Education and training regarding BHD can be carried out through various programs, both in schools, workplaces, and communities. People trained in BHD can provide effective first aid before

medical professionals arrive at the scene, increasing the chances of saving lives. BHD skills are important because they can be taught as basic skills in helping with various accidents and events such as cardiac arrest and respiratory arrest due to choking. The leading cause of death in the world is heart disease. Based on WHO (World Health Organization) data in 2017, it is stated that around 17.5 million deaths in the world are caused by heart and blood vessel diseases. Every year the number of cases continues to increase, with 31% of the global 56.5 million deaths caused by cardiovascular disease.

In Indonesia, Riskesdas data in 2018 showed a prevalence of heart disease of 1.5% based on a doctor's diagnosis. Data from the North Maluku Provincial Health Office shows that the incidence of heart disease in Ternate City continues to increase from year to year, with 438 cases in 2018, 587 cases in 2019, and 798 cases in 2020. This increase shows how important prevention and early treatment efforts, including BHD training for the general public, are. If there is an obstruction of the airway due to a foreign object, including emergency conditions that must be handled immediately. Choking is the main cause of airway blockage which can be fatal if it interferes with oxygenation and ventilation of the body, causing death. Overcoming airway obstruction quickly and appropriately is essential to prevent serious complications and death. BHD training includes the knowledge and skills to handle these situations effectively. Nature lovers have a penchant for doing outdoor activities such as forest greening, rafting, and mountain climbing. However, they must have physical, mental, and skills in these activities to survive in the wild. According to Giri, nature lovers must also have knowledge of first aid and BHD to overcome emergencies that may occur during activities in nature. This is important for the safety of yourself and others in the group.

The city of Ternate has a hilly and mountainous topography with slopes varying from 8% on the slopes to 40% towards the summit of the Gamalama volcano and is surrounded by the sea. This geographical condition adds to the challenge for nature lovers in carrying out their activities. Based on this explanation, researchers are encouraged to conduct research on nature lovers (MAPALA) students of Khairun University. These communities come from different levels of faculties and study programs, and emergencies often occur during activities. The formulation of this research problem is "What is the description of knowledge about Basic Life Support in Nature Lovers Students of Khairun University?" The purpose of this study is to find out the overview of knowledge about BHD in nature loving students of Khairun University based on the gender of the respondents, study program, and training history. This research is expected to provide benefits for Khairun University in providing socialization, training, and simulation about the importance of BHD to the entire academic community. The results of the research are also expected to develop researchers' expertise in the field of research and become the implementation of the knowledge learned during lectures.

METHOD

This type of research is a descriptive research with a *cross sectional* approach. Location and Time This research was conducted at Campus II Gambesi, Khairun University. Data collection and collection time were carried out in December 2021 – January 2022. The population in this study is nature lovers students of Khairun University who are active as students and active in organizations with a population of 149 people. However, at the time of the study, the sample based on the study program was 123 people and the remaining 26 people were not in place at the time of the study. The details of the research sample by study Sampling in this study uses the *Total Sampling technique*. According to Sugiyono.²⁰ *Total Sampling* is a sampling technique when all members of the population are sampled. 1) The respondents were nature lovers students of Khairun University who were active as students and

active in organizations. 2) Respondents who are willing to fill out the questionnaire. 3) Data Collection Techniques. Primary data was obtained directly from respondents through filling out questionnaires to get an overview of knowledge about Basic Life Support for Nature Loving Students at Khairun University, while secondary data was obtained from each MAPALA of Khairun University, including the number of MAPALA members who are still active as students and active in organizations.

RESULTS

This research was carried out at Campus II Gambesi, Khairun Ternate University. Khairun University has 6 (six) MAPALA consisting of KARFAPALA, which is from all faculties, followed by MAPALA ESA, namely from the Faculty of Engineering, MAPASIR from the Faculty of Fisheries and Marine Sciences, ARSIPALA from the Faculty of Architectural Engineering, MAPALA STAR from the Faculty of Letters, and MEPAL from the Faculty of Economics. This research was conducted in 6 (six) MAPALA at Khairun University. The research data used are primary data, namely data taken using a questionnaire directly in January 2022 and secondary data obtained from each MAPALA of Khairun University. The sample of this study uses *the Total Sampling* technique. The respondents were 123 nature lovers students of Khairun University who had met the inclusion and exclusion criteria. From all the existing respondents, an overview of the respondents' characteristics was obtained, including knowledge, gender, study program and BHD training history. Based on the results of the study, an overview of the gender frequency distribution of the total MAPALA respondents was obtained, namely 123 respondents, including 71 male respondents (57.7%) and 52 female respondents (42.3%). The data can be seen in the table below.

Table 1.
Distribution of respondent frequencies based on gender

Characteristics	f	%
Man	71	57,7%
Woman	52	42,3 %

Based on the results of the study, the number of respondents in this study was 123 respondents divided into 14 (fourteen) study programs, the data can be seen in the table below.

Table 2.
Distribution of respondent frequencies based on Study Program.

Program Studi	f	%
Marine Science	26	21.1
Management	10	8.1
Accountancy	8	6.5
Travel Business	10	8.1
Tour		
Anthropology	2	1.6
History	1	.8
Indonesia Literature	1	.8
Civil Engineering	28	22.8
Mining	4	3.3
Electrical Engineering	4	3.3
Informatics	1	.8
Forestry	1	.8
Mechanical Engineering	4	3.3

Based on the results of the study, the frequency of nature lovers who have participated in BHD training is 108 respondents (87.8%) and those who have never participated in BHD are 15 respondents (12.2%). The data can be seen in the table below.

Table 3.

Distribution of respondent frequencies based of nature lovers who have participated in BHD training

BHD Training History	f	%
BHD training	108	87.8
Never	15	12.2

The description of knowledge is classified into three assessment categories, namely good, sufficient, and poor. Based on these three categories, the results of 14 (fourteen) study programs were obtained, namely, as many as 8 respondents (6.5%) had a good level of knowledge, as many as 62 respondents (50.4%) had a sufficient level of knowledge, and as many as 53 respondents (43.1%) had less knowledge. The data can be seen in the table below.

Table 4.

The description of knowledge

Knowledge	f	%
Good	8	6.5
Enough	62	50.4
Less	53	43.1

The results of the analysis based on knowledge by gender showed that of the 71 male respondents who had good knowledge, 3 respondents (2.4%), 29 respondents (23.6%) had sufficient knowledge, and 39 respondents (31.7%) had less knowledge. Meanwhile, the group of female respondents showed that out of 52 respondents, 5 respondents (4.1%), 5 respondents (4.1%) had good knowledge, 33 respondents (26.8%) had sufficient knowledge, and 14 respondents (11.4%) had less knowledge. The data can be seen in the table below.

Table 5.

The description of knowledge

Gender		Good	Enough	Less	Total
Man	Sum	3	29	39	71
	Percentage (%)	2.4%	23.6%	31.7%	57.7%
Woman	Sum	5	33	14	52
	Percentage (%)	4.1%	26.8%	11.4%	42.3%

Based on the results of the analysis of the knowledge picture based on the study program, in the marine science study program, there were 19 respondents (15.4%) who had sufficient knowledge and 7 respondents (5.7%) who had less knowledge. The management study program had 4 respondents (3.3%) with good knowledge and 6 respondents (4.9%) with poor knowledge. In the accounting study program, there were 2 respondents (1.6%) with good knowledge, 5 respondents (4.1%) with poor knowledge, and 1 respondent (0.8%) with poor knowledge. The tourism business study program had 10 respondents (8.1%) with sufficient knowledge, while the anthropology study program had 2 respondents (1.6%) with sufficient knowledge. In the history study program, there was 1 respondent (0.8%) with insufficient knowledge, while the Indonesia literature study program had 1 respondent (0.8%) with sufficient knowledge. The civil engineering study program had 2 respondents (1.6%) with good knowledge, 6 respondents (4.9%) with sufficient knowledge, and 20 respondents (16.3%) with less knowledge. The mining study program had 4 respondents (3.3%) with less knowledge, while the architecture study program had 9 respondents (7.3%) with sufficient knowledge and 14 respondents (11.4%) with less knowledge. The electrical engineering study program had 1 respondent (0.8%) with sufficient knowledge and 3 respondents (2.4%) with less knowledge. The informatics, forestry, and mechanical engineering study programs each had 1 respondent (0.8%) with good knowledge, with mechanical engineering also had 3 respondents (2.4%) with less knowledge.

Table 6.
The analysis of the knowledge picture based on the study program

		Good	Enough	Less	Total
Marine science	Sum	0	19	7	26
	Percentage (%)	0.0%	15.4%	5.7%	21.1%
Management	Sum	4	6	0	10
	Percentage (%)	3.3%	4.9%	0.0%	8.1%
Accountancy	Sum	2	5	1	8
	Percentage (%)	1.6%	4.1%	0.8%	6.5%
UPW	Sum	0	10	0	10
	Percentage (%)	0.0%	8.1%	0.0%	8.1%
Anthropology	Sum	0	2	0	2
	Percentage (%)	0.0%	1.6%	0.0%	1.6%
History	Sum	0	0	1	1
	Percentage (%)	0.0%	0.0%	0.8%	0.8%
Literature Indonesian	Sum	0	1	0	1
	Percentage (%)	0.0%	0.8%	0.0%	0.8%
Civil Engineering	Sum	2	6	20	28
	Percentage (%)	1.6%	4.9%	16.3%	22.8%
Mining	Sum	0	0	4	4
	Percentage (%)	0.0%	0.0%	3.3%	3.3%
Architecture	Sum	0	9	14	23
	Percentage (%)	0.0%	7.3%	11.4%	18.7%
Electrical Engineering	Sum	0	1	3	4
	Percentage (%)	0.0%	0.8%	2.4%	3.3%
Informatics	Sum	0	1	0	1
	Percentage (%)	0.0%	0.8%	0.0%	0.8%
Forestry	Sum	0	1	0	1
	Percentage (%)	0.0%	0.8%	0.0%	0.8%
Mechanical Engineering	Sum	0	1	3	4
	Percentage (%)	0.0%	0.8%	2.4%	3.3%

DISCUSSION

Overview of Knowledge About BHD, Based on the respondents' answers to questions that assessed the knowledge of the respondents, an overview of the knowledge of respondents who were included in the good category was obtained as many as 8 respondents (6.5%), followed by respondents who had sufficient knowledge as many as 62 respondents (50.4%), and respondents who had less knowledge as many as 53 respondents (43.1%). From these results, it can be said that the majority of respondents have knowledge that is classified as sufficient because BHD is not included in the learning curriculum. Based on the theory put forward by (Notoadmodjo, 2007) that a person's knowledge is influenced by several factors, namely education, information, mass media, environment and experience.

Based on gender characteristics, it is known that the majority of male and female respondents have knowledge classified in the sufficient category, namely from 71 male respondents there are 29 respondents (23.6%) and out of 52 female respondents there are 33 respondents (26.8%). This shows that men and women have the same knowledge that falls into the category of enough about BHD. In line with what Tygerson stated in his book entitled "First Aid" which must be translated into Indonesian Language, everyone will eventually be in a situation that requires first aid for others or for themselves. Based on this theory, there is no difference between men and women. Where BHD is very important to be known by both (Tygerson, 2011).

Overview of Knowledge Based on Study Programs, Based on the results in table 4.6, the knowledge of the 14 (fourteen) study programs is classified as adequate. Where the study program with the highest percentage in the sufficient category was in the marine science study program as many as 19 respondents (15.4%). The study program with the highest percentage in the good category was in the management study program with 4 respondents (3.3%). Meanwhile, the study program with the highest percentage in the less category was found in the civil engineering study program with 20 respondents (16.3%). From this study, it is known that of the 14 (fourteen) study programs have the same knowledge and show that there is almost no difference between the 14 (fourteen) study programs. This could be because the 14 (fourteen) study programs did not learn about BHD.

Overview of Knowledge Based on BHD Training History, Based on table 4 overview of knowledge based on BHD training, 59 respondents (48.0%) who had sufficient knowledge stated that they had participated in BHD training. This is in line with the research conducted by Ahmad Faridz Azhari Siregar with the title "Overview of the Level of Knowledge, Attitudes, and Awareness of University of North Sumatra Students Towards Basic Life Support" which was obtained from a total of 69 students who had a sufficient level of knowledge, there were 35 people (50 people), 7% of students who stated that they had participated in BHD training (Siregar, 2021).

CONCLUSION

From the results of this study, the majority of MAPALA knowledge of Khairun University is classified as adequate, namely 62 respondents (50.4%). Knowledge of basic life support by gender showed the same percentage in the adequate category, with 23.6% of men and 26.8% of women. In 14 study programs, knowledge about basic life support is also classified as adequate, with the highest percentage in the marine science study program as many as 19 respondents (15.4%). Most of the MAPALA of Khairun University have participated in BHD training, with 108 respondents (87.8%) having participated and 15 respondents (12.2%) having never participated in the training. From this research process, some suggestions are given: researchers are expected to be able to study the implementation of BHD correctly and appropriately according to SOP guidelines to increase insight and knowledge; faculties are expected to review BHD, both from the study program and the university level; and MAPALA is expected to prioritize the recruitment of students who already have a BHD certificate as active members.

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