






Basic Life Support (BLS) Education To Increase Students' Motivation To Help Cardiac Arrest Victims

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Abstract

Basic Life Support (BLS) is an activity to clear the patient's airways, assist breathing, and maintain blood flow without the use of assistive devices. This assistance must be carried out quickly and precisely, because if the assistance is not appropriate it can cause disability, even worse, the patient can die. The purpose of this community service is to increase students' knowledge about BLS and motivation to help. The method used is education and lectures. The population in the community service is students at Tunas Harapan Vocational School, totaling 63 students with several existing problems. The results of the survey on students still have many who do not understand BLS. And from the results of the survey and interviews, most students who do not know how to help victims of cardiac arrest and some are even afraid to help. Very low knowledge and motivation and the lack of information from medical personnel regarding BLS are obstacles and problems. Therefore, it is necessary to provide education and understanding of BLS. The results showed that students experienced an increase in their knowledge of Basic Life Support (BLS) from good knowledge at 7.94% to 46.03%, and their motivation to help cardiac arrest victims increased from good knowledge at 4.76% to 58.73%. This education and motivation can provide information to students and teachers of the school so they can provide assistance to cardiac arrest victims.

A. Introduction

Life Support according to (American Heart Association, 2020) is an emergency aid action taken to save the life of the victim, in a crisis situation, including people who have experienced heart failure/cardiac arrest and stopped breathing. Victims who have respiratory failure or heart failure do not necessarily die, the patient can still be saved. Basic Life Support has various actions from various exercises, in particular, victim protection, evaluation of consciousness, assessment of heart rate and pulse, assessment of respiratory resuscitation and breathing and recovery position (Nirmalasari, V., & Winarti, W. (2020).

Cardiovascular disease is the leading cause of death worldwide. Cardiovascular disease accounts for 17.3 million deaths annually. The incidence of cardiac arrest in Indonesia is around 10 per 100,000 people under 35 years of age, with an annual incidence of approximately 300,000-350,000. Based on this data, cardiac arrest is highly prevalent and can result in death. However, it can be prevented by administering rapid and appropriate BPD. BPD must be administered quickly and accurately because within 3-5 minutes after cardiac arrest, the victim will experience brain damage and even death (Ana, K. D., & Kusyani, A. 2023).

Basic Life Support (BLS) is an activity such as clearing the patient's airways, assisting breathing, and maintaining blood flow without using aids. This assistance must be carried out quickly and precisely,

because if the assistance is not appropriate it can cause disability, even worse, the patient can experience death. Knowledge of basic life support (BLS) is a knowledge and skill because if you only know the theory without training or practice, the motivation to help is lacking and the mental is not trained when actually facing a real incident (Qodir, A. 2020).

Knowledge and motivation are closely related and play a crucial role in behavior. Basic life support can reduce mortality rates due to traffic accidents by up to 85% (Purnomo, E., et al., 2021). Knowledge of basic life support can shape motivation in attitudes and behaviors in helping students. Lack of knowledge can impact the emergence of prosocial attitudes and behaviors towards those around them. Meanwhile, as social beings, we should always provide assistance to others in need. The expected assessment is to improve students' knowledge and motivation in helping related to Basic Life Support (BLS). Motivation to help, especially victims of cardiac arrest, is expected to generate benefits for others. Having knowledge of Basic Life Support (BLS) accompanied by high motivation to help can help prevent death and reduce the incidence of disability.

Based on an initial survey conducted at Tunas Harapan Plupuh Vocational School in June 2025, the data obtained showed that 17 students did not know about basic life support (BLS) and 5 students only knew briefly from social media. From the survey results, it was found that there was a lack of education so that education on basic life support (BLS) knowledge was indeed needed. Therefore, related parties have a responsibility to educate and encourage students on the importance of Basic Life Support (BLS) in assisting Cardiac Arrest Victims. The goal of this Community Service is to educate and motivate students so they can gain a better understanding of Basic Life Support (BLS) and how it can be used to help people experiencing Cardiac Arrest.

Tunas Harapan Vocational School has 63 students and faces several issues. Survey results show that many students don't understand Basic Life Support (BLS). From the survey and interviews, it's clear that most students aren't sure how to help someone having a cardiac arrest, and some are even scared to try. Very low knowledge and motivation and the lack of information from medical personnel regarding Basic Life Support (BLS) are obstacles and problems. Therefore, it is necessary to provide education and understanding of Basic Life Support (BLS). Increasing knowledge of Basic Life Support (BLS) is very important, so it can raise awareness and motivate students to help victims. This can be taught to students and teachers, so they can pass on knowledge related to Basic Life Support (BLS) to their families. Through this education and motivation, it can provide information to students and teachers at the school to be able to provide assistance to victims of cardiac arrest.

B. Methods

In this community service activity, the target population was students from SMK Tunas Harapan Plupuh Sragen. A total of 63 participants took part in the service. The activity involved providing education, and it took place on Monday, September 15, 2025, starting at 09.00 and continuing until completion. The event was held in the classroom at SMK Tunas Harapan Plupuh Sragen. The method used during the service included conducting interviews and distributing questionnaires, which were used to measure the participants' knowledge of basic life support and their level of motivation. The variables measuring knowledge of basic life support and motivation used a questionnaire with a Likert scale with a validity test of >0.433 . The implementation of the community service was as follows: 1. The team that is implementing the project uses the PBL method, which is based on solving problems. 2. The community service team gathers the problems faced by the partners through Focus Group Discussion sessions. This helps in identifying the most important issues that need to be solved right away. The service lasts for 3 hours, and during the activities, they use tools like PowerPoint presentations and leaflets to share information. 3. The team responsible for putting the plan into action looks at the common issues students face and the ways to solve them. Based on the discussions from the focus group, they identified several key problems that students are experiencing. 4. The next approach involves offering education, after which the team shares details with students through class meetings about when the education will take place. They also work with the teaching staff to plan the types of services that will be conducted. 5. On the day the service was implemented, the service team provided materials about Basic Life Support (BLS) and then moved on to discussions and post-tests.

Figure Of Community Service Activities



Figure 1. Presentation of Material



Figure 2. Discussion



Figure 3. Presentation of Material



Figure 4. Ice brikng

C. Results and Discussion

1. Results

This activity was carried out at SMK Tunas Harapan Plupuh Sragen. The activity was carried out on September 15, 2025, with 63 students, with various complex problems. Researchers conducted a survey and interviews on July 21, 2025. Many students still lacked knowledge and were not motivated to provide Basic Life Support (BLS). This activity was delivered using lecture, demonstration, and cognitive test methods. This activity was intended to convey material related to Cardiac Arrest events and how to provide assistance through BLS.

The educational or health education methods used are lectures and simulations. The lecture method involves delivering lesson material orally. One advantage of this method is that it can be attended by a large number of students.

This community service activity is an educational effort. The educational process for students takes place in four stages, starting with (1) gathering facts, which involves collecting and identifying the problems that exist in the field. (2) Identifying students. (3) delivering planned material. (4) Evaluation of educational results, namely to measure whether the objectives determined during the activity have been implemented according to plan. At the implementation stage of the extension, it begins with giving a pre-test then continues with the presentation of material by the facilitator, at the end of the extension a post-test is carried out by measuring knowledge.

Table 1. Measurement of Basic Life Support (BLS) Knowledge and Motivation to Help

<i>Variable Category</i>	<i>Pretest</i>	<i>Posttest</i>
Basic Life Support Knowledge (BLS)		
Good	5 (7,94%)	29 (46,03%)
Currently	20 (31,75%)	27 (42,86%)
Not enough	38 (60,31%)	7 (11,11%)
Total	63 (100%)	63 (100%)
Help to Motivation		
Good	3 (4,76%)	37 (58,73%)
Currently	19 (30,16%)	17 (26,98%)
Not enough	41 (65,08%)	9 (14,29%)

Total	63 (100%)	63 (100%)
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Based on the data above, the data on the level of knowledge of Basic Life Support (BLS) in students was obtained, the pretest was given before the BLS education, namely that most were in the poor category as many as 38 students (60.31%). The posttest was given after the BLS education, the data obtained were that most of the students' knowledge levels were in the good category as many as 29 students (46.03%). As for the knowledge of Motivation to Help students during the pretest before being given education, the majority were in the poor category as many as 41 students (65.08%). The posttest after being given education related to Motivation to Help, the data obtained were that most of the students' level of motivation to help were in the good category as many as 37 students (58.73%).

The results of the community service project are shown in the last session, where students were evaluated on their understanding of Basic Life Support (BLS) through lectures and discussions. The students were very engaged, especially during the discussion part with the facilitator, which helped shape their attitudes and how they respond in learning BLS. It is clear that the students were able to explain what was taught at the beginning of the session.

2. Discussion

The increased knowledge gained after the training demonstrated that the materials provided to participants were effective and useful in supporting volunteers in splinting. This was further evidenced by qualitative evaluation results from interviews, which indicated that several participants reported increased confidence in answering questions. Basic life support knowledge is first aid for victims who have had an accident and are helped quickly which aims to prevent death, prevent disability, prevent extensive damage, prevent infection and reduce pain in the victim 1 . According to AHA, 2015 Basic Life Support (BLS) is the basis for saving lives when cardiac arrest or respiratory arrest occurs. The main parts of BLS involve quickly recognizing when someone has sudden cardiac arrest and calling for help, starting CPR right away, and using an AED to shock the heart quickly (Guruh Wirasakti, G. W. 2020).

Knowledge is a crucial domain to master, as knowing something allows us to implement it and use it as a guide for future actions. A person's knowledge is influenced by the learning process, while the learning process itself is influenced by various factors, including the subject matter, the instructor, the methods used, the curriculum, and so on. Therefore, if these factors are properly present, the learning process will be effective and the results achieved will be optimal.

Knowledge is the result of knowing that occurs after someone senses an object through the five human senses. The level of knowledge of the splint bandage in students in this study is at the level of knowing (Know) and understanding (Comprehension). Knowing is a pre-existing memory after observing an object but is still not interpreted in everyday life. Understanding is an attitude that not only knows but also is able to interpret an object correctly. Factors that influence knowledge are information is data obtained from an event and then converted into a form that can be useful and has meaning for the recipient of the information where the main function of information itself is to increase knowledge. Experience can broaden one's knowledge, which can increase one's knowledge both positive and negative experiences (Syaiful et al. 2019).

Furthermore, the level of knowledge is also influenced by several factors, including the level of knowledge, where there are six stages: knowing, understanding, applying, analyzing, synthesizing, and evaluating. Students with a good level of knowledge enter the analysis stage, where they know and understand basic life support (BLS) and strive to apply it and learn to analyze every incident that requires BLS. Meanwhile, students with sufficient knowledge enter the understanding stage but are not yet able to apply the knowledge they have acquired (Ayu et al. 2022).

The results of this community service activity match what other community service activities have shown. These activities show that using simulations and role-play helps people learn directly by watching, practicing, and acting out how to give first aid during accidents or provide basic life support. The hope is that the community will gain more knowledge, better attitudes, and improved actions when dealing with accidents. Teaching Basic Life Support (BLS) is very important for the general public, especially people in their working years, so they can help others in emergencies and prevent death or serious injuries (Setiawati. 2019).

Learning about basic life support (BLS) is very important for everyone in society, starting from school age. This includes understanding what cardiac arrest is, the reasons it happens, the signs and

symptoms someone might show if they are in cardiac arrest, what BLS means, the main goals of BLS, the steps someone without medical training should take during BLS, and when to stop performing cardiopulmonary resuscitation. Having this knowledge helps people act correctly when providing first aid to someone who needs BLS (Barus, M. 2017). One way to help someone learn more is by providing health education. This matches the idea that health education is using teaching methods in the health field to better people's understanding, beliefs, and actions (Notoatmodjo, S. 2020).

Based on observations, there was an increase in knowledge from poor to moderate or even good levels due to changes in student knowledge during health education, which explained the definition of cardiac arrest, causes of cardiac arrest, signs and symptoms of cardiac arrest, the definition of basic life support (BLS), the purpose of BLS, lay BLS steps, and indications for discontinuing CPR, all of which involve a learning process. This aligns with Notoatmodjo's theory (2020), which states that the learning process can be interpreted as increasing insight, knowledge, and understanding gained from one's experiences or through individual learning. This is expected to enable students to explore what is within themselves by encouraging thinking and developing their personality by freeing themselves from ignorance.

Knowledge and motivation are closely related and play a crucial role in behavior. Basic life support is crucial for traffic police officers to understand because traffic students are tasked with handling traffic accidents and therefore frequently assist victims (Suastrawan et al. 2021). Student knowledge will influence student motivation, while student knowledge and motivation will be the beginning of a behavior in providing basic life support treatment to traffic accident victims. A person's knowledge will influence how a person is motivated to behave according to what he has learned. The more a person learns or knows something, the more motivated he will be to apply what he has learned (Syaiful, et al. 2019). Other research explains that adolescents who are in the development of body size, strength, psychology, reproductive ability, are easily motivated and learn quickly are expected to be bystanders in their respective environments and these characteristics can be found in high school level adolescents (Diananda. A. 2018).

Knowledge gained to increase motivation can be obtained through the learning process by utilizing the media used by students. One type of motivation, seen from its basis of formation, is learned motivation, meaning this motivation will exist and develop due to a person's curiosity in the learning process (Ngirarung et al., 2017). Researchers argue that student motivation in providing assistance to cardiac arrest victims (emergencies) is crucial because it helps others. Furthermore, it can also increase or enhance prosocial behavior or helping behavior in these students. Siagan (2006) divides motivation into two factors, as cited in Dahlan et al. (2019): internal factors consisting of self-esteem, responsibility, desires, hopes, and mood, and external factors consisting of environmental factors, groups, organizations, peers, attractions, and the people around them. From the results of the explanation above, it shows that the motivation of most students has high motivation in this study, categorized from the ability of students in understanding and analyzing knowledge about basic life support (BLS), this is proven by the results of the level of students' knowledge about basic life support (BLS) which is categorized as good so it will influence high motivation in students in helping victims of cardiac arrest (emergency) (Rahmad et. al. 2022).

Students' high motivation to help cardiac arrest victims is due to their involvement in the PMR organization, where one of their duties is to help others with sincerity and responsibility. This research is in line with research conducted by Buamona, S. (2017) which found a relationship between the level of knowledge about first aid in accidents and the motivation to help traffic accidents in adolescents.

Community service activities were held on September 15, 2025, in the classroom of SMK Tunas Harapan Plupuh Sragen, involving all students from grades IX, X, and XI. The material used for this community service was provided by the Community Service Team. The main aim of this activity is to help students learn more about Basic Life Support (BHD). The team believes that if students gain knowledge and skills in BHD, it will help them understand and act in emergency situations. The reason the community service team from STIKes Mitra Husada Karanganyar decided to do this activity is to teach students about BHD and encourage them to be more aware. However, there were some limitations, as the activity could not be conducted for all visits and all students at SMK Tunas Harapan Plupuh.

D. Conclusion

Basic Life Support (BLS) is an activity such as clearing the patient's airways, assisting breathing, and maintaining blood flow without the use of assistive devices. Students at Tunas Harapan Vocational School, totaling 63 students, have several existing problems. The results of surveys and interviews, most students do not know how to perform BLS and how to help victims of cardiac arrest. People don't know much about BLS and aren't very motivated to learn it. Also, medical staff don't give enough information about BLS, which makes things harder. Because of this, it's important to teach students and teachers about BLS. Having more knowledge about BLS helps increase awareness and makes people more willing to help during emergencies. With proper education and encouragement, students and teachers can learn how to help someone who has a cardiac arrest.

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