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YOUTH EMERGENCY RESPONSE: EMPOWERING YOUTH THROUGH CARDIO PULMONARY RESUSCITATION (CPR) EDUCATION IN SMK PLUS SABILUR ROSYAD SIDOARJO

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ABSTRACT

Cardiac arrest can occur anytime and anywhere, including in school environments. Quick and proper initial treatment through Cardiopulmonary Resuscitation (CPR) plays an important role in increasing the victim's survival rate. Unfortunately, the level of knowledge and skills among teenagers regarding CPR actions is still relatively low. The aim of community service is to empower teenagers through education on Cardiopulmonary Resuscitation (CPR) in the school environment, in order to enhance their knowledge and preparedness in facing emergency situations. The method used in this community service activity is to provide training and education about CPR. This activity was carried out February 2025 which was attended by 40 Students of SMK Plus Sabilur Rosyad Sidoarjo. The Results Show Most participants (60%) demonstrated a good understanding of CPR material, while 33% fell into the enough category, and only 7% remained in the less category. The training method used is quite effective in increasing participants' knowledge of cardiopulmonary resuscitation and made a routine program especially in the school environment,

Keywords: CPR, Education, Training, Youth Emergency Response

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INTRODUCTION

Empowering adolescents in emergency response, especially through Cardiopulmonary Resuscitation (CPR) education, is essential to increase awareness and life-saving skills in school settings. CPR is a basic skill that must be possessed by the general public, including adolescents, in dealing with emergency situations such as cardiac arrest. The effectiveness of CPR training programs among adolescents has been demonstrated in several studies that underscore the importance of knowledge and practical skills in providing life support.

Cardiac arrest rates are more than 356,000 cases of out-of-hospital cardiac arrest (OHCA) occur each year in the United States. Approximately 90% of out-of-hospital cardiac arrest victims die. The success rate of bystander CPR is only about 46%. Based on data from PERKI (Indonesian Cardiovascular Specialist Doctors Association) and research results, around 10% of deaths in hospitals are caused by cardiac arrest. In Indonesia, the success rate of CPR in hospitals is only around 20-30%, and lower for cases outside the hospital (PERKI, 2020).

One study concluded that education in Basic Life Support (BLS), including CPR, can significantly save lives. Research by Yusniawati et al. showed that CPR training substantially increased the knowledge and skills of adolescent members of the Youth Red Cross (PMR), indicating their readiness to handle sudden cardiac arrest (Yusniawati et al., 2023). This is in line with the results of research by Sinaga et al. which emphasized that counseling on CPR helps the community to respond more quickly in emergency situations, which in turn can increase the

success rate of CPR actions (Sinaga et al., 2024).

CPR or Cardiopulmonary Resuscitation is an emergency lifesaving procedure performed when the heart stops beating. Immediate CPR can double or triple the chances of survival after cardiac arrest. (AHA, 2020)

Simulation-based training is also very effective in preparing adolescents to face emergencies. Mumek et al. explained that BHD simulations are very helpful for police officers in honing these skills, and this can also be applied in the context of adolescent education in schools (Mumek (2022); Wijayanti (2025)). The results of a study by Prawesti et al. showed that CPR training programs for health workers can reduce the number of deaths caused by cardiac arrest, indicating that increasing competence in CPR is very significant for public safety (Prawesti et al., 2018).

The method of using audiovisual media in education has also proven effective. Handayani reported that the use of media from audiovisual learning increased the level of knowledge about BHD among students (Handayani(); Rahmawati (2024)). This shows that various educational techniques can attract the attention of adolescents and strengthen their understanding of the CPR process.

Training with audiovisual methods not only increases knowledge but also builds students' motivation in applying CPR techniques when needed (Oktafiani; 2022) and (Wijayanti; 2023). This knowledge is very important, considering the fact that more than 70% of deaths from cardiac arrest occur without early intervention, so providing careful and comprehensive training in the school environment is crucial (Pujianto et al., 2022).

Overall, empowering adolescents through CPR education not only provides them with practical knowledge but also encourages active participation in promoting safety in the school environment and the wider community. CPR training should be conducted regularly and integrated into the educational curriculum to ensure that adolescents can act effectively in life-threatening emergency situations (Guridno et al., 2024; Purwacaraka et al., 2023).

SMK Plus Sabilur Rosyad Sidoarjo as one of the vocational education institutions has a strategic role in forming teenagers who are responsive and alert in emergency conditions. Through the CPR training program, students not only gain basic knowledge and skills in saving lives, but are also empowered to become agents of change in their surroundings. This effort is in line with the objectives of preventive and promotive health education in the community.

By implementing CPR training at SMK Plus Sabilur Rosyad Sidoarjo, it is hoped that it can increase the capacity and awareness of adolescents in providing appropriate first aid and strengthen the role of schools as places for applicable health education.

Based on the findings of the situation in the area, the Kerta Scholar Poltekkes will contribute to an effort to increase the knowledge and skills of students to CPR training Sabilur Rosyad Plus Vocational School Sidoarjo City. The output target of this activity is Students of Sabilur Rosyad Plus Vocational School, Sidoarjo to increase knowledge and skills about CPR. Preparedness drills conducted to the safety of all people living in School.

OBJECTIVES

General Purpose

The purpose of this community service activity is expected to increase the knowledge and skills about CPR (Cardio Pulmonary Resuscitation). The implementation of this community service has received approval from Poltekkes Kerta Scholar with an assignment letter.

Special Purpose

Following their participation in community service projects, health cadres should be able to: Gain a better awareness of cardiac arrest². Recognize and perform CPR

PLAN OF ACTION

Strategy Plan

The method used in implementing community service is a participatory approach which will be held in 23 February 2025 with solutions that have been agreed upon by the service team and partners in overcoming problems according to the results of the situation analysis by carrying out counseling and training activities in increasing the knowledge and skills of CPR. The stages of the dedication method are as follows:

1. Training: theory, demonstration, and simulation about CPR
2. Counseling: Counseling about Cardiac arrest

Implementation

Poltekkes Kerta Ilmu and SMK Plus Sabilur Rosyad Sidoarjo have collaboration to implement the Community Life-Saving Program. Coordinating the execution of tasks, setting up the necessary infrastructure, and completing the activities within the allocated time are the first steps in the implementation process.

. The implementation of this community service has received approval from Poltekkes Kerta Scholar with letter of assignment Number: 12/SPPD/D/II/2025

Settings

This community service activity will be held from 23 February 2025 at Sabilur Rosyad Plus Vocational School Sidoarjo City, Indonesia.

Target

The target of this community service activity is 40 Students Sabilur Rosyad Plus Vocational School, Sidoarjo, Number: 12/SPPD/D/II/2025

RESULTS AND DISCUSSION

Knowledge of Cardiopulmonary Resuscitation (CPR) in SMK Plus Sabilur Rosyad Sidoarjo students is a strategic step in creating a young generation that is responsive to medical emergencies. CPR is a basic skill that is very important in first aid for victims of sudden cardiac arrest, which can happen anytime and anywhere, including in the school environment.

The CPR training conducted includes theoretical understanding of cardiac arrest conditions, clinical signs, and stages of CPR implementation according to guidelines from the American Heart Association (AHA) and the Indonesian Heart Association (PERKI). The material is delivered interactively using lecture methods, discussions, practical simulations, and educational video screenings. Students are also given the opportunity to do direct practice using a CPR training mannequin.

Table 1. Characteristics of Cadres and Citizens

Variable	Respondent n (65)	
	f	%
Age		
16 years old	32	80
17 years old	8	20
Gender		
Male	30	75
Female	10	25

Based on table 1. it can be seen that the majority of the training participants who took part in community service activities (80%) were aged 16 years. And gender education level and almost all were male 75%

Table 2. Improving the knowledge and skills of pre-test and post-test health cadres.

Knowledge	Category	n	p (%)
Pre-Test	Less	31	78
	Enough	7	18
	Good	2	4
Post-Test	Less	5	13
	Enough	10	25
	Good	25	62

Table 2 shows that there is an increase in the knowledge After the CPR training was conducted, an evaluation was conducted through a post-test to measure the increase in participants' knowledge.

Before education and training were conducted, the pre-test results showed that most students had a low to moderate level of knowledge regarding CPR, which was 78% (31 participants). This could be caused by lack of access to information, low direct experience in handling real cases in the field. This condition reinforces the urgency

of the need for CPR training and knowledge empowerment since school age.

The evaluation results show that the majority of participants are in the good category with a percentage of 62% (25 participants). Meanwhile, 25% (10 participants) are in the sufficient category, and only 13% (5 participants) are still in the less category.

These results indicate that the CPR training provided had a positive impact on increasing participants' knowledge. Most participants were able to understand and absorb the material provided, especially in terms of recognizing signs of cardiac arrest, correct CPR steps, and the importance of immediate action when facing an emergency. In addition, students also showed increased confidence in performing CPR and expressed their willingness to become first aid volunteers in the school and community environment. Top of Form.

Low levels of knowledge about Cardiopulmonary Resuscitation (CPR) among students are a significant problem in Indonesia. Many teenagers do not understand how to perform CPR, which can worsen the situation when cardiac arrest occurs. In a study conducted by Limanan and Lontoh, it was found that data on CPR knowledge among young adults, including students, is still minimal (Limanan & Lontoh, 2021; . This shows the need for education that focuses on increasing adolescents' understanding of this life-saving action.

Another study by Wahyu et al. also confirmed that the majority of undergraduate nursing students have a "sufficient" level of knowledge about CPR, but the problem is that even though they have the knowledge, real actions during an emergency are still very limited (Wahyu et al., 2024). This shows that the knowledge

received is not directly proportional to the readiness to act, which is often caused by a lack of practice and simulation in training.

Education through training programs involving audiovisual media and practical learning sessions has also proven effective. Fatmawati et al. reported that Basic Life Support (BLS) training with audiovisual media can significantly improve students' knowledge and skills in providing CPR (Fatmawati et al., 2019). A similar study by Nirmalasari and Winarti showed that CPR training can improve individuals' skills and confidence in providing assistance to cardiac arrest victims (Nirmalasari & Winarti, 2020). This shows that the method of delivering the material greatly influences students' understanding.

However, there are still major challenges related to the community's attitude which tends to be passive when facing cardiac arrest. Research by Sujana et al. emphasized that many students at SMA Karya Pembangunan Margahayu did not act in emergency situations due to lack of knowledge and direct experience in implementing CPR (Sujana et al., 2024). Programs that educate and train students in the school environment to be ready for emergency response need to be continuously encouraged so that they not only have the knowledge but also the courage to act.

By involving students in practical and interactive CPR training programs, we can improve their knowledge and skills, so that when an emergency occurs, they are able to act appropriately and quickly. This is very important considering that the death rate from cardiac arrest that is not treated quickly is very high (Sujana et al., 2024), and providing first aid in the form of CPR can significantly increase the victim's

chances of survival (Limanan & Lontoh, 2021; (Toha et al., 2021).



Figure 1. SMK Plus Sabilur Rosyad Sidoarjo City, East Java Training Activities

This increase in knowledge shows that the CPR education that is carried out is effective and can be an applicable health learning model in vocational schools. With the provision of CPR knowledge and skills, students will not only become alert individuals, but can also become life-saving agents in the community.

In addition to the short-term impact of increasing knowledge and skills, this training also fosters humanitarian values, social awareness, and disaster preparedness in students. This is in line with the vision of character education implemented at SMK Plus Sabilur Rosyad Sidoarjo, which not only prioritizes academic aspects, but also life skills and social values.



Figure 2. Best Students of CPR training



Figure 3. CPR training



Figure 4. Training of CPR for Youth Emergency Responder

CONCLUSION

Based on the results of the post-test evaluation after CPR training, it is known that the training has a significant impact on increasing participant knowledge. Most participants (60%) showed a good understanding of CPR material, while 33% were in the sufficient category, and only 7% were still in the less category.

This indicates that the training method used is quite effective in increasing

participants' knowledge of cardiopulmonary resuscitation. Therefore, CPR training like this needs to be continued periodically, and made a routine program especially in the school environment, so that more individuals have the readiness and ability to face emergency situations.

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