

STUDENTS EMPOWERMENT THROUGH FIRST AID TRAINING TO ENHANCE EMERGENCY READINESS

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ABSTRACT

First aid training equips students with the knowledge and confidence to respond effectively to potentially life-saving emergencies. A patient's outcome is significantly influenced by the actions taken at each stage of the integrated emergency management system, including the first aid provided by students before professional health workers arrive. This community service initiative, made possible through the support and collaboration of our partners, is designed to enhance female students' knowledge, skills, response time, and emergency preparedness. The program involved two days of training for 44 female students at Plus Khodizah Islamic High School, using a video-based approach, problem-based learning, and demonstrations of four key skills: basic life support, choking relief, wound and bleeding management, and evacuation techniques. The results showed a significant improvement in students' knowledge, practical skills, and response time, making them more efficient and effective in emergency situations. To support long-term learning, students were provided with instructional videos, pocketbooks, and essential emergency response skills for daily use. This community service has been well-received, with our partners giving an average satisfaction score of 8 out of 10. Overall, the first aid training program has successfully increased students' emergency readiness by enhancing their knowledge, skills, and responsiveness.

Keywords : First aid; female students; readiness; training

ABSTRAK

Pelatihan pertolongan pertama membekali siswi dengan pengetahuan dan kepercayaan diri untuk merespon secara efisien pada kondisi gawat atau darurat yang berpotensi menyelamatkan nyawa. Keberhasilan pasien tertolong bergantung pada keberhasilan pada setiap tahapan Sistem Penanggulangan Gawat Darurat Terpadu termasuk bagaimana siswi memberikan pertolongan pertama sebelum petugas kesehatan terampil datang. Pengabdian masyarakat ini bertujuan untuk meningkatkan pengetahuan, keterampilan, respon time dan kesiapan siswi dalam menghadapi kondisi gawat darurat sehari-hari. Metode yang digunakan adalah pelatihan dengan pendekatan video, problem-based learning dan demonstrasi empat keterampilan kepada 44

RIWAYAT ARTIKEL

Diserahkan : 29/07/2024

Diterima : 18/12/2024

Dipublikasikan : 16/04/2025

siswi SMA Plus Khodizah Islamic School selama 2 hari. Keterampilan yang diberikan yaitu bantuan hidup dasar, pertolongan tersedak, pertolongan luka dan perdarahan, dan proses evakuasi. Hasil pengabdian masyarakat ini didapatkan bahwa pengetahuan keterampilan dan respon time siswi meningkat signifikan. Untuk pengetahuan dan keterampilan jangka panjang, siswi dibekali video keterampilan dan buku saku penanganan kegawatdaruratan sehari-hari. Pelaksanaan pengabdian masyarakat ini memberikan kepuasan kepada mitra, dimana mitra memberikan skor rata-rata 8 (0-10). Pelatihan pertolongan pertama ini efektif dalam meningkatkan kesiapan melalui peningkatan pengetahuan, keterampilan, dan respon time.

Kata Kunci: Kesiapan; pelatihan; pertolongan pertama; siswi

INTRODUCTION

In today's fast-paced world, the safety and well-being of students in the educational environment is of utmost importance. Recognizing this, there is an increased emphasis on empowering female students through first aid training, which aims to increase their readiness to handle emergencies effectively. These initiatives go beyond the traditional boundaries of academic education, offering practical, life-saving skills that are indispensable in the face of accidents or unexpected medical emergencies (Fahmi & Nurachmah, 2018).

First aid training equips students with the knowledge and confidence to respond efficiently at critical moments, potentially saving lives. This training instills a sense of responsibility and vigilance and fosters a culture of safety and preparedness in the school community. Integrating first aid education into schools not only empowers students but also creates more resilient and proactive students (Saubers & Iannelli, 2011).

Through this approach, students learn to care for themselves and support others in need, thus fostering empathy and a sense of community. Empowering students through first aid training is an important step to build a generation that is not only academically capable but also equipped to face and manage real-world challenges with competence (Hung et al., 2021).

Efforts to rescue victims involve coordination between various parties such as

the community, pre-hospital health workers, intra-hospitals, and inter-hospitals. This coordination series is called the Integrated Emergency Medical Services (EMS). The success of patient rescue is highly dependent on the success of each stage of the EMS, including how the student provides first aid before skilled health workers arrive (Darmawan et al., 2020; Mulyana, Pamungkas, Sari, et al., 2023).

This first aid (Figure 1) training was held at Plus Khodizah Islamic High School, Batan Street No. 12, Lebak Bulus, Cilandak District, South Jakarta City Prov. D.K.I. Jakarta. This school adopts a boarding school system where students go to school and live in the same place. The school is also a women-only Islamic school that adopts the national and Pesantren (Islamic boarding school) curricula. The school has 86 students divided into classes X, XI, and XII, with 20 employees. Based on the situation assessment results conducted by the team, there are problems with the implementation of EMS in the school. School residents have never participated in training, workshops, or seminars on first aid in accidents. This is evidenced by an explanation from one of the school residents who said there had been an accident due to a fall, but no school resident could help.

When the team visited the school, they found the stairs quite steep and potentially dangerous to school residents. In addition, the floor of the main field is composed of rough materials. The school already has a School

Health Unit (UKS), but it does not function, so the room is locked and unused.

The advantages of the school include 1) the existence of UKS, 2) the existence of simple stretchers for the evacuation of victims, and 3) the distance between the school and health care facilities is quite close.

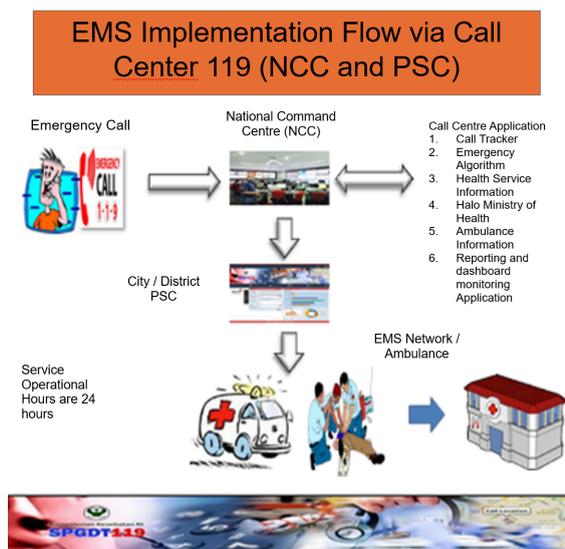


Figure 1. Emergency Medical Services (EMS)

(Source: Processed by the Authors, 2024)

The solution is to provide first aid training, including 1) Basic Life Assistance for ordinary people, 2) choking relief, 3) help with wounds and bleeding, and 4) evacuating victims. This training refers to acquiring knowledge, skills, and competencies from teaching or practical experience. Training is a form of education that focuses on learning specific skills or behaviors, is often goal-oriented, and is designed to improve skills. In summary, training is essential for personal and professional development, allowing individuals to acquire new skills, improve performance, and adapt to new challenges and roles.

Many researchers have been putting effort into improving preparedness for everyday emergency conditions. Suswitha and Arindari (2020) conducted first-aid research on fracture cases through simulation methods that effectively increased the knowledge (Suswitha & Arindari, 2020). Martinez et al. (2020) conducted simulation training to improve

respondent competence (Guerrero-Martínez et al., 2020). Hernando et al. (2016) conducted training with a demonstration method for improving responders' readiness (Hernando et al., 2016). Mulyana et al. (2023) also conducted education on earthquake disaster emergency response to improve responders' preparedness when facing aftershocks (Mulyana, Pamungkas, & Abdurrasyid, 2023). Tobase et al. (2017) conducted basic life support education using online course methods that have been proven effective in increasing nursing students' knowledge (Tobase et al., 2017).

Based on this data, this community service program aims to increase students' readiness for daily emergencies through first aid training. The outputs of the implementation of this research include 1) skill demonstration videos, 2) PowerPoint files, 3) a partner pocketbook, 4) a first aid kit, 5) reactivating the UKS (School Health Unit) function, and 6) activity videos.

METHOD

This research, integrated with community service, uses a quantitative method with a *quasi-experiment pre-posttest one-group* approach. The interventions include training with a video approach, problem-based learning, and skill demonstrations. This community service was conducted for two days, from October 31 to November 1, 2023, at Plus Khodizah Islamic High School on Jl. Batan No. 12, Lebak Bulus District, Cilandak District, South Jakarta, City Special Capital Region of Jakarta Province. The target of this community service is 44 students in Grades X, XI, and XII. The stages of community service implementation are as follows:

Table 1. Stages of Community Service Implementation

Phase	Activities	Information
1	Preliminary planning and licensing Method	1.The process of planning topics, locations, and goals 2.Preparation of the initial proposal

	- Team discussions Note: 1-7 October 2023 (7 days)	3.Licensing process to the Principal
2	Program planning Method 1.Deliberation 2.Data analysis Note: 8-14 October 2023 (7 days)	1.Gathering with the principal and students in the preparation of a program plan based on the results of the situation assessment 2.Determining the students who will be given training
3	Program implementation Method - <i>Pretest</i> knowledge and skills - Presentation of material via video - Skills training - <i>Posttest</i> knowledge and skills - Formative evaluation Note: 31 October 2023 (a day)	1. <i>Pretest</i> in the form of 24 multiple-choice questions through g-form 2.Providing BLS materials, choking, wounds, bleeding, and evacuation 3.Provide practical training on BLS, choking, wounds, bleeding, and evacuation 4. <i>Posttest</i> is the same as pretest
4	Evaluation Method 1.Deliberation - Summative evaluation (assessment of activities by students) Note: 1 November 2023 (a day)	1.Gather with students to report the results of activities in the form of documentation, certificates, <i>pretest</i> and <i>posttest results</i> 2.Suggestions from the head and students in the implementation of the following activity 3.Submission of reports, pocketbooks and cinnamonate

(Source: Processed by the Authors, 2024)

The measuring tool for the success of the implementation of community service uses three measuring tools, namely:

1. Planning checklist sheet

A checklist sheet is a list of planned implementations. The success indicator of this measuring tool is the implementation of all planning lists. There are nine core planning lists observed during the implementation, namely: 1) all Teams attend planning; 2) deliberations attended by all parties; 3) the planned training time spans; 4) all participants attended for two days; 5) all topics are given to participants; 6) participants try all skills; 7) all activities are documented in the form of photos, videos, and reports; 8) respondents' knowledge and skills improved; and 9) partners responded well to this program.

2. 24 multiple-choice question sheets

There are 24 questions divided into four training materials topics. Partners are instructed to fill out the sheet via *Google Forms*. The correct answer will be multiplied by 4.2 points, so the highest score is 100 points, and the lowest is 0 points. This sheet is filled in twice, namely, pretest and posttest.

3. Standard Operating Procedure (SOP) Sheet

SOP sheets are used to assess students' skills. The students are instructed to demonstrate their skills and will be evaluated by the team. Each skill has a different score depending on the standard references. SOP BLS has seven stages multiplied by 14.28, so the score is 0-100. The SOP to help choking victims has four stages multiplied by 25, so the score is 0-100. The SOP to help bleeding victims has four stages multiplied by 25, so the score is 0-100. The evacuation of victims with three helpers has five stages multiplied by 20, so the score is 0-100.

4. Stopwatch

The stopwatch is used to assess the *response time* and speed of the student in providing help. Each skill has a different time depending on the standard reference.

5. Partner satisfaction sheet with the program

The satisfaction sheet is a tool for assessing the partners in the programs

implemented. Partners are instructed to give a numerical rating ranging from 0 to 10, where the higher the number given, the more satisfied the partner is with the program. The satisfaction score of each student will be accumulated and averaged.

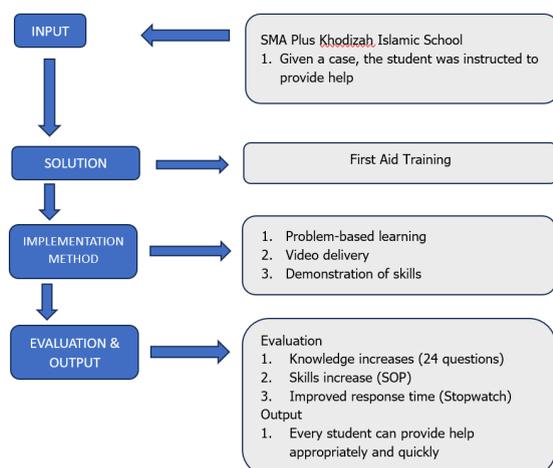


Figure 2. Overview of Science and Technology Transferred to Partners

(Source: Processed by the Authors, 2024)

RESULTS AND DISCUSSION

Situation Assessment

Figure 3 shows the situation assessment process carried out on October 1, 2023, at 08.00–16.00 WIB. The team of students and lecturers immediately went to the field to assess the situation. The study results showed that the school had 86 students divided into classes X, XI, and XII and 20 employees. School residents have never participated in training, workshops, or seminars on first aid in accidents. This is evidenced by the explanation of one of the school residents that there had been an accident due to a fall, and no school residents were able to provide help.

When the team visited the school, it was found that the stairs were quite steep and potentially dangerous to school residents. In addition, the floor of the main field is composed of rough materials. The school already has a School Health Unit (UKS), but it does not function, so the room is locked and unused. The advantages found in the school are 1) the existence of UKS, 2) the existence of

simple stretchers for evacuating victims, and 3) the distance between the school and health care facilities is quite close.



Figure 3. Visit Team and School Environment Conditions / Kunjungan Tim dan Kondisi Lingkungan Sekolah)

(Source: Authors' Documentation, 2024)

Situation assessment is an essential process for understanding and evaluating the current state of an environment. This process involves gathering information, analyzing, and making judgments or decisions based on the analysis. In a broader context, a situation assessment can refer to a thorough assessment of a situation, problem, or environment (Asmirajanti et al., 2019; Rizqillah & Suna, 2018).

Program Planning

Figure 4 shows the TIM's initial discussion process, held at R808 Building A of Esa Unggul University on September 29, 2023, at 08.00 – 17.00 WIB. This discussion was attended by 13 people, including one lecturer and 12 7th-semester students. The results of this discussion were: a) the formation of topics, regions, and goals of community service and b) the formation of a draft program proposal. On September 30, 2023, at 10.00 – 15.00 WIB, the student team conducted the licensing process to implement community service to the school. The licensing process results in a permit to perform community service at the school.

Program planning is carried out with the principal, lecturers, and students through deliberations based on the results of field

studies. This activity was held on October 2, 2023. The results of the deliberations showed that 44 students were selected, consisting of 15 students from class X, 15 from class XI, and 14 from class XII. Then, it was agreed that the implementation of the training would be held on Tuesday and Wednesday, October 31 to November 1, 2023, at 09.00 – 12.00 WIB.



Figure 4. Program Planning and Drafting Process

(Source: Authors' Documentation, 2024)

Planning refers to setting goals, determining strategies, and decomposing tasks and schedules to achieve the goals set for a particular program. It involves several main components, namely: 1) target setting, 2) strategy development, 3) assignment allocation and scheduling, 4) resource allocation, 5) risk management, 6) monitoring and evaluation, and 7) communication planning. Planning combines strategic thinking, resource management, and operational execution to guide a program from conception to completion (Gunawan et al., 2018; Nilasari et al., 2022; Rohman et al., 2019).

Licensing is a formal process granted by authorities to individuals and organizations to carry out certain activities. Licensing aims to regulate and control these activities in the interests of the community, the environment, and security. The licensing process involves submitting an application, examination, and approval from the competent authority (Maharani & Lynch, 2021).

Program Implementation



Figure 5. Training Implementation for 2 Days

(Source: Authors' Documentation, 2024)

Figure 5 shows that the implementation of the training will be held for two days, from October 31 to November 1, 2023, from 09.00 – 12.00 WIB. The following is the order of the events:

Table 2. Schedule

Time	Activities
Day 1	
09.00	Opening and Prayer
09.05-09.20	Remarks from the Principal, Lecturers, and Students
09.20-10.20	Pretest knowledge and skills
10.20-11.20	Materials and Practices: BLS, Evacuation, Bleeding, Choking
11.30	Closing
Day 2	
09.00-09.05	Opening and Prayer
09.05-11.05	Posttest knowledge and skills
11.05-11.40	Certificate Submission, Group photo, and Closing of the event

(Source: Processed by the Authors, 2024)

The results of the program implementation were obtained, and all students received material and practice on each skill taught. All participants filled out *the pretest* and *posttest*

as many as 24 multiple-choice questions with the following results:

Table 3. Student Characteristics (N: 44)

Student Characteristics	n (%)
Class	
X	15 (34%)
XI	15 (34%)
XII	14 (31.8%)
Age	
15	9 (20.5%)
16	13 (29.5%)
17	17 (38.6%)
18	3 (6.8%)
19	2 (4.5%)

(Source: Processed by the Authors, 2024)

Table 3 shows that classes X, XI, and XII represent participants equally. Then, most of the trainees were 17 years old, and there were as many as 17 students (38.6%).

Table 4. Comparison of Knowledge Before and After Training (N=44)

Variable	Mean	<i>p-value</i>
Knowledge		
<i>Pretest</i>	54.1	0.000
<i>Posttest</i>	75.8	
Skills		
BLS		
<i>Pretest</i>	20.8	0.000
<i>Posttest</i>	94.8	
Helping Bleeding Victims		
<i>Pretest</i>	38	0.000
<i>Posttest</i>	100	
Helping Choking Victims		
<i>Pretest</i>	38.6	0.000
<i>Posttest</i>	93.7	
Evacuation		
Korban		
<i>Pretest</i>	48.1	0.000
<i>Posttest</i>	100	
Response time (menute)		
BLS		
<i>Pretest</i>	8.4	0.000
<i>Posttest</i>	2.6	
Helping Bleeding Victims		
<i>Pretest</i>	6.5	0.000
<i>Posttest</i>	2.3	
Helping Choking Victims		
<i>Pretest</i>	7.5	0.000

<i>Posttest</i>	2.3	
Evacuation of Victims		
<i>Pretest</i>	11.7	0.000
<i>posttest</i>	3.2	

(Source: Processed by the Authors, 2024)

Table 4 shows a significant increase in student's knowledge and skills between the pretest and posttest. The knowledge score increased from an average of 46 to 71. In terms of skills, there was an increase as follows: BLS skills increased from an average of 54.1 to 75.8; bleeding increased from an average of 38 to 100; choking increased from an average of 38.6 to 93.7; and evacuations increased from an average of 48.1 to 100. The response time aspect also showed an improvement, with the average time to respond and perform each skill faster: in BLS, from an average of 8.4 minutes to 2.6 minutes; on bleeding, from an average of 6.5 minutes to 2.3 minutes; on choking, from an average of 7.5 minutes to 2.3 minutes; and in evacuation, from an average of 11.7 minutes to 3.2 minutes.

Training refers to improving an individual's skills, abilities, and knowledge for a specific goal. It involves educational activities designed to improve a person's performance in their current role or prepare them for the desired role. Training can be conducted in various settings, from formal classroom settings to on-the-job training, virtual learning platforms, and interactive workshops. Training plays a crucial role in personal and professional development, helping individuals and organizations achieve their goals as well as maintain a competitive advantage (Ekawati et al., 2021; Suindrayasa et al., 2020). According to research by Prakoeswa et al. (2022), there is a considerable influence of basic life support training in improving nurse skills (Prakoeswa et al., 2022). Mulyana et al. (2023) conducted the same research, finding increased knowledge of first aid in accidents.

The training provided includes basic life support, bleeding, choking, and evacuation.

Since cardiac arrest can happen to anyone, first aid in cardiac arrest needs to be given to female students. Bleeding often occurs in accident victims, but at school, this can happen due to falls. Meanwhile, evacuation is the last stage of any help provided.

Cardiac arrest, also known as cardiac arrest, is a medical emergency condition that occurs when the heart suddenly stops pumping blood throughout the body. This condition can occur suddenly and is usually caused by a severe heart rhythm disorder (Jainurakhma et al., 2020). Choking, in the context of physical health, refers to a situation in which a person's airway is partially or entirely blocked by a foreign body, thus obstructing normal breathing. This blockage can be caused by food, liquids, or other objects (Mulyana, Pamungkas, Sari, et al., 2023). Bleeding is a condition in which blood comes out of a blood vessel. Bleeding is a condition in which blood comes from a blood vessel and can vary from minor bleeding, such as minor wounds, to severe bleeding (Spahn et al., 2019).

Program Evaluation



Figure 6. Program Closing and Evaluation

(Source: Authors' Documentation, 2024)

Figure 6 shows the process of closing and evaluating the program, which was carried out using the deliberation method. School principals, lecturers, students, and students gathered in the deliberations. Furthermore, students and lecturers reported the activity

results, which included a) improvement of knowledge, skills, response time, and readiness and b) limitations in implementation. After the report, the partner submits suggestions to the University, followed by an overall assessment from the partner to the University. The activity ended with handing over certificates and souvenirs to the partners.

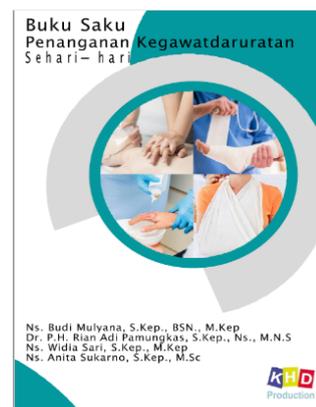


Figure 7. Pocket Book

(Source: Processed by the Authors, 2024)

Figure 7 is a pocketbook on daily emergency handling that will be given to partners. This book contains steps in providing first aid. The purpose of sharing this book is to maintain students' long-term knowledge.

The nine success indicators in the planning checklist sheet are ideally checked so this program is successfully implemented as planned. Then, the average satisfaction of respondents was 8 (0-10). Program evaluation is a systematic process for assessing a program or project's design, implementation, and outcomes. The primary purpose of program evaluation is to measure the program's effectiveness, understand its impact, and determine how much it achieves its set goals. Program evaluation helps organizations to make better informational decisions, improve program performance, and hold stakeholders accountable (Asmirajanti et al., 2019).

CONCLUSION

Implementing community service through first aid training uses a video approach, problem-based learning, and practical skill

demonstrations to improve knowledge, skills, response time, and readiness. First aid training provides benefits for partners, including 1) increasing knowledge about first aid in emergency conditions; 2) improving skills in providing first aid in emergency conditions; 3) increasing response time in providing help; 4) increasing the readiness of students; 5) long-term knowledge through a pocket book of daily emergency management; 6) provision of first aid equipment that can be used in the event of an emergency; and 7) reactivation of the School Health Unit (UKS).

However, there are several shortcomings in this study's implementation: 1) out of 86 female students, only 43 received training, and 2) short implementation time. Therefore, the development of the following program includes: 1) increasing the number of trainees to include all students and employees; 2) extending the duration of training to strengthen knowledge and skills; and 3) providing complete first aid equipment for partners.

ACKNOWLEDGMENTS

The authors would like to thank LPPM Esa Unggul University and Plus Khodizah Islamic High School for supporting the implementation of this community service program.

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