



**EMPOWERING YOUTH: THE IMPACT OF BASIC LIFE SUPPORT (BLS)
TRAINING ON KNOWLEDGE, SKILLS, AND ATTITUDE DEVELOPMENT IN
ADOLESCENTS**

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ABSTRACT

The community, especially teenagers, really needs knowledge, attitudes and skills in providing Basic Life Support (BLS) so that first aid to victims of illness or accidents can be saved and avoid death. Objective: This study analyzes the effect of basic life support training using seminars, booklets, and video methods on increasing the knowledge, skills, and attitudes of teenagers in Syamsudin Noor Village. Method: This research uses a quasi-experimental design with a control design. The population in this study were teenagers in Syamsudin Noor Village, with a sample of 30 people from each group. The variables include teenagers' knowledge, skills and attitudes regarding BLS, as well as educational media in the form of videos on handling essential life support and booklets on handling critical life support. The instruments used in this research were questionnaires, observation sheets, and learning media. The analysis uses the t-test at a significance level of 5% (0.05). Results: There was an increase in teenagers' knowledge, attitudes and skills regarding essential life support. The results of analysis using the t-test obtained a p-value for each variable of knowledge ($p=0.005$), attitudes ($p=0.004$) and skills ($p=0.0014$) after implementing BLS training. Conclusion: There is an effect of increasing the knowledge, attitudes and skills of teenagers in the community regarding essential life support after being given education through learning videos, seminars and booklets.

Keywords: basic life support; booklets; education; educational training; teenagers; videos

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INTRODUCTION

The ability to hone self-development, especially in teenagers, is the right time because there is a very high level of curiosity in adolescence (Nasyrova et al., 2019), in addition to efforts to adapt to the environment to develop competencies to hone interests and talents. It is known that adolescence at the age of 0-18 years is a period of transition and human growth and development that occurs from childhood to adulthood (Sawyer et al., 2018). It is known that during adolescence, changes can be seen from three dimensions, namely biological, social, and cognitive (Linn, M. C., & Songer, 1991) (Noor Zuhri, 2023). The importance of increasing knowledge among teenagers is the basis for achieving an Indonesian society that can advance the nation (Harmadi et al., 2022).

Human sensing is application of or is the result of information absorbed through a person's senses (Teixeira & Dublon, 2010). A person's health behavior is determined not only knowledge, but any attitudes, beliefs, and traditions of the person concerned. Knowledge is the basis of a person's responses and actions. Knowledge can be influenced by seven factors: education, employment, age, interests, experience, surrounding environmental culture, and information (Sharma, 2021). Accidents or unexpected events can happen anywhere, anytime, and to anyone. This event can be a minor incident or a disaster involving many sufferers

(Lennquist, 2012). In an event that requires medical treatment, the first people to provide help are those at the scene or the sufferer's family members. Those who attempt to provide this assistance have varying levels of knowledge, ranging from untrained to trained. There is time between aid in the field until the victim receives assistance from medical personnel at a health facility, so this grace period must be filled (Kathleen Geale, 2012) (Handayani et al, 2019).

The situation of these consequences are directly felt by the victims in the community but are also the spearhead of the first responders of the victims, which can threaten their lives or health (Antai, 2011). Therefore, the community must be alert to help victims by providing essential life support. Basic Life Support is an emergency measure to clear the airway, assist breathing, and maintain blood circulation without assistive devices (Olasveengen et al., 2020) (Maria et al., 2024). The goal is to obtain adequate emergency oxygenation of vital organs such as the brain and heart through artificial ventilation and artificial circulation until the lungs and heart can generally meet the body's oxygen needs. For this reason, for the community to become more independent in the health sector, especially in dealing with emergencies, it is necessary to have four knowledge and abilities through a form of Basic Life Support training for the Lay Community so that professional and skilled human resources can be obtained when carrying out first aid measures for sick victims and others. Accidents through providing Basic Life Support properly and correctly (Arora et al., 2018).

It is known that 80 percent of people who experience accidents will usually experience musculoskeletal system disorders. Meanwhile, 50 percent could die during the accident or a few minutes after the accident (Arason, 2014). The World Health Organization (WHO) states that road traffic accidents are the second most significant cause of death in the world (Mohammed et al., 2019). Every hour, four people die due to traffic accidents. As many as 72% of traffic accident cases occurred in Indonesia (Susilo et al., 2015). Accidents involving motorbikes reached 73%, followed by cars (15%), trucks (8%), buses (2%), and bicycles at 2% (WHO, 2015). Likewise, in Indonesia, traffic accident injuries and deaths have become a severe problem. The prevalence of injuries from Riskesdas 2013 increased compared to Riskesdas 2007; the cause of motorbike accidents was 40.6 percent, mostly in men aged 15-24 years. The proportion of injuries from land transportation accidents (motorbikes and other vehicles) increased from 25.9 percent to 47.7 percent (Assah, 2020). Interviews with ten residents of Sungai Alat village revealed that seven people did not understand essential life support, and three people had heard about essential life support (Andhi Fahrurroji et al., 2020) (Maria & Wardhani, 2023).

These basic life support skills can be taught to anyone, not only health workers but also the general public. This is because every person should ideally have basic life support (BLS) skills. BLS skills are important because they teach basic techniques for rescuing victims from various everyday accidents or disasters that are commonly encountered (Anggraini et al., 2020). The aim of this research is to identify the effect of Basic Life Support training using seminar, booklet and video methods on increasing the knowledge, skills and attitudes of adolescents in Syamsudin Noor Village.

METHOD

This research uses a quasi-experimental design with design control. The population in this study were teenagers in Syamsudin Noor Village, with a sample of 30 people in each group. Variables include teenagers' knowledge, skills and attitudes regarding basic life support (BLS), as well as educational media in the form of videos on handling essential life support equipment and booklets on handling critical life support equipment. The instruments used in

this research are questionnaires, observation sheets, and learning media. The analysis uses the t-test or Wilcoxon test according to the significance level of 5% (0.05). The results of the validity test of the community knowledge and skills questionnaire about basic life support for 30 respondents were obtained if all items showed a calculated r value > r table, which was 0.382, which means that it can be concluded that all question items were declared valid. Based on the results of the output value of the reliability test on the community knowledge instrument about basic life support, a Cronbach alpha value of 0.761 was obtained. This means that the instrument in this study was declared reliable.

RESULT

Based on the results of data collection, the following bold results were obtained based on the characteristics of the respondents.

Table 1.
Respondent characteristics teenagers in Syamsudin Noor Village. (n= 60)

Respondent characteristics	f	%
Age		
15	23	39
16	19	31
17	18	30
Gender		
Male	31	51
Female	29	49

From the table, the majority of teenagers aged 15 years were 23 people (39%), and the majority of respondents were men, 31 people (51%). The results are based on definite and statistical tests with t-tests related to teenagers' knowledge, attitudes, and skills regarding basic life support before and after being given intervention through video media, seminars, and booklets as follows:

Table 2.
Distribution of the level of knowledge, attitudes, and skills of adolescents regarding basic life support before and after being given video, seminar, and booklet interventions (n=60)

Information	Knowledge level		Attitudes		Skills	
	Before	After	Before	After	Before	After
Good	9 (15%)	21 (35%)	14 (23%)	32 (53%)	5 (9%)	17 (28%)
Adequate	37 (61%)	32 (53%)	24 (40%)	15 (25%)	12 (20%)	31 (52%)
In Adequate	14 (24%)	7 (12%)	22 (37%)	13 (21%)	43 (71%)	12 (20%)
T-Test Test Results	t count 3.029; p= 0,005		t count (3.139); p=0,004		t count (2.628); p=0,014	

The research results show. In the Knowledge Aspect, the results of the t-test state that t count (3.029) > t table (2.462), so Ho is rejected. Thus, there is a significant difference between the mean level of knowledge before (M = 41.83, SD = 9.502) and the level of knowledge after implementing BHD training (M = 46.17, SD = 10.819), t (60) = 3.029, p = 0.005 (P value < 0.01). In the Attitude Aspect, the results of the t-test state that t count (3.139) > t table (2.462) so that Ho is rejected. Thus, there is a significant difference between the mean attitude before (M = 36.13, SD = 7.964) and attitude after implementing BHD training (M = 41.00, SD = 9.592), t (60) = 3.139, p = 0.004 (P value < 0.01). In the skill aspect, the results of the t-test state that t count (2.628) > t table (2.462), so Ho is rejected. Thus, there is a significant difference between the mean skills before (M = 26.30, SD = 2.575) and skills after implementing BHD Training (M = 27.30, SD = 2.806), t (60) = 2.628, p = 0.014 (P value < 0.01).

DISCUSSION

Overall, the pretest results on the knowledge, attitude, and skills of Syamsudin Noor Village regarding the security stage, response check, and evaluation stage are mainly categorized as sufficient. This is because students are provided with a theory about how to carry out BHD at the security stage using a booklet and are given guidance to improve their skills. However, there is still room for improvement, especially in increasing the number of students with sound knowledge compared to students with less knowledge. This suggests that there is a need for more targeted interventions to ensure that all students have the basic knowledge required for the BHD security stage. Routine and periodic training is necessary to achieve maximum basic life support management knowledge. Hence, activities in schools such as Indonesian Red Cross training activities and school Health Unit activities support understanding of the management of essential life support. The intensity of students in practicing BHD practices can influence students to become skilled. The availability of BHD procedural videos is also essential as a medium for improving student knowledge (I Maria, 2020).

Management of Basic Life Support in most Poor categories at the pulse check and chest compression stages provides basic life support training as an experience that can increase knowledge in carrying out these activities. Training is included in non-formal education to increase knowledge. The results of this study show that students' knowledge regarding BHD, pulse and pulse resistance, and chest compressions need to be improved. Level of knowledge other factors influence knowledge according to Notoatmodjo, (2018), namely education, employment, age, intelligence, environment, social culture, education, information, and experience. Based on research results, the majority of respondents are aged 15 - 18 years; according to the Ministry of Health, 10-18 year-olds will be included in the teenage age category in 2023, where teenagers have cognitive development or have developed reasoning and thinking abilities to solve problems faced based on direct experience. Furthermore, interest also influences knowledge, where interest makes someone try and pursue something to gain more in-depth knowledge (Anil & Bhat, 2020)

The BLS Media Booklet introduces BLS; the steps for implementing BLS include the Danger Stage, Response Stage, Shout For Help Stage, Circulation Stage, Airway Stage, Breathing Stage, and Recovery Position Stage (Maria et al., 2024). The BLS booklet, whose contents have been adapted to the age of teenagers as users, uses simple and easy-to-understand language, especially scientific language, in administering BLS, and the appearance design of the booklet media is made as attractive as possible to make it easier when studying independently. Video training, which contains the stages of BLS, is shown to teenagers to make it easier to practice BLS actions. Participants, especially teenagers, will get direct information and practice and simulate BLS actions by showing videos and booklet media. It is hoped that the efforts that have been made using BLS training will be able to increase knowledge, attitudes and skills in managing BLS (Abolfotouh et al., 2017), especially during adolescence where teenagers have growing physical strength which is very necessary for BLS practice (Rosida et al., 2023). If teenagers are fully aware of the management of BHD, it will totally influence teenagers' behavior, especially when they find victims, especially in cases of respiratory arrest and cardiac arrest, anywhere and at any time (Ardianty et al. 2023)

There was an increase in knowledge in the Fair category, increasing to the Good category. The process of changing this category is greatly influenced by the delivery of BLS material including the Danger Stage, Response Stage, Shout For Help Stage, Circulation Stage, Airway Stage, Breathing Stage and Recovery Position Stage. The view that there is an

increase in insight, knowledge and understanding obtained from one's experience or by carrying out a learning process is expected to be able to explore individual thinking abilities so that personality development is formed so that knowledge emerges in carrying out. This research shows that there is a significant difference between knowledge and attitudes before and after showing the basic life support training video. This finding is in line with explaining that administering emergency actions outside the hospital is the responsibility of the individual at home to carry out emergency actions. Showing basic life support videos provides a new atmosphere in an effort to understand the management of basic life support, the process of showing training videos through the process of making videos and paying attention to broadcast time will provide an increase in knowledge and attitudes. Implementing basic life support as early as possible can give the victim the opportunity to get out of the critical phase thereby providing an increase in life expectancy. This research shows that there is a significant difference between knowledge and attitudes before and after viewing the video basic life support training. This finding supports previous research on emergency situations, that training influences the knowledge and skills implemented by health workers. There are clear differences because in this study the response to using health workers. The significant difference between respondents in lay people gave full intention, especially in the process of conveying information, a media was needed that was able to directly describe emergency situations through the basic life support video training process. Research by Heryyanoor et al., (2022) also explains that learning media such as videos and modules can improve a person's knowledge and attitudes, as well as other research (Septiani et al., 2020).

Cardiac and pulmonary emergencies can occur at any time. Therefore, everyone should learn how to provide basic life support. Please note that the success rate of basic life support will depend on the duration between the accident and the first aid provided. The quality of the assistance you provide will also affect the victim's safety. This step, which is also called basic life support, requires knowledge and skills in performing heart massage, using an AED (automated external defibrillator), and treating airway obstruction. Basic life support is performed due to emergency conditions. So victims usually don't have time to make special preparations. Meanwhile, for people who provide basic life support, the main preparation is to ensure that the environment around the scene is safe to carry out this procedure (American Heart Association, 2015). This research provides an understanding that emergency assistance outside the hospital is the initial process of an emergency situation which requires the role of lay people who are able to provide emergency action to the victim. It is hoped that the emergency management provided will be through appropriate procedures so that it is truly able to provide good results to the victim. . People have a greater chance of taking emergency action, especially when it occurs outside the hospital. This finding is supported by this research, which is mainly qualitative with very minimal quantitative components. This research has several limitations, the video viewing process may have a subjective impression for each individual because this research is the first to be conducted to assess appropriate management through basic life support training videos which have question categories at the research locus. Therefore, it is hoped that further research can be carried out with re-assessment within a certain period of time (three months, six months or one year) so that training can be refreshed to adapt to the needs of lay people as direct help when incidents occur outside the hospital.

CONCLUSION

There is an effect of increasing teenagers' knowledge, attitudes and skills regarding basic life support after being given education through learning videos, seminars and booklets.

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