



## The Effect of Providing First Aid Education on Accidents (P3K) in Increasing The Knowledge and Motivation of Members of The Youth Red Cross (PMR) at Muhammadiyah 1 High School In Jambi City

Andi Subandi<sup>1</sup>, Dwi Noerjoedianto<sup>2</sup>, Iis Hartini<sup>3</sup>, Muhammad Taqwa<sup>4</sup>

<sup>1,2,4</sup> Jambi University, Indonesia

<sup>3</sup> Office of Women's Empowerment and Child Development, Indonesia

Email : [andisubandi@unja.ac.id](mailto:andisubandi@unja.ac.id)<sup>1</sup>, [dwi\\_noerjoedianto@unja.ac.id](mailto:dwi_noerjoedianto@unja.ac.id)<sup>2</sup>, [iis.mkk2016@gmail.com](mailto:iis.mkk2016@gmail.com)<sup>3</sup>

**Abstract.** Accidents or injuries can happen anywhere, anytime, even in the school environment. Wherever an accident occurs, it is necessary to get immediate help to reduce the danger and immediately go to the nearest health facility. The low level of knowledge and motivation of PMR members will be a big problem, because PMR members are trained as first aiders in schools before the victim is sent to the next health facility. This study used a quantitative pre-experimental type with a one group pretest-posttest design approach. The population in this study were all members of PMR SMA Muhammadiyah 1 Jambi City. The sample in this study was 35 students using the total sampling technique. The independent variable of this study is first aid education and the dependent is the knowledge and motivation of PMR members. The research instrument used a 2-time questionnaire using the Wilcoxon statistical test. The results showed that before the intervention, some respondents had sufficient knowledge as many as 27 respondents (77.1%) and after the intervention the respondents had good knowledge as many as 35 respondents (100%). Motivation of PMR members before being given the intervention, most respondents were moderately motivated with a total of 31 respondents (88.6%) and motivation after being given the intervention all respondents were highly motivated as many as 35 respondents (100%). Wilcoxon statistical test results there is an effect of first aid education on knowledge with a significance value of 0.001 ( $p$  Subscribe to DeepL Pro to edit this document. Visit [www.DeepL.com/pro](http://www.DeepL.com/pro) for more information.  $< 0.05$ ) and motivation with a significance value of 0.001 ( $p < 0.05$ ). This study shows that first aid education has an influence on increasing the knowledge and motivation of PMR members at Muhammadiyah 1 High School in Jambi City. PMR members are expected to be able to increase motivation and relevant knowledge about first aid in accidents, as well as motivation towards others and themselves.

**Keywords:** Knowledge, Motivation, PMR Members, First Aid in Accidents (P3K)

### 1. INTRODUCTION

Based on the 2018 Riskesdas statistics, 9.2% of injuries in Indonesia occurred due to activities that disrupt daily life. Based on location, the percentage of injuries on roads was 31.4%, while the percentage of injuries in schools and neighborhoods was 6.5%. The most common injuries suffered at school were sprains (22%) and lacerations (26%), as well as fainting, nosebleeds, and fractures. (Prahmawati and Putri, 2021).

Accidents or injuries can happen anywhere, anytime, even in the school environment. Wherever an accident occurs, there is an immediate need to get help to reduce the danger and go to the nearest health facility immediately (Subandi, Nurlinawati, and Rudini 2021). To save the person from further injury, disability, or even death, quick and accurate action is required. (Setianingsih, Arifin and Waladani, 2022). According to Salsabila Azzahra et al. (2022), various kinds of accidents that occur at school include children being injured by slipping in the toilet, fighting with classmates, tripping, sports injuries, food poisoning, fainting, nosebleeds, and other accidents. (Andoko et al., 2022).

According to Retno et al. (2020), members of the Youth Red Cross (PMR) still have a low level of enthusiasm and understanding of first aid in accidents (P3K). The low knowledge and motivation of PMR members will be a big problem, because PMR members are trained as first aid officers in schools before victims are sent to the next health facility. (Education et al., 2022). According to research by Rahmani & Abduh (2022), PMR members need to have adequate motivation and knowledge to help victims in a crisis, including providing first aid in an emergency. Providing late or incorrect first aid can cause the sufferer to become seriously ill. (Rahmani and Abduh, 2022).

It is important to provide first aid knowledge through education and training (Sembel et al., 2020). This is in line with the guidelines provided by the International Federation of Red Cross and Red Crescent Societies, which states that promoting first aid education is critical to saving lives and that the provision of aid should initially be integrated into a larger development strategy (Prastyawati and Nindya, 2022). (Prastyawati and Nindya, 2022).

Less motivated and knowledgeable helpers usually avoid helping victims. Therefore, an intervention is needed to increase the knowledge and motivation of first aid members of PMR, namely with education. According to research by Rahayu et al. (2022), education is a useful tool for spreading knowledge. The more knowledge PMR members have, the more proficient they will be in providing first aid, especially when helping themselves and others in the school environment. (RISKA RAHAYU ALDA RISMA, 2022). First aid education should include first aid concepts and basic laws, calls for help, choking, fainting, bites and stings, poisoning, wounds and bleeding which are closely related to the incidence of accidents that often occur. Sihombing (2019) states that the purpose of this education is to increase the knowledge and motivation of PMR members to become more skilled and knowledgeable first aid providers. (Sihombing, 2019).

Based on the explanation above, the researcher is interested in taking the title "The Effect of Providing First Aid Education on Accidents (P3K) in Increasing Knowledge and Motivation of Youth Red Cross (PMR) Members at SMA Muhammadiyah 1 Jambi City".

## **2. MATERIALS AND METHODS**

This study used a quantitative pre-experimental type with a one group pretest-posttest design approach. The population in this study were all members of PMR SMA Muhammadiyah 1 Jambi City. The sample in this study was 35 students using the total sampling technique. The independent variable of this study is first aid education and the dependent is the knowledge and

motivation of PMR members. The research instrument used a 2-time questionnaire using the Wilcoxon statistical test.

### 3. RESULTS

#### 1. Respondent Characteristics

##### a. Based on Respondent Gender

**Table 1.** Frequency Distribution of Characteristics of Research Respondents Based on Gender of PMR Members

Gender	Frequency (n)	Percentage (%)
Male	11	31,4
Female	24	68,6
<b>Total</b>	<b>35</b>	<b>100</b>

The table above explains that the respondents were almost entirely female with 24 respondents (68.6%).

##### b. Based on Respondent Age

**Table 2.** Frequency distribution of research respondent characteristics based on PMR age

Age	Frequency (n)	Percentage (%)
15-16 years old	20	57,1
17-19 years old	15	42,9
<b>Total</b>	<b>35</b>	<b>100</b>

The table above explains that of the 35 respondents, most were in the age range of 15-16 years as many as 20 respondents (57.1%).

##### c. Based on Length of Time as a PMR Member

**Table 3.** Frequency distribution of research respondent characteristics based on length of time as a PMR member

Member	Frequency (n)	Percentage (%)
<1 year	20	57,1
>1 year	15	42,9
<b>Total</b>	<b>35</b>	<b>100</b>

From the table above, it explains that most of the respondents have been PMR members for less than 1 year as many as 20 respondents (57.1%).

##### d. By Training Experience

**Table 4.** Frequency Distribution of Respondent Characteristics Based on Training Experience

Training	Frequency (n)	Percentage (%)
Ever	0	0
Never	33	100
<b>Total</b>	<b>33</b>	<b>100</b>

Based on the table above, it explains that out of 33 respondents who have never participated in training, 33 respondents (100%).

## 2. Univariate Analysis

### a. Knowledge Level of PMR Members Before First Aid Education

**Table 5.** Frequency Distribution of Respondents' Knowledge Before Being Given First Aid Education

Knowledge Level	Frequency (n)	Percentage (%)
Good	3	8,6
Simply	27	77,1
Less	5	14,3
<b>Total</b>	<b>35</b>	<b>100</b>

Based on the table above regarding the frequency distribution of knowledge levels before being given first aid education, it was found that most respondents had sufficient knowledge, namely 27 respondents (77.1%).

### b. Knowledge Level of PMR Members After First Aid Education

**Table 6.** Frequency Distribution of Respondents' Knowledge After First Aid Education

Knowledge Level	Frequency (n)	Percentage (%)
Good	34	100
Simply	0	0
Less	0	0
<b>Total</b>	<b>35</b>	<b>100</b>

Based on the table above regarding the frequency distribution of knowledge levels after being given first aid education, it was found that all respondents had a good knowledge category as many as 35 respondents (100%).

### c. Motivation of PMR Members Before First Aid Education is Provided

**Table 7.** Frequency Distribution of Respondents' Motivation Before Being Given First Aid Education

Motivation Level	Frequency (n)	Percentage (%)
High	1	2,9
Medium	31	88,6
Less	3	8,6
<b>Total</b>	<b>35</b>	<b>100</b>

Based on the table above regarding the frequency distribution of motivation before being given first aid education, it was found that most respondents had moderate motivation, namely 31 respondents (88.6%).

## d. PMR Members' Motivation After First Aid Education

**Table 8.** Frequency Distribution of Respondents' Motivation After First Aid Education

Motivation Level	Frequency (n)	Percentage (%)
High	34	100
Medium	0	0
Less	0	0
<b>Total</b>	<b>35</b>	<b>100</b>

Based on the table above regarding the frequency distribution of motivation after being given first aid education, it was found that all respondents had a good motivation category as many as 35 respondents (100%).

## 3. Bivariate Analysis

## a. The Effect of Providing First Aid Education on Knowledge of PMR Members

**Table 9.** Frequency Distribution of the Effect of First Aid Education on Respondents' Knowledge

<i>Pre Knowledge</i>	<i>Post Knowledge</i>			<b>Jumlah</b>
	Good			
	<i>f</i>	%	N	%
Good	3	8,6	3	8,6
Simply	27	77,1	27	77,1
Less	5	14,3	5	14,3
Total	35	100	35	100
<i>Wilcoxon Test</i>		P=0,001		

Based on the table above, it was found that the influence on the level of knowledge of PMR members, there was an increase in knowledge before and after the intervention, namely all respondents became well informed with a total of 35 respondents (100%). After the Wilcoxon test, the value of  $p=0.001$  ( $p<0.05$ ) was obtained, which means that there is a significant difference in pre-test and post-test knowledge.

## b. The Effect of Providing First Aid Education on Motivation in PMR Members

**Table 10.** Frequency Distribution of the Effect of First Aid Education on Respondents' Motivation

<i>Pre Motivation</i>	<i>Post Motivation</i>			<b>Jumlah</b>
	High			
	<i>f</i>	%	N	
High	1	2,9	1	2,9
Medium	31	88,6	31	88,6
Less	3	8,6	3	8,6
Total	35	100	35	100
<i>Wilcoxon Test</i>		P=0,001		

Based on the table above, it was found that the effect on the level of motivation in PMR members, there was an increase in motivation before and after the intervention, namely all

respondents became well motivated with a total of 35 respondents (100%). After the Wilcoxon test, the value of  $p=0.001$  ( $p<0.05$ ) was obtained, which means that there is a significant difference in pre-test and post-test motivation.

#### **4. DISCUSSION**

##### **1. Knowledge of PMR Members Before First Aid Education is Provided**

Based on the research data, the results showed that before being given first aid education, it was found that most respondents had sufficient knowledge, namely 27 respondents (77.1%). The results also explained that most respondents had been PMR members for less than 1 year, as many as 20 respondents (57.1%).

A new member will have less experience and knowledge compared to a long-time member, so they need to have an adequate level of knowledge. Sutanta (2022) reported that basic simulation training is rarely provided by schools, and the reason why the percentage of first aid knowledge with the highest percentage is at the sufficient level is because the PMR coach's information time span is not effective when extracurricular activities are carried out. (Sutanta, Saputro and Sari, 2022).

According to the researcher, the respondents had received provisions about first aid outside the scope of the research conducted by the researcher. This happened because the active role of new members in a period of less than one year contributed enough, but it is necessary to increase knowledge about first aid education to increase the knowledge of PMR members because of the lack of maximum information absorbed to avoid errors in procedures based on knowledge.

##### **2. Knowledge of PMR Members After First Aid Instruction**

Based on data from the results of research conducted on the level of knowledge after being given first aid education, it was found that all respondents had a good knowledge category as many as 35 respondents (100%). The results also found that most were in the age range of 15-16 years as many as 20 respondents (57.1%).

Those who are psychologically developed, think creatively, improve cognitively, learn quickly, are easily motivated, emotionally intelligent, eager to learn new things, and have the potential to provide first aid in accidents are those between the ages of 12 and 15. (Prayitno, 2020). Thus, the interest in providing first aid will increase. Subekti (2020) emphasized that first aid learning can improve students' understanding of first aid in the classroom. The education includes first aid in an effort to increase the interest and enthusiasm of early adolescents. (LUAR and KARTIKASIWI, 2022).

Based on the explanation above, the researcher assumes that the age of PMR members 15-16 years has increased in knowledge. This is because at this age respondents are able to properly receive information conveyed by researchers and have good memory and mature minds. The media used by researchers to provide interventions uses power points with a few sentence strategies and the selection of supporting images according to the age of the respondent to clarify learning material and increase enthusiasm so that respondents are not bored and the material can be conveyed properly.

### 3. Motivation of PMR Members Before First Aid Education is Provided

Based on the research data, it was found that before being given first aid education, the results showed that most respondents had moderate motivation, namely 31 respondents (88.6%). The results also explained that most respondents had been PMR members for less than 1 year, as many as 20 respondents (57.1%).

Respondents' motivation was moderate as they could answer each question reasonably well, but members with less than one year had difficulty understanding the content as a whole and hesitated when acting. Yuliana (2019) asserts that a new member must have an internal drive because they must adjust to the unfamiliar surrounding situation. (Yuliana Dewi, 2019).

According to the researcher's assumption, new members are not yet accustomed and honed in their own abilities so that the motivation to provide first aid is not optimal and needs to be emphasized again. Therefore, an encouragement is needed to give the thought that he is able to provide help by appreciating, loving himself so that he can increase confidence to perform first aid.

### 4. Motivation of PMR Members After First Aid Instruction

Based on data from the results of research conducted on motivation after being given first aid education, it was found that all respondents had a good motivation category as many as 35 respondents (100%).

First aid education can increase the motivation of PMR members. Retno (2020) supports the idea that knowledge and motivation go hand in hand because there is a learning process that can provide knowledge to students and inspire good behavior. (Anisah and Parmilah, 2020).

According to the researcher, motivation increased to high after being given first aid education. This is because respondents' increased knowledge will be followed by increased motivation. Education can provide confidence in oneself with the increase in information obtained and can increase self-confidence through positive thoughts, feelings, directed

views, and feelings, the more knowledgeable a person is, the more confident he will be to provide assistance.

#### 5. The Effect of First Aid Education in Improving the Knowledge of PMR Members

The results showed that respondents who received first aid education experienced an increase in knowledge, namely in the good group. Statistical analysis findings from the study show that there is a significant difference in first aid education on the knowledge of PMR members.

Widiastuti & Adiputra (2022) stated that first aid education can increase participants' understanding of how to provide assistance in health education, on how to provide correct first aid with a form of invitation to change one's mindset by incorporating ideas, thoughts and facts through communicative messages. (Widiastuti and Adiputra, 2022). The purpose of this delivery is to increase the understanding and ability of PMR members to perform first aid constructively.

According to the researcher, all respondents experienced an increase in knowledge with the provision of effective first aid education to increase knowledge. Respondents experienced an increase in knowledge scores after being given an intervention in the form of first aid education and providing first aid simulations requested from the school to researchers. The increase in knowledge is the result of providing first aid education where respondents not only listen and watch the material presented, but also demonstrate so that respondents understand more deeply and minimize misinterpretation compared to only reading or listening to information to remember.

#### 6. The Effect of First Aid Education in Increasing the Motivation of PMR members

The results showed that respondents who received first aid education experienced an increase in motivation, which was in the high group. Statistical analysis findings from the study show that there is a significant difference in first aid education on the motivation of PMR members.

According to Wirahadi (2019), the motivation of PMR members can be increased by first aid education which can increase a person's self esteem, provide models that can be emulated directly in first aid according to what they learn. (Saputra et al., 2019).

According to the researcher, after the intervention, all respondents showed a change in score to a high category. This is because all respondents understand the correct actions to take when providing first aid to victims so as to increase the willingness of respondents to provide help, and researchers involve respondents to carry out demonstrations by imitating demonstrations made by researchers so that respondents become more



understanding, skilled, self-appreciative, proud, feel capable, and want to provide first aid voluntarily.

## 5. CONCLUSIONS

The level of knowledge before being given first aid education, the results showed that most respondents had sufficient knowledge, namely 27 respondents (77.1%). And the level of knowledge after being given first aid education, the results showed that all respondents had a good knowledge category as many as 35 respondents (100%).

The level of motivation before being given first aid education, the results showed that most respondents had moderate motivation, namely 31 respondents (88.6%). And the level of motivation after being given first aid education, the results showed that all respondents had a good motivation category as many as 35 respondents (100%).

There was an effect on the level of knowledge in PMR members, there was an increase in knowledge before and after the intervention, namely all respondents became well informed with a total of 35 respondents (100%). After the Wilcoxon test, the value of  $p=0.001$  ( $p<0.05$ ) was obtained, which means that there is a significant difference in pre-test and post-test knowledge.

There was an effect on the level of motivation in PMR members, there was an increase in motivation before and after the intervention, namely all respondents became well motivated with a total of 35 respondents (100%). After the Wilcoxon test, the value of  $p=0.001$  ( $p<0.05$ ) was obtained, which means that there is a significant difference in pre-test and post-test motivation.

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