



THE RELATIONSHIP BETWEEN PMR STUDENTS' KNOWLEDGE LEVEL AND SELF EFFICACY IN PROVIDING FIRST AID FOR SPLINT DRESSING

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ABSTRACT

Fracture is an emergency that requires immediate help to reduce the threat of danger to the victim, one of the causes of fractures is traffic accidents. Knowledge is a supporting factor for *a person's self-efficacy* in providing first aid in an accident that must be known by all groups, including high school students (PMR members). Objective to determine the relationship between the level of knowledge of PMR students to *self-efficacy* in providing first aid in bandage at SMAN 3 Banjarmasin. Method using a quantitative method with a *cross sectional* approach. The research sample of 36 people was then carried out the *Chi-Square test*. Based on the results of knowledge analysis on *self efficacy*, it showed a *p-value* of $0.01 < 0.05$ which means that there was a significant relationship between PMR students' knowledge and *self efficacy* in providing first aid for splint dressing. There needs to be follow-up and coordination by the school in providing first aid materials to students in a sustainable manner, with good knowledge, the *self-efficacy* of students in providing first aid is also good.

Keywords: first aid; knowledge; self efficacy; splint dressing; youth red cross

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INTRODUCTION

A broken bone (fracture) is an emergency situation that requires immediate help to reduce the threat of harm to the victim, one of the causes of a fracture is a traffic accident (Riamah et al., 2022). A traffic accident is an incident that occurs on the road, which is unexpected and unintentional involving one vehicle with another vehicle or with humans which results in property loss and even fatalities (Mubalus, 2023). In cases of accidents, the prevalence of lower extremity fractures is quite high, with a prevalence of 40% of the number of accidents that occur (Ridwan et al., 2019).

Fractures in the femur reached 19,629 people, 14,027 people in the crucis, 3,775 people in the tibia, 970 people had fractures in small parts of the leg and 336 people had fibula fractures (Putri et al., 2023). According to WHO (World Organization Health, 2019), more than 5.6 million people died due to traffic accidents and 1.3 million people suffered broken bones (Samsir et al., 2023). In 2018, Riskesdas recorded 5.5% of bone fracture incidents in Indonesia (Anggraeni, 2023). Fracture cases in South Kalimantan Province reached 4.23% while in Banjarmasin City it reached 4.18% (Triawanti et al., 2022). The highest number of accidents that occur in the school environment include injuries due to bleeding, sprains and fractures (Listiana & Silviani, 2020). Meanwhile, according to Wulandari et al., (2023) stated that injuries suffered by high school students were on the street, occurred at school, sports activities and could also occur in the home environment.

Injuries resulting from accidents in the school environment generally occur in the musculoskeletal system and must be treated quickly and appropriately. If not, it will cause worse injury and can trigger bleeding (Warouw et al., 2018). As for the solutions that can be taken to reduce the damage or other consequences caused, there is a need for fast and appropriate first aid measures. First aid is temporary treatment given to victims, for example in accidents before the victim gets more complete help from a doctor or paramedic, so that in these conditions the role of the community in helping the victim before being treated by health workers becomes very important (Rosiska & Yati, 2024).

The obligations of a helper are divided into 4 parts, namely: 1. Maintaining personal safety, when carrying out rescue actions, a helper must take into account risks and prioritize his or her safety. 2. Ask for help, try to ask for help, especially from medical personnel. 3. Provide assistance according to the victim's condition, try to provide assistance according to needs and the seriousness of the condition. 4. Arrange for transportation to the nearest medical facility (pmidkijakarta.or.id, 2023). The principles of first aid are divided into several parts, including: 1. The rescuer secures himself first before helping the victim. 2. Be calm, never panic, don't panic doesn't mean you can be slow. 3. When facing an emergency, always work with a clear and controlled plan so that it can run more effectively. 4. Do not move the victim in a hurry, the victim must not be moved from the place before it can be ascertained the type and severity of the injury suffered. 5. If the victim does not want to be carried, the bleeding must be stopped and the broken bones must be splinted. 6. Be careful, responsive and carry out movements quickly and precisely without causing additional damage or injury to the victim. 7. Provides a feeling of calm and prevents or reduces the victim's fear and anxiety. Therefore, it is hoped that all levels of society will know how to provide first aid and apply splints properly and correctly (Yeni et al., 2023).

Bandaging is one way to reduce the risk of damage to existing tissue, to reduce pain, the possibility of disability and prevent death. Dressing using mittela or something else with clean principles (Hegarty et al., 2019). A splint is a form of first aid for injury/trauma to the musculoskeletal system which is useful for reducing movement and resting (immobilizing) parts of the body that have suffered a fracture using a tool. Splinting is a tool to reduce movement in cases of closed or open fractures (Ferianto, 2022).

One of the people who needs to know how to treat bone fractures in high school students is the PMR members. Youth Red Cross (PMR) is an extracurricular activity in schools under the auspices of PMI (Indonesian Red Cross) which utilizes time in social activities to provide benefits for students and the general public so that they can realize or implement the values that have been taught and obtained by PMR members (Samsir et al., 2023). Every PMR member is obliged to know and understand first aid material, first aid can be done by anyone and in any situation. Victims who are injured really need first aid quickly and precisely, because proper and fast treatment can minimize more severe impacts such as disability or even death. Because of this, there is a need for basic knowledge for school students, one of whom is a member of the PMR. The basic first aid material that PMR students must know and understand according to Listiana & Silviani, (2020) are: 1. Basic knowledge of first aid. 2. Physiological anatomy. 3. Patient assessment. 4. Wounds. 5. Broken bones. 6. Burns. 7. Sudden illness. 8. The role of PMR in first aid services. Lack of basic knowledge can result in errors in providing first aid, because when an incident occurs, you often feel panicked and unable to do anything.

Knowledge is also a factor that influences self-efficacy. Self-efficacy is a belief that a person has regarding his abilities and also the results that will be obtained from his hard work and can influence the way a person behaves. Self-efficacy has a big impact on people's daily lives because self-efficacy influences the determination of actions taken to achieve a goal in various events (Bandura, 1997:42). Individuals with high self-efficacy believe that they are able to do something to change the events around them, for example an accident occurs around their residence which requires treatment of accident victims, handling rescue of victims as one of the efforts made to save the life of someone whose life is being threatened (Hendrawan & Hendrawan, 2020).

Based on the results of a preliminary study that researchers conducted at SMAN 3 Banjarmasin, 14 respondents who were invited to discuss and fill out a questionnaire via Google form regarding knowledge of first aid for dressing splints said that they had received material on handling fractures and practiced bandaging and splinting methods. It was found that some respondents had knowledge good and sufficient knowledge about splint dressing assistance, and approximately 2 years ago there were 2 students who experienced bleeding and bone dislocations while at school. Based on the background above, knowledge is a supporting factor for a person's self-efficacy in providing first aid for splint installation, which all groups need to know, including high school students/equivalent (PMR members). Knowledge is mostly obtained from the senses of hearing and sight. Seeing this, this research aims to determine the relationship between the level of knowledge of PMR students and their self-efficacy in providing first aid for splint dressing at SMAN 3 Banjarmasin.

METHOD

This research was conducted at SMAN 3 Banjarmasin, East Banjarmasin District, Banjarmasin City. The reason for choosing the research location was because SMAN 3 is a school that has PMR extracurricular activities and has received materials on treating fractures. SMAN 3 is also on a road that is busy with traffic, making it prone to accidents which can cause injuries, one of which is broken bones. This research method uses a quantitative research type with a cross sectional approach design, data analysis uses univariate and bivariate analysis then tested using the chi square test. The population used in this research was PMR students with a total of 50 people. The sample used in this research was 36 respondents. The data collection instrument used in this research was a knowledge questionnaire about splint dressings from Rizka, 2017 with a validity value of (0.0361) with reliability (0.78). The second instrument is a valid self-efficacy questionnaire from the General Efficacy Scale by Schwarzer and Jerusalem (1995) which has been tested for validity (0.665) and reliability (0.815). Data collection was carried out by distributing questionnaires directly and online via Google form to determine the relationship between the level of knowledge of PMR students and their self-efficacy in providing first aid with splints at SMAN 3 Banjarmasin.

RESULTS

Based on table 1, the characteristics of respondents at SMAN 3 Banjarmasin show that the age range of most PMR members is 15-16 years (63.9%). Characteristics of respondents based on gender, the majority were female (66.7%). The results of the characteristics of respondents who received information on splint dressing assistance through education & training were (61.1%), and it was found that the frequency of knowledge of most PMR students was good (52.8%) and the results of the frequency of self-efficacy of most PMR members were good (55.6%).

Table 1.
Characteristics of respondents (n = 36)

Characteristics	Category	f	%
Age	15-16 years old	23	63.9
	17-18 years old	13	36.1
Gender	Female	24	66.7
	Male	12	33.3
Source of information on splint dressing	Training	22	61.1
	Mass media	14	38.9
Knowledge	Good	19	52.8
	Enough	17	47.2
Self Efficacy	Good	20	55.6
	Currently	15	41.7
	Not enough	1	2.8

Table 2.
Frequency distribution of PMR students' level of knowledge regarding Self Efficacy

Frequency distribution		Self Efficacy						Total	p-value
		Good		Currently		Not enough			
		f	%	f	%	f	%		0,0001
Knowledge	Good	16	44,5	3	8,3	0	0	19	
	Enough	4	11,2	12	33,4	1	2,6	17	

In table 2, the results of the analysis of the relationship between the level of knowledge of PMR Students and Self-Efficacy in providing first aid with splints are obtained using the chi square p-value test of 0.001 or <0.05 , so it can be concluded that there is a relationship between the knowledge of PMR Students and self-efficacy in providing first aid and splinting. The results of research conducted on PMR members at SMAN 3 Banjarmasin showed that the majority of respondents had a good level of knowledge (52.8%).

DISCUSSION

The results of the research show that there is a relationship between PMR students' knowledge of self-efficacy in providing first aid for splint dressing. The majority of respondents had a good level of knowledge about providing first aid for splinting. From the questionnaire data, it is known that several factors support the good knowledge of PMR members, namely the existence of education or training and the provision of materials by PMR coaches. These results are in line with research conducted by Hizkia et al., (2023) which, based on the frequency distribution of the research results, respondents' knowledge about first aid in accidents based on splint dressing, namely respondents who had good knowledge were 58.33%, those who had sufficient knowledge were 38.33% and those who had poor knowledge were 3.33%.

This is in line with the research results Warouw et al., (2018) where the results obtained from students' knowledge that knowledge about first aid in accidents is obtained from information sources or from experiences they gain in their environment. Knowledge is not the only factor that can influence a person, knowledge can be influenced by several factors, including age and gender. As a person ages, there will be changes in the psychological and psychological/mental aspects (Darsini et al., 2019). According to Ragita & N, (2021) the adolescent age range is divided into 2 periods, namely early adolescence from the age of 12-16 years and late adolescence from the age range of 17-25 years. And in research conducted at SMAN 3 Banjarmasin, the results showed that most of the respondents' age range was 15-16 years (63.9%) with good knowledge of around (22.8%), so some of the respondents in this study were in the early teenage period. This research is in line with research that was

conducted on 193 class The results of the questionnaire showed that students aged 16 years had a good level of knowledge as many as 81 respondents (42.0%).

Knowledge can also be influenced by other factors, namely gender, gender differences also influence self-efficacy, we can see this from Bandura's (1997) research which states that women have higher efficacy in managing their roles. And from the results of research conducted on members of PMR SMAN 3 Banjarmasin, it was found that the majority of respondents were women (66.7%) with good knowledge of (22.8%). This is in line with research in 2015 conducted by Tel Aviv University in Darsini et al., (2019) they did interesting research comparing the brains of men and women. From this research, it was found that women use their right brain more often, this is the reason women are better able to see from various points of view and draw conclusions. Meanwhile, the self-efficacy of PMR students themselves showed that PMR members at SMAN 3 Banjarmasin had a level of self-efficacy or self-efficacy in the good category of (55.6%) of the total respondents. Self-efficacy can be influenced by several things, including knowledge and gender (Suryono, 2018). Yunus et al., (2023) stated that students' confidence in providing first aid will increase when students have good knowledge. From research conducted on PMR members at SMAN 3 Banjarmasin, it was found that members with good knowledge (52.8%) also had a good level of self-efficacy (55.6%). Knowledge is something that is often associated with self-efficacy. (Bandura, 1997) said that self-efficacy is an assessment of self-confidence about how well an individual can carry out the necessary actions related to a prospective situation.

Thus, self-efficacy is related to self-confidence or self-confidence and having the ability to take action as expected. This is in line with research conducted by Apriani et al., (2022) that the majority of respondents with a low level of knowledge, 26 respondents (48.1%), had a low level of self-efficacy, namely 30 respondents (55.6%). The results of research conducted by Trifianingsih & Anggaraini, (2023) showed that the majority of respondents who had insufficient knowledge about first aid for injuries to elementary school students, 22 people (55%) had a level of self-efficacy or self-efficacy that was less than 21 people. (52.5%). Apart from that, research La'ade, (2020) showed that most of the level of knowledge about First Aid (First Aid in Traffic Accidents) was in the good category, namely 26 people (56.52%), and most of the level of self-efficacy in provision of first aid was included in the good category, namely 20 people (43.48%).

The results of research conducted on PMR members at SMAN 3 Banjarmasin showed that the majority of respondents had a good level of knowledge (52.8%). The level of self-efficacy or self-efficacy in the good category was (55.6%) of the total respondents. Based on table. 2 above, from the results of the analysis of the relationship between the level of knowledge of PMR Students and Self Efficacy in providing first aid bandages, it was found that the results of the chi square test were $p < 0.001$ or < 0.05 , so it can be concluded that there is a relationship between PMR Students' knowledge of self efficacy in providing first aid bandages. splint. Similar research was also carried out on teenagers in Sanur Kauh village, Bali. The results of the analysis showed that the significance value obtained was a p-value of 0.001, which means there is a relationship between knowledge and self-efficacy in providing first aid. Other research also found that there was a significant correlation between knowledge and self-efficacy with a p-value of 0.001 (Mardina, Sipasulta, & Albertina 2017). And reinforced by research involving 51 respondents who were recruited using the probability sampling method with simple random sampling, it was found that there was a significant relationship between the level of knowledge about first aid for accidents (P3K) and the self-efficacy of members of

the Youth Red Cross (PMR) Surakarta Headquarters with the p-value obtained. value 0.001 ($p < 0.05$) and there is a relationship with a correlation value (r) of 0.459 (Kusuma, 2024).

CONCLUSION

Based on the results of knowledge analysis on *self efficacy*, it showed a *p-value* of 0.001 < 0.05 which means that there was a significant relationship between PMR students' knowledge and *self efficacy* in providing first aid for splint dressing. There needs to be follow-up and coordination by the school in providing first aid materials to students in a sustainable manner, with good knowledge, the *self-efficacy* of students in providing first aid is also good.

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