

Simulation Methods for Emergency Handling Preparedness in Junior High School Children in The New Normal Era

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ABSTRACT

School students are a group at high risk for an emergency situation, because many possibilities can occur in this group. Teachers are required to have an understanding of early handling of emergencies in schools, both individual cases and disaster emergency conditions that are at risk of mass emergency conditions. It was found that there were 8 health cases in school children consisting of 3 cases of vomiting while studying, 2 cases of fever, 1 person complaining of abdominal pain, 1 person having a nosebleed (Epistaxis), and 1 case of fainting during a ceremony before Covid-19 hit. The purpose of this study was to determine the understanding of teachers and UKS members on First Aid Emergency Cases at SMP 2 Silaut in the New Normal Era. This research is a type of pre-experimental design research. The design used is "One-shot Case Study". The population in this study were UKS members as many as 25 people. The research sample was carried out by saturated sampling. Data collection instruments used questionnaires, documentation, and observation sheets. The hypothesis test used is the t-test. The results of the study found that the post-test results showed that as many as 21 people (84%) had good knowledge (76%-100%). This is because students have good awareness, interest, and enthusiasm for the material presented.

Keywords: *Emergency First Aid, Simulation, New Normal Era.*

1. INTRODUCTION

School-age children are an age group that is very dangerous in an emergency situation because there seems to be a lot that can happen to this group. This age group has the highest motor activity and is not accompanied by knowledge of avoiding the formation of emergency conditions such as disasters, diarrhea, fever, nausea, vomiting, and fainting. School children also have the habit of snacking carelessly, not often washing their hands with soap, and playing on dirty school floors so they are easy to get sick [1].

School students are a group at high risk for an emergency situation, because many possibilities can happen to this group. Academic institutions are ready to reduce this problem and increase community disaster

resilience by forming synergistic partnerships between schools and emergency practitioners In [2]

Following their developmental sessions, school-age children need monitoring and care from adults while in school, in this case, the Teacher Council. The teacher's role is not only to educate students' cognitive, psychomotor, and morals, they are also responsible for the health conditions they experience during the teaching and learning process at school[3]. Teachers are required to have an understanding of the initial handling of emergencies in schools, both individual cases and disaster emergency conditions that are at risk of mass emergency conditions [4]

Other information from research conducted by Marsaid in Pasuruan in 2019 found that emergencies in schools often occur during sports sessions and during

school breaks where there are many playing activities between fellow school students. More than 60% of children in various schools in India have faced an emergency situation with the highest problems being injuries (bruises) 27%, vomiting 23%, and fainting 19%. To overcome this problem, teachers often do not recognize early action in dealing with emergencies in schools[5]. They just rely entirely on health workers at health facilities, meanwhile, by recognizing that early action for emergencies in school children is expected, bad consequences can be avoided.

School-age children in Indonesia often experience diarrhea, nausea, vomiting, abrasions, epistaxis, and fainting during ceremonies with the highest cases occurring in East Java Province with moderate cases of diarrhea due to food poisoning[6]. More than 700 children in a boarding school had diarrhea at that time and had to be evacuated to the hospital for treatment. Furthermore, research at SDN Purwosari I, Pasuruan Regency, found that in dealing with emergency children at the school, triage training with the Jumpstart method was carried out on the Teacher Council where the results showed that it significantly affected the readiness for early emergency handling at school[7].

Based on the researcher's initial study on March 15-17, 2021, data obtained that there were 8 health cases in school children consisting of 3 cases of vomiting while studying, 2 cases of fever, 1 person complaining of abdominal pain, 1 person having nosebleeds (Epistaxis) and 1 case of fainting during sleep. ceremony before Covid-19 hit. According to a teacher at SMPN 2 Silaut, almost every Monday during the flag ceremony, someone faints. Sometimes with different people. Other cases such as nausea, vomiting, fever, and abrasions are also common in schools. Usually, these teachers only contact the students' parents to pick them up and allow them to rest at home. Therefore, with a large number of emergency cases in schools, it is necessary to give an understanding of how to apply first aid to students to make it easier for health workers to later provide effective interventions. while in a health facility.

Furthermore, based on the results of interviews with UKS teachers at SMPN 2 Silaut, it was found that the UKS function in schools was not yet optimal in dealing with these health problems. He also admitted that he did not know what first aid was appropriate to the health problems experienced by the students of SMPN 2 Silaut.

Related to this, in carrying out the activity process a set of components is needed which includes objectives, method materials, and assessments [8]. The method is an effort to implement the plans that have been prepared in real activities so that the goals are achieved optimally [9] One of them with the simulation method. This method emphasizes the activeness of students in building concepts or knowledge to overcome the problems they face[10]. The purpose of this study was

to determine the skills of teachers and UKS members regarding the readiness to handle emergencies with the simulation method in students before being given health education at SMPN 2 Silaut and knowing the skills of teachers and UKS members regarding the readiness to handle emergencies using the simulation method for students after being given health education at SMPN 2 Silaut.

First aid in the emergency department is a series of first attempts that can be made in emergency conditions to save the patient from death[11]. The provision of first aid must be done quickly and accurately using the existing facilities and markets at the scene if this first aid measure is carried out properly and will reduce disability or suffering for the victim and can even save the victim from death, but if this first aid measure does not work well eating is likely to make things worse and can even result in disability and death. The goals of first aid are saving lives or preventing death, preventing more severe disability (preventing the condition from worsening), and promoting healing by reducing pain, fear and preventing infection[12].

First Aid is a treatment that is given immediately to people who are injured or suddenly sick. First aid does not replace proper medical care. First aid provides only temporary assistance until competent medical care is obtained, if necessary, or until the opportunity to recover without medical treatment is met. Most injuries do not require medical treatment[13].

Simulation means imitation or an act that is pretending[14]. As a teaching method, simulation can be interpreted as an activity that describes the actual situation. The point is that students (with the guidance of the teacher) take part in a mock simulation to try to describe the actual event. So in simulation activities, participants or role holders perform an imitation environment of the actual event.

The simulation learning method is a learning method that makes an imitation of something real, the surrounding circumstances (state of affairs), or the process[15].

2. METHODS

This research is pre-experimental design research. The design used is "One-shot Case Study". The population in this study were all UKS members, as many as 25 people. The research sample was carried out by saturated sampling, which is a sampling technique when all members of the population are used as samples. This is because the population is relatively small, with less than 30 people[16]. In this design, there is one class that is treated.

Data collection instruments used questionnaires, documentation, and observation sheets. The

questionnaire instrument had previously been tested for validity, reliability, discriminatory power, and the level of difficulty of the questions. Questionnaires were used to find out how the understanding of teachers and UKS members about emergency handling readiness with the simulation method. Furthermore, there is an interview and observation guide to find out how the skills of teachers and UKS members are regarding the readiness to handle emergencies using the simulation method.

Hypothesis testing in this study using the t-test. The hypotheses proposed in this study are: (1) there is an effect of using the simulation method on the understanding of teachers and UKS members about emergency handling readiness before being given treatment, (2) there is an effect of using the simulation method on the understanding of teachers and UKS members about emergency handling readiness after treatment. given the treatment

3. RESULTS

Characteristics of UKS Members at SMPN 2 Silaut the majority of students are female and 14 years old and currently sitting in grade 8. It can be seen in the following table.

Table 1. Recap of the Characteristics of UKS Members

Variabel	Gender		Age	
	Male	Female	≤ 14 tahun	≥ 14 tahun
Frequency	10	15	25	-
Percentage	40	60	100	-

Children at this age have the characteristics of being bolder in acting, children's behavior becomes risky so that it affects the problem health[17]. This is the cause of many incidents of injury to children, especially school-age children. The majority of injuries occurred in male students during recess, while cases occurred in female students during sports lessons[18]. Boys are more often involved in risky and challenging activities than girls, so they are more likely to be injured. Research proves that many accidents occur in children aged 14 years and male students have a 0.781 times greater risk of traffic accidents than female students[19].

Table 2. Results of Pre and Post Test Scores.

Category	Pre-Test	Post-Test
Good (76%-100%)	5 (20%)	21 (84%)
Fairly Good (51%-75%)	9 (36%)	4 (16%)
Poor (25%-50%)	11 (44%)	-
Total	25 Orang (100%)	25 Orang (100%)

Based on table 2. it can be seen that from the pretest scores the majority of participants had poor scores as

many as 11 people (44%). This shows that the majority of students do not know about first aid in emergency or accident cases, whether the information is obtained from schools, social media, or books. Therefore, it is necessary to have training or refresher and periodic evaluation of these competencies so that children do not easily forget. This refresher also aims to maintain and improve health services in schools, especially in UKS activities. The learning system of SMP Negeri 2 Silaut, is quite advanced, but learning about health is very rare.

The results of this study can be used as a basis for schools to integrate emergency first aid materials in schools as part of the routine training agenda at schools and evaluate their implementation. Explained the importance of providing education about first aid training at ages 13-14 years as part of the curriculum[20]. The educational flow in question is to provide a repeated understanding of the basics of first aid, then equip children with skills on emotional management of victims, avoiding infection, how to apply bandages and splints in cases of wounds and fractures, wound care, and how to contact emergency services. However, the school should provide facilities such as a first aid kit in case of an accident (P3K) to support these activities.

The posttest results showed that as many as 21 people (84%) had good knowledge (76%-100%). This is because students have good awareness, interest, and enthusiasm for the material presented. The evaluation results from all participants said that this activity was very useful as a provision for the prevention and treatment of injuries in schools. The students participating in this activity were very enthusiastic about the material provided. This can be seen from the beginning to the end of the event, it can be seen that all students actively participated in the simulation session.

The increase in knowledge also changes from a poor level to a sufficient level or a good level. This is following research which proves that there is an increase in the average knowledge and attitudes of pre and posttest scores before and after training on first aid[21][22][23]. This increase in average is also due to the interest of students during the activity by using the simulation method, so that participants can practice first aid as if it were a real case. The simulation method was chosen so that students are more active during the training so that there is an increase in knowledge and improvement of students' attitudes about preventing and handling emergency cases in schools. The simulation method has been shown to increase knowledge and improve student attitudes after health education is carried out compared to the lecture method[24].

First aid training in accidents needs to be done in a school environment, this is supported by previous research on Emergency First Aid Training at the Brawijaya Smart School Malang Center where the results

of the posttest score increase indicator[25]. The description of the level of risk of injury in school-age children is with a moderate level of 60.4%[26]. This means that various efforts must be made immediately to prevent and anticipate injuries to children. Health education through this stimulation method is very appropriate for school students, considering that school is an important part of children's lives and most of the time is spent at school.

This study also involved representatives of UKS teachers. It is the teacher who acts as the first line to protect and provide care for children in schools. This is what supports that teachers must also be equipped with first aid. This training also needs to be given to teachers because it has proven to be very effective in increasing their knowledge[27]. Through this training, teachers become more confident in giving explanations to children. The results of the interviews obtained after being carried out, the coaching teachers became more confident and more enthusiastic in conveying material to children about emergency first aid at school.

Schools as institutions that have been trusted by parents of course have the responsibility to take care of their students, teachers as parents while at school can prevent and supervise health while at school[28]

This training is very important to be understood by teachers, school staff, and even students as a provision to assist as soon as possible to avoid the next danger.

The overall evaluation of this research went well, where several points or targets had been achieved. All participants can understand and demonstrate the practice of handling first aid in emergency cases at school. This activity can provide benefits for students, namely increasing knowledge to always behave in a healthy and safe life, and preparing children as agents of change in the family and community.

4. CONCLUSION

This research proves that first aid training with simulation methods is effective in increasing students' knowledge. This can be seen from the results of the increase in the average value of pre and post-test and changes in knowledge from good enough to good. Skills in the management of injury cases that often occur in schools are getting better. Suggestions for the school can then integrate this training into the school's routine training agenda so that the community of SMP N 2 Silaut understands the importance of knowledge and skills in handling injury cases at school from an early age. The results of this study can also be used as input for the school to add to the insight of students and teachers with advanced training in handling trauma to victims of mass disasters such as earthquakes or floods.

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