



First Aid Training Model for Physical Education Teachers

Ade Evriansyah Lubis, Agung Nugroho
Sekolah Tinggi Olahraga dan Kesehatan Bina Guna

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Abstract

The student safety during Physical Education learning process is an important aspect that becomes a responsibility of every Physical Education teacher. Therefore, Physical Education Teacher must have special supporting skills for handling and giving first aid for various types of physical problems and accidents experienced by students. For this reason, it is necessary to conduct a study aimed at developing a first aid training model for Physical Education teachers. The method used in this study was Research & Development model, using the ADDIE approach (Analysis, Design, Development, Implementation, & Evaluation). The population of this study were Physical Education Teachers in Medan Deli District, Medan Municipality, North Sumatra Province, in 2019. The respondents included 99 Physical Education teachers selected through total sampling technique. The data collection techniques used in this study were interviews and online questionnaire distribution. The data analysis technique used was descriptive analysis technique. The research results show the total score mean (X) validation of 2 First Aid Training Experts was 71.00 and the total score mean (X) validation of 2 Physical Education Experts was 73.00. Based on the quantitative data obtained from the mean score calculation (X), the qualitative value was obtained ($51.00 \leq X \leq 75.00$). It concludes that the First Aid Training Model for Physical Education Teachers is feasible to be used as a support for Physical Education learning in schools.

*Correspondence Address : Jl. Alumnium Raya No.77, Kec. Medan Deli
Kota Medan, Sumatera Utara 20241
E-mail : lubisadee@gmail.com

INTRODUCTION

Basically, all human activities have a potential to pose a risk of physical problems and accidents. The higher the quantity and quality of the physical activity carried out, the higher the potential for the physical problem and accident occurrence. Daily physical activities carried out regularly and continuously can affect the situation and physical condition of humans, the influence depends on internal and external factors. Internal factors are closely related to genetics, while external factors are related to environmental conditions. Therefore, humans will have and experience a variety of responses and adaptations to the physical activities they do (Lubis et al., 2020).

Physical activities and sporting activities can be conducted through a variety of activities. The activities will be related to the various characteristics of problems and physical accidents that may occur. However, in particular, physical problems and accidents during sporting activities can be caused by several factors, including accidents, unfit physical conditions, inappropriate methods, inadequate infrastructure, inadequate warming up, and inadequate cooling down (Junaidi et al., 2018).

Physical problems and accidents can occur in almost all types of sporting activities. Physical problems and accidents in sporting activities are more common in sports with physical contact (body contact), such as football, basketball, and so on. However, physical problems and accidents could also occur in non-body contact sports, such as volleyball, badminton, and so on. (Setiani & Priyonoadi, 2015).

If we talk about sporting activities, we will also discuss sporting activities carried out in schools. Sporting activities in schools are commonly referred to Physical Education and Health learning activities. Physical Education learning is a learning process carried out through physical activities aimed to achieve learning objectives that are oriented to the student cognitive, psychomotor, and affective

aspects. The implementation of Physical Education learning has slightly different characteristics compared to other learning held in schools. In Physical Education learning, students are required to carry out more intensive physical activities, which are dominantly carried out outside the classroom, and often have to use other supporting infrastructure facilities (Yuliawan & Indrayana, 2020).

In practice, Physical Education learning in schools certainly has very diverse characteristics. In formal education, there are three levels of education, consisting of Elementary School, Junior High School, and Senior High School. The implementation in the three levels of formal education will certainly have characteristic similarities and differences. The similarity lies in the composition of the studied material, while the difference lies in the depth of discussion of the studied material in schools (Supriyadi & Supriyono, 2017).

Considering that Physical Education learning carried out in schools also involves sport activities, of course, Physical Education learning cannot avoid the risk of physical problems and accidents. The risk of physical problems and accidents that occur during Physical Education learning in schools will have diverse characteristics, depending on the situation and conditions of the surrounding environment. Most of the physical problems and accidents that occur during Physical Education learning process in schools are due to unfavorable environmental factors, such as field situations and conditions that are too dry or too wet. In addition, the occurrence of physical problems and accidents experienced by students is also influenced by the physical readiness of students that might not meet the proper health degree to carry out physical activities in the Physical Education learning process at school (Kusumaningrum et al., 2018).

The presence of various risks of problems and accidents in the Physical Education learning process requires a person who is responsible for anticipating the risk. Teacher is

a figure who is fully responsible for each student behavior in the learning process at school. The responsibility includes providing a good service during teaching and learning activities, one of which is a safety guarantee for all students (Maksum, 2009).

One of the strategic efforts to improve the quality of Indonesian citizen human resources is by realizing a program to improve the health status. One of the most strategic places to realize this program is school. School, as a place for teaching and learning activities, must be a "Health Promoting School", especially for all students and all people who are involved in the school environment. (Wijayanti, K., & Wibowo, R., 2017; Yarnita et al., 2018).

A teacher is the closest figure when students are in the school environment, especially during the learning process. Teachers need to understand and be able to provide first aid to students when they experience problems or accidents that occur during the learning process at school. First aid actions are given when students experience injuries or other dangerous and life threatening situations and conditions, such as for the students who have a heart disease history or respiratory problems. Therefore, skills, such as providing basic life support, are essential to be acquired by every teacher (Nekada & Wiyani, 2020).

A Physical Education teacher provides learning related to sports to all students at school. School age students, including elementary school, junior high school, and senior high school students, need assistance in every teaching and learning activity, both in theory and practice. The Physical Education teaching and learning activities in schools, including in elementary school level, junior high school level, and senior high school level, have the same chance to get interference or accidents, including physical accidents which might result in partial or total dysfunction of body function. For this reason, an initial treatment, which is called First Aid, is needed (Grey, 2007).

First aid is a quick action to relieve the

illness or injury of someone who gets an accident that requires medical assistance. Everyone has a possibility to face emergency situations and conditions in an event. This situation can occur anywhere and anytime, including during a learning process at school. The readiness of each individual to provide first aid can help reduce the risk of disability or death due to the problem or accident (Chai, Akhyarsi, & Wijayanto, 2015).

First aid is a vital skill that must be owned by every profession, especially Physical Education teachers. Physical activity carried out by students can potentially cause physical problems and accidents, both in the light and heavy categories. These physical problems and accidents certainly require proper handling. The handling must also be relevant to the current scientific rules, considering that the health science is constantly changing and developing into a better direction (Adi, 2015).

The risk of accident or injury when doing Physical Education learning will vary greatly and can occur in every part of the student body, from the mildest level, such as a pain in one part of the body, to the most severe, such as the loss of movement function of certain body organs. If this condition is not handled properly, it can disrupt learning activities and routines at school (Meikahani & Kriswanto, 2015).

Therefore, in addition to having instructional skills, every teacher must also be equipped with supporting health skills, especially the First aid skill for handling accidents. This is important to minimize the worst risks as the result of physical problems or accidents experienced by students during learning. A teacher should be able to help students by providing first aid before getting further help (Furst, 2018).

In general, there are several important things that must be known and understood in the first aid training, including basic life support, medical experience, legal basis, rescue criteria, personal protective equipment, consent for action, victim assessment, cardiopulmonary resuscitation, victim transfer, victim history,

periodic examination, and recording and reporting (Bollig, Myklebust, & Ostringen, 2011). The model developed in this study was first aid training applied by Physical Education teachers for several types of physical problems and accidents commonly experienced by students during Physical Education teaching and learning activities in schools.

METHOD

This research was conducted during the Covid-19 pandemic. Therefore, both the process and the procedure implementations were slightly changed or modified according to the circumstances without reducing the scientific value of a study. The research was carried out online by implementing government advice regarding health protocol rules. Therefore, several stages of the study were adjusted to minimize direct contact. There were several stages of the research that must be modified, including the analysis, development, implementation, and evaluation stages. The online media/applications used included WhatsApp (groups), Zoom (meeting), and Google (forms) media/applications.

Research Design

This research is Research and Development research. According to Gall, Gall, & Borg (2007), research and development is a development model, in which the research findings are used to design new products and procedures that are then systematically tested, evaluated, and revised until they meet certain criteria.

The procedures of this study were administered through ADDIE approach, which consisted of analysis, design, development, implementation, and evaluation.

Analysis

At this stage, the need analysis process for the product to be developed was carried out. The analysis process was carried out through closed online interviews using a question-and-answer rubric with Physical Education teachers who were registered as Teachers in Medan Deli

District, Medan Municipality, North Sumatra Province.

Design

Based on the results of the analysis, the researcher then carried out the product (model) design process according to several supporting references (books) related to the First Aid Training and Physical Education Learning material used in this study.

Development

Based on the results of the product (model) design, the researcher conducted an online Focus Group Discussion (FGD) with First Aid Training Experts and Physical Education Experts to develop the designed products, so that they could be tested.

Implementation

Based on the product development results through the Expert Judgment that had been carried out, the testing process of the First Aid Training product (model) was carried out to all Physical Education teachers in Medan Deli District, Medan Municipality, North Sumatra Province. The product testing process was carried out online where each Physical Education teacher made recordings using media (gadgets). The results of the trial recording were sent back to the researcher.

Evaluation

Based on the results of the First Aid Training Model trial, an evaluation process was carried out on all the results of the product trial recordings by First Aid Training Experts and Physical Education Experts. Furthermore, these experts provided an assessment on the feasibility of the product (model) that had been tested using a questionnaire rubric prepared previously.

Population

The population in this study were Physical Education teachers registered as teaching staff from various formal education levels, in-

cluding elementary school level, junior high school level, and senior high school level in the Medan Deli District, Medan Municipality, North Sumatra Province. The sampling technique used was the Total Sampling technique, where all Physical Education teachers recorded in the population participated as samples in this study. There were 99 Physical Education teachers involved as respondents in this study.

Data Collection Technique

The data collection techniques used in this research were interviews and questionnaires. The interview process was carried out online through the Zoom application service for all Physical Education teachers from every Formal Education level, consisting of elementary school level, junior high school level, and senior high school level, using a closed interview procedure, where the questions asked by the researcher to the Physical Education teachers were the pre-arranged questions.

The questionnaire distribution process was also carried out online by distributing questionnaires through Google Forms application to First Aid Training Experts and Physical Education Experts to provide an assessment of the products designed in this research.

Data Analysis

The data analysis technique used in this research was the descriptive analysis technique, where the quantitative data obtained from the mean score calculation were converted into a qualitative value consisting of very feasible, feasible, not feasible, and very unfeasible categories.

RESULT & DISCUSSION

The product (model) analysis process was carried out using closed interviews, where the interviews were conducted in a structured manner using a series of texts containing several prepared questions. Interviews were conducted online using the Zoom Meeting application for all Physical Education teachers registered as teaching staff in the Medan Deli

District, Medan Municipality, North Sumatra Province. Interviews were conducted to analyze the need for the product to be developed in the research. From the interview results, data regarding the types of physical problems and accidents that commonly occur during Physical Education learning in schools were obtained.

Table 1. Interview Rubrics

Question Items	Description	
	Yes	No
Have you ever attended the First Aid Training Program?		
Have you understood the operational standards for First Aid Training?		
Have you applied all First Aid forms to various physical problems and accidents occurred during Physical Education lessons?		
Do you feel the need to comprehend an in-depth First Aid understanding for various physical problems and accidents experienced by students?		
Have you ever handled bleeding during Physical Education lessons at school?		
Have you ever handled students who had soft tissue injuries during Physical Education lessons at school?		
Have you ever handled a student who experienced joint dislocation during Physical Education lessons at school?		
Have you ever handled students who had fractures during Physical Education lessons at school?		
Have you ever handled a student who was unconscious during Physical Education lessons at school?		
Have you ever handled students who suffered burns during Physical Education lessons at school?		

Based on the results of interviews, the product (model) design process was then conducted. The design process of the First Aid Training Model was administered by conducting online Focus Group Discussion (FGD) with First Aid Training Experts and

Physical Education Experts. Data from the interview results on the types of commonly occurring problems and accidents during Physical Education learning in school were used as the foundation by the researcher together with First Aid Training Experts and Physical Education Experts in compiling the first aids to be included in the First Aid Training Product (Model). The results of the product (model) design process included: (1) First Aid Training on Bleeding, (2) First Aid Training on Soft Tissue Injury, (3) First Aid Training on Joint Dislocations, (4) First Aid Training on Fractures, and (5) First Aid Training on Unconsciousness.

Table 2. Score Conversion Rubric

Category	Score
Very Feasible	$76,00 \leq X \leq 100,00$
Feasible	$51,00 \leq X \leq 75,00$
Not Feasible	$26,00 \leq X \leq 50,00$
Very Unfeasible	$0,00 \leq X \leq 25,00$

(Source : Azwar, 2003)

Table 3. Percentage Physical Problems and Accidents

Type	Percentage
Bleeding	43%
Soft Tissue Injury	27%
Joint Dislocation	18%
Fracture	7%
Unconscious	5%
Burns	0%

After the product (model) design was completed, the product (model) testing process was carried out. The product testing process was carried out online by 99 Physical Education Teachers who were registered as teaching staff in Medan Deli District, Medan Municipality, North Sumatra Province, where each Physical Education Teacher made recordings using media (gadgets) personally. The product (model) trial was carried out by Physical Education teachers as rescuers with student

representatives as victims by practicing each item in the first aid training simulation as a whole. The results of the trial recordings were sent back to the researchers to be validated by experts.

From the results of the trials, a validation process was carried out on all the product trial results conducted by First Aid Training Experts and Physical Education Experts. Furthermore, the experts provided an assessment of the feasibility of the product (model) using the questionnaire rubric that had been prepared previously. The feasibility assessment or product (model) validation in this study was carried out by 2 First Aid Training Experts and 2 Physical Education Experts.

The validation of the First Aid Training material by First Aid Training Experts was determined based on 2 aspects, namely theoretical aspect and practical aspect. The average of the total validation score of 2 First Aid Training Experts was 71.00. It indicated that, based on the average of the total validation score, the product (model) developed in this study was declared feasible to be used in Physical Education learning in schools. The validation of Physical Education Learning material by Physical Education Instruction Experts was assessed based on 2 aspects, namely the theoretical aspect and practical aspect. The average of the total validation score of 2 Physical Education Experts was 73.00. It concludes that, based on the average of the total validation score, the product (model) developed in this study was declared feasible to be used in Physical Education learning in schools.

The initial purpose of the product (model) development in this study was motivated by the absence of specific handling forms for various types of physical problems and accidents, which would later be specifically used by every Physical Education teacher in providing first aid to students experiencing physical problems and accidents during Physical Education learning at school. The model developed in this study had been adapted to various supporting factors (reference sources and expert

validations) which were predicted to ease Physical Education teachers to understand and implement a comprehensive first aid training. This is in line with the goal of the model development of this study, which was to minimize disability and death as a result of the lack of prompt and proper handling carried out by Physical Education teachers for physical problems and accidents commonly occurring during Physical Education learning in schools. The product (model) developed in this research was compiled into a manual and tutorial DVD, which would later be distributed to all Physical Education teachers in the Medan Deli sub-district, Medan Municipality, North Sumatra Province. The product (model) developed in this study also had weaknesses, especially related to the breadth and depth of the material, considering that this research was conducted on a limited population. Therefore, it might affect the product (model) as a whole.

CONCLUSION

Based on the development results carried out in this study, data showed that the average of the total score validation (X) of the 2 First Aid Training Experts was 71.00 and the average of the total score validation (X) of 2 Physical Education Experts was 73.00. Based on the quantitative data obtained from the mean score calculation (X), the qualitative value was 51.00 X 75.00. It concludes that the First Aid Training Model for Physical Education teachers is declared feasible to be used as a support for Physical Education learning in schools.

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