



Training Model of Pencak Silat Gymnastics Skills for Children aged 13-16 Years

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Abstract

The background of this research is the lack of children's activity in carrying out basic pencak silat techniques. The aim of this research is to produce products and determine the effectiveness of basic Pencak Silat technique training through the Pencak Silat Gymnastics skills training model for children aged 13-16 years. This research uses the ADDIE research and development model research method. This research was conducted at the Sasana Terate Jaya Club Indonesian Pencak Silat Padepokan with research subjects being children aged 13-16 years, in March - June 2024. The results of this research using a paired sample T test showed that the tcount was 22.708 with a significance value (Sig. 2-tailed) is $0.000 < 0.05$. which means there is a significant difference between before and after being given the pencak silat training model treatment. So it can be concluded that the pencak silat gymnastics training model for children aged 13-16 years is effective and can be used in training to improve basic pencak silat movement skills.

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INTRODUCTION

Pencak Silat is a traditional martial art and culture of the Indonesian nation that has the purpose of self-defences and independence. According to the Big Indonesian Dictionary (KBBI), pencak Silat has the meaning of a game (skill) in defending oneself with the skill of fending off, attacking, and defending oneself, either with or without weapons. The Executive Board of the Indonesian Pencak Silat Association (PB IPSI) along with the State Intelligence Coordinating Agency (BAKIN) defines pencak Silat as a result of Indonesian human culture to defend, maintain its existence (independence) and integrity (unity) towards the environment/surrounding nature to achieve harmony in life in order to increase faith and piety to God Almighty (Pratama & Trilaksana, 2018).

In the modern world, pencak Silat is not only a martial arts tool but has developed into an effort to maintain health through sports (Mardotillah & Zein, 2017). Pencak Silat also functions as a means of physical and spiritual education through a formal, tiered education process through schools. Pencak Silat can be used as a vehicle for children's character education, because the positive values in it cover four aspects including mental spiritual development, arts and culture development, self-defence development, and sports development (Maulana & Khotimah, 2022).

At this time, pencak silat has developed into a sport. The role of pencak silat, which was initially as a means of defense and self-defense, gradually shifted to become an educational and recreational sport. Pencak silat is trained in schools, universities and various institutions as a means to educate morals and to train fitness and health. Pencak

silat has also developed into a competitive sport. In improving the performance of pencak silat training, techniques are closely related to movement ability, physical condition, tactics and mentality. Basic techniques need to be mastered first in order to develop the quality of pencak silat achievements. In pencak silat there are various silat schools/schools so that the names and basic moves are different for each school, but basically the form of the moves is almost the same. Because in principle the basic techniques are trained to improve basic pencak silat skills.

Based on field observations, currently school-age children are more interested in sports games such as football or basketball. Coupled with the current gadget era, where school-age children are exposed to a lot of technology, it is not uncommon for children to become too dependent on gadgets for entertainment and exercise, and reduce their time for physical and social activities in the real world. For school-age children who may not be interested in conventional sports, pencak silat can be an interesting and challenging alternative sport. Therefore, it is important for pencak silat sports to be cultivated and socialized in the environment of school-age children, one of which is through pencak silat gymnastics. Because so far there have not been many who have made pencak silat gymnastics in schools. Pencak silat, which is a demonstration and martial arts, is carried out in its entirety and understood with the aim of maintaining or improving fitness, agility, and physical endurance. To be able to demonstrate a series of moves, good basic movements are needed. Basic pencak silat movements are planned, directed, coordinated and controlled movements, which have four aspects as one unit, namely the mental spiritual aspect, the

self-defense aspect, the sports aspect, and the arts and culture aspect (Lubis & Wardoyo, 2016). The introduction of basic pencak silat movements can be given by studying basic techniques that include pencak silat movement skills; horse stance, stance, step patterns, defense, avoidance, attack, and catch (Triaiditya et al., 2018). Children who have understood the basic techniques well can then be introduced to a series of movements that can improve pencak silat martial arts movement skills.

Skills are the development of the results of training and experience obtained from basic abilities (Sulistyowati, 2019). Demonstrating a series of basic pencak silat movements requires good motor skills because children must be able to arrange planned, directed, coordinated and controlled movements. In order for a child to master skills, coaches and athletes must support each other in a training process. The coach prepares the training program needed by the athlete and the athlete completes the training program given to support efforts in the quality of training that can improve skills.

The training program provided must be in accordance with the needs to be achieved, but sometimes trainers have different perceptions about the formation of movement. Trainers also tend to provide makeshift models, and not a few also provide models that are not age-appropriate, such as models that should be for adults but are given at pre-teen or teenage ages (13-16 years). This problem causes children to experience a level of boredom in the training process later on. Boredom that arises when children enter adolescence (13-16 years) which should be directed towards competitive sports, makes children reluctant to continue to become athletes. The material that can be received by children aged 13-16 years is how the concept in the sport of pencak

silat can be conveyed and accepted through fun activities. The goal is for children to be interested in doing basic pencak silat movements in the form of basic technical skills such as; horse stance, stance, defense, evasion, and attack, and provide opportunities for children aged 13-16 years to be able to perform movements according to the correct technique when performing movements in pencak silat, this is done gradually starting from the easiest movement activities to complex movement activities. This is also in line with several existing training principles, such as; the principle of multilateral development or comprehensive development is related to general movement skills and fitness development as the main goal that occurs at the beginning of training planning, the principle of variation where training requires variations in the form of training and training methods so that saturation does not occur, the principle of developing a training model where this model is used to develop training patterns, and giving excessive loads (over load), where the training load given to children must be periodically and progressively increased. The training load functions as a stimulus and brings a response from the child's body, if the load is carried out optimally (not too light and not too heavy) then after full recovery, the level of fitness and skills will increase higher than the previous level.

Several research results state that the developed pencak silat-based gymnastics learning model can improve children's fitness (Widiastuti & Fhitriani, 2017). The success of using the gymnastics training model can improve the abilities of pencak silat athletes (Widiastuti et al., 2019). Then, the development of a training learning model through mastery of gymnastics movements and pencak silat movement

sequences is considered effective in improving children's character (Cholid & Harwanto, 2019). Success in improving basic pencak silat movement skills in children aged 13-16 years certainly needs to be supported by support from various sciences.

Thus, it is necessary to have a form/model of skill training for children aged 13-16 years that can be applied in the process of basic pencak silat technique training. A model that is appropriate and right with the characteristics of children aged 13-16 years and is expected to help the process of forming basic pencak silat movement skills. Directly, with the existence of an appropriate and interesting model, it helps trainers in solving very basic problems so that children's movement needs can be achieved.

The focus of the problem is the pencak silat gymnastics skill training model for children aged 13-16 years. The objectives to be achieved are: 1) to produce a design for developing a pencak silat gymnastics skill training model for children aged 13-16 years; and 2) to see the effectiveness of the product results from developing a pencak silat gymnastics skill training model for children aged 13-16 years.

METHODS

The approach and research method of the pencak silat gymnastics skills training model for children aged 13-16 years using the ADDIE research and development model. The selection of the ADDIE development research model, by paying attention to the research procedures described, is very clear, detailed and easy to understand. Development research is also research used to create new products and develop existing products based on needs analysis in the field (observation, interviews,

questionnaires from initial needs analysis). (Tangkudung, 2016).

Participants

The participants in this research were 30 children aged 13-16 years from the East Jakarta Perisai Putih National Silat School.

Sampling Procedures

The sampling procedure used is the Purposive Sampling technique. Purposive Sampling is one type of non-random sampling, where data collection is determined based on certain characteristics and traits in order to obtain test subjects that are in accordance with the research, so the technique for selecting test subjects is by providing self-assessment of test subjects among the selected population and of course must meet the criteria in accordance with the research topic (Sugiyono, 2017). To obtain specific results, it is limited to participants with criteria, namely ages 13-16 years.

Materials and Apparatus

Data collection in this study was carried out using a research instrument, namely basketball dribbling skills with a score of 1-4 which was carried out at the Perisai Putih National Silat School in Jakarta. This instrument has been validated by gymnastics and pencak silat experts who have been declared eligible and can then be used.

Procedures

The research and development procedure uses the ADDIE design model from Reiser and Mollenda, where each step is divided into five steps, namely: 1) Analysis, 2) Design, 3) Development, 4) implementation, and 5) Evaluation (Zhang, 2020).

Design or Data Analysis

The data analysis technique for measuring effectiveness uses the t-test (Sugiyono, 2017). To determine the effectiveness of the results of basketball dribbling skills after being given a variety of learning models to students in grades 4-6 of elementary school.

RESULT

After conducting research on the development of a pencak silat gymnastics training model, the results of the development of a pencak silat gymnastics training model were produced as a manuscript that presents a pencak silat gymnastics training model to improve basic pencak silat technique skills for children aged 13-16 years, packaged according to the characteristics, rhythm and movement of children. This study uses the type of Research and Development (R&D) which is developed as a pencak silat gymnastics skills training model for children aged 13-16 years. The development model used in this study is the ADDIE model whose stages are analysis, planning, development, implementation and evaluation. Based on research and development, the following research results were obtained. In the early stages, a preliminary study or needs analysis was conducted using observations and interviews in the field about the exercises that had been implemented. From the needs analysis conducted, it can be concluded that it requires new variations of exercises and results according to the needs of the children, and in the training, supporting tools/training media are needed to develop basic pencak silat technique skills.

The next stage is Design. At this stage, the activity of designing a model that will be developed based on the results of the needs analysis is carried out. Each

activity/model variation is arranged and explained according to needs. Furthermore, the design results in the form of an initial draft of variations of the pencak silat gymnastics exercise model of 10 variations of movement are submitted to the Experts to be validated directly in order to get advice. After completing the data collection stage and drafting the basic pencak silat technique skills training, the next step is the development stage. At this stage, validation is carried out with experts (expert judgment) on the product model design that has been made. This is done so that the model that is made is more ready and feasible to be tested in the field. For expert judgment, through direct face-to-face consultation and conveying the results of the draft model design. This draft model concerns the Pencak Silat gymnastics skills training model for children aged 13-16 years. Based on the validation results, out of 10 movement activities, 9 are feasible to be implemented, and there is 1 that is feasible to be revised. This is because basically the activity is feasible, but there are revisions in several things, such as the opening movement can be made more dynamic. Therefore, the validation results from the three silat experts as a whole amount to 10 forms of activity for the model that are feasible to use, but with some input and improvements. The next step is implementation, at this stage the researcher implements model variations. From the results of the evaluation, suggestions and input from several experts, a revision of the product model that has been developed is carried out, including several revised movement activities, adjustments to movement activities with rhythm and movement activities starting from easy, moderate to difficult movement activities. After carrying out several series of processes for developing a pencak silat gymnastics

skills training model, starting from needs analysis, model variation design, making model products, conducting a series of expert tests, the next stage is an effectiveness test to determine whether this model is effective to be given or not. The results of this effectiveness test will later provide conclusions to researchers as well as provide answers that the model developed is feasible or not to be produced and applied to children aged 13-16 years. In this effectiveness test, there were 30 children aged 13-16 years at the Perisai Putih National Silat School in East Jakarta. The results of the effectiveness test were as follows: Next, based on the results of the N-gain score test calculation, it shows that the average value of the N-gain score is 84.05, which is included in the Effective category. With a minimum N-Gain score of 66.67 and a maximum of 100. Thus, it can be seen that the Pencak Silat gymnastics skills training model is effective for children aged 13-16 years. Furthermore, based on the results of the paired sample t-test analysis, it can be obtained that the calculated t is 22.708 and $\text{Sig. (2 tailed)} = 0.000 < 0.05$, this means that there is a difference in the results of basic technical skills of children aged 13-16 years between before and after being given a pencak silat gymnastics skills training model. Thus, the pencak silat gymnastics skills training model for children aged 13-16 years can be used to improve basic pencak silat technique skills.

DISCUSSION

Based on the stages of the ADDIE model development research, it can be concluded that the Pencak Silat gymnastics skills training model for children aged 13-16 years developed and created by researchers is a product that aims to help improve basic pencak silat technique skills. Improving basic pencak

silat technique skills through variations in pencak silat gymnastics activities has been successfully implemented according to the planned training program. Overall, the activities in the Pencak Silat gymnastics skills training model are appropriate for children aged 13-16 years both in terms of rhythm and existing movements.

The basic skills needed in pencak silat do have their own characteristics when compared to other martial arts, considering that pencak silat is a national culture, so that elements of art and culture are still maintained according to their categories (Ediyono, 2017). Achieving optimal performance cannot be separated from physical, technical, tactical, and mental development (Fakhurrozi et al., 2020). Physical factors play a very important role, in this case, meaning that good physical existence is the main capital for athletes in achieving achievements (Maksum & Indahwati, 2023). An athlete will be able to develop their potential optimally if they meet the following factors; physical characteristics, are important components that must be presented as supporting appearance (physical capacity), correct mastery of techniques that are in accordance with the anatomy of the body required for certain sports can be developed (biomechanics), specific fitness levels for certain sports activities must be achieved (physiological capacity), psychological factors that allow athletes to succeed in a competition need to be developed and maintained (increasing psychological conditions), work ethics including the right attitude in training must be presented and opportunities to compete with other athletes of the same or higher level must be available. An athlete's achievement is expected to increase if supported by good physical and the program provided according to needs. A good training

program is of course methodical, tiered, continuous, and applicable according to the sports specialization (Widiastuti, 2017).

The pencak silat gymnastics skill training model for children aged 13-16 years created and developed by researchers is a product that aims to introduce basic pencak silat movements. This can be given by studying basic techniques that include pencak silat movement skills; horse stance, stance, defense, evasion, and attack (Triaiditya et al., 2018). Children who have understood the basic techniques well can then be introduced to a series of movements that can improve pencak silat martial arts movement skills. This study also shows that there is an increase in basic pencak silat movement skills for children aged 13-16 years after applying the pencak silat gymnastics skill training model developed by researchers. As stated by Sulistiyowati, (2019) that skills are a development of the results of training and experience obtained from basic abilities. The increase in basic technique skills can be seen from the activities carried out by children aged 13-16 years in demonstrating a series of basic pencak silat movements. As in the results of previous studies showed that the pencak silat-based gymnastics learning model developed can improve student fitness (Widiastuti & Fhitriani, 2017).

The training model developed by researchers aims to provide opportunities for children aged 13-16 years to be able to perform movements according to the correct technique when performing movements in pencak silat, this is done gradually starting from the easiest movement activities to complex movement activities. As the results of previous studies also show that the training model is one approach that is designed in a structured manner and implemented in stages, so that the

delivery of knowledge or science becomes effective and efficient (Mirawati & Royani, 2019)

Rhythmic gymnastics is a sport that can be done individually or in groups to show choreography that is thick with acrobatics with or without gymnastic aids in the form of balls, ribbons, ropes, clubs, and hoops (Sulistiyowati et al., 2022). Rhythmic gymnastics is very good for physical fitness and body shaping. Rhythmic gymnastics or rhythmic gymnastics is one alternative method used to improve children's concentration through body movements. Good and correct movements in rhythmic gymnastics activities will produce maximum results as expected (Honchar et al., 2022).

Rhythmic gymnastics can be interpreted as one of the gymnastics that is done by following the rhythm of music or singing which then forms a coordination of movement between the movements of the limbs and the rhythm (Ulfah et al., 2021). The need for rhythmic gymnastics is to help children fulfill their desire to move, then as a means of developing children's physical fitness, besides that it can also be used to develop various types of basic movement skills that are oriented towards the process, and as an enrichment of various basic movement skills (Kuzmenko & Boldyreva, 2021). Rhythmic gymnastics or also called rhythmic gymnastics is a gymnastic movement that is done with the rhythm of music, or free exercises that are done rhythmically (Manik et al., 2023). Through rhythmic gymnastics activities, children can move all parts of their body, so that their gross motor skills will increase. In addition, the combination of hands and feet can be stimulated through rhythmic gymnastics activities (Skopal et al., 2020). Basically, gymnastics is a complete body movement in any form. Harmony and continuity are

one of the characteristics of gymnastic movements (Sukmawati et al., 2023). Children who are directly involved in rhythmic gymnastics activities will develop their flexibility and coordination (Skopal et al., 2020).. In addition, rhythmic gymnastics activities can contribute to the enrichment of children's movement repertoire. Gymnastics also has the potential to develop basic movement skills for children. Gymnastics is an activity that can help optimize children's development (Harwanto & Suharti, 2020). Gymnastic movements are very suitable for emphasis in physical education programs, especially because of their physical demands such as strength and muscle endurance for the movements performed. Gymnastics also has a major contribution to the development of basic fundamental movements that are important for physical activities for other sports, especially how to make body shape management effective and efficient (Culjak et al., 2014).

Pencak silat gymnastics is a series of dynamic, systematic movements that contain aesthetic values whose movements are basic movements of pencak silat (Rohmah et al., 2015). This Pencak Silat gymnastics uses various pencak silat movements and step patterns in pencak silat. Pencak silat gymnastics is also a physical activity that can optimize children's development, especially in the development of fundamental movements that are very important in terms of controlling attitudes and movements to be effective and efficient (Lanos & Lestari, 2022). This series of movements can be used to improve basic pencak silat technique skills. The material on basic pencak silat movement techniques is packaged in the form of aerobic gymnastics. Substantively, this gymnastics can also improve mental

spiritual aspects, self-defense, and better arts and culture (Utomo et al., 2023).

After conducting expert validation and testing the effectiveness of the model, from these results it can be seen that the Pencak Silat gymnastics skills training model developed in this study can be effectively used in pencak silat training. The results of the product that has been made by researchers, namely the Pencak Silat gymnastics skills training model for children aged 13-16 years, have several advantages and disadvantages in this product. Therefore, it is necessary to make improvements or revisions with suggestions and input from experts as follows: a) Improvements to several model variations can be done in pairs or groups between children, so that by applying the pencak silat gymnastics skills training model it is more effective. b) During the training process, it is hoped that the trainer can invite children to be more active and participate, children are more enthusiastic and challenged in the training process, especially basic pencak silat techniques.

After evaluating this product and revising the product, the results of this product have advantages and are successful in improving basic pencak silat technique skills. Like the results of previous studies, the success of using the gymnastics training model can improve the abilities of pencak silat athletes (Widiastuti et al., 2019). Then, the development of a training learning model through mastery of gymnastics movements and a series of pencak silat movements is considered effective in improving student character (Cholid & Harwanto, 2019). The following are the advantages of the pencak silat gymnastics skills training model development product: a) This product provides various variations of basic pencak silat technique training in the form of videos, guidebooks or e-books. b) Variations in movement

activities in this model are arranged systematically according to the sequence from easy to difficult movement activities.

CONCLUSION

Based on the results of the analysis, it can be concluded that the model of pencak silat gymnastics skills training for children aged 13-16 years can be done and applied in the process of basic pencak silat technique training, and is effective in improving basic pencak silat technique skills. Thus, children aged 13-16 years of basic pencak silat technique skills can be more enthusiastic and more active in moving in training with this training model.

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