



The Influence of Mental Training and Playing Circuit-Based Training Program on Student Volleyball Learning Outcomes at Sekolah Dasar Pembangunan Laboratorium Universitas Negeri Padang

Yuni Astuti¹, Syafruddin², Syahril Bakhtiar³, Eri Barlian⁴, Nurhizrah Gistituati⁵

Universitas Negeri Padang, Indonesia

Email: yuniastuti@fik.unp.ac.id

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Abstract

The objectives of this experimental type of research are to determine the effect of mental training and playing circuits-based training programs on the learning outcomes of elementary school volleyball students. This study included 28 five-grade students in class 5a and 22 in class 5b. The sampling technique used is called purposive sampling. The test instrument used was a pre-test and post-test of volleyball skills based on the value of quantity and quality determined by volleyball experts. The paired t-test was used to analyze the data. Data analysis revealed that mental training-based training programs and playing circuits affected the learning outcomes of volleyball for elementary school students at Sekolah Dasar Pembangunan Laboratorium Universitas Negeri Padang. The data found an average value of 64.09 before being given a pretest of basic volleyball technical skills. The final (post-test) test of students' basic volleyball skills after using mental training and playing circuit-based training program yielded an average score of 68.68, equating to a 4.68 percent increase.

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Introduction

Elementary school education serves a purpose and plays a role in the development of human resources. Because elementary school students acquire a fundamental learning experience as a provision towards further



education, the success of education in the subsequent stage is determined by the success of education in the preceding phase. Physical education and sports are educational systems that are implemented consciously and methodically through various physical activities in order to enhance physical abilities and skills, physical growth, intelligence, and character. The implementation of education as a process in human growth and development lasts a lifetime, and physical education is one of the powerful components to stimulate this growth and development since physical education is strongly associated with human mobility. A substantial contribution to children's growth and development is attainable if physical education and sports learning programs in schools are established properly. Those include physical and spiritual harmony to physically and psychologically prepare an individual to improve physical and spiritual abilities and fitness in order to help develop their personality. (Akhmad et al., 2022) revealed that the physical education learning process continues to use traditional learning strategies, that students' motivation is low, that students are not active in learning, that student learning outcomes remain low, and that teachers do not use learning methods that may improve student learning outcomes.

Therefore, to achieve the objectives of physical education in elementary schools, an exercise program capable of improving students' skills is required, one of which is mental training and playing circuit-based training programs. Training is a type of activity that is done repeatedly for a long period of time in order to achieve the best results. The implementation of the training program must be suitable to the abilities of the person undergoing training in order to achieve satisfactory training results. (Syafuruddin, 2011) revealed that training involves the repeated execution of automated skills ranging from simple to complex movements in order to improve one's physical abilities. Training is, in other words, the actualization or implementation of previously planned training materials or forms.

Mental is the overall structure and psychological processes that are organized, both consciously and unconsciously. As a result, it is clear that every psychological component will influence the athlete's strength and mental state. Mental training is an exercise process that involves elements of concentration, directing action to a goal according to a plan, and controlling feelings (emotions and thoughts) and psychophysical conditions to increase one's mental fortitude. Mental training is an effort to improve athletes' ability and

mental endurance, which encompasses the ability to develop abilities under any conditions, including internal and external obstacles throughout the competition (Behnke et al., 2019) (Ugurlu, 2020). According to (Afacan, 2022), mental training is a long-term and systematic exercise to develop and learn to control: 1) attitude, 2) appearance, 3) emotions and emotional state (mood), and 4) physiological processes. Every athlete constantly confronts the psychological scenario of "hope for success" and "fear of failure." Negative outcomes are relatively easy to overcome through mental training. Based on (Monzoni et al., 2018), mental training, specifically concentration training and personal technical analysis, is effective for improving athletes' performance during competition. According to (Subatra et al., 2021), mental training has significantly improved aggression and reduced anxiety in sports competitions. Meanwhile, according to the findings of the study (Subatra et al., 2021), mental skills training in sports has a significant impact on athletes' self-confidence.

Furthermore, (Sudiby, 2002) argues that the implementation of mental training can be divided into two stages: the initial and the strengthening/advanced stages. These stages of mental development can be accomplished through various systematics

and techniques. The objectives to be achieved for each stage can also vary depending on the athlete's condition and psychological development, together with the interests of the sport in which the athlete participates. As previously stated, there are two stages in mental training: an initial and an advanced stage. This initial stage is a precursor to mental training, with the primary goal of forming an image of "image building" and preparing physical conditions for the following mental exercise. This stage's mental training includes, among other things, breathing exercises, concentration exercises, imagery or visualization, and image building (Noori, 2019). Meanwhile, in the advanced stage, the objective is to enhance the mental components of the athlete. Because mental is the entire structure and process, all mental training techniques must be directed at this advanced stage to strengthen psychological functions related to cognitive aspects (reason), conative (willingness), and emotional affective aspects. (Xiong, 2012) contends that mental training is the primary training for competitive sports and the most crucial part of improving an athlete's abilities and strategies.

This mental training focuses on improving cognitive abilities such as concentration of attention, imagery, reaction speed and accuracy, and mindset

restructuring. Mental training for the improvement and ability of the conative aspect (willingness) incorporates willpower training, concentration, contemplation, and relaxation (Scott et al., 2021). Mental training related to improving emotional affective aspects, including biofeedback, self-control exercises with self-suggestion techniques, and meditation to control emotional symptoms (Behnke et al., 2019). (Kaplan & Andre, 2021). Activities on mental training are given in playing circuit programs which, in the implementation of these exercises, still pay attention to mental training. Playing is part of the scope of physical education that can be used to realize educational goals. Playing can bring children positive physical, psychological, and social changes. Playing is a phenomenon that develops thoroughly in society and is done by almost every human on a daily basis. Even so, playing within the context of schoolwork still feels socially unacceptable. A series of games can enrich the learning system and make it more varied. Furthermore, schools require a variety of materials delivery methods. Modern education must strive to promote independence, responsibility, material depth, creativity, communication skills, and other social competencies. Therefore, games are required as a form of education and knowledge in learning.

The significance of playing in schools is that the game dramatically impacts learning. Students can understand the lesson material more profoundly and thoroughly if they incorporate play into their learning. Students also do not run away from problems but rather seek solutions to solve them. Playing is an essential part of children's lives, and games play an important role in the development of a child's personality. Playing is a self-execution effort (both mental and physical) that is exceptionally beneficial for the improvement and development of motivation, performance, and accomplishment in completing the tasks and interests of the organization more effectively. The essence of play is a genuine, voluntary, and enjoyable physical activity. According to (Weisgram, 2019), the game's concept is to develop skills in both male and female students. (Rodrguez, 2021) claims that games have educational value and significant didactic resources. Moreover, (Ritonga, D. A., Damanik, S., Damanik, S. A., Suprayitno, & Priyambada, 2022) suggested that the play approach is appropriate for improving elementary school students' basic skills and personality values.

As stated by (Sukintaka, 2004), playing is a physical activity that is carried out voluntarily and earnestly to get a sense of pleasure from the activity. The

play approach is a method of learning that is performed in the form of a playing circuit or games. According to (Wahjoedi, 1999), the play approach is "learning given in the form or situation of the game." On the other hand, (Subroto, 2001) states, "the approach to playing in games is to increase students' awareness of the concept of playing through the application of appropriate techniques according to the problem or situation in the real game." Another point of view was expressed by (Beltasar, 2001) (Brugnoli, 2016) "The goal of teaching through play is to improve students' playing performance by combining playing awareness and the application of basic technical skills into the previous form." In addition, (Khalil et al., 2022) and (Polat et al., 2022) conducted research and discovered that physical education teachers were motivated to use playing circuit-based learning as a pedagogical method for teaching. Based on previous research, the authors decided to conduct research on the primary material in the education curriculum in elementary schools, which consists primarily of various types of ball games, both in teams and individually. One of the sports in the subject for elementary school students is a volleyball game that implements mental training and playing circuit-based training program in the volleyball material.

Materials and Methods

This study is experimental research in which other variables are tested against other variables that are strictly controlled. The author used a pretest-posttest experimental design to test the independent variables of the mental training and playing circuit-based training program on the volleyball learning outcomes of elementary school students. The population for this research was 28 students of Sekolah Dasar Laboratorium Pembangunan Universitas Negeri Padang in class 5a and 22 students in class 5b. The sampling technique used is the purposive sampling technique. Thus the sample is as many as 22 students from class 5b. The data collection technique is using a volleyball skill test using a target for service and a test for individuals passing for 60 seconds and counting how many times they are able to do both low passing and overhead passing. Volleyball experts conducted a quantity and quality test for the evaluation. The paired t-test was used as a data technique.

Results

The quality of the students' volleyball skills was obtained with the highest score of 70 and the lowest score of 60. The average score of 64.09, and the standard deviation are 2.81 based on the analysis of the initial test data before being given treatment with mental training and playing circuit-based training program for 22 elementary school students. Meanwhile, the final test data analysis

results after being treated with mental training and playing circuit-based training program for 13 treatments revealed that the quality score was 77, the lowest score was 65, the average score was 68.68, and the standard deviation was 3.09.

Furthermore, data analysis from the quantity value using the volleyball skill test discovered an initial test before being given treatment with mental training and playing circuit-based training program for 22 elementary school students, with the highest score being 22, the lowest score being 3, the average score being 9.41, and

the standard deviation being 4.19. Conversely, based on the results of the final test data analysis after being treated with mental training and playing circuit-based training program of up to 13 treatments, the highest value in quantity was 21, the lowest score was 9, the average score was 13.23, and the standard deviation was 3.04. The frequency distribution of the results of the initial and final tests of volleyball skills based on the quality value of volleyball skills is shown in the table below for more details.

Interval Class	Category	Pretest		Posttest	
		Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency
> 72	Very good	0	0	2	9,09
68– 72	Good	0	0	11	50
65 – 67	Moderate	8	36,36	9	40,91
61 - 64	Poor	12	54,55	0	0
< 61	Very Poor	2	9,09	0	0

Moreover, the following table shows the frequency distribution of the results of the initial and the final data tests of volleyball skills based on the value of the quantity of volleyball skills.

Interval Class	Category	Pretest		Posttest	
		Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency
> 18,1	Very good	1	4,55	2	9,09
13,7 – 18,1	Good	1	4,55	6	27,27
9,1 – 13,6	Moderate	7	31,82	13	59,09
4,4 – 9,0	Poor	12	54,55	1	4,5
<4,4	Very Poor	1	4,55	0	0



From the results of the normality analysis of the initial test of quality values obtained, the value of sig (0.200) > $\alpha(0.05)$. In comparison, the normality of the final test of quality values obtained sig (0.196) > $\alpha(0.05)$. Meanwhile, from the results of the quantity value obtained, the value of sig (0.200) > $\alpha(0.05)$. The final test value for the quality value obtained was obtained by the value of sig (0.200) > $\alpha(0.05)$. As a result, it is possible to conclude that the data conclusion is normally distributed for all test results.

Furthermore, from the results of hypothesis testing, the significant value for 2-tailed is 0.000 because the researcher conducted a one-way hypothesis test; the 2-tailed significant value must be divided by two into $0.000: 2 = 0.000$. Because the value of sig (0.000) < $\alpha(0.05)$, then H_0 is rejected, so H_1 is accepted. In other words, the ability of basic volleyball techniques after using mental training and playing circuit-based training program is superior to that of basic volleyball techniques without using mental training and playing circuit-based training program in terms of quality and quantity values.

Discussion

Data analysis shows that volleyball skills improved in quality and quantity after being treated with mental training and playing circuit-based training program. The improvement in students'

volleyball technical abilities demonstrates that the exercises implemented through mental training-based training programs and playing series impact students positively. So, if this mental training and playing circuit-based training program is given to students consistently, students' volleyball skills may continue to improve for the better (Turgut & Yasar, 2019). Henceforth, the better the implementation of the mental training and playing circuit-based training program provided, the better the volleyball skills of the students, allowing them to achieve a skill that they are proud of and participate in competitions such as the student's national sports olympiad. This mental training and playing circuit-based training program can provide an additional guideline for sports, health, and physical education teachers to improve students' volleyball skills in school coaching.

Mental training is an exercise in which all aspects of the psyche are used to deal with various types of pressure during a match. Mental skills are classified into three categories: (a) fundamental skills, (b) performance skills, and (c) facilitative skills (Gumusgul, 2019). Mental skills for athletes and coaches are personal development skills and team skills. (Dönmez & Imamoğlu, 2020) (Ali Uğur, 2021) (Karaman, 2021) (Temel, et al., 2022) (Latif et al., 2022). Using mental training and playing circuits-based training

programs also improves students' basic movement skills, which can help them with volleyball skills, including coordination. Since coordination is essential in all movements, it is a process of muscle cooperation that results in a structured and directed movement that aims to form the movements required to implement technical skills. The greater the cooperation (coordination) of all motion elements involved, the better the motion that can or must be made.

The combination of mental training and playing circuit-based training is a practical approach to be employed in elementary schools. Because elementary school-aged children are more receptive to cognitive and psychomotor learning, this will also aid in realizing a holistic individual. The findings of this study are also supported by previous research by the author that focused on volleyball skills training that was given with a playing circuit and was found to be very effective for elementary school students. (Yuni Astuti, 2018), (Erianti et al., 2020)(Y Astuti & Kumar, 2019).

Conclusions

Based on the data analysis and discussion findings, it is reasonable to conclude that training programs based on mental training and playing circuits should not be overlooked. The findings of this study revealed that the training program significantly affected volleyball skills of student

at Sekolah Dasar Laboratorium Pembangunan Universitas Negeri Padang. This fact is supported by the results of hypothesis testing, the significant value for 2-tailed is 0.000 because the researcher conducted a one-way hypothesis test; the 2-tailed significant value must be divided by two into 0.000: $2 = 0.000$. Because the value of sig (0.000) < alpha (0.05), then H_0 is rejected, so H_1 is accepted. In other words, in terms of quality and quantity values, the students' ability of basic volleyball techniques after using mental training and playing circuit-based training program is better compared to that of basic volleyball techniques without using mental training and playing circuit-based training program. Consequently, it is evident that the volleyball training program is very appropriate and effective for elementary school students because it takes into account the characteristics of elementary school students.

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