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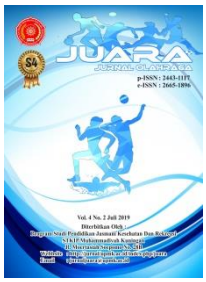

The Effect of Physical Education to Improve Motor Competence of Elementary School Children

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Abstract

This study aimed to determine the effect of physical education in improving children's motor competence in primary schools. To enhance children's motor competence, the research method used was a quasi-experimental method with The Pretest Post-Test Two Treatment Design. The sample used was elementary school students in Merauke District with a total of 60 people. The instrument used is using Somatic measures (measuring the height, weight, BMI, and thickness of the student's fat). Then the second test instrument uses Motor skills (Gymnastics skills, Soccer skills, Basketball skills, Track-and-field skills). The results showed that the physical education program could improve the motor competence of elementary school children, as for the conclusion of this study that physical education programs provided in elementary schools can improve children's motor competence. This increase is inseparable from a physical education program that is well designed and by the child's characteristics.

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INTRODUCTION

Children's motor skills in schools are currently not very well developed, especially in the Merauke district primary schools. This fact requires the proper handlers. Good motor skills of children will help students explore the environment and be able to socialize with physical activities in various branches. The statement supports this that the child's basic motor skills will enable the child to explore his environment, clarify the child's increasingly broad independence, socialize various movements with sports experience (Thomas, Jerry, and Thomas 2008). The development of children's motor skills will support the habits of students. In the elementary school environment, the excellent motor skills of children are expected to have a tremendous impact on children's physical growth. It is often found in the field that children who lack motor skills will affect being overweight. The effect of this excessive weight will cause various diseases. It has been reported that more than 41 million

young children under the age of 5 were overweight or obese in 2014 worldwide (Zeng et al., 2017).

In addition to having an impact on obesity, children's motor skills will affect children's academic abilities. So critical is the motor skills of children in academics, it is necessary to increase children's motor skills, especially in the Merauke district. Children with motor problems avoid physical activities with causes obesity, social communication disorders, low self-esteem, and poor academic performance (Dehghan et al., 2017). The development of the motor skills of children at school can be developed using physical activity. Besides being developed using physical activity, it can also be set in outdoor activities. In addition to this development, motor skills can also be developed with physical education programs in schools. Children should have opportunities to take part in daily physical activities, either indoors or outdoors. These activities should comprise physical play and regular and frequent planned sessions of physical education (Dean et al., 2017).

Abnormalities in children's motor development will interfere with their ability to play, write, and others. Children aged 6-12 years can draw, jump, run. Cases in children's motor development disorders need extraordinary cooperation and handling from the government so that children's rights can be realized, especially in education. Physical activity is considered a key factor for children's healthy physical and mental development (Milanese 2010). The urgency of the research is that students in the Merauke district need special attention. This education, which is located on the border of Indonesia and PNG, must be well developed, and a profound breakthrough is necessary for the development of children's motor skills. There has been no research that has led to the improvement of children's motor skills in the Merauke district.

When children are less active, the significance of studies on the positive impact of sport on physical health, mental health, and cognitive functioning is critical (Bidzan-Bluma and Lipowska 2018). Another thing is that motor skills must be the essential foundation for children. The preschool period is ideal for promoting motor development and engagement in physical activities, given the rapid growth in young children (Favazza et al., 2013). The novelty of this research is to improve children's motor competence by using physical education programs. Physical education programs are packaged using programs in which there are various kinds of activities. The activities referred to are Ball handling, Catching, throwing, dribbling, shooting, passing and feinting, playing together, making decisions two against 1, Tactically clever positioning, taking up one against one situation, defending an area, Cooperating in defense, Forward roll, Backward roll, Headstand, Cartwheel, Leapfrog. Besides, in terms of renewal activities, used in this study is the test instrument used. The test instruments used were Somatic measures (measuring students' height, weight, BMI, and fat thickness). Then the second test instrument uses Motor skills (Gymnastics skills, Soccer skills, Basketball skills, Track-and-field skills). The contribution of this research will provide the basis for physical education teachers in elementary schools in developing children's motor skills. In addition to providing a basis for developing motor skills, another thing is to equip students with motor

skills. Good motor skills will have a substantial impact on various kinds of participation. When children develop into adolescents and have good motor skills, they will have a 10% -20% better chance of participating in vigorous physical activity (Ali et al., 2017).

This study aimed to determine the effect of physical education in elementary schools on the improvement of children's motor competence. With good motor skills, children are expected to improve children's abilities in various movements and support learning success.

METHODS

The method used in this study was a quasi-experimental method with The Pretest Post-Test Two Treatment Design (Ramadan & Juniarti, 2020). This research was conducted in Elementary Schools in Merauke District, Merauke Regency, Papua. When the analysis was carried out in the even semester of the 2019/2010 school year. The population in this study were elementary school students in Merauke District, Papua. Meanwhile, the samples in this study were several 60 students who were taken by purposive sampling. The data analysis technique in this study used the t-test. Before analyzing the data, first, perform a pre-requisite analysis test using the normality and homogeneity test.

FINDINGS AND DISCUSSION

Findings

The results of the motor skills of primary school children consisting of height, weight, BMI, and thickness of fat, motor skills (Gymnastics skills, Soccer skills, Basketball skills, Track-and-field skills) can be presented in the following table:

Table 1. Research Results on Motor Competence and Body Composition

			Group A Pretest	Post-test	Group B Pretest	Post-test
Body Composition		Fat	1,75	1,66	1,43	1,21
		Height	112,93	113,01	114,26	115,08
		Weight	41,8		38,8	
	Gymnastic	*Forward roll*	4,86	9,00	5,06	8,07
		Backward roll	5,63	8,57	5,26	7,27
		Headstand	5,90	10,96	5,90	9,90
		Cartwheel	5,80	9,75	5,67	8,67
		Leapfrog	5,70	9,68	5,50	8,50
	Soccer	*Passing*	5,70	9,70	5,50	8,50
		Dribbling	21,93	21,03	21,90	21,01
		Juggling the ball	4,86	7,87	5,07	7,07
		Shooting to the goal	5,63	9,63	5,27	8,27
	Basketball	*Dribbling*	32,90	32,42	32,93	32,43
		Shooting	5,90	8,97	5,9	7,90
		Passing	31,92	31,12	31,85	31,01
	Track and field	*40 m speed running*	6,94	6,65	6,84	6,65
		long jump	2,69	3,08	2,71	3,00

high jump	71,33	81,33	66,3	76,30
Throwing	14,03	17,03	12,10	15,10

Based on the table, everything has increased from fat to track and field. The results of this increase can be seen from the better pretest to posttest scores.

Discussion

The increase in the body mass index of children leading to better results was caused by several factors, including those related to the growth and development of children. This growth and development will support the growth index for children. A well-packaged physical education will improve a child's body mass index; this is in line with the statement.

In connection with the addition of the Body Mass Index based on field observations associated with normal child development, maturity factors, developmental behavior in children, in this case, it will have an impact on the risk of health so that it will improve the health of children in primary schools (Erfle and Gamble 2015). When children do sports activities that are packaged with PJOK subjects, it will impact the use of energy reserves in the child's body.

Physical education carried out by children for a long duration will impact the utilization of energy reserves in the muscles. Triglycerides in forces will be used as fuel, in which there are three types of fatty acids. When an activity is high, the glycerol increases to trigger fat to be used as fuel in the body (Grohman 2016). Fat loss that occurs in children can be seen by utilizing negative calories needed by the body. The education given during the treatment period will change the diet that the child does. Children will use more calories in the body for physical activity or sports; this will impact increasing lean body mass (Sword 2012). The series of activities in the research will have an impact on improving children's physical fitness.

This will be done by doing physical activity; doing physical activity will decrease the fat presentation in the body. The child's skills have been associated with the basic skills related to the sport being assessed (football, basketball, gymnastics, athletics) supported by the facilities provided by the school and the author during the study. Apart from the support of leisure and leisure time utilization facilities, it will contribute to improving children's abilities, in this case, children's motor competitions in elementary schools. Increased physical activity that encourages increased children's motor competition can be supported by providing facilities, space, and tools at school so that children will be motivated (Cohen et al., 2014).

The interaction of children, teachers, researchers, and the environment will contribute to improving the skills that children have. Much literature states that children who develop basic motor skills with the environment can be done through practice, learning, and interaction (Akbari et al., 2009). The psychological aspects of children must

also be developed so that researchers must consider children's interests, abilities, and strengths. When in the field. This will encourage us to be actively involved in carrying out the sequence of movements designed by the researcher. For all of this to work well, there must be an adjustment in the child's understanding of what is being taught.

The motor competition program must support children's participation, children's understanding in carrying out activities in the field; this will impact the child's ability to develop their abilities (Hands 2012). A good program accompanied the increase in gymnastics; many teachers did not understand program planning and self-evaluation enough. A good program and conducting an evaluation will increase the child's ability to carry out a gymnastic movement. This will encourage children to do the gymnastics movement well. Teachers with good quality practice in the field will improve children's gymnastics skills; children will find it easy to learn the activities given (Kovač 2012). Improvement in sports (football, basketball, gymnastics, athletics), including locomotor ability. This maximum result is developed using the Physical Education program in elementary schools.

To improve the results of children's motor skills, it is necessary to understand the development of children's motor skills that will be used as a movement throughout their life. Better children's knowledge of motor development developed by motor competition can increase physical activity throughout their lives (Loprinzi, Davis, and Fu 2015). Another thing was also stated that physical education in increasing motor competition would be used as the basis for children's lives in the future. Physical education programs are also a foundation for children's basic movements in accessing physical activities throughout their lives; without this foundation, children will experience difficulties in choosing an active way of life (Ruiz and Palomo 2018).

The physical education provided at school is sometimes considered insignificant by reducing the number of hours or activities in the field. This aims to improve children's academic ability, but this is not successful, and there is no empirical evidence. There are many facts in the field that participating in physical education programs will improve children's motor skills and aerobic abilities. Points in the area of children's aerobics, muscle flexibility, strength have a positive relationship with children's academic skills and the child's body mass index (Ericsson 2017). Physical education, in addition to shaping children to have a healthy lifestyle, physical education learning can also be oriented toward the formation of children's motor skills (Laurentiu-Gabriel and Evgeny 2018). Several factors influence the motor development of children in primary schools; these factors are the learning provided by teachers both in primary and before school. With this foundation, the importance of the role of physical education is placed in elementary schools. Children's motor skills can be promoted with physical education in elementary schools, even before school to

improve children's proficiency in motor skills (Barela 2013).

Physical education programs provided in elementary schools will affect children's growth and other skills. The development of motor skills affects the overall growth of the child. Several studies have shown that the acquisition of motor skills in children at the primary level is related to the development of neuromotor, cognitive, social, and emotional skills in childhood (Battaglia et al., 2019). The increase in the mental aspect was caused by the child's ability to do physical activity. The results showed that the physical activity packaged in Physical Education has a relationship with the nervous system; this has a positive relationship with children's cognitive function (Zeng et al., 2017).

Physical education programs, which are closely related to physical activities with children's motor skills, will positively affect children's behavior in the future. This will provide children with provisions in predicting children's participation in physical activity in the future. This ability allows children to organize time in physical activity, especially in locomotor abilities (Chen, Hammond-Bennett, and Hypnar 2017). This ability is essential because physical education has a very noble goal: improving children's motor skills. Children's motor skills are the most critical part of the goals to be achieved in Physical Education (Ericsson 2011). To enhance these goals, schools are appropriate for promoting physical activity and physical education (García-Hermoso et al. 2020). Not only related to physical education purposes but children's level of motor skills is also associated with health. In recent years, children's motor competence has been linked to health, such as cardiorespiratory and musculoskeletal awareness. Thus motor competence has an impact on children's physical and cognitive development (Lorås 2020).

The results obtained were only carried out in Merauke District, where the children involved were from various tribes in Merauke District. This will have an impact on the limitations of absorbing the information provided by the teacher. This will cause a teacher to be extra hard in conveying information and using various variations so that children can do what the teacher instructs. This wide variety of variations will provide different kinds of movement experiences in children to improve children's motor skills.

CONCLUSION

Physical education programs provided in elementary schools can improve children's motor competence. This increase is inseparable from a physical education program that is well designed and following the characteristics of children in Merauke. The physical education program that is given twice a week can improve the motor competence of elementary school children. Besides improving motor skills, it can also improve health, which can be seen with a better child's body mass index.

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