



## **Analysis of Gross Motor and Fine Motoric on Learning Outcomes of Physical Education at Public Elementary Schools**

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### **Abstract**

This research was conducted to analyze gross motor skills and fine motor skills with the learning outcomes of PJOK (Physical Education Sports Health) in Public Elementary School 1 Sumbergedong students. This type of research is a quantitative descriptive study. The population in this study were students at Public Elementary School 1 Sumbergedong Trenggalek. The sample in the study was taken by total sampling. The instrument used was a motor ability test (Motor Ability Test). The results showed that the male low class gross and fine motor skills were 48% and 40%, girls 79% and 52%, while the low class men's learning outcomes were 39% and girls 51%. The male high-class gross motor skills were 38%, girls 49%, men's fine motor skills 39%, girls 36%, while the high-class learning outcomes for boys were 77% and girls were 33%. Based on the research results, it can be concluded that students who have good motor skills tend to have good learning outcomes.

### **How to Cite**

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## INTRODUCTION

Physical education in elementary schools actually has a very important meaning, role and function in an effort to create a healthy and dynamic society. National education has the function of developing capabilities and shaping dignified national character and civilization in order to educate the nation's life, aiming at developing the potential of students to become human beings who believe and fear God Almighty, have noble character, are healthy, knowledgeable, capable, creative, independent, and become a democratic and responsible citizen (Undang-Undang Republik Indonesia No.20 Tahun 2003 Tentang Sistem Pendidikan Nasional, 2003).

Philosophically, physical education is the most important part of education as a whole. As an aspect of education in elementary schools, physical education aims to develop cognitive, affective, and psychomotor aspects through physical activities (Pramono, 2012). Physical education has an important role in improving fitness so that a person has the ability to carry out work tasks without causing significant fatigue (Santoso, 2016).

Physical education is synonymous with physical activity where it is related to motor skills of children. Basically, if the child does not get stimulation from parents, it will have an impact on decreased motor development which has an impact on learning disorders (Munir et al., 2019). Motor development also triggers children's social development which is divided into gross motoric and fine motoric. Gross motor skills are abilities that require coordination of most parts of the child's body, such as jumping, climbing, running, tiptoeing, walking and so on (Iswantiningtyas & Wijaya, 2015). Meanwhile, fine motor development is closely related to the development of the motor center in the brain which is in line with the maturity of nerves and muscles (Tahel & Ginting, 2018). Therefore, every movement that a child makes is no matter how simple it is, in fact, the result of a complex interaction pattern of various parts and systems in the body that is controlled by the brain. So that at the education level in schools, sports that are introduced are basic sports that are adjusted to education level or age (Pratama, 2015).

Motor development will affect all aspects of a child. If a child has good motor skills, then all movement activities that are carried out will be good too. Because in doing activities, of course, the concentration of understanding the stimulus is very important so that the results of the motion

are good. In essence, in learning physical education in schools, the level of concentration is the main indicator in understanding the material provided by an educator. Concentration has a very important role in improving student achievement in the learning process because with better concentration, a student can absorb all the material given (Ramadan & Ningrum, 2019).

Learning is a process of interaction between teachers and students and the elements in them. The teacher is the most dominant factor that determines the quality of learning. Good quality learning will certainly produce good learning outcomes (Wulandari & Surjono, 2013).

Gross and fine motor skills also affect the creativity level of early childhood (Romlah, 2017), therefore researchers are interested in researching them. Analysis of Gross Motor and Fine Motoric on Learning Outcomes of Physical Education in public elementary schools 1 Sumbergedong Trenggalek.

## METHODS

This type of research is a quantitative descriptive study. This research was conducted at Public Elementary Schools 1 Sumbergedong Trenggalek. The population in this study were students at Public Elementary Schools 1 Sumbergedong Trenggalek. The sample in the study was taken by total sampling.

The instrument used was a motor ability test (Motor Ability Test). The motor ability test was used to measure basic motor skills for elementary school students. This test has a reliability of 0.93 and a validity of 0.87. The reliability is obtained by retesting, while the validity is obtained by tolerating the test with the criteria used, namely the combined score, this test consists of 3 items of gross motor tests and 2 items of fine motor tests, namely: (1) agility test with 4 x Shuttle Run. 10 meters; (2) balance test with Stork stand positional balance test; (3) Speed test with a 30 meter sprint test; (4) Coordination test by throwing catch a tennis ball at a distance of 1 meter from the wall; and (5) the Nelson Hand reaction test, measuring the reaction time of the hand with visual stimuli (Nurhasan, 2007).

Data collection techniques are methods used to obtain information or data related to the variables to be studied. The data collection techniques, namely: by using the Motor Ability Test.

The entire population, namely students at Public Elementary School 1 Sumbergedong 1 Trenggalek underwent a Motor Ability Test which consisted of a speed test (running 30 me-

ters), agility test (shuttle run 4 X 10 meters), balance test (stork stand positional balance), hand eye coordination test. (throw and catch the ball within 1 meter), and reaction speed test (Nelson Hand Reaction Test). The data analysis technique in this study used descriptive statistical analysis with a percentage.

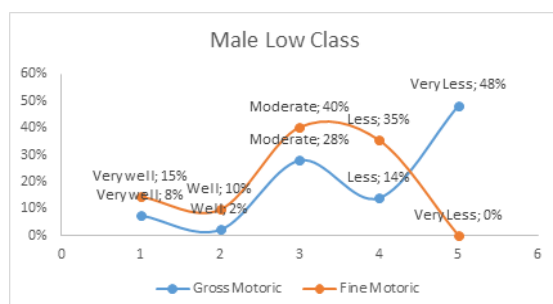
**RESULTS AND DISCUSSION**

The research sample character based on gender and age group 7-12 years, amounting to 73 male and 76 female.

**Table 1. Men's Low Class**

Category	Gross Motoric	Fine Motoric
Very well	8%	15%
Well	2%	10%
Moderate	28%	40%
Less	14%	35%
Very Less	48%	0%

Based on the **Table 1** above, it can be explained that the majority of male students' gross motor skills are 48% in the "very less" category. Meanwhile, fine motor skills are in the "moderate" category with a percentage of 40%.



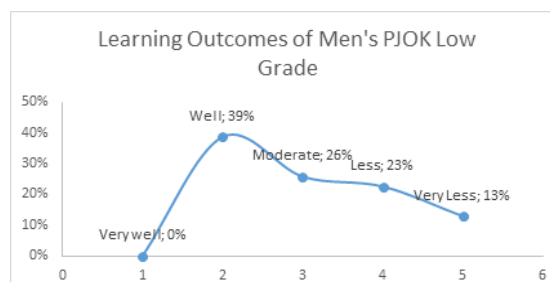
**Graph 1. Male Low Class**

**Table 2. Learning Outcomes of Men's PJOK (Physical Education Sports Health) Low Grade**

Category	Percentage
Very well	0%
Well	39%
Moderate	26%
Less	23%
Very Less	13%

Based on the **Table 2** above, it can be explained that the learning outcomes of male low-grade PJOK (Physical Education Sports Health)

at school are in the "well" category with a percentage of 39%.

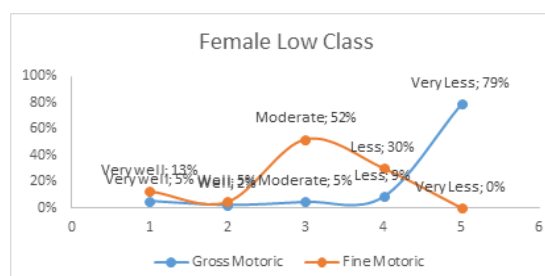


**Graph 2. Male Low Class**

**Table 3. Female Low Class**

Category	Gross Motoric	Fine Motoric
Very well	5%	13%
Well	2%	5%
Moderate	5%	52%
Less	9%	30%
Very Less	79%	0%

Based on the **Table 3** above, it can be explained that the majority of the gross motoric skills of female low-grade students are 79% in the "very less" category. Meanwhile, fine motor skills are in the "moderate" category with a percentage of 52%.



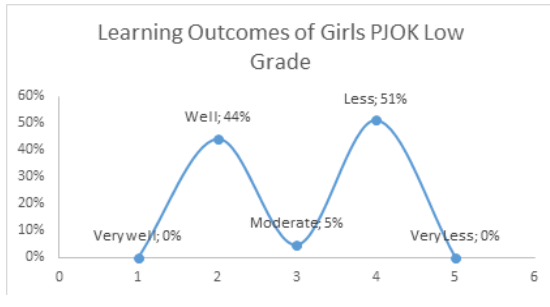
**Graph 3. Female Low Class**

**Table 4. Learning Outcomes of Low Class Female PJOK (Physical Education Sports Health)**

Category	Percentage
Very well	0%
Well	44%
Moderate	5%
Less	51%
Very Less	0%

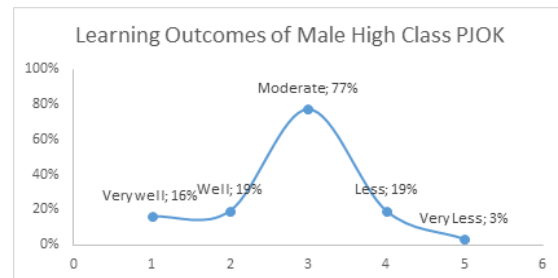
Based on the **Table 4** above, it can be explained that the learning outcomes of female low-grade PJOK (Physical Education Sports Health)

at school are in the “less” category with a percentage of 51%.



**Graph 4.** Female Low Class

class PJOK (Physical Education Sports Health) at school are in the “moderate” category with a percentage of 77%.

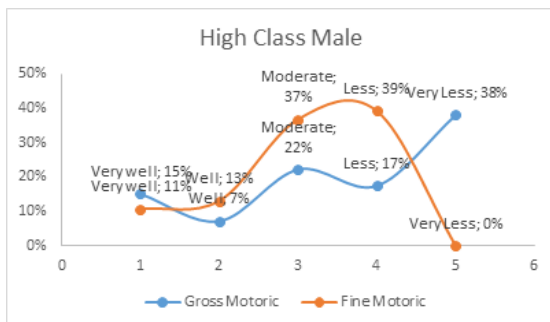


**Graph 6.** High Class Male

**Table 5.** High Class Male

Category	Gross Motoric	Fine Motoric
Very well	15%	11%
Well	7%	13%
Moderate	22%	37%
Less	17%	39%
Very Less	38%	0%

Based on the **Table 5** above, it can be explained that the majority of the gross motoric skills of male high class students are 38% in the “very less” category. Meanwhile, fine motor skills are in the “less” category with a percentage of 39%.



**Graph 5.** High Class Male

**Table 6.** Learning Outcomes of Male High Class PJOK (Physical Education Sports Health)

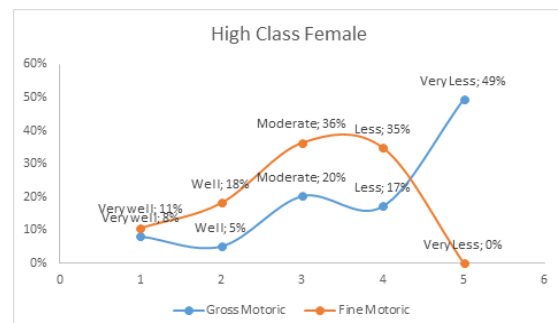
Category	Percentage	Fine Motoric
Very well	16%	11%
Well	19%	13%
Moderate	77%	37%
Less	19%	39%
Very Less	3%	0%

Based on the **Table 6** above, it can be explained that the learning outcomes of male high

**Table 7.** High Class Female

Category	Gross Motoric	Fine Motoric
Very well	8%	11%
Well	5%	18%
Moderate	20%	36%
Less	17%	35%
Very Less	49%	0%

Based on the **Table 7** above, it can be explained that the majority of the gross motoric skills of female high class students are 49% in the “very less” category. Meanwhile, fine motor skills are in the “moderate” category with a percentage of 36%.

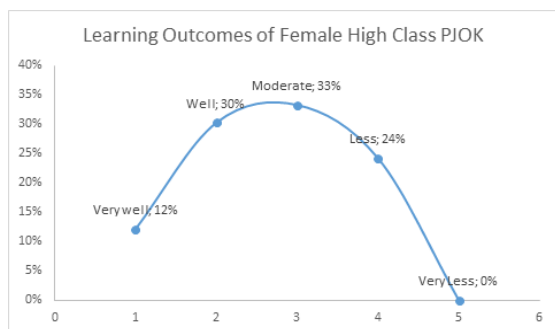


**Graph 7.** High Class Female

**Table 8.** Learning Outcomes of Female High Class PJOK (Physical Education Sports Health)

Category	Percentage	Fine Motoric
Very well	12%	11%
Well	30%	13%
Moderate	33%	37%
Less	24%	39%
Very Less	0%	0%

Based on the **Table 8** above, it can be explained that the learning outcomes of female high class PJOK (Physical Education Sports Health) at school are in the “moderate” category with a percentage of 33%.



**Graph 8.** High Class Female

The development of motor functions is very important for children to improve their skills to participate in activities at school and recreation. Motor development in school-age children is expected to run with good holisitics which will prepare future individuals, good motor development, namely from the movement and muscle coordination system in an individual (Bonert & Melmed, 2017).

The data analysis shows that the motor condition of low-grade children is still far from expectations so that the learning outcomes of PJOK (Physical Education Sports Health) in schools are not optimal, as well as those in high class are still from expectations which are the main goal of success in the learning process at school. Motor skills greatly affect a child’s physiological development and even trigger brain development.

The use of gross motor skills that use large muscles as a coordinated series of motion is very important as a development experienced by a child to support functional activities, play, and complex movement skills for sports. The development of basic motion includes the development of movement behavior that is used to move the body from one place to another (locomotor) and receive or send an object or object, usually a ball (object control) (Fadhullah et al., 2020).

Basically learning outcomes are the achievement of instructions or stimuli given. So that a child must have perceptual motor skills to understand everything in taking certain actions according to the situation at hand (Kusmiati & Sumarno, 2018). This is in line with the results of the motor analysis of students at public elementary schools 1 Sumbergedong where their motor conditions are still far from expectations so that

the learning outcomes have not got maximum results. It is even reinforced by research results (Subarjah, 2010) that there is a positive interaction between motor skills and learning outcomes for playing skills, meaning that if motor skills are low, the learning outcomes will not be optimal.

## CONCLUSION

Based on the results of data analysis and discussion in this study, it was found that there was a significant relationship between motor conditions and learning outcomes of PJOK at Public Elementary School 1 Sumbergedong Trenggalek. Gross and fine motor skills greatly affect children’s learning outcomes in carrying out the dominant PJOK (Physical Education Sports Health) learning process with a physical activity. However, for other researchers, it is suggested to be more in-depth in analyzing involving other factors in further research, such as other indicators, namely infrastructure and stimulus provided by a teacher.

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