



Static Balance of Lower Class Elementary School Students

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Abstract. Balance has an important role in movement activities. This study aims to measure the static balance of elementary school students in the lower grades.

This research is a quantitative descriptive research with data collection techniques using tests and measurements. Data collection instrument with a Standing Stork Test balance test. The research sample was 20 grade 2 students at Muhammadiyah Jogokariyan Elementary School. Each student is given three chances and the best result is taken. The detailed research results are as follows: the Poor category is 2 students (10%), the Fair category is 10 students (50%), the Good category is 5 students (25%), and the Very Good category is 3 participants. educated (15%). Based on the results of the study, it can be concluded that the highest percentage is in the Fairly Good category. There is a need for further research involving more samples.

Keywords: Balance, Students, Lower Class.

1 Introduction

Balance has an important role in movement activities. Balance is the ability to maintain the body's center of mass against a fulcrum and against gravity which is influenced by sensory, motor or musculoskeletal processes [1]. Balance can improve a child's quality of life and the shape of the feet has an influence on standing balance [2]. Balance is a person's ability to maintain a stable and controlled body position, both while still and in motion. This involves coordination between the sensory, nervous, and muscular systems [3]. Balance is the ability to maintain a stable and controlled body position in various positions and situations, both still and in motion.

Balance refers to the ability to maintain a stable and controlled body position, with good coordination between the sensory, nervous and muscular systems [4]. Balance is the ability to maintain a stable and controlled body position, both while still and in motion. It involves fine coordination between the sensory, nervous, and muscular systems, and is an important skill in many types of sports and other physical activities [5], [6], [7].

Balance is realized due to the existence of balance control components, which consist of the visual, vestibular, proprioceptive and musculoskeletal systems (muscles, joints and soft tissue) [8]. Children's ability to perform coordinated body movements is needed to train flexibility, balance and agility. The inability to achieve opti

mal balance can result in disruption of daily functional activities which makes children prone to falls and injuries, difficulty stabilizing the body when other body parts move, difficulty maintaining body posture when sitting, standing, walking, running and difficulty carrying out other movements [9].

Balance is influenced by several factors: 1) Age, age is related to the location of the body's center of gravity. The location of the center of gravity in children is higher, because children have heads that are larger than their feet. This condition will affect balance, the lower the center of gravity on the fulcrum, the more stable the body position will be [10], 2) Gender, gender will affect balance, because between men and women there are differences in the location of the center of gravity. In men it is located around 56% of body height, while in women it is around 55% of body height [11], 3) Muscle Strength, strong muscles are muscles that are able to contract and relax well. If the muscles are strong, then balance and daily activities such as walking, running, working in the office will run smoothly [12], 4) Body Mass Index (BMI), BMI will affect a person's balance. Based on research results, there is a high correlation between BMI and balance. A high BMI or overweight criteria of 23-24.9 Kg/m² will affect a person's level of balance [13], and 5) Physical Activity, physical activity is movement that causes muscle contractions. Physical activity will improve physical fitness, coordination and muscle strength. This condition will have an impact on improving a person's balance [14].

2 Method

This research is quantitative descriptive. The research was carried out at the Muhammadiyah Jogokariyan Elementary School.

2.1 Study Design

Data collection techniques use tests and measurements.

2.2 Research Participants

The sample in this research was 20 students in class 2 of Muhammadiyah Jogokariyan Elementary School.

2.3 Data Collection and Instrumentation

The instrument for collecting data uses the Standing Stork Test [15].

2.4 Statistical Analysis

SPSS for Windows version 26 was used to analyze the data. The results of data processing are presented in percentage.

3 Result

The test results were analyzed using the SPSS for Windows version 26 program package. The description of the research data is as follows:

Table 1. Description of Research Data

Variabel	Result
n	20
min	18
max	335
average	113.95
standar deviation	85.74

Table 2. Balance Category of Students

Intervals	Frequency	Percentage	Category
>199.70	3	15%	Very Good
113.95 – 199.69	5	25%	Good
28.21 – 113.94	10	50%	Quite Good
< 28.20	2	10%	Not Good
Total	20	100%	

Based on the table above, it can be seen that out of 20 students, 3 students or 15% have a balance in the very good category, 5 students or 25% have a balance in the good category, 10 students or 50% have a balance in the quite good category, and 2 students or 10% have a balance in the poor category. Below is presented the level of student balance in a bar chart.



Figure 1. Balance Category of Students

4 Discussions

The research results showed that 50% or as many as 10 students had a balance in the quite good category. In order to maintain a stable body position, in this case static balance, a person must involve coordination between the sensory, nervous and muscle systems [3]. Balance is influenced by several factors: 1) Age, children have a larger head compared to their feet, so the center of gravity will be higher, so this condition will affect the level of balance [10], 2) Muscle Strength, strong muscles are muscles that are able to contract and relax well, during childhood it is possible that children do not yet have maximum muscle strength [12], 3) Physical Activity, physical activity will improve physical fitness, coordination, muscle strength. This condition will affect balance. Lack of physical activity in children will impact balance levels [14]. Another reference states that balance, especially when standing, is influenced by the shape of the feet [2].

5 Conclusion

The detailed research results are as follows: the Poor category is 2 students (10%), the Fair category is 10 students (50%), the Good category is 5 students (25%), and the Very Good category is 3 participants. educated (15%). Based on the results of the study, it can be concluded that the highest percentage is in the Fairly Good category. There is a need for further research involving more samples.

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