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Validity And Reliability of The Basic Manipulative Movement Skills Test For 6-8 Year Old Children

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Abstract Assessment of basic movement skills tests is widely used, including manipulative basic movement skills tests. This manipulative basic movement test is used to measure the basic manipulative movement skills of early childhood. The purpose of this study is to determine whether it is suitable and effective for measuring manipulative basic movement skills in early childhood 6-8 years. The sample population used in this study were 30 early childhood aged 6-8 years in Pemanggilan Village, Natar District, South Lampung. Construct validity and reliability are calculated using Pearson correlation with the results obtained are research covering 4 indicators namely throwing, catching, hitting, and kicking obtained the results of the value of r count> r table (28;5%) = 0.361. So it can be stated that all indicator items used are valid and based on reliability testing with Cronbach alpha obtained a value of 0.806> 0.7 so that it presents that the items are reliable to measure the sample. In conclusion, thus that the manipulative basic movement skills test is suitable and effective to be used to measure basic movement skills in early childhood 6-8 years.

Keywords: skills; basic movement; manipulative; 6-8 years old

INTRODUCTION

The development and progress achieved by society due to the development of science and technology that is increasingly sophisticated, making people's need for education increase. Education itself means changing, fostering, directing and even shaping the overall dimensions of students. With a good education, it will develop the potential that exists in children by having religious spiritual strength, personality, intelligence, noble character, and skills that are necessary in themselves, society and the state.

Early children are one of the most important assets for every nation where they will one day replace and continue the baton, these early children must be prepared as well as possible, starting from the provision of good education, a strong physique, and a healthy body (Nofi Marlina, 2017). Children cannot be separated from activities that make them feel happy, they can express joy, excitement and pleasure through play, because the world of children is indeed a world of play.

Early childhood is a child who is at the age of 0-6 years and 6-12 years where at that age the child is experiencing development. In childhood the world of children is identical to cheerfulness, fun and excitement, we often hear that at this time children experience the golden age or golden age where 80% of the child's brain is already working which is characterized by changes in child development quickly both physical, cognitive, social emotional, religious moral values, and language. Early childhood is the best time to instill values because children are at the most rapid stage of physical growth and development, especially in physical and motor abilities.

Early childhood is a group of children who are in the process of growth and development that is unique, meaning that they have patterns of physical growth and development (gross and fine motor coordination) and express behavior relatively spontaneously, are active and energetic, have a strong curiosity and enthusiasm for many things, therefore uniqueness creates a potential learning period (Toufan, 2017).

In the modern era like today, many parents do not pay attention to the needs of physical activities for their children (Conra et al., 2018). Whereas sufficient activity greatly impacts the development of children at each stage of their developmental age, each phase of

human development has different characteristics and needs for physical activity. Children need enough physical activity to grow and develop, according to the American Academy of Pediatrics (AAP), Children need at least 60 minutes of exercise every day, a total of 60 minutes can be accumulated from several activities, but the amount a day should be 60 minutes. This is imperative for children to get enough physical activity during their growth and development.

Child development is all the changes that occur during childhood, namely during: 1. Infancy toddlerhood (age 0-3 years). 2. Early childhood (age 3-6 years). 3. Middle childhood (age 6-11 years) (Siregar Nofi, 2018). While the changes that occur in the child include changes in the following aspects:

1. Physical Development Physical growth is a process of change in the human body that includes an increase in weight and height. However, not all developments are balanced, most children grow up with a greater body weight than the child's height. This occurs due to the increasing size of the skeletal system, muscles and several other organs in the body.
2. Motor Development Motor development is the process of increasing a person's ability to move, the movements made by children are the result of the interaction of various parts and systems in the body controlled by the brain.

Motor skill development involves the large muscles in the legs, arms and chest. Gross motor skills are important for performing everyday physical tasks such as running, walking, lifting, kicking, throwing, etc. Well-developed gross motor skills enable children to perform everyday tasks such as running and walking, play skills such as rock climbing, and sports skills such as catching, throwing, racket striking, etc.

Basic movement skills must be formed early, this formation is done with physical activities that are in accordance with the development of children both physically, psychologically and socially. Basic movement in humans consists of three kinds, namely locomotor motion or movement that is carried out resulting in a person moving places, non-locomotor motion which means that a person moves by not moving places, basic manipulative motion means movement carried out by playing with objects.

Physical activity can improve children's cognitive, emotional, and behavior so that they can improve academic achievement (Nofi Marlina, et al., 2023). However, the findings between the relationship between physical activity and cognitive work in children are still relatively rare and inconsistent even though children's motor development and cognitive learning have a positive effect on academic achievement.

Within a 24-hour day, children aged 3-4 years should spend at least 180 minutes in any type of physical activity of any intensity, of which at least 60 minutes is moderate to vigorous intensity physical activity, spread throughout the day the more the better not being held for more than 1 hour at a time (stroller/pram) or sitting for long periods.

Motion comes from the coordination of various organs in the human body (Maggill & Anderson, 2017). Motor control is how the neuromuscular system functions to activate and coordinate the muscles and limbs involved in the performance of motor skills.

The ability to move is one of the important fitness indicators in every individual to support their performance (Tangkudung, Kurotul, & Wahyuningtias, 2019).

Manipulative skills combined with locomotor skills and stabilization skills will make it easier for a person to perform various physical activities (Dlis, 2018). The physical activities are unlimited both those that do not use tools and those that do not use tools.

Basic movement skills consist of three namely locomotor, nolocomotor and manipulative. These basic locomotor, manipulative and stability skills go through a definite and observable process from immaturity to proficiency. Stages in this phase include beginning, emerging, and proficient. Achievement of the proficient stage is greatly influenced by opportunities for practice, encouragement, and instruction in an environment that encourages learning (Goodway, Ozmun, & Gallahue, 2021).

Based on the explanation above from several definitions, it can be concluded that basic motion is the ability of motion that every human being has. Basic human movement abilities consist of locomotor movements, namely moving from one point to another and non-locomotor movements are sedentary movements and manipulative

movements where these movements can be improved through repeated practice using objects.

Play is an activity carried out with or without the use of tools that produce or provide information, provide pleasure and develop imagination in children (Anggani S, 2006). From the definition of play it is clear that playing with games can develop children's imagination, but it can also develop children's basic movements.

Play for children is very meaningful and is an absolute requirement to stimulate growth and development (Ade wahyu, et al., 2023). There are many benefits that children can get from a game. Through games, besides having fun, children can also think more creatively, be able to express their thoughts and feelings, discover their strengths and weaknesses, and enrich their skills and interests. State that in games in general, both children, adolescents, and adults tend to always want to move while having fun, especially for elementary school-age children it appears that their movement activities are so high. Usually, these forms of activity are channeled through games.

The world of children is a world of play, fun is one of the main elements in play (Tambunan D, et al., 2023). The child will continue to play as long as the activity entertains him, when the child is bored the child will stop playing. Making a fun training program is something that must be considered by the trainer.

Manipulative skills will develop with age and will be even faster if accompanied by a series of motion learning exercises. Any normal child will master the ability to throw, catch and kick without having to practice.

Manipulative skills are a person's skills in manipulating objects. "Manipulative skills (also referred to as object control skills) generally involve a combination of at least two movements and are performed in conjunction with other types of movements" (Haibach-Beach et al., 2018).

Manipulative skills involve using some kind of tool, often with the hands but also with the feet or other body parts (Robert P & Aaron, 2016). Manipulative activities develop hand-eye and foot-eye coordination and agility. By using equipment such as balloons, hoops, wands, bean bags, balls, tug ropes, Lummi sticks, Frisbees and spoons,

students can develop manipulative skills in a variety of situations.

Manipulative skills are the basics of various game skills, movements that require energy such as throwing, hitting, kicking and receiving objects, such as catching are important skills that can be taught using various types of balls or by using other assistive devices (Arya P, et al., 2021).

Skills from manipulative motion, that is receptive and propulsive, receptive skills are receiving an object such as catching and propulsive skills have the characteristics of exerting force or force on an object, such as hitting, throwing, bouncing and kicking.

According to Rohendi & Laurens Manipulative movements are based on gross and fine movements with examples: gross movements such as catching, kicking and hitting an object, while fine movements such as sewing, cutting with scissors and typing (Rohendi & Laurens, 2017).

Locomotor skills are easier because your child is in control of the object he is sending. In contrast, receptive skills require perception and coordination skills to move one's body into position to receive the incoming object. In everyday life, as well as in many games and sports, there is often a need for propulsive and receptive skills.

Manipulative skills are the ability of a person to be able to manipulate objects that are around him to achieve certain goals (Dedi, 2018). This movement can be in the form of rolling the ball, hitting the ball, kicking the dribble ball and others.

Based on the opinions of experts, manipulative movements are movements using energy to give or receive an object such as throwing, catching, kicking, bouncing and hitting.

METHODS

The purpose of this study is to determine the effectiveness and suitability of the manipulative basic movement skills test in early childhood 6-8 years based on the results of validity and reliability obtained.

The method used in this study is by giving a manipulative basic movement skills test which has 4 items;

throwing, hitting, catching, kicking, to 30 early childhood 6-8 years in Pemanggilan Village, Natar District, South Lampung Regency.

Research instruments play an important role in quantitative research because of the quality of data used, the instruments used in are:

Table 1. Throwing Movement

No	Indicator	Sub-Indicators	Picture	Score			
				1	2	3	4
1	Preparatory phase	1. View 2. Arm 3. Body 4. Knee 5. foot					
2	Implementation phase	1. View 2. Arm 3. Body 4. Knee 5. foot					
3	*Follow Through* phase	1. View 2. Arm 3. Body 4. Knee 5. foot					

Table 2. Capture Movement

No	Indicator	Sub-Indicators	Picture	Score			
				1	2	3	4
1	Preparatory phase	1. View 2. Arm 3. Body 4. Knee 5. foot					
2	Implementation phase	1. View 2. Arm 3. Body 4. Knee 5. foot					
3	*Follow Through* phase	1. View 2. Arm 3. Body 4. Knee 5. foot					

Table 3. Hitting Movement

No	Indicator	Sub-Indicators	Picture	Score			
				1	2	3	4
1	Preparatory phase	1. View 2. Arm 3. Body 4. Knee 5. foot					
2	Implementation phase	1. View 2. Arm 3. Body 4. Knee 5. foot					
3	*Follow Through* phase	1. View 2. Arm 3. Body 4. Knee 5. foot					

Table 4. Kicking Movement

No	Indicator	Sub-Indicators	Picture	Score			
				1	2	3	4
1	Preparatory phase	1. View 2. Arm 3. Body 4. Knee 5. foot					
2	Implementation phase	1. View 2. Arm 3. Body 4. Knee 5. foot					
3	*Follow Through* phase	1. View 2. Arm 3. Body 4. Knee 5. foot					

For the assessment criteria as follows: Score (4) If the tester performs the preparatory attitude movement correctly or in accordance with the picture in the predetermined indicator.

Score (3) If the tester has performed the preparatory posture movement but the movement is almost

similar to the picture in the predetermined indicator.

Score (2) If the tester performs the preparatory attitude movement but the movement is not in accordance with the picture in the indicator set.

Score (1) If the tester performs the preparatory attitude movement without paying attention to the indicators, in other words, it is wrong.

Construct validity and reliability were calculated using Pearson correlation using SPSS.

RESULTS AND DISCUSSION

The results obtained from this study in Pemanggilan Village, Natar Subdistrict, South Lampung Regency on 30 early childhood 6-8 years old and the assessment was carried out validity and reliability testing using Pearson correlation which resulted as follows:

Table 5. Validity Results

Indicator	R-count	R-table	Information
Throw	0,880	0,361	Valid
Catch	0,831	0,361	Valid
Hit	0,792	0,361	Valid
Kick	0,794	0,361	Valid

Based on testing the research instrument covering 4 indicators, namely throwing, catching, hitting, and kicking, the results of the rcount> r table (28; 5%) = 0.361. So it can be stated that all indicator items used are valid.

Table 6. Reliability

Composite Reliability	**Multiple Items**
0,806	4

Based on reliability testing with Cronbach alpha, a value of 0.806> 0.7 was obtained, representing that the items were reliable for measuring the sample.

CONCLUSIONS

In conclusion, this research can be developed and applied, thus that the manipulative basic movement skills test is effective and suitable to be used to measure basic movement skills in early childhood 6-8 years.

The implications of this study provide a positive contribution to be used by teachers and the community to measure the ability of basic manipulative movement skills of children aged 6-8 years.

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