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Original Article Research

The Influence of Play Activities, Nutritional Status and Motor Ability on The Physical Fitness of Primary School Students

Riwaldi Putra[1*], Deri Putra[1], Fitri Agung Nanda[2]

[1]*FKIP Universitas Pasir Pengaraian, Indonesia*

[2]*Universitas Sriwijaya,Sumatra Selatan, Indonesia*

[*]email corresponding author: riwaldiputra@upp.ac.id[*]

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Abstract

This research aims to reveal the influence of playing activities, nutritional status and motor skills on physical fitness. This research method is quantitative using a path analysis approach. The population of this study was all students at SD N 14 Jati Tanah Tinggi, Padang City, totaling 163 people. The sampling technique was carried out by purposive sampling, with a total sample of 49 people. Data was collected by filling out questionnaires for playing activities, measuring body weight and height for nutritional status, throwing a basketball, running for four seconds, passing a ball against a wall and jumping without a start to measure motor skills, and to measure students' physical fitness, the TKJI test was used to elementary school age children. The results of research and data analysis show that: (1) Playing activities have a direct and significant effect on physical fitness by 12.6% (2) Nutritional status has a direct and significant effect on physical fitness by 12.4% (3) Motor Ability has a direct and significant effect on physical fitness by 9.2% (4) Playing activities have an indirect effect on Physical Fitness through Motor Ability by 17.7% (5) Nutritional status has an indirect effect on Physical Fitness through Motor Ability is 28.1% (6) Playing Activities, Nutritional Status and Motor Ability simultaneously influence students' Physical Fitness by 48.2%.

***Kata Kunci**:* Play Activities, Nutritional Status, Motor Ability, Physical Fitness

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1. INTRODUCTION

Physical fitness is the main factor that has a positive impact on achieving better quality education. (Syahara, 2011) states that physical fitness is defined as the body's ability to carry out physical and psychological activities without suffering from fatigue. (Suryadi, 2022) explains that physical fitness is one of the most important aspects for improving sports performance. It is very important to maintain physical fitness, the level of physical fitness increases along with health. Someone who is physically healthy can support their work in everyday life (Januarianto 2023).

This must be applied by students both at school and in everyday life so that students will be more enthusiastic in carrying out their activities. (Saputra et al., 2023) stated that physical freshness or often referred to as physical fitness is a person's body's ability to carry out daily tasks and work without causing significant fatigue, so that the body still has energy reserves to cope with additional loads.

Elementary school age students receive physical education lessons as a form of structured training to optimize their physical fitness. (Ariestika et al., 2021) explains that physical education is taught from elementary school to college level. It is felt that physical education learning at elementary school level really needs to be implemented considering that it helps provide awareness to maintain students' physical fitness so they are able to participate in learning well (Pamungkas et al., 2022). Physical education learning at school is also a source of information for students to complete their knowledge (Nopiyanto et al., 2023). Apart from being a physical activity or movement, it is also a means for students to gain knowledge about a healthy lifestyle by fulfilling nutritional needs in their food. Then play activities also color the physical activities or movements of elementary school students in their daily lives.

Play activity is an activity that is carried out with a feeling of pleasure, willingly, and seriously. Gusril (2016) states that play activities are spontaneous activities during childhood that connect them with adult activities and the surrounding environment which includes the child's imagination and performance using all his feelings, hands or all body parts. Fadlan et al. (2023) Of course, playing activities will attract attention and enable students to actively participate in the learning process and students will not feel tired when carrying out movement activities. Nutritional status is a measure of success in fulfilling nutrition for children as indicated by the child's weight and height. (Deevona et al., 2023) explains that adequate nutritional conditions or status are needed to build or make students passionate and enthusiastic about learning PJOK at school. To obtain good physical condition, a balanced nutritional intake is required, which means that the amount of energy and nutrients that enter the body is the same as what is needed and excreted. Then motor skills are also a determining factor for students to obtain good physical fitness.

Based on the literature review above, it was revealed that the physical fitness of elementary school children is influenced by nutritional status, play and motor activities, in fact based on the results of observations made at SD N 14 Jati Tanah Tinggi, Padang City. This lack of physical fitness may be due to students not moving enough, having very little playing time or because most of the time after school is spent watching (TV). Students in sports activities rarely do play activities that involve a lot of movement, and face-to-face hours during physical education lessons are still insufficient to improve their physical fitness. This is because in school activities students do a lot of assignments from teachers such as taking additional studies or courses. Even though there is free time, it is used for playing on the internet or games, and this is made worse by parents who limit their children's movement space to play.

Based on the results of observations made by the author at SD n 14 Jati Tanah Tinggi, Padang City, the author wants to conduct research on these three components influencing students' physical fitness. This research is considered to have high novelty because previous research did not discuss these three components simultaneously. The samples or subjects that will be researched have never been conducted before. The results are expected to be able to become a reference for improving students' physical fitness through approaches that can be taken by

teachers to improve students' fitness which will influence learning outcomes, especially in physical education.

2. METHOD

2.1 Participants

The population is 163 students at SD N 14 Jati Tanah Tinggi, Padang City. To determine the sample that will be used in this research, the Purposive Sampling technique was used. The samples taken were male students at SD N 14 Jati Tanah Tinggi, Padang City, considering that the TKJI test used was 10-12 years old. So the sample in this study was male students, namely classes: III, IV, V, and VI, taken based on ages 10-12 years, totaling 49 people.

2.2 Research Design

This type of research is quantitative research with a path analysis approach (Path Analysisis), namely using structural equations that look at the causality of the influence dimensions of playing activities (X1), nutritional status (X2) and motor skills (X3) on physical fitness (Y). Path Analysis Method. Path analysis is used to test the magnitude of the contribution shown by the path coefficient on each path diagram of the causal relationship between variables.

2.3 Instruments

Collecting data or information used as material to be processed in this research includes filling out questionnaires for playing activities, measuring body weight and height for nutritional status, throwing a basketball, running for four seconds, passing a ball against a wall and jumping without a start. To measure motor skills, and to measure students' physical fitness, the TKJI test is used for elementary school age children.

2.4 Data Analysis

This research method is quantitative using a path analysis approach. Path Analysis or path analysis is the relationship between independent variables and dependent variables which is usually presented in the form of a diagram containing arrows that show the direction of influence of exogenous and endogenous variables.

3. RESULTS

3.1 Physical fitness

The 49 students in the class interval 22-25 (0 people 0%) with very good category, class interval 18-21 (1 person 2%) with good category, Class interval 14 - 17 (30 people 61%) with medium category, class interval 10 - 13 (16 people 33%) with a poor category and class interval 5 - 9 (2 people 4%) with a very poor category, the average number of class intervals is 14 so there are 32 elementary school students who have Physical fitness class intervals are above average or equal to average (63%) with categories good, very good and moderate.

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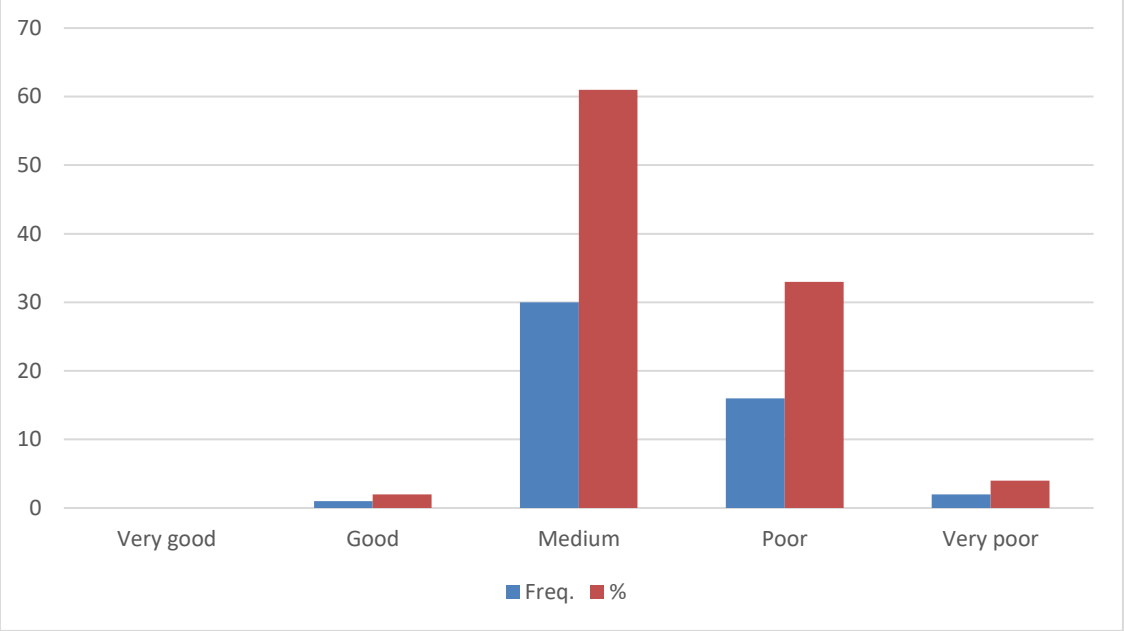
Figure 1.

Physical Fitness Results

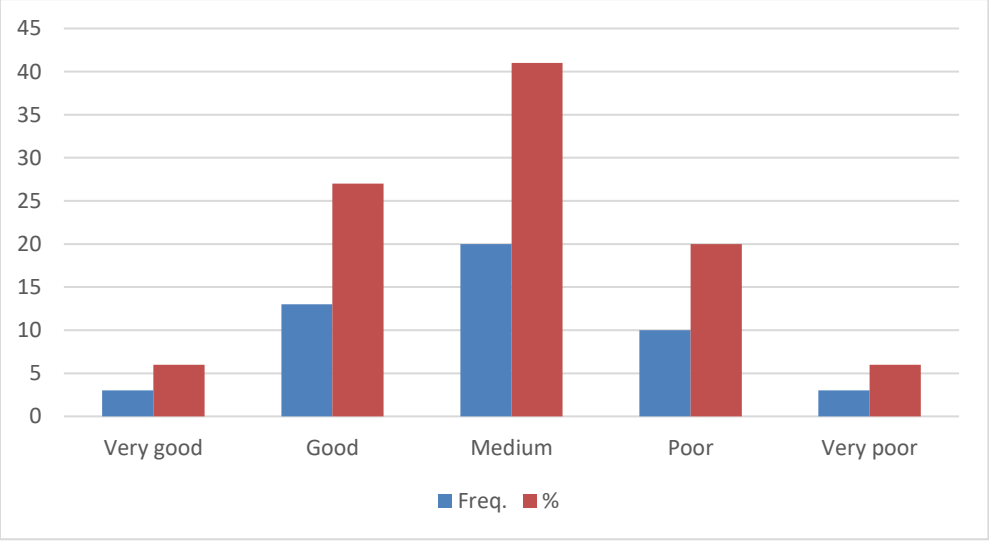


3.2 Play activities

The 49 students at SDN 14 Jati Tanah Tinggi, Padang City who were in the class interval≥126 (3 people 6%) with the excellent category, class interval116.5-125.8 (13 people 27%) with the good category, class interval107-116 (20 people 41%) in the moderate category, class interval 97.3-106.9 (10 people 20%) in the poor category and class interval <97 (3 people 6%) in the very poor category, the average number of class intervals is 112 so There are 36 students at SDN 14 Jati Tanah Tinggi, Padang City who have class intervals above average or equal to average (74%) in the categories of good, very good and moderate.

Figure 2.

Physical Play Activities



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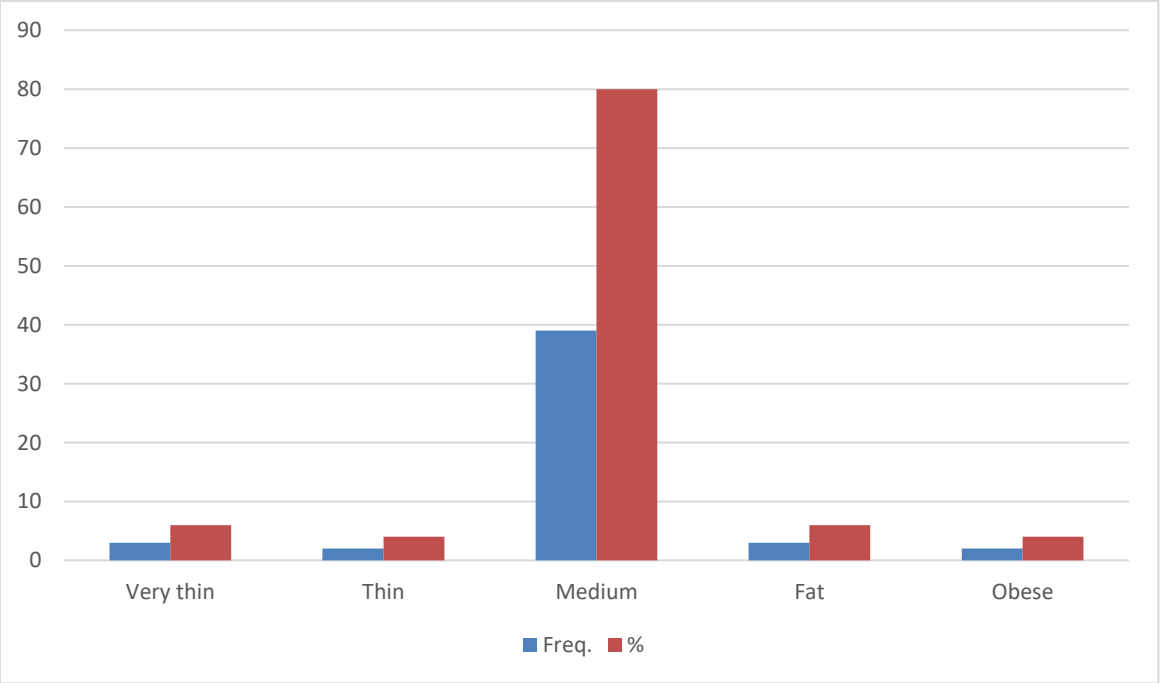
3.3 Nutritional status

The 49 students at SDN 14 Jati Tanah Tinggi, Padang City who are at the threshold of > 2 SD (2 people 4%) in the Obesity category, the threshold is > 1 SD to 2 SD (2 people 6%) in the obese category, the threshold is – 2 SD to 1 SD (39 people 80%) with the normal category, threshold - 3 SD to < -2 SD (2 people 4%) with the thin category and threshold < - 3 SD (3 people 6%) with very thin category, it can be concluded that 39 students are in the normal category or 80%.

Figure 3.

Nutritional Status



3.4 Motor skills

The 49 students at SDN 14 Jati Tanah Tinggi Padang City who were in the T-Score class interval≥60 (2 people 4%) in the very good category, the T-Score class interval was 53.3-59.8 (14 people 28%) in the Good category, T-Score class interval 47-53 (17 people 35%) in the medium category, T-Score class interval 40.2-46.7 (15 people 31%) in the poor category and T-Score class interval < 40 (1 person 2%) with the very poor category, the average number of class intervals is 50.0, then there are 33 students at SDN 14 Jati Tanah Tinggi, Padang City who have class interval T-Scores above the average or equal to the average (72%) in the category good, very good and average.

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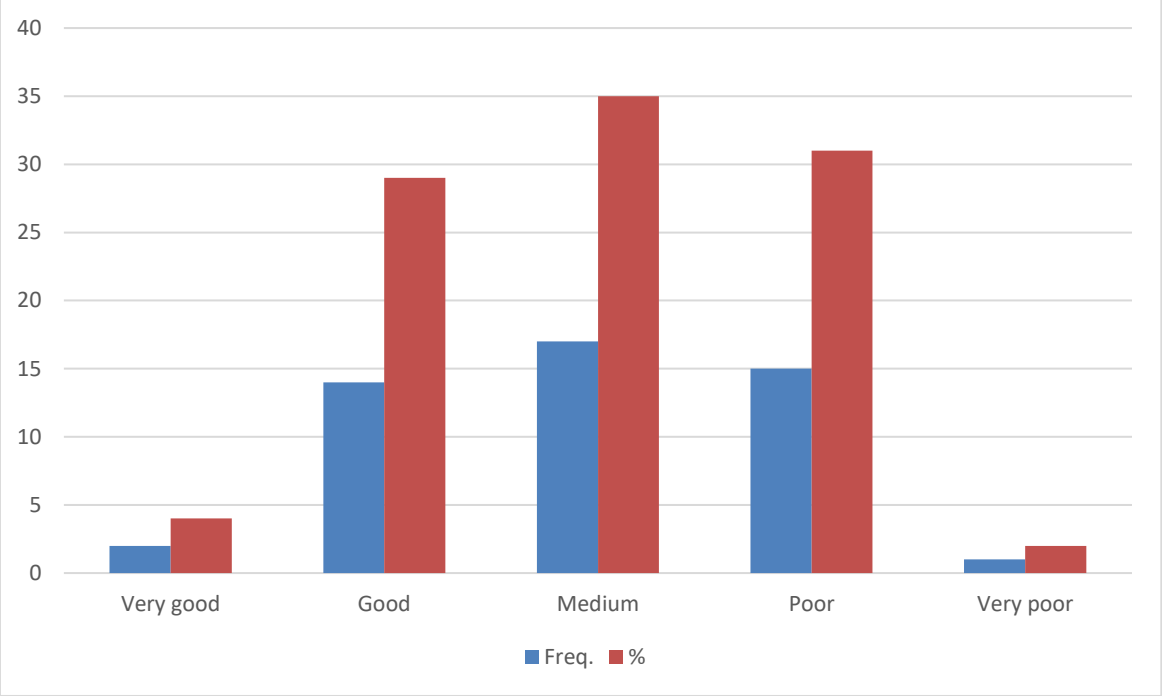
Figure 4.

Motor Skills



4. DISCUSSIONS

The influence of playing activities on the physical fitness of students at SD N 14 Jati Tanah Tinggi, Padang City is 12.6%, while the rest is influenced by other factors. Other factors that can influence a student's physical fitness could be the student's psychological state. The physical values contained in play activities are useful for children's growth and development both in terms of physical, mental and emotional function. Play activities require active movement and are carried out with joy. Play activities carried out happily will influence hormones and stimulate growth and increase knowledge, especially to improve physical fitness.

Furthermore, Piaget and Vygotsky in Sujiono (2010:34) play is a part or stage of cognitive development (imitation, memory, comprehension, imagination) that a child must go through. Playing is also a means to learn to think, express ideas (creativity/inventiveness), or imagine. Piaget in (Barlian, 2016) states that knowledge will be more meaningful when it is sought and discovered by students themselves. Children gain knowledge not by passively receiving it from others, but by actively constructing it themselves through their environment. (Prasetiyo et al., 2023) explains that basically, fun learning, especially for elementary school age children, is through playing while learning which is adapted through the implementation of learning models and methods. Physical education in elementary schools is closely related to play, because in accordance with the characteristics of elementary school age children who require a specific approach, the physical education process in elementary schools should be carried out through fun game playing activities (Natal et al., 2023).

Good nutritional status is one of the important requirements for achieving optimal health,

not only characterized by good physical appearance, but also mental and emotional. The influence of nutritional status on the physical fitness of students at SD N 14 Jati Tanah Tinggi, Padang City is 12.4%, while the rest is influenced by other factors. Physical fitness is a set of attributes relating to human physiology which are related to health or which are related to skills, health fitness is concerned with adaptive conditions which vary with growth and maturity status as well as physical activity as stated by Ferreira et all (2013: 18) who say that a set of attributes physiological related to health or skills. Physical fitness is an adaptive physiological state that varies according to growth and maturity status as well as physical activity. (Adiska et al., 2024) Physical fitness is a person's ability to carry out daily tasks enthusiastically without feeling tired and still having plenty of energy to enjoy other free time. (Pomatahu et al., 2023) explains that nutritional status affects children's growth and development. The aim of this activity is to help physical education teachers monitor children's growth, and provide secondary data on children's nutritional status for schools

The influence of motor skills on the physical fitness of students at SD N 14 Jati Tanah Tinggi, Padang City is 9.2%, while the rest is influenced by other factors. Physical fitness has different levels for each individual. Every physical activity requires a level of physical fitness that is supported by a healthy body. According to (Ateljevic & Nanda, 2023) said that good motor skills possessed by elementary school students will influence students' learning skills and achievements. (Safitri et al., 2023) stated that the development of motor skills is as early as possible, and every education must maximize their efforts to ensure that children receive various needs during the process of developing motor skills. (Prodyanatasari, 2024) explains that the development of good motor skills can be useful in maximizing body growth and development in children, so that it can support the optimization of other growth and development.

Physical fitness is a condition where the body is at the best point in terms of physical fitness standards. In this condition, the body is able to receive physical activity in the heavy category for quite a long duration, without experiencing significant fatigue. Physical fitness, as stated by Wilda Wellis in M Azizan (2019: 120), "contains the meaning of the body's ability and capability to adjust to the physical load given without causing excessive fatigue." Students' need for physical fitness during the physical education, sports and health learning process, especially in activities outside the classroom, will of course not be separated from the influence of their motor skills and nutritional status. (Burhaein & Solekhah, 2023) stated that physical fitness is a person's body's ability to carry out daily tasks and work diligently and alertly without experiencing significant fatigue, and still has energy reserves to fill free time and face unexpected emergencies. Physical fitness related to health and related to skills that support daily activities, namely speed, agility, power, balance, coordination, reaction speed (Jariono et al., 2024). (Sari, 2024) physical fitness in particular, starting from the basic level. Educators, especially those working in elementary schools, must have knowledge of these methods. Physical and health education in schools is very important because it improves health and physical fitness, which is very important for the growth of young elementary school children and requires healthy and regular growth.

Current research shows that play activities, nutritional status, and motor skills are important factors influencing the physical fitness of elementary school students. Adequate and structured play activities can improve children's physical fitness. Good nutritional status also contributes significantly to physical and mental development, while motor skills trained from an early age are closely related to optimal physical health. However, data shows that many

elementary school students still lack physical activity and experience nutritional problems such as obesity or malnutrition. Apart from that, many children's motor skills have not developed optimally due to a lack of adequate physical stimulation.

The desired condition is an integrated program of adequate play activities, strict monitoring of nutritional status, and structured motor skills training in the elementary school curriculum. Thus, every student can achieve optimal physical fitness. It is hoped that students will have an appropriate daily physical activity routine, get a balanced nutritional intake, and can develop motor skills from an early age. The goal is to create a generation that is healthier and better prepared physically and mentally to face the challenges of the future.

The gap that appears lies in the implementation and integration of these three aspects in the school environment. Many elementary schools do not yet have a structured and adequate play activity program. In addition, monitoring nutritional status is often limited to periodic checks without concrete follow-up. On the other hand, the physical education curriculum still focuses on certain aspects without paying attention to the ongoing development of basic motor skills. This results in an imbalance in the development of students' physical fitness

To overcome this gap, there needs to be collaboration between schools, parents and the government. Schools need to develop a program of structured and fun play activities and ensure that every student is actively involved. Governments and health agencies must provide comprehensive nutritional guidance and support nutritional monitoring programs in schools. In addition, training for physical education teachers on effective methods of developing motor skills should be improved. With a holistic and integrated approach, it is hoped that it can overcome existing gaps and significantly improve the physical fitness of elementary school students.

5. CONCLUSIONS

Based on the research findings and discussion of the research results, it can be concluded as follows: There is a direct influence between playing activities and the physical fitness of students at SD N 14 Jati Tanah Tinggi, Padang City, amounting to 12.6%. (2) There is a direct influence between nutritional status and physical fitness of students at SD N 14 Jati Tanah Tinggi, Padang City, amounting to 12.4%. There is a direct influence between motor skills and physical fitness of students at SD N 14 Jati Tanah Tinggi, Padang City, amounting to 9.2%. There is an indirect effect of playing activities on physical fitness through the motor skills of students at SD N 14 Jati Tanah Tinggi, Padang City, amounting to 17.7%. There is an indirect effect of nutritional status on physical fitness through the motor skills of students at SD N 14 Jati Tanah Tinggi, Padang City, amounting to 28.1%. There is a positive influence between play activities, nutritional status and motor skills, together with the physical fitness of students at SD N 14 Jati Tanah Tinggi, Padang City, amounting to 48.2%.

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