ANALYSIS OF PHYSICAL FITNESS LEVELS OF CLASS V STUDENTS OF SDN GISIKDRONO 02 REVIEWED FROM NUTRITIONAL INTAKE, BMI AND PJOK VALUE

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Article Info

Abstract

Physical fitness in elementary school is an educational process carried out consciously and systematically through various physical activities in order to acquire abilities and skills, physical growth, intelligence and attitude growth. This study aims to analyze (1) Analyze the condition of physical fitness in terms of nutritional intake in Class V students at SDN Gisikdrono 02, (2) Analyze the condition of physical fitness in terms of BMI in Class V students at SDN Gisikdrono 02, (3) Analyze the condition of physical fitness in terms of from PJOK scores for Class V students at SDN Gisikdrono 02. This type of research uses descriptive quantitative. The population of this study was 97 students. The sample from this research was all class V students at SDN Gisikdrono 2, Semarang City, totaling 97 students. Data collection techniques in this research were carried out using questionnaires, interviews, and documentation. The technique for analyzing nutritional intake data and BMI data uses the nutrisurvey2007.exe application. Meanwhile, student physical fitness data is obtained using the Indonesian Student Fitness Test (TKSI) by the Ministry of Education and Culture which has been tested as valid and reliable.

Conclusions: (1) There is a relationship between students' nutritional intake and physical fitness level, (2) There is a significant relationship between students' BMI and physical fitness level, (3) There is a significant relationship between grades in PJOK subjects and physical fitness level.

Keywords: physical fitness, nutritional intake, BMI, corner value

INTRODUCTION

Physical education, sports and health are an integral part of total education which tries to achieve the goal of developing mental, social and emotional development for society through physical activity. One of the PJOK materials is physical fitness. Physical fitness in elementary school is an educational process carried out consciously and systematically through various physical activities in order to acquire abilities and skills, physical growth, intelligence and attitude growth.

Students' physical condition can also be caused by the nutritional intake they consume. The nutritional intake consumed provides and fulfills energy needs. The nutritional status of a student will be greatly influenced by the food intake obtained, the nutritional value consumed every day should at least have a balanced content of fat, protein, minerals, vitamins and carbohydrates so that over-nutrition does not occur which results in obesity and can actually reduce quality of human life.

Physical condition can be assessed by taking into account age and height and weight or BMI. The Body Mass Index (BMI) number or in English the Body Mass Index is a value obtained from calculating the quotient between body weight (BB) in kilograms and the square of body height (TB) in meters (Sugiarto, 2023: 164). Body Mass Index (BMI) is believed to be a simple indicator of or describe the level of adiposity in a person's body in correlation with height, body weight. BMI is used to measure whether body weight is ideal or not and is a good measurement method for assessing the risk of disease that can occur due to non-ideal body weight.

Physical condition is a person's condition at a certain time. The state of physical fitness is not constant, but fitness increases with regular exercise and decreases when exercise is stopped. Physical fitness is the body's ability to carry out various daily activities without feeling significant fatigue and still being able to fill free time with positive activities (Agus & Sepriadi, 2019).

Students who have talent and potential, analysis of students' physical fitness serves to achieve achievement. Meanwhile, students who have standard physical fitness and less can be used to provide knowledge to teachers to design the learning that will be carried out. Especially in elementary schools, physical fitness can contribute to the school level selection process to participate in national competition festivals which are held every year and in the form of O2SN (National Student Sports Olympics).

METHODS

Researchers used descriptive quantitative research with an Ex-post Facto research design. This research examines the influence of nutritional intake, BMI, and PJOK scores on students' physical fitness levels. This research was carried out in Class V of SDN Gisikdrono 2 Semarang City with a total of four groups. The data collection technique in this research was carried out using non-test techniques. Non-test techniques are carried out using questionnaires, interviews and documentation. Data analysis using descriptive statistics is statistics that function to describe or provide an overview of the object being studied through sample or population data. Nutritional intake data using the nutrisurvey2007.exe application. The number of calories consumed by students was obtained using the 24 Hour Food Recall Form. BMI data was obtained using a BMI questionnaire and BMI data was also analyzed using the nutrisurvey2007.exe application. PJOK scores are obtained using student report cards for the 2023/2024 school year. Student physical fitness data is obtained using the Indonesian Student Fitness Test (TKSI) by the Ministry of Education and Culture, there are 5 (five) types of tests, namely: 1) *Child Ball Test;* 2) *Tok Tok Ball Test;* 3) *Move The Ball Test;* 4) *Shuttle Run 8 x 10m Test; dan* 5) *600 m Run Test.*

RESULTS AND DISCUSSION

1. Results of Nutritional Intake Values
Nutritional intake refers to the food and drinks we consume to meet the body's nutritional needs. The nutrients the body needs consist of macronutrients (carbohydrates, proteins and fats) and micronutrients (vitamins and minerals). Adequate nutritional intake is very important for elementary school children because at this time their bodies are experiencing rapid growth and development. The following are the results of student nutritional intake data for a total of 97 students.

Tabel 1. Analysis of Criteria for Nutritional Intake Variables

Female		
Nutritional Criteria	Amou	Percentage

	nt	
Above KKAL Recomendation	21	44%
Under KKAL Recommendation	27	56%
Total	48	100%

Male		
Nutritional Criteria	Amount	Percentage
Above KKAL Recomendation	18	37%
Under KKAL Recommendation	31	63%
Total	49	100%

It was concluded that as many as 21 female students and 18 male students had nutrition above the Recommended KKAL, and as many as 27 female students and 31 male students had nutrition below the Recommended KKAL. Meeting calorie needs will help students stay fit and focused during study hours.

2. BMI Value Results
BMI is the abbreviation for Body Mass Index, a measurement used to evaluate the proportion of a person's weight relative to their height. BMI is used as a rough indicator to assess a person's weight status. This is a commonly used basis in medical and health practice to assess whether a person is in the underweight, normal, obese or overweight weight range. The following is the student's BMI data.

Tabel 2. Analysis of BMI Variable Criteria

Female		
BMI Criteria	Amount	Percentage
Thin	22	46%
Normal	20	42%
Fat	6	13%
Total	48	100%

Male		
BMI Criteria	Amount	Percentage
Thin	29	59%
Normal	13	27%
Fat	7	14%
Total	49	100%

A total of 22 female students and 29 male students have bodies with thin criteria, as many as 20 female students and 13 male students have bodies with normal criteria, and as many as 6 female students and 7 male students have bodies with fat criteria. Good health contributes to better concentration, stronger memory, and increased energy, all of which can improve a student's academic performance. By knowing their BMI and paying attention to their health, students can increase their chances of succeeding in school.

3. PJOK Value Results
PJOK is designed to promote a healthy lifestyle, develop motor skills, improve physical and mental health, and build understanding of the importance of sport and physical activity in everyday life. In the PJOK curriculum, students learn about various types of sports and physical activities, exercise techniques, fitness principles, games, and health skills. The following is data on students' PJOK scores.

Tabel 3. Analysis of PJOK Variable Criteria

Female		
PJOK Value Criteria	Amount	Percentage
Very Good	4	8%
Good	44	92%
Enough	0	0%
Less	0	0%
Total	48	0%

Male		
PJOK Value Criteria	Amount	Percentage
Very Good	8	16%
Good	41	84%
Enough	0	0%
Less	0	0%
Total	49	0%

It was concluded that as many as 4 female students and 8 male students had PJOK score criteria in the very good category, as many as 44 female students and 41 male students had PJOK score criteria in the good category. CHD involves physical activity, including physical exercise and sports. By knowing their PJOK scores, students can evaluate their physical health. This helps in monitoring their physical abilities and athletic progress.

CONCLUSION

1. There is a relationship between students' nutritional intake and their level of physical fitness. Students who have a nutritional

intake that is above the daily kcal recommendation tend to have a better level of physical fitness than students who have a nutritional intake that is above the daily kcal recommendation.

2. There is a significant relationship between students' BMI and physical fitness level. The order of students' physical fitness from the highest is students with normal BMI, thin, then fat. Students with an obese BMI have several obstacles in physical fitness due to difficulties in moving the body, breathing factors and body flexibility. The data results do not show that there are obese students.

3. There is a significant relationship between grades in basic subjects and physical fitness level. Students who get high scores in pjok tend to have a better level of physical fitness than students who get lower scores.

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