

# Implementation of the nusantara student fitness test for learners

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## ABSTRACT

Physical education in schools plays an important role in supporting the learning process by ensuring optimal physical fitness. This study aims to determine the physical fitness profile of male students aged 12-13 years at Junior High School Islam Raudlatul Muhibbin. The research design used a cross-sectional approach, involving 64 male students who underwent the Tes Kebugaran Pelajar Nusantara (Indonesian Student Fitness Test), which consists of five test items: (1) Body Mass Index (BMI), (2) V Sit and Reach, (3) Sit Up, (4) Squat Thrust, and (5) Pacer Test. The research findings show the average scores of male students aged 12-13 years at Junior High School Islam Raudlatul Muhibbin as follows: Body Mass Index (3.36), V Sit and Reach (2.22), Sit Up (1.98), Squat Thrust (1.93), and Pacer Test (1.3). The overall average score is 2.16, which falls into the low category. The data in this study were analyzed using a descriptive quantitative approach by calculating the average score, which was then averaged. The first step of the analysis was processing the raw data collected from the five test items, followed by calculating the average score, and then classifying the data into categories. Therefore, conducting physical fitness assessments is essential to determine students' fitness status and improve it through increased physical activity at school.

ARTICLE INFO			
Accepted : 14th September 2024	Zainal Arifin		
Approved : 15th March 2025	Physical Education, Universitas PGRI Pontianak		
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## **INTRODUCTION**

Physical fitness plays an important role in the body's ability to perform activities optimally. During physical activities, a person's body will experience fatigue if the exertion exceeds its limits. (Listyasari & Wahidah, 2022) it is said that to avoid diseases and live a healthy life, people need to maintain their physical fitness. In addition to maintaining a healthy diet and getting enough rest, regular exercise is also essential as it can enhance a person's productivity efficiently. Mental well-being is an important component related to exercise in determining quality of life (Ramdani et al., 2024).

School is a place within an educational environment. Discussing education is not only about academic achievements but also about the school's responsibility to maintain students physical fitness and healthy lifestyles. (Muhammad & Yani, 2023) it is stated that maintaining students physical fitness is not only the responsibility of parents but also the schools important role in their physical development. Promoting a healthy lifestyle at school can be done by

educating students about activities such as exercising. When students perform a physical activity movement, they must engage critical thinking skills <u>(Ramadhan et al., 2024)</u>. Physical activity encourages students to be more active, especially when conducted outdoors, contributing to their overall physical fitness. During the developmental phase, sports also have a significant impact on a person's mental and psychological health <u>(Siahaan, Ketaren, Prajaya, Hasibuan, & Siregar, 2024)</u>.

Currently, Indonesia is experiencing growth and development in technology. Almost all institutions, industries, and even daily human needs are closely linked to the use of technology. Due to technological advancements, changes are not only occurring in tools and platforms but also in human behavior, which has undergone significant transformation (Rohyati et al., 2024). This development has led individuals to become engrossed in their own world, often neglecting their surroundings. If the use of digital advancements is not managed wisely, it can negatively impact a person's physical fitness. The importance of mental health within physical fitness is crucial, especially during adolescence, which is a critical period for mental well-being (Situmorang, Panggabean, & Nababan, 2023).

Such an impact causes individuals, including students in educational environments, to become reluctant to engage in physical activity. (Daniel Agung Syawang et al., 2024) explaining how digital technology development affects a sedentary lifestyle and increases stress levels. (Sangwan, Rathee, & Chahal, 2023) it is also stated that the significant advancements in technology have led to ethical considerations, making performance an ethical concern. Therefore, maintaining health to engage in daily activities as usual requires attention and the incorporation of exercise into everyday life. Physical and mental health can be maintained through physical activity, preventing chronic diseases (Suarjana, Sudirham, Manopo, Pongoh, & Supit, 2023).

The Ministry of Youth and Sports has issued a policy on the Nusantara Student Fitness Test. This policy is outlined in Presidential Regulation of the Republic of Indonesia No. 86 of 2021 concerning the Grand Design of National Sports, aiming to create an Indonesian society that actively participates in sports with a good level of physical fitness. This means that physical fitness consists of several elements, including endurance, strength, flexibility, speed, balance, coordination, and agility (Kamaruddin et al., 2024; Riska Lestari, Destriana, 2024). Physical growth during adolescence needs to consider heart and lung health, muscular endurance, and an ideal body weight, which are all related to physical fitness components (Yane, Wardhani, & Saputra, 2024). A fit physique will stabilize the movement process in daily activities. (Dewa & Winarno, 2023) stated that if a person has optimal physical fitness, their activities will be

more efficient and effective. Besides stabilizing movement, strong endurance can contribute to increasing self-confidence and social support (Burhaein & Rozak, 2024).

The potential for adolescent physical fitness has recently tended to decline. This condition affects academic achievement and mental health, which need to be considered by teachers in schools. This transformation indicates changes in childrens emotions, as adolescence is a sensitive period (Altermann & Gröpel, 2024). Physical education teachers are an integral part of developing overall physical fitness. For example, teachers should set aside time to monitor and support students physical fitness (Muksin, Gazali, & Daharis, 2019).

Junior High School Islam Raudlatul Muhibbin was chosen as the research area due to field findings indicating a lack of attention to the physical fitness of male students aged 12-13 years. Based on information obtained during interviews with the physical education teacher at the research site, it was found that physical fitness monitoring for students had never been conducted. Additionally, the schools facilities were inadequate as it is located within an Islamic boarding school environment. Moreover, the education system and physical activities of male and female students in the boarding school environment are generally separated. Therefore, the research focused on one population group to obtain more specific results. This study aims to provide an overview of the physical fitness level of male students in this age group, serving as an evaluation material for physical education teachers to optimize students physical activities.

#### METHOD

The cross-sectional survey is the design used in this study. The purpose of a crosssectional research design is to obtain detailed factual information from clear data, whether from a large or small population (Sofya, Novita, Afgani, & Isnaini, 2024). According to the statement by (Putri, Lailiyah, & Chong, 2023) a cross-sectional survey design can collect data on a large-scale level. Research will be more optimal if the chosen method aligns with the issue being studied. To obtain the expected results, it is necessary to use a method that is consistent with the research objectives and problems being examined. (Syahrizal & Jailani, 2023) a method can be considered a descriptive method if it is capable of solving research problems found in the field. This method was chosen because it can provide an overview of the physical fitness of male students at Junior High School Islam Raudlatul Muhibbin aged 12-13 years. This study involves a population of 64 male students within that age range. The data collection technique in this study utilized the Nusantara Student Fitness Test method. The data were analyzed using a descriptive quantitative approach by calculating the average score from five fitness test items, including: (1) Body Mass Index (BMI), (2) V Sit and Reach, (3) Sit Up, (4) Squat Thrust, and (5) Pacer Test (Darumoyo, Utomo, & Septianingrum, 2025). Each test item produced an individual score, which was then averaged. The first step in the analysis involved processing the raw data collected from the five test items, followed by calculating the mean score and classifying the data into specific categories.





The sample consisted of male students aged 12-13 years who met the inclusion criteria, including actively attending school, having no history of severe injury or illness that could hinder the physical fitness test process, and being willing to participate in the entire test. The Nusantara Student Fitness Test was administered through five test items: (1) Body Mass Index (BMI), (2) V Sit and Reach, (3) Sit Up, (4) Squat Thrust, and (5) Pacer Test. The selection of the sample was based on the research needs to evaluate the physical fitness of male students aged 12-13 years, considering that this age group is in a critical phase of physical development requiring special attention. Additionally, the research findings can serve as an evaluation material for physical education teachers to enhance physical activity in the school environment.

# **RESULTS AND DISCUSSION**

## Results

This study was conducted in the schoolyard of Junior High School Islam Raudlatul Muhibbin, involving a population of male students aged 12-13 years. The findings illustrate students physical fitness levels through data descriptions of single variables obtained from the research site. The research data is presented in percentages, tables, diagrams, and score rankings. Below is a detailed description of the research results:



Table 1. Frequency Distribution of Body Mass Index

Figure 2. Frequency Distribution of Body Mass Index

Table 1 and Figure 1 display the data from the 64 students examined, then the Body Mass Index (BMI) was calculated. It was found that 41 students (64,1%) had a good nutritional status (normal), 16 students (2,0%) were undernourished (thinness), 5 students (7,8%) were overnourished, and 2 student (3,1%) was obese.

In addition to the results presented in Table 1 and Figure 2, further data on the distribution of V Sit and Reach measurements can be seen in Table 2 and Figure 3 below:

Category	Frequency	Percentage
Very Low	0	0%
Low	52	81,3%
Adequate	9	14,0%
Good	3	4,7%
Very Good	0	0%
Total	64	100%

**Table 2.** Frequency Distribution V Sit and Reach

Implementation of the Nusantara Student Fitness Test for Learners Rio Wardhani<sup>1</sup>, Zainal Arifin<sup>1</sup>, Stephani Yane<sup>1</sup>, Iskandar<sup>1</sup>, Awang Roni Effendi<sup>1</sup>, Heri Rustanto<sup>1</sup>



Figure 3. Frequency Distribution V Sit and Reach

Table 2 and Figure 3 present an overview of the v sit and reach performance among male students aged 12-13 years at Junior High School Islam Raudlatul Muhibbin. The breakdown shows that 52 students (81,3%) fell into the low category, 9 students (14,0%) into the adequate category, and 3 students (4,7%) into the good category.

Table 3 and Figure 4 present the data obtained from the study, specifically the sit up measurement results. The following are the findings presented:

Category	Frequency	Percentage
Very Low	22	34,4%
Low	23	35,9%
Adequate	16	25,0%
Good	3	4,7%
Very Good	0	0%
Total	64	100%

 Table 3. Frequency Distribution Sit Up



Figure 4. Frequency Distribution Sit Up

Table 3 and Figure 4 reveal the performance of the sit-up test (60 seconds), where the majority of students, 22 students (34,4%), are categorized as very low. The second highest

category is very low, with 23 students (35,9%), while the remaining 16 students (25,0%) fall into the adequate category and in the final category, which is good, there are 3 students (4.7%).

Furthermore, Table 4 and Figure 5 present the results of the squat thrust measurement. Below are the further findings related to the squat thrust measurement:



 Table 4. Frequency Distribution Squat Thrust

Figure 5. Frequency Distribution Squat Thrust

Table 4 and Figure 5 illustrate the outcomes of the 30 second squat thrust test, where most students, totaling 26 (40,6%) are classified in the very low category. Following closely behind is the low category, which includes 20 students (31,3%), while 13 students (20,3%) are deemed adequate, and merely 5 students (7,8%) are categorized as good. Next, Table 5 and Figure 6 present the results of the pacer test measurement. The pacer test is the final test administered to the testees to assess their level of physical fitness. Below are the results of the pacer test measurement:

Category	Frequency	Percentage
Very Low	47	73,4%
Low	14	21,9%
Adequate	3	4,7%
Good	0	0%
Very Good	0	0%
Total	64	100%

**Table 5**. Frequency Distribution Pacer Test

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Figure 6. frequency Distribution Pacer Test

Table 5 and Figure 6 indicate that among male students aged 12-13 years, the majority fall into the very low category in the pacer test, comprising 47 students (73,4%), while 14 students (21,9%) are categorized as low, and only 3 students (4,7%) fall into the adequate category. To complement the results presented in the previous tables and figures, the overall physical fitness measurement data of the students is displayed in Table 6 and Figure 7. This data represents the overall average results after the students completed a series of physical fitness tests.

	Physical Fitness				
Category	Body Mass Index	V Sit and Reach	Sit Up	Squat Thrust	Pacer Test
Normal	41				
Overweight	5		- <u>.</u>		·
Obese	2		•	·	·
Thinness	16			•	·
Very Good	•			•	·
Good		3	3	5	
Adequate		9	16	13	3
Low		52	23	20	14
Very Low			22	26	47
Total	64	64	64	64	64
Average	3,36	2,22	1,98	1,93	1,3
All Average			2,16		

Table 6.	Overall	Physical	Fitness	Data
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Figure 7. Overall physical fitness graph

## Discussion

Assessing students physical fitness can be conducted through tests and evaluations of their physical abilities. By designing an appropriate physical education program and understanding students health conditions, this approach can help reduce the risk of diseases, improve overall health, and support academic achievement. This study aims to evaluate the physical fitness of male students aged 12-13 years at Junior High School Islam Raudlatul Muhibbin using the Nusantara Student Fitness Test. The results show that among 64 students, the average scores for each test component were as follows: Body Mass Index (3.36), V Sit and Reach (2.22), Sit Up (1.98), Squat Thrust (1.93), and Pacer Test (1.3). Therefore, the overall average physical fitness score for male students aged 12-13 years was 2.16, which falls into the "low" category

Before implementing sports activities in schools, it is essential to conduct a physical fitness assessment. This assessment plays a crucial role in providing data on students physical conditions, allowing for the determination of their readiness to participate in the learning process. (Prontenko et al., 2019) health protection is one of the key factors in maintaining students' well-being, and physical education also contributes to improving both physical and mental health, helping prevent illnesses. Since students must possess the ability to support their learning activities, an adequate level of physical fitness is highly necessary (Wani & Wea, 2021)(Destriana, Elrosa, & Syamsuramel, 2022).

Various studies have been conducted on physical fitness using the Nusantara Student Fitness Test method. One such study was conducted (Yahya, Wahyudi, & Yudasmara, 2024) titled "Physical Fitness of Fifth Grade Elementary School Students in Relation to Physical Education, Sport, and Health Learning Outcomes." The study found that many students easily felt fatigued, lacked enthusiasm, and some even left the class during Physical Education, Sport, and Health lessons. This research utilized the Nusantara Student Fitness Test method to assess students physical fitness using four test items: V Sit and Reach, Sit Up, Squat Thrust, and Pacer Test. Through these measurements, students physical fitness levels could be more clearly identified, allowing the results to be evaluated to support the improvement of their learning outcomes. Next, a study conducted by (Saputra, Teguh, & Sari, 2023) titled "Survey on Physical Fitness through the Nusantara Student Fitness Test at Senior High School 1 Plupuh in 2023" identified that students physical fitness levels were less than optimal due to the limited school area, which restricted their movement. As a result, many students spent more time sitting in class or at the cafeteria. After conducting measurements using the Nusantara Student Fitness Test, the results indicated that while students physical fitness was generally good, further improvement was needed to prevent a decline.

(Kljajević et al., 2022) it is stated that physical fitness is closely related to health, if physical activity decreases, the level of fitness will also decline. Physical education plays an important role in shaping healthy habits and promoting an active lifestyle. For many children, this subject may be their only opportunity to engage in regular and organized exercise (Martins, Honório, & Cardoso, 2023). These findings also suggest that students lack of enthusiasm in physical education classes may be related to their fitness levels.

#### CONCLUSION

Based on the research findings, the Nusantara Student Fitness Test is effective in measuring the physical fitness of male students aged 12-13 years, covering body mass index, flexibility, muscle strength, and cardiovascular endurance. The measurement results indicate each students fitness category, both in terms of body mass index status (obese, overweight, normal, or thinness) and fitness levels based on the v sit and reach, sit up, squat thrust, and pacer test (very good, good, adequate, low, very low). These findings also suggest that students lack of enthusiasm in physical education classes may be related to their fitness levels. The researcher hopes that these results can serve as a reference for physical education teachers at Junior High School Islam Raudlatul Muhibbin to enhance students physical activity, apply the findings to future student cohorts, and serve as a reference for further research.

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